

ASEER

URBAN DESIGN CODE

BACKGROUND DOCUMENT



Client

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Date

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Frankfurt am Main/ Germany

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ASEER

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An architectural rendering of a modern building courtyard. The scene is viewed from a low angle, looking down a narrow path. On the left, a dark, textured wall with diagonal lines runs along the path. On the right, a light-colored wall with horizontal lines is visible. In the center, a woman wearing a brown hijab and a white top is walking towards the viewer, carrying a bag. A young child in a white dress is walking alongside her. The path is paved with light-colored tiles. In the background, there are lush green trees and a building with a decorative lattice facade. The overall atmosphere is bright and modern.

A

INTRODUCTION

1 Purpose of this Urban Design Code

1.1 Introduction

The main purpose of the Aseer Urban Design Code 2021 (hence referred to as AUDC) is to help raise the overall urban design quality of Aseer's urban areas, while also helping to mitigate the most critical and recurring visual pollution issues in the region.

The standards and guidelines described in the urban code are intended to promote a general excellence in urban planning, urban design, landscape design and architecture, respecting the identity of the place.

Also, they intend to promote the development of an attractive, representative and inviting public realm, with a generous and lush landscape environment. The code is structured as a living document and intentionally leaves room for future chapters and sections.

The AUDC should be viewed and interpreted as a positive framework to design open space and built-form, contributing to a harmonious, attractive, coherent urban-architectural aesthetic, and not as a set of onerous constraints.

1.2 Design Quality and Visual Pollution

One of the main purposes of the AUDC is to help mitigate visual pollution effects caused by sprawling urban development.

The AUDC defines visual pollution primarily as an aesthetic issue, as a negative impact on the natural environment and on the public realm, turning visually appealing areas for the community into something unpleasant.

Common causes of visual pollution identified in the Aseer region are:

- Loss of natural features and appearance.
- Loss or lack of distinct districts, neighborhood and corridors character.
- Poorly designed open space, public realm, and street furniture.
- Poor and non-contextual architecture; sub-standard structures; incompatible urban form of buildings and infrastructure.
- Lack of buildings maintenance.
- Unfinished or abandoned construction sites.
- Excessive allocation and/or poorly designed space for automobiles, particularly parking areas.
- Strong or excessive visual and physical barriers; particularly on natural features like wadi areas and hillsides.
- Excessive and non-coordinated signage and advertisements.
- Non-coordinated and misplaced utilities.
- Exposed trash and waste.
- Poor quality of graffiti and writings.
- General overcrowding of areas.

Identity of the Place

Architecture
Landscape
Urban Design
Planning
Sign



2 Guiding Principles & Strategies

2.1 Principles

The Aseer Urban Design Code - background document is developed on the base of 8 guiding principles that serve as the foundation to the different elements of the code. The guiding principles were derived from the study and analysis of international and regional best practices addressing visual pollution issues in natural and urban contexts.

Particularly, the 8 principles focus on the importance of establishing a positive relationship between urban development and natural and cultural landscapes that are so characteristic to the Aseer region.

The 8 guiding principles are:

1. Celebrate Aseer's diverse natural and cultural landscapes, a foundation of unique identity for the region and its people.

2. Preserve the remarkable setting of the topography, open space, productive landscapes and the scenic qualities of Aseer's roadways, countryside and communities.

3. Safeguard urban and architectural heritage interrelated with the cultural landscape and enhance their relationship.

4. Create connections between people and places with new development that respects and fosters the special character and heritage of Aseer.

5. Foster a sustainable mobility system that is well integrated within the urban fabric and respects aesthetic values as well.

6. Provide a welcoming and pleasing visual experience by reducing visual clutter over built form and preventing mass marketing and outdoor advertising intruding on the landscape or community appearance.

7. Enhance legibility through built form, branding and way-finding strategy for the region.

8. Support the vitality of the region by enhancing the links between business and tourism development.

2.2 Design Strategies

Under the umbrella of the 8 guiding principles, the AUDC promotes 6 practical strategies to guide the different aspects of urban development.

The 6 strategies correspond to the 6 design elements or parts of the urban code. The sequence of strategies proposes a clear design attitude toward development. The 6 design strategies are:

1. Manage the Landscape Setting

Aseer's natural landscape is an expression of the diversity of its heritage and a foundation of its identity. This strategy aims to protect natural features, open space and its scenic qualities along with controlling landscape settings for existing and new development sites, thereby enhancing its identity, preserving its past and planning for a more desirable future.

2. Enhance Heritage & Cultural Landscape

The architectural heritage is interwoven with its natural and productive landscape within the different environments of Aseer. The strategy lays out a clear path towards safeguarding this rich heritage and cultural landscape from disappearing, preserving the identity of Aseer and connecting people to places.

3. Complete Streets & Movement Network

Right-of way design in Aseer urban areas is over dominated by automobile related considerations resulting in generic spaces that are detrimental to its urban aesthetic. Complete streets strategy guides roads to become streets in urban settings, contribute to place making and beautification of places while properly interfacing with adjacent uses.

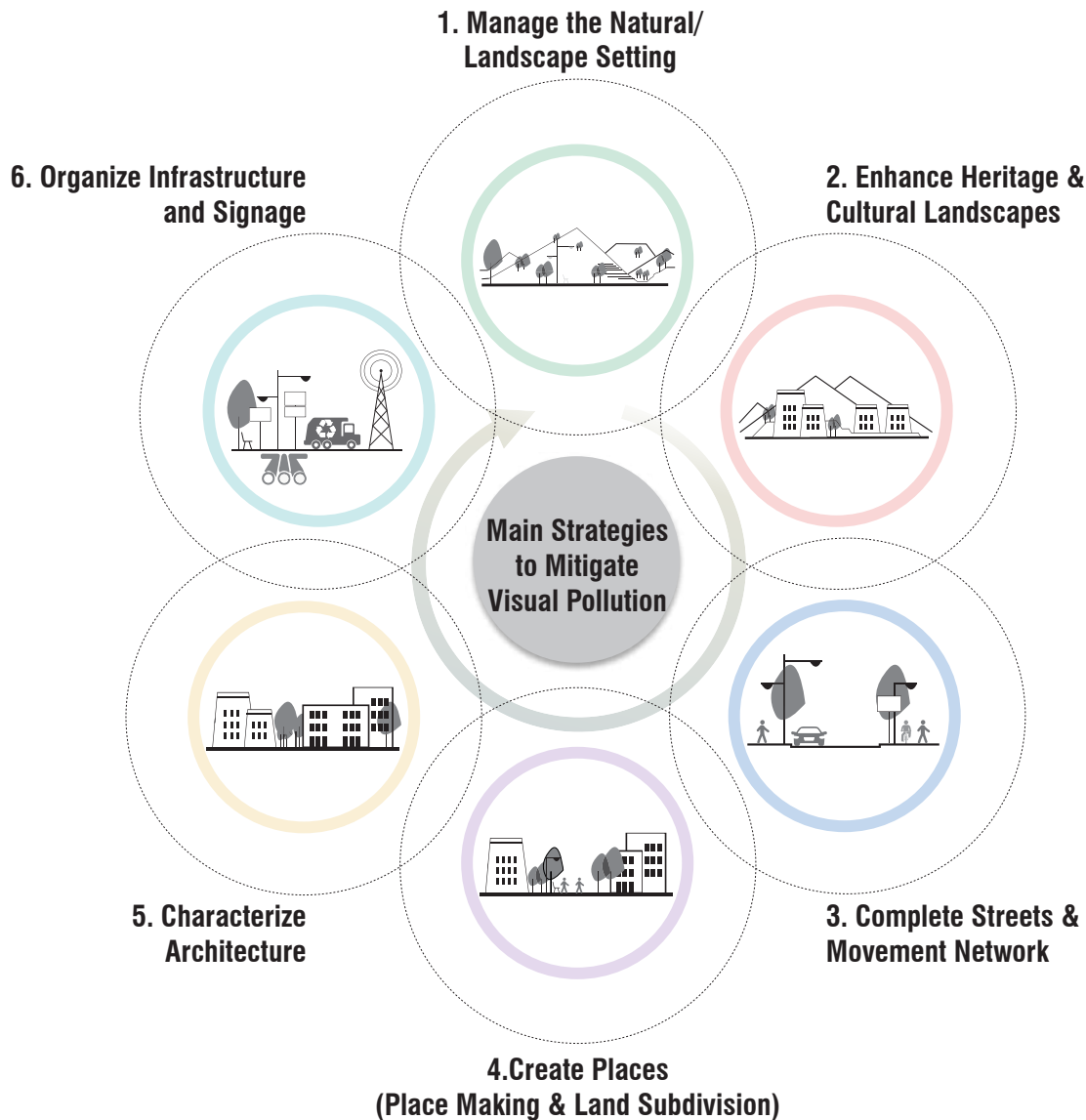


Figure 1 Six design strategies of AUDC

4. Placemaking & Land Subdivision

Control of uses and building placement characterizes well designed, people-oriented places. Placemaking reinforces the aspects of a city that make it distinctive and functionally unique. This strategy incorporates the identity of Aseer, its cultural values, uses, levels of activities and physical scale and forms, into the uses and pattern of development.

5. Characterize Architecture

Substandard and dull architecture, with use of typologies, materials, and finishes that are alien to the richness of the Aseer context, contribute significantly to visual pollution and to Aseer's progressive loss of identity. New architecture needs to be more contextual, designed more for people and less for cars, looking at the future while acknowledging the past, and empowering the sense of place.

6. Organize Infrastructure and Signage

Poorly designed infrastructural elements, utilities, city services, public and private signage and their misplacement contribute significantly to visual pollution, and too often result in a messy overall composition of Aseer's landscapes and townscape. Infrastructure and signage elements must be restricted where not appropriate while positively contributing to create a collective visual impression.

3 The Unique Character of Aseer Region

One of the AUDC primary objectives is to protect and enhance the Aseer region’s sense of place and its image. The Aseer region’s natural environment is extremely diverse compared to the rest of the Kingdom. Featuring the Red sea shoreline, coastal plains, mountain valleys, high mountains and plateaus that include the Kingdom’s highest peak Mount Sawdah at almost 3000m, to inland desert.

The AUDC recognizes that the image of the region is not defined by its architecture alone, rather it is formed by a comprehensive set of layers comprising:

- Natural environment.
- Infrastructure.
- Built form.

In this direction, defining the key elements that contribute to its spatial character is necessary to understand the unique attributes of the area that need protection and development control. The AUDC identifies 5 different environments within the Aseer region as indicated in the exhibit below. Further guidance regarding each of the environments is provided in chapter B.1.1.6.

Furthermore, to promote new built form that is more contextual to the Aseer Region, additional guidance is provided in the insert document *Aseer Contextual Architecture Guidelines*. In fact, new architecture when inspired by the heritage and culture of the place can lend a unique and distinct character, reinforcing the identity of that place and of its people.

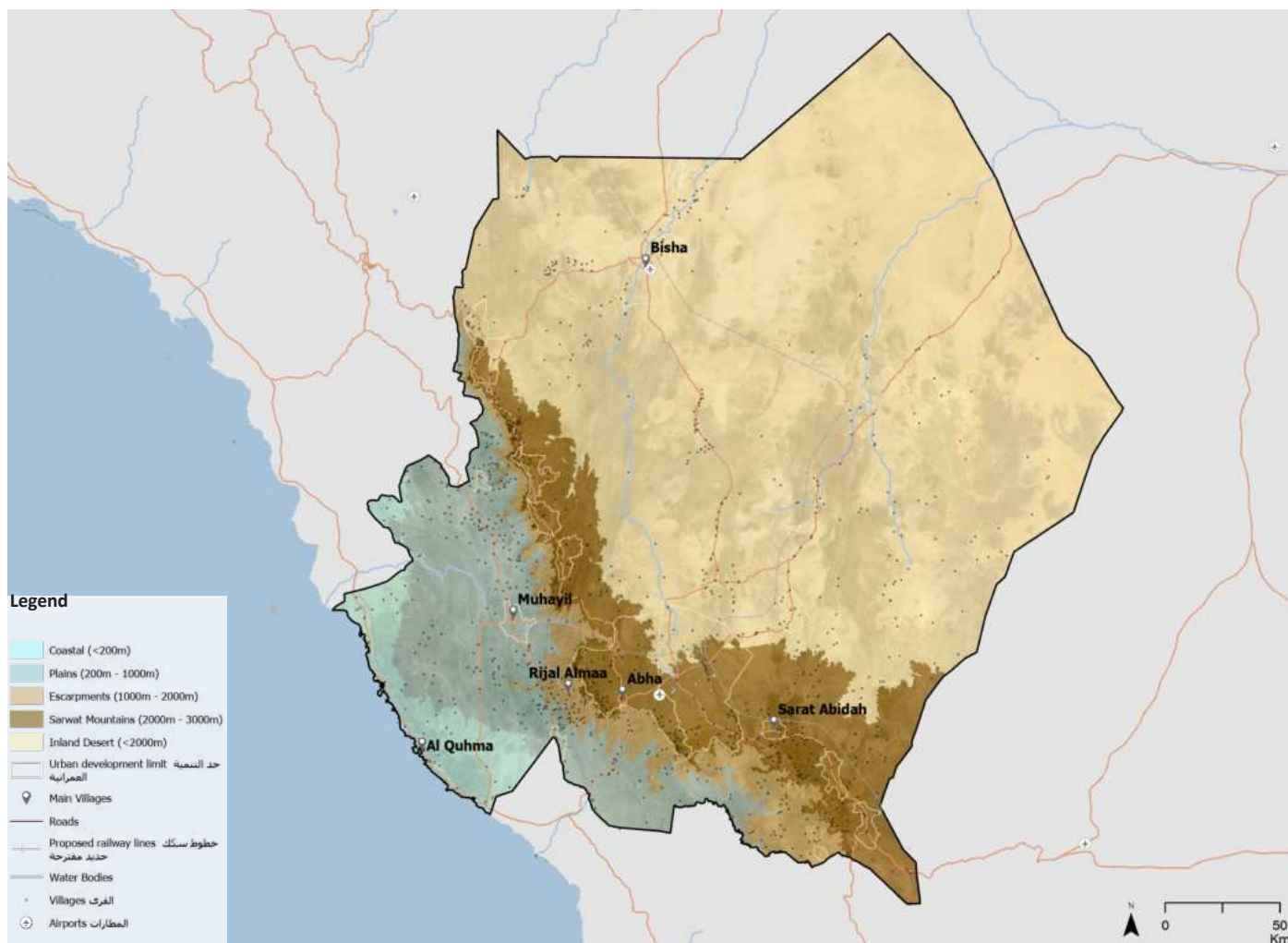


Figure 2 Map of the five natural environments in Aseer region

5 Test Beds

In addition to Abha city, five other areas of Aseer are used as testbeds in the AUDC to showcase the proposed strategies.

The testbeds represent different natural environments, architectural and landscape heritage. The different settings of the testbeds allow to derive comprehensive, detailed, and contextualized guidance.

The below selection criteria shows the procedures that are followed to filter and select the testbeds. The criteria are organized by priority.

The five test beds are:

- **Al Birk (Coastal Plains)**
- **Mahayel (Tihamah Plains)**
- **Rijal Alma, Al Namas (Escarpments)**
- **Khamis Mushait (Sarwat Mountains)**
- **Beesha (Inland Deserts)**

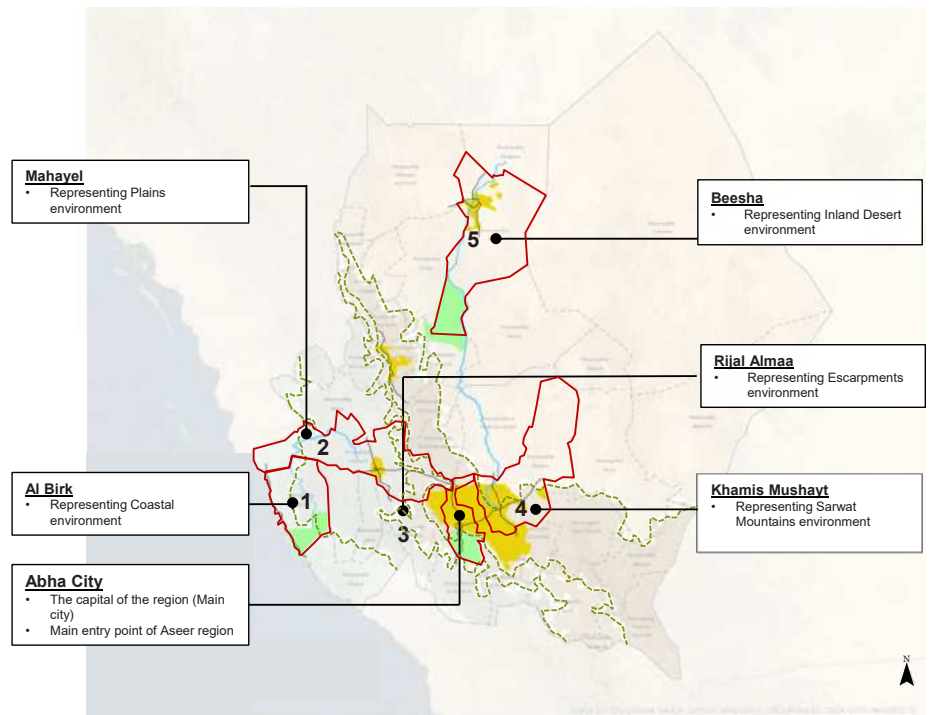


Figure 3 Testbeds in Aseer region

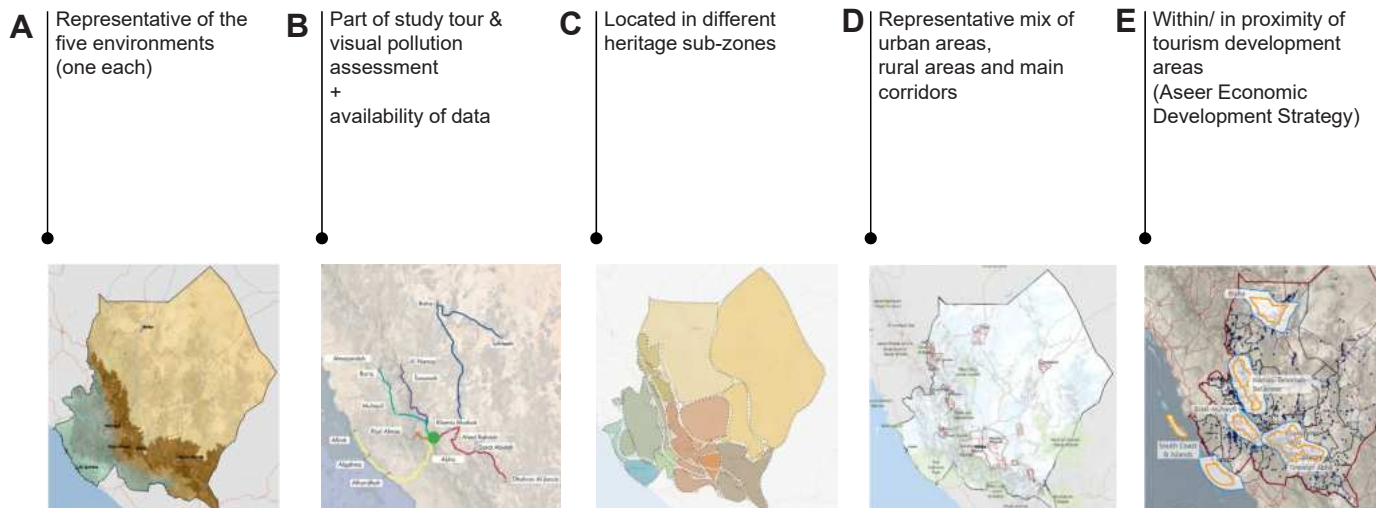


Figure 4 Selection criteria for testbeds in Aseer region

4 How to Use this Urban Design Code

The Aseer Urban Design Code (AUDC) is conceived as a regulatory tool - an approach to delivering improved quality development, and as a supplementary planning document that add further details to existing policies like structural and local plans. It is different from conventional land use zoning regulations as the AUDC is informed by urban design considerations which relate to place-making, supporting the transition to a spatial approach to planning.

Design Elements

The document is a compilation of six interrelated design elements as follows:

1. Manage the Landscape Setting

Addressing the relationship between proposed development and the natural environment, and the design of open space.

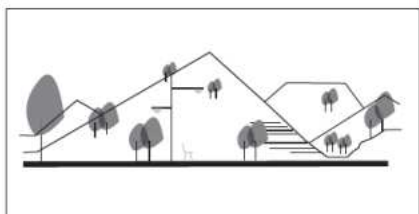
2. Enhance Heritage & Cultural Landscape

Addressing the relationship between proposed development and heritage.

3. Complete Streets & Movement Network

Addressing the design of the movement network, right-of way, and associated public realm.


1. Manage the Landscape Setting



Sub-Strategies

- 1A Protect Natural Landscape Character
- 1B Preserve and Enhance Wadi Network
- 1C Protect and Use Natural Vegetation
- 1D Designing Open Space

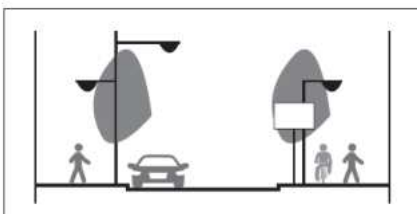
2. Enhance Heritage & Cultural Landscape



Sub-Strategies

- 2A Heritage Protection Framework
- 2B Development in Heritage Areas
- 2C Properties in Buffer and Transition Zones
- 2D Properties in Viewsheds and View Corridor Zones

3. Complete Streets & Movement Network



Sub-Strategies

- 3A Design with Nature
- 3B Movement Network
- 3C Complete Streets
- 3D Street Design Templates
- 3E Street Design Elements
- 3F Public Realm Arrangement Templates

Figure 5 AUDC design elements

4. Placemaking & Land Subdivision

Addressing master planning and land subdivision considerations, land uses and development standards.

5. Characterize Architecture

Addressing plot development and contextual architecture, materiality and finishes.

6. Organize Infrastructure and Signage

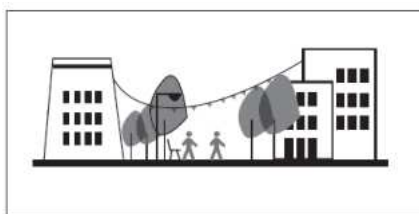
Addressing the correct placement of infrastructural element and signage in urban area.

For each element, the AUDC provides distinct forms of detailed design guidance comprising a set of written and graphic rules that establish

with precision the two- and three-dimensional design elements of a particular subject, development, or area. Each element is discussed with overall objectives, guidance, critical requirements and supporting references to orient the user.

The design review checklist at the beginning of each element's part is intended as an agile tool to orient the evaluating authority or the applicant. It should be used to ensure that all important topics related to a new development application have been addressed and highlight where there may be a need for additional studies.

4. Placemaking & Land Subdivision



Sub-Strategies

4A Placemaking

4B Typical Situations: Application of Land Use Development Standards, Districts and Corridors Character

4C Land Subdivision

5. Characterize Plot & Architecture



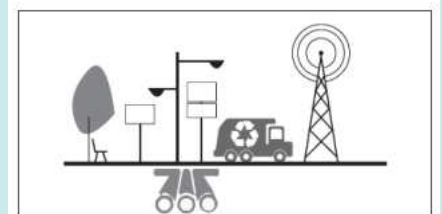
Sub-Strategies

5A Plot

5B Architecture

5C Building Typology

6. Organize Infrastructure & Signage



Sub-Strategies

6A Organize Infrastructure

6B Organize Signage

Specific Design Topics & Design Sheets

Each of the 6 elements is further explored through specific sections by design topic. These are arranged in design sheets so that the information can be accessed and used independently by the user.

Each design topic starts by stating the main AUDC objective for that topic. The topic is then discussed in terms of standards and guidelines, providing quantitative and qualitative provisions.

The guidelines are meant to set a direction and are typically put forth using the words “should” or “may”. They are not prescriptive but aim to provide guidance to property owners, architects, design professionals, evaluating authorities, residents and other interested parties. Most of the guidelines are specific in nature, while others are a matter for broad interpretation; however, none should be confused with imposing a mandated style or motif.

The standards are required and are signified by the word “shall” or “must”. Development standards, for instance, regulate new site and building development by establishing place-making standards for building form, frontage, open space, and other elements. These are addressed specifically under elements 4 and 5.

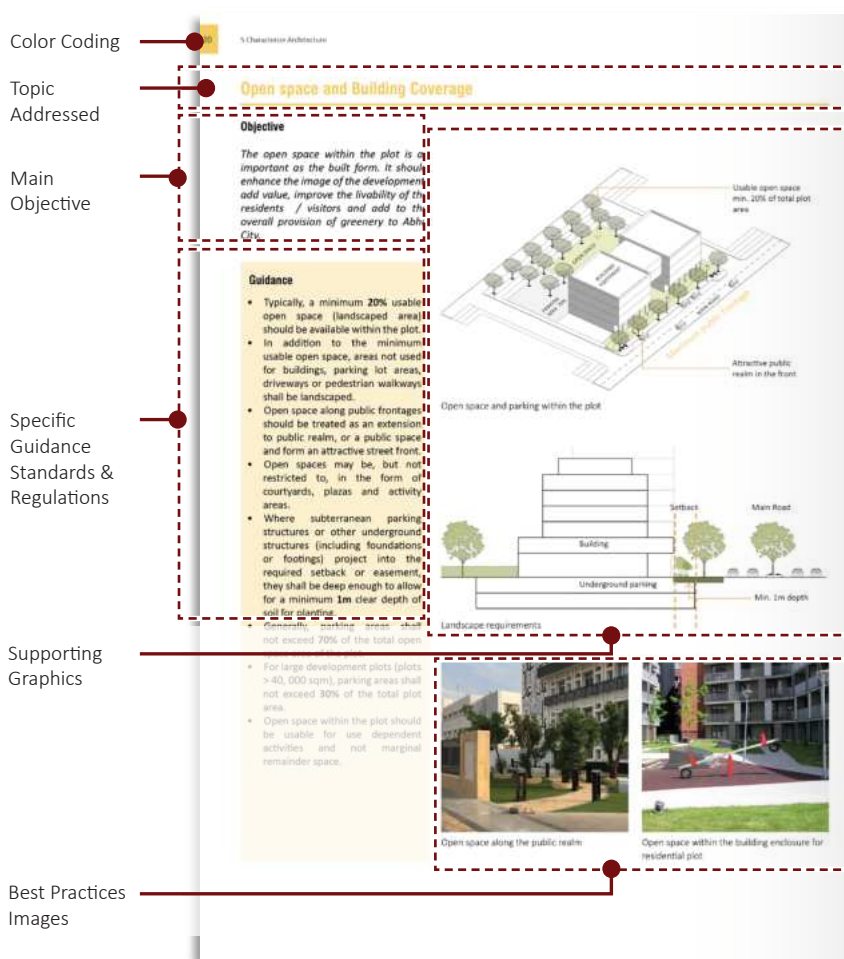


Figure 6 Example of typical design sheet

5 Jurisdiction and Applicability

The AUDC applies to every new urban development, re-development or land subdivision project requiring a development permitting from ASDA and/or Amanah within the urban growth boundaries in Aseer region as shown in the map below.

The AUDC is thought as a regulatory tool and, depending on the user, intends to play the following roles within the Aseer urban planning and development processes:

Design processes – the AUDC can set the detailed urban design parameters of projects across the different scales

of design intervention, from street and block sizes and layouts to landscape and architectural concerns.

Development processes – the AUDC provides a means through which stakeholders can explore and negotiate detailed design options and allow these concerns to feed into development options from an early stage.

Planning processes – the AUDC provides a ready means to consider, establish and formalize design parameters in a more objective manner, and then to regulate and monitor design solutions through the development control process.

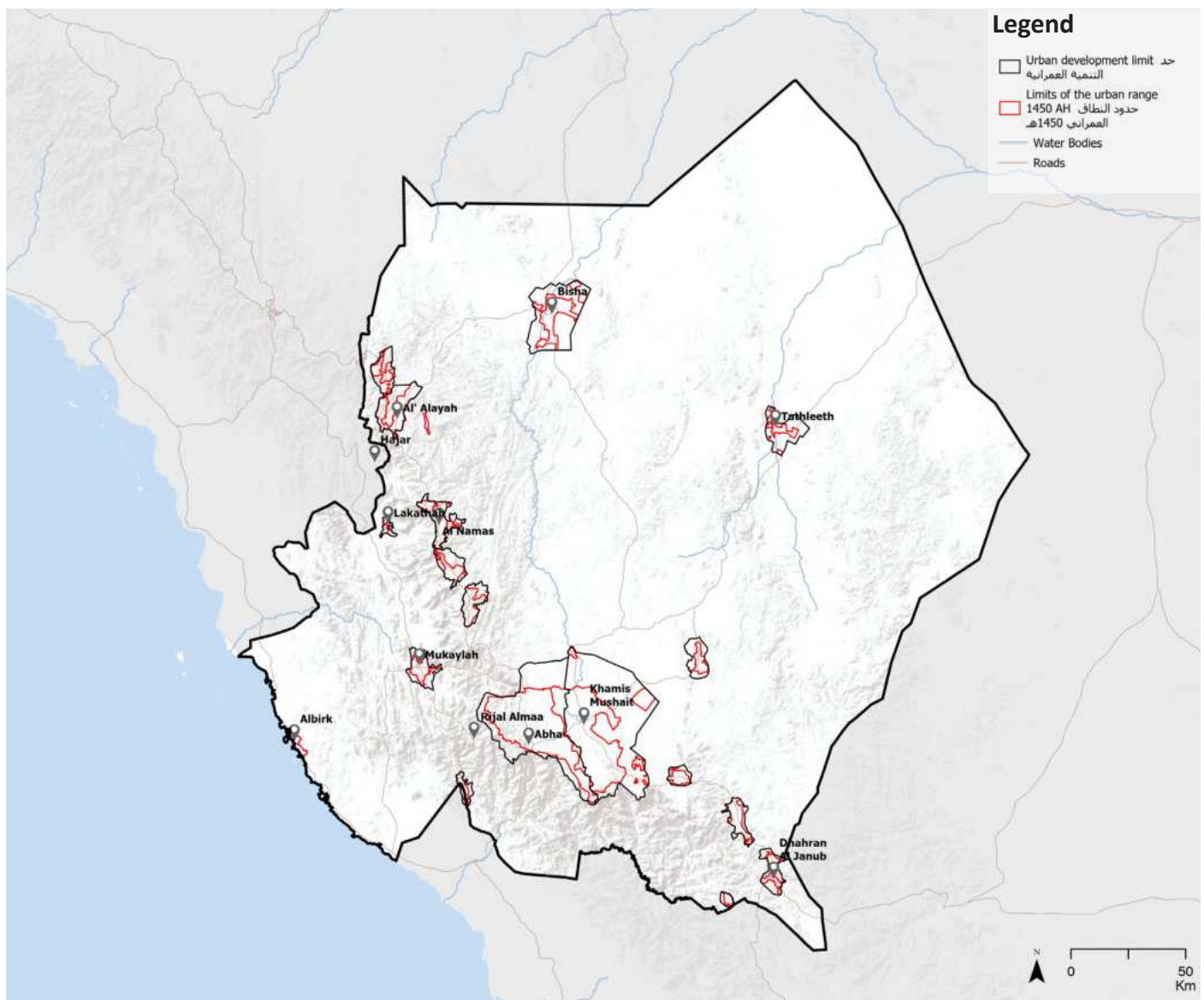
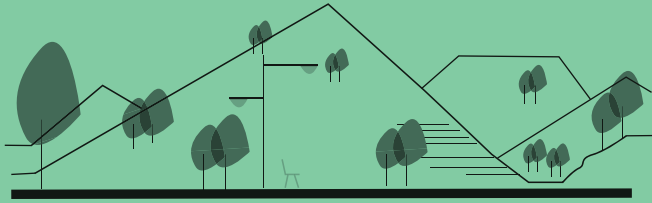


Figure 7 Established Urban Grown Boundaries in Aseer region

The background of the page is a semi-transparent architectural rendering. On the left, a modern building with a dark, textured facade is shown. A courtyard area in the center features a staircase and a vertical architectural element with a decorative, grid-like pattern. Two women in traditional attire are standing in the courtyard. On the right, a large, leafy tree is visible, and a person is standing near its base. The overall scene is brightly lit, suggesting a sunny day.

B

DESIGN ELEMENTS



1 | MANAGE THE LANDSCAPE SETTING

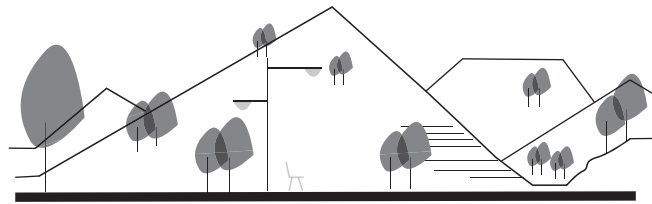


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1 Manage the Landscape Setting

1.1 General Guidance & Checklist

1.1.1 Introduction

Within the Aseer region, the landscape is an expression of the diversity of its heritage and a foundation of its identity, and plays an important public interest role in the cultural, ecological, environmental and social disciplines. Therefore, the AUDC aims to protect and manage impacts on Aseer's natural features, open space and its scenic qualities as well as its ordinary landscapes. This effort aims to enhance Aseer's identity, preserve its past and plan for more desirable future. Whilst change is inevitable, the AUDC promotes sustainable change that protects the natural character for future generations in any new development plans. In this direction, visual pollution mitigations are one means to control the impacts on the landscape setting. The following chapter sets out guidelines to help manage and minimize the impact of change on the landscape.

1.1.2 General Guidance

- Protect the natural and cultural landscape character, including traditional farming practices to preserve the unique character of Aseer and the environment for future generations.
- Preserve and enhance the wadi network to establish green, blue and recreational open space infrastructure; an integrated functioning open space network.
- Protect, enhance and promote ecology in the urban, rural and natural contexts. Ensure habitat connectivity using stepping stones, corridors, and buffers to connect large high quality patches and limit fragmentation.
- Protect & use natural vegetation to preserve the unique character of Aseer's environment for future generations.
- Design high quality open spaces to improve visual amenity, connected pedestrian priority and social areas and create healthy livable cities.

1.1.3 Requirements Checklist

The following checklist of requirements is intended as an agile tool to be used by the evaluating Authority or by the Applicant. It should be used to ensure all important topics related to a new development have been addressed and highlight where there may be a need for additional studies.

Evaluating Authority - Landscape Setting Design Review Checklist		
Base Line Information	<p>Authorities should provide the following information to applicant where available:</p> <ol style="list-style-type: none"> 1. Detailed landscape character assessment. 2. General hydrological plans. 3. General infrastructure plans. 4. Existing land use plans showing areas of special character/ uses/ national parks/view corridors, areas with restrictions such as slopes above 30%, protected natural areas, wadi corridors, buffers. 5. Flora and fauna studies. 6. Setbacks and public realm guidance. 7. LAC and open space guidance. 8. Vehicular access and parking guidance. 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Pre-application Advice	<p>Provide an opportunity for developer/owner to receive guidance on the proposed development and on what type of information/study may be required to obtain permitting.</p>	<input type="checkbox"/>

Supporting Regulating Documents:

- MoMRA, (1426-2005). Open Spaces Planning and Design Handbook.

Additional References and Best Practices

- An Approach to Landscape Character Assessment, Chris Tutor, 2014
- British Standards Part M and K for design guidance on accessibility.
- Council of Europe (2017). European Landscape Convention and Reference Documents.
- Council of Europe (2018). Glossary of the Information System of the Council of Europe Landscape Convention Spatial planning and landscape, No. 106.
- DPZ CoDesign and Indexa (2020). Wadi Hanifah Form-based Code.
- Green Riyadh Design Guidelines (2020). Volume-1 to 3/Version-1/Rev 1, March.
- Landscape Insitute, UK (2019). Visual Representation of Development Proposals, Technical Guidance Note 06/19.
- Landscape Institute, UK (2013). Guidelines for Landscape and Visual Impact Assessment, Third Edition (GLVIA3).
- Manual of Arriyadh Plants, High Commission for the Development of Arriyadh (2011).
- Plant Diversity in Saudi Arabia, <http://www.plantdiversityofsaudi Arabia.info>
- UN Habitat (2019). Abha City Profile.

Applicant (Developer / Owner) - Landscape Setting Design Review Checklist

Required Information	<p>For review and approval as part of development permitting application: Project design to clearly illustrate:</p> <ul style="list-style-type: none"> • Location map of the project or site improvement in relation to Aseer Urban Design Code (AUDC), Character Zone and contextual analysis. • Site plan and context within AUDC clearly illustrating site boundary. • Typical appropriately scaled plan clearly illustrating design intent. • Typical appropriately scaled sections clearly illustrating design intent. • Appropriately scaled details, including treatment of level changes clearly illustrating design intent. • Planting, furniture and materials palette. • 0.5m topographic survey, grading plans and slope analysis for existing and proposed development. • Existing tree survey and protection plan. • Hydrological and storm water plans – existing and proposed including wadi interfaces and buffers, clearly illustrating design intent. • Mobility plan showing vehicular, pedestrian, cycling and transit circulation and access and linkages to context. • Utilities and infrastructure plans, including lighting design clearly illustrating design intent. • Project description. 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<p style="text-align: center;">Additional Information</p> <p>Planning may be conditionally approved and additional information may be requested, if:</p> <ul style="list-style-type: none"> • The site falls within an area of special character. • 15-30% Slope. • Conservation area. • Protected view corridor. • Wadi area. • Sites over 8ha. 	<p>An informal 2 Point Study (2PS) shall be required for development on slopes over 15%, adjacent protected areas or views, within or adjacent to wadi corridors or as required by permitting authority. It shall illustrate the proposal’s setting within the landscape from a publicly accessible open spaces. Location of views must be pre-agreed with permitting authority. It should illustrate how the project fits into the different contexts- the “immediate” context of a development proposal, and its “halfway” and/or “distant” contexts. A base line image shall be provided to illustrate pre-development conditions for comparison.</p>	<input type="checkbox"/>
	<p>A formal Landscape and Visual Impact Assessment (LVIA) may be required for subdivision plans or developments that exceed 10 hectares or as required by permitting authority. It shall illustrate the proposal’s setting within the landscape from a publicly accessible open spaces. Location of views must be pre-agreed with permitting authority. It should illustrate how the project fits into the different contexts- the “immediate” context of a development proposal, and its “halfway” and/or “distant” contexts. A base line image shall be provided to illustrate pre-development conditions for comparison.</p>	<input type="checkbox"/>
	<p>Detailed topographic plans 0.25m, with slope protection and proposed mitigation measures for sites over 15% slope.</p>	<input type="checkbox"/>
	<p>Detail ecological surveys of existing conditions and proposed planting plans and other mitigation measures for land subdivisions and developments larger than 8 hectares.</p>	<input type="checkbox"/>
	<p>Cultural heritage and archaeological surveys.</p>	<input type="checkbox"/>
	<p>A maintenance and management plan for land subdivisions and developments larger than 10 hectares.</p>	<input type="checkbox"/>
	<p>A Landscape Character Assessment for land subdivisions and developments larger than 10 hectares.</p>	<input type="checkbox"/>
<p>An Environment Impact Assessment (EIA) may be required as follows:</p> <ul style="list-style-type: none"> • Within city limits, developments that exceed 10 Hectares. • Outside city limits, as required by permitting authority. • The EIA may include, but is not limited to: <ul style="list-style-type: none"> • Flood hazard and hydrological studies indicating how the new development protects the area from floods and rainfall drainage risks. • Studies that show how public utilities such as sewage, water and electricity, with the clarification of its effect on the wadi and the surrounding areas, are being prepared. • Landscape and Visual Impact Assessment (LVIA). 	<input type="checkbox"/>	

1.1.4 Landscape Setting: Areas of Intervention



Photomontage illustrating possible improvements to the landscape setting

1. Manage slopes with appropriate retaining
2. Protect ridge line
3. Buffer and limit building on slopes
4. Pedestrian friendly roads & streets
5. Access to open spaces
6. Natural vegetation buffers to unused plots

1.1.5 Landscape Character Assessment

Objective

A Landscape Character Assessment should be undertaken in order to analyze and understand Aseer’s landscape character. The region of Aseer, located in the south west of the kingdom of Saudi Arabia, is shaped by various landscape categories that are affected by climate and morphology. These factors combined, create an area unique in terms of its nature, landscape, climate and water availability and in turn settlements and other human activities.

Overview

A Landscape Character Assessment is the process of identifying and describing variation in the character of the landscape holistically, to identify and explain the unique combination of tangible elements and intangible aspects (public perception and social representations) and identify features that make landscapes distinctive. This helps to understand the landscape and assist in informing judgments and decisions concerning the management of change.

This approach establishes the base line classification of landscape types, describing their physical characteristics, wildlife, cultural and geological features. It can then be used to outline how the landscape is changing, how to support economic activity and what the environmental opportunities are.

The final out come of a Landscape Character Assessment includes map(s) and accompanying descriptions of the character types.

Additionally, this process can help establish areas that require additional protection and might be subject to overlays or land use zoning that protects or preserves the character, such as National Parks or Conservation Areas. Planning permission may then be refused for major developments in these designated areas, except in exceptional circumstances and where it can be demonstrated that they are in the interest of the public.

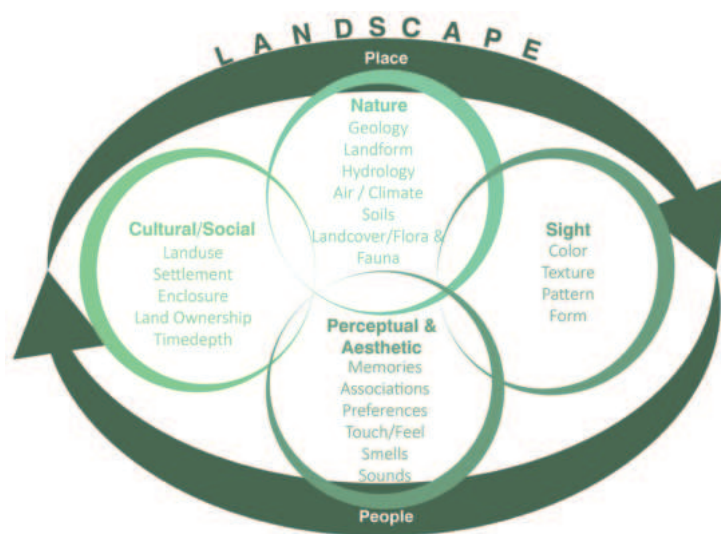


Figure 8 Diagram summarizing the elements that contribute to the landscape character

Guidance

- The steps of the Landscape Character Assessment shall cover the following steps:
 - Define purpose and scope and preparation of the brief.
 - Desktop study.
 - Field study.
 - Classification and description of landscape character types and areas.
 - The Landscape Character Assessment output maps, descriptions & definitions.
- In addition, key principles to consider when undertaking an assessment:
 - Landscape is everywhere and all landscape and seascape has character.
 - Landscape occurs at all scales and the process of Landscape Character Assessment can be undertaken at any scale.
 - The process of Landscape

Character Assessment should involve an understanding of how the landscape is perceived and experienced by people.

- A Landscape Character Assessment can provide a landscape evidence base to inform a range of decisions and applications.
- A Landscape Character Assessment can provide an integrating spatial framework – a multitude of variables come together to define the distinctive landscapes.
- The final output should be further supported by assessments during the planning process to help minimize impacts of development. For example, Environmental Impact Assessment (EIA), Landscape (or Townscape, Seascape) and Visual Impact Assessments (LVIA) or a Landscape Management Plan to assist decision making and judgments.

Overview of Aseer

The climate of Aseer can be generalized as hot during the summer with the mean monthly temperature ranging between 22 and 32°C, mild during winter with a minimum temperature ranging between 16 and 24°C. The maximum average temperature reaches 39°C.

Prevailing southwesterly wind and monsoon rains fall mainly during winter and summer.

The region is further influenced by the Aseer Mountain range which forms part of the Sarwat Mountains. These steep high mountains that reach up to 3000m, receive most of the rain.

Guidance

Note: this initial desktop study is suggestive only, and an appropriate Landscape Character Assessment by a professional consultant must be prepared.

As a result of the climatic conditions, landforms and elevation, the region can be divided into **5 natural environments** or character zones. Through these 5-character zones we can begin to establish a general understanding of the elements that make each place unique and decipher what should be protected.

The five-character zones are defined as:

- Coastal Area
- Tuhama Plains
- Escarpments
- High Mountains
- Inland Desert

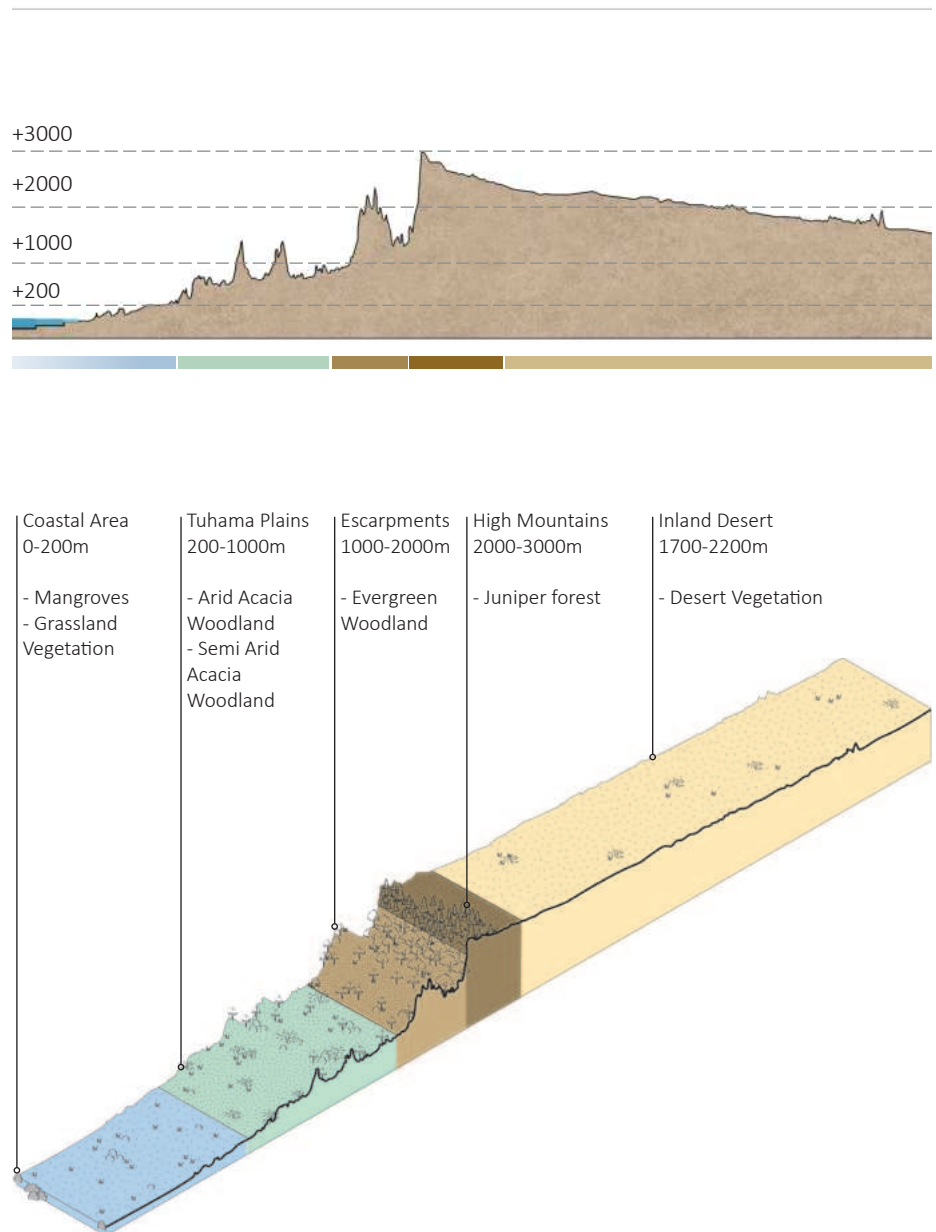


Figure 9 Diagram illustrating Aseer's overall landform and vegetation type.

- **Coastal Area:** is influenced by the Red Sea climatic conditions; as receiving little rainfall and high temperatures. It is characterized by sand dunes that steadily migrate towards the sea and can reach up to 4m, wadis, flood plains and few rocky hills at the Tuhama Plains threshold. Vegetation is typically of low coverage and density. Three distinct vegetation groups effected by soil types can be observed. Xerophytes, (vegetation adapted to the low rainfall), are of a high percentage however with low coverage. Grassland vegetation is typical with some trees found on the rocky hills that provide the right micro-climates. Fragmentation of good quality mangrove habitats are found along the inter-tidal zone of the seashore. Soil is typically found to be a thin layer of poorly sorted fine to coarse grained sand and gravel, but can also include saline soil, lava rocks, sand dunes, hard sandy-silty soil of alluvial deposits, water courses, and disturbed grounds.
- **Tuhama Plains:** are characterized by foothill (rocky hills and small mountains) and undulating basins separated by water courses, creating a wide range of micro-environments. Water courses feature boulders, rocks, stones, sand and carry aeolian deposits from the mountains. The basins are set between the rocky hills and vary in scale. Arid Acacia Vegetation or Semi-Arid Acacia Woodland dominated by Acacia ehrenbergiana are most typical. The variety of micro-environments has led to high species diversity and seven vegetation groups have been defined. Vegetation coverage is moderate. Many plant species are found on the slopes of foothills where diverse habitats such as granite rocky slopes, cliffs, and crevices are found. The soil is typically hard sandy deposits mixed with rocks. Overall, soil is typically found to be granite rocky hillsides, aeolian deposits from the mountains, water courses, and disturbed grounds.
- **Escarpment:** The Escarpments are characterized by low foothills (lower escarpments), water courses, and

hillsides (upper escarpments), which are generally steep. Vegetation is diverse and of higher density than the Tuhama Plains and Coastal Areas. There is a high extent of slopes and escarpments where the bedrock is often exposed (high erosion) and fine soil material is confined to pockets and crevices. Three vegetation groups have been defined which correlate to these landscape characters and are broadly defined as evergreen woodlands. Low foothill conditions offer diverse micro-habitats which appear in the forms of rocky or sandy cliffs and crevices. Within water courses, water is very likely to be seen during or shortly after rain, or in some cases further up the escarpments continue throughout the year where the water course is steep. The hillside slopes in the upper escarpments are generally steep and appear in the forms of cliffs, ridges, sharp peaks, and consist of granite boulders, sandstone and limestone rocks. Soil is commonly sandy stony. Disturbed ground is found near farms and villages, on roadsides, and on wastelands. Soil is predominantly a sandy-gravelly type.

- **High Mountains:** are characterized by hillsides, water courses, some plains and disturbed sites. The hillside slopes are generally steep to the west and decline to the east, and appear in various formations such as rocky cliffs, rocky ridges, granite boulders, granite outcrops, granite sandstones and crevices. Water courses generally consist of sandy-loamy rich with humus soils. A large number of tributaries descend from the top west into the escarpments. Plain areas of various sizes are found among hills to the west. Soil is generally sand pans or gravel pans of granite origin and are typically impervious to water. Vegetation is typically high density. Dry slopes and boulder- strewn wet slopes, ridges and crests are densely covered by Juniperus forest, with shrub, annual and perennial under-story. Two vegetation groups are evident reflecting the dryer slopes and wetter slopes. Shoaib Ridah reserve is a good example of the remaining dense vegetation of

juniper forests and traverses from the mountain ridge to escarpments.

- **Inland Desert:** is characterized as moderate desert with low annual rainfall and is located to the east of the high mountains from where it gradually declines toward the east. This character results in a warmer summer and cooler winter than the adjacent mountains. The landform is typically made up of sporadic rocky hills, sand dunes, water courses, plains and disturbed land. Sporadic rock formations that range in height from a few to 20m above the general sloping surface are scattered throughout. Typically, these formations are made up of rocky granite, rocky outcrop, or sandstone and soil is either white sand or granite sand. Sand dunes are sporadic and cover small areas in the rain shadow slopes. The soil is typically white and sandy. Wadis are typically made up of white sand soil and support various vegetation communities. The vegetation reflects the moderate desert climate with low density sporadic vegetation where micro-climates or periodic water facilitate establishment. The plain habitat covers a vast area, and consists of mostly hard sand, hard saline sand, or soft sand which are deposited after rains.
- **Wadi Corridors:** the main wadi corridors are Wadi Bisha, Wadi Bardani and Wadi Tathleeth. Typically these wadis feature wadi farming and pass through several urban districts and rural settlements. Wadi Bisha and Tathleeth are more extensive and appear to have less vegetation cover compared to Wadi Bardani which is narrow, winds through the escarpments and more densely vegetation. While some wadi tributaries have been channelized through major cities such as Tathleeth, Bisha and Muhayil, in other urban areas the wadi tributaries appear in a more natural condition with soft edges and an organic wadi bed where natural hydrological functions, water flow and sedimentation are facilitated.

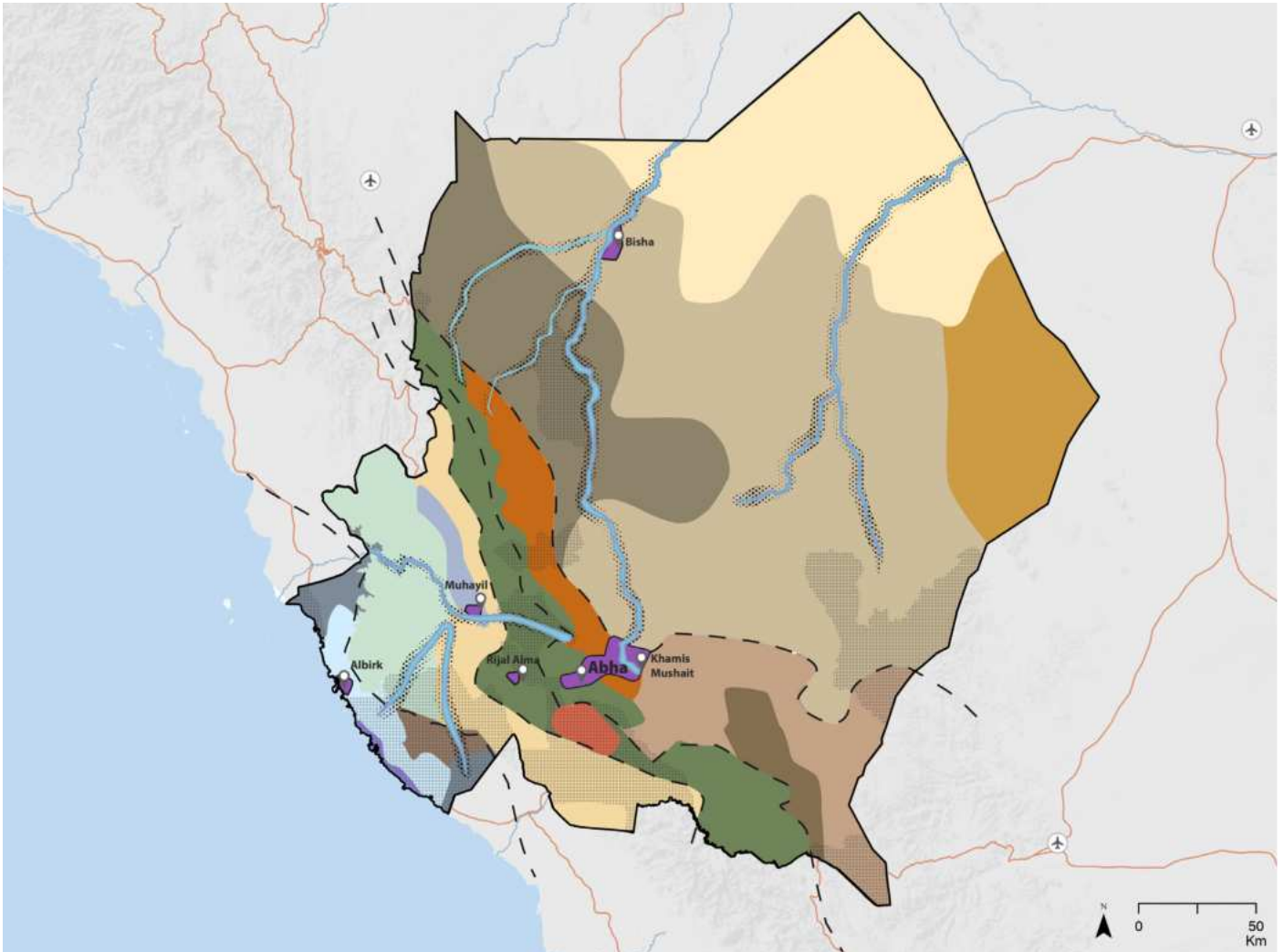
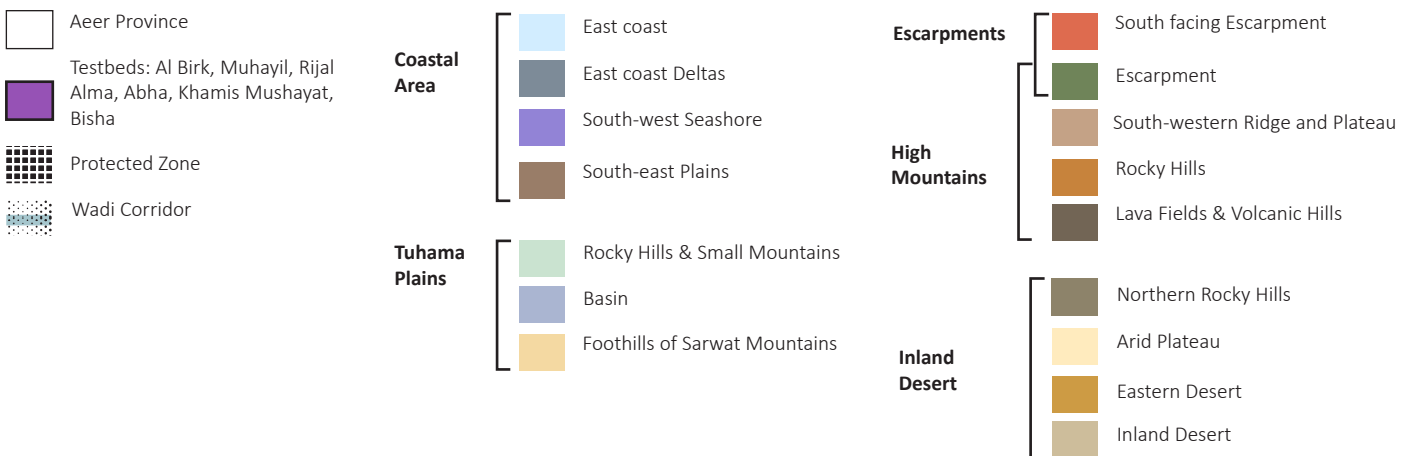


Figure 10 Map of landscape character areas

Legend



1.1.6 Landscape Character of the Five Natural Environments of Aseer

Coastal Area

Overview

Generally, the coastal area is influenced by the Red Sea climatic conditions; receiving little rainfall and high temperatures and is characterized by sand dunes reaching up to 4m that steadily migrate towards the sea, wadis, flood plains and few rocky hills at the Tuhama Plains threshold.

Vegetation is typically low coverage/density. Three distinct vegetation groups effected by soil types can be observed. Xerophytes, vegetation adapted to the low rainfall, are of a high percentage however with low coverage. Grassland vegetation is typical with some trees found on the rocky hills with the right micro climates. Mangroves are found along the inter-tidal zone of the seashore. Soil is typically found to be a thin layer of poorly sorted fine to course grained sand and gravel, but can also include saline soil, lava rocks, sand dunes, hard sandy-silty soil of alluvial deposits, water courses, and disturbed grounds.

It can be established from initial desktop studies, that the area features at least 7 landscape characters, including the wadi corridors.

Arid Region

- Precipitation: Less than 100mm
- Elevation: Seashore to 200m
- Temperature: Average 32°C

Guidance

The Coastal Area and Al Birk's landscape characteristics can be summarized into the following categories and general descriptions:

Coastal Volcanic Fields: vast, exposed plains of volcanic hills and lava fields, interspersed with sand dunes. Vegetation is sparse except where wadis have carved dramatic channels allowing vegetation to be protected and supported. Soil is generally of a granite sandy type.

Coastal Deltas: vast fields of alluvial plains, alluvial fans and short estuaries are shaped by watercourses and generally free from rocky volcanic hills. Vegetation cover is moderate within the wadi and wadi edge, becoming sparse as water becomes more scarce.

Shoreline: features a matrix of alluvial fans, Sabkha (mud flats), sporadic lava fields, sand dunes and wadis. Vegetation is typically low and sparse.

Plains: consist of wide flat basins with alluvial fans surrounded by high volcanic hills. Wadi water courses typically feature moderate vegetation cover.

Mangrove Habitat: areas of high quality yet fragmented deep green mangrove habitat is interspersed with heavily disturbed habitat adjacent to urban areas.

Urban Areas: are typically low density sprawling settlements concentrated along wadis and the coastal edge where a major road runs, becoming more sporadic, small and sparse the further away from the coast line. Productive landscape in the form of flat fields are typically scattered throughout the coastal plains including the volcanic lava fields, whilst wadi farms are clustered along wadis.

Wadi Corridors: are typically wide, measuring at least 200m in width, and appears to maintain a natural condition with soft edges and organic wadi bed and terminate at the shoreline as deltas or short estuaries. Wadi Dhaban and its tributaries are the main watercourses. Dhaban dam intercepts flow in the south west before it reaches the Red Sea.

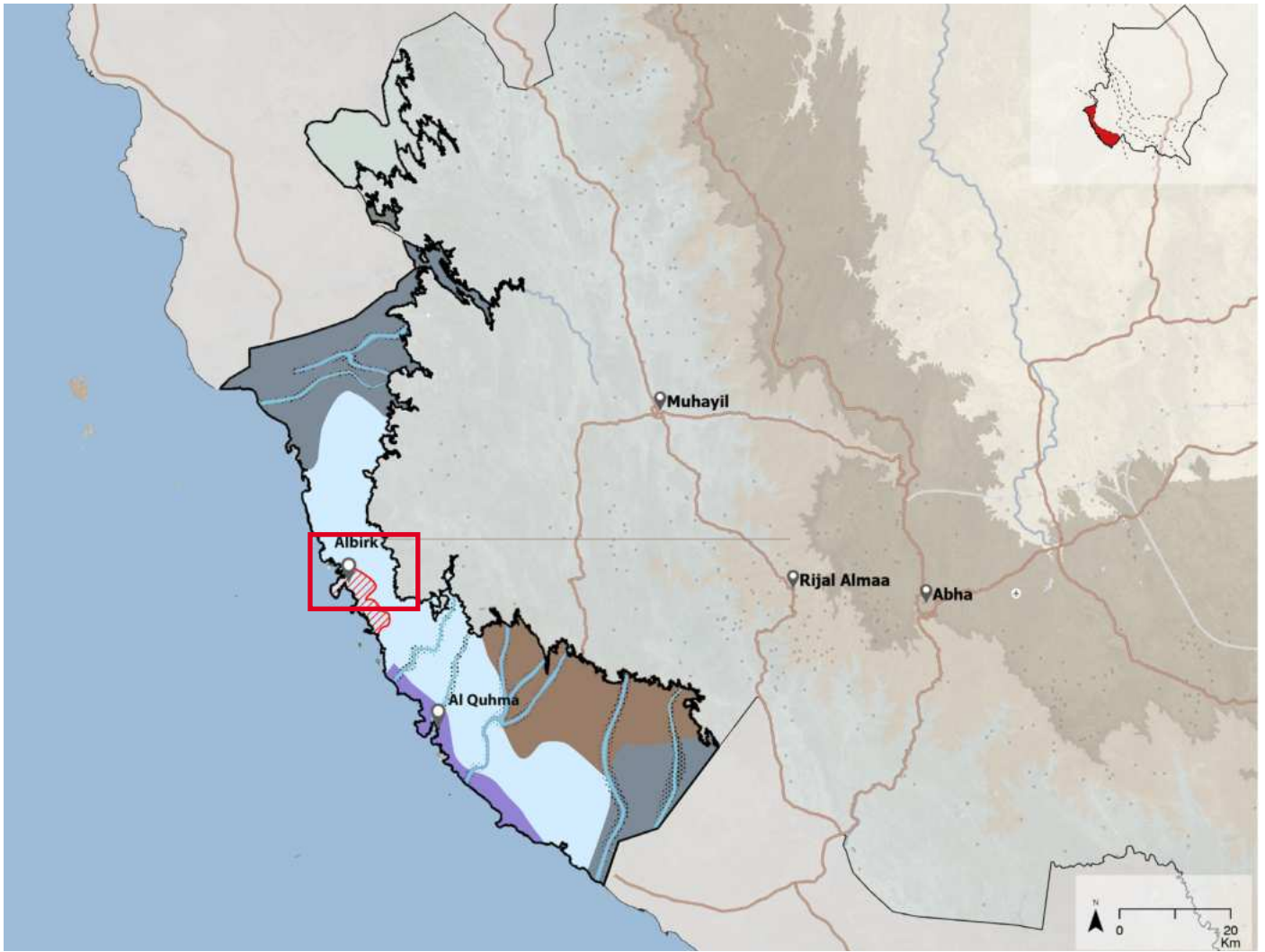





Figure 11 Map of typical landscape character areas of Coastal Area.

Legend

-  Coastal Area
-  Al Birk
-  Coastal Volcanic Fields
-  Coastal Deltas
-  Shoreline
-  Plains
-  Mangrove Habitat
-  Urban Areas
-  Wadi Corridors

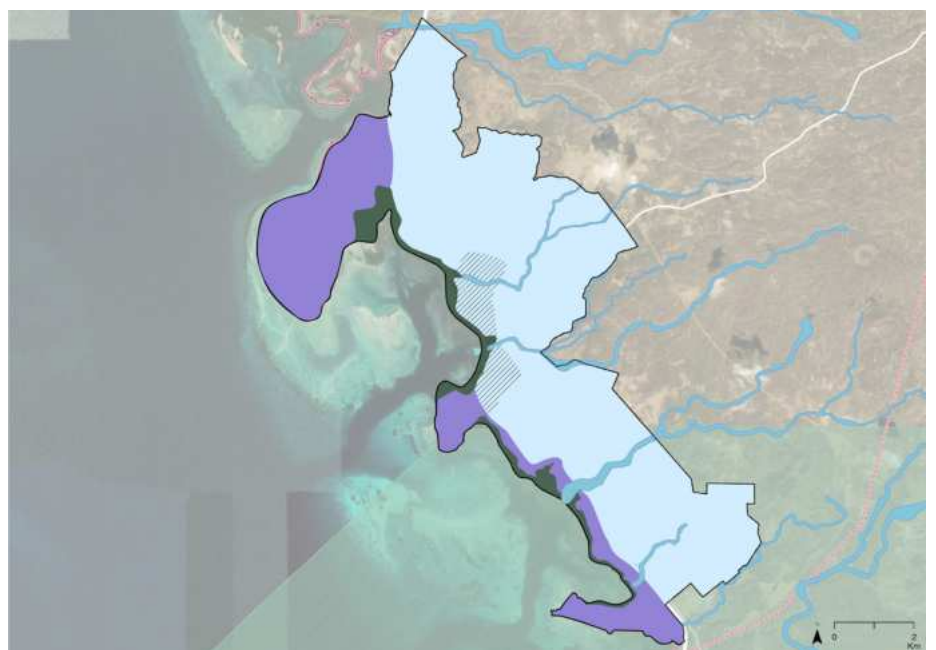


Figure 12 Map of typical landscape character areas of Al Birk.

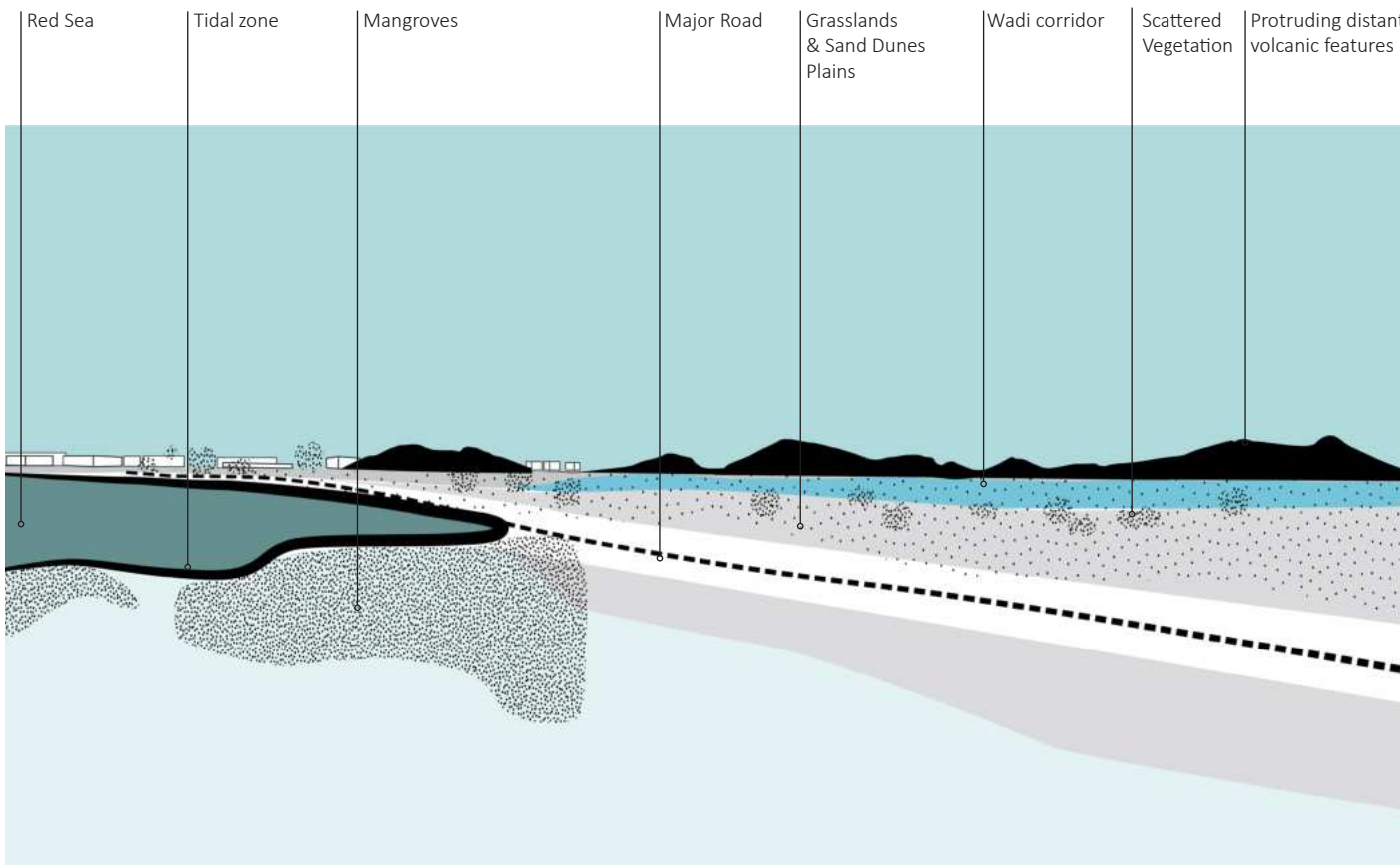


Figure 13 Diagram illustrating the elements that contribute to the landscape experience of Al Birk and Coastal Area. The Coastal Plains are experienced as a vast, open and horizontal landscape. It feels exposed, yet the rough textured volcanic lava fields, smooth sand dunes and flat sea created a balanced composition, both from a distance and human scale. The Red Sea offers a cooling blue contrast to the sandy and volcanic plains. The sea further emphasizes the flatness and expansive qualities of the area, whilst wadi channels offer slight depressions that wind through the landscape offering respite or areas of more intense texture and color

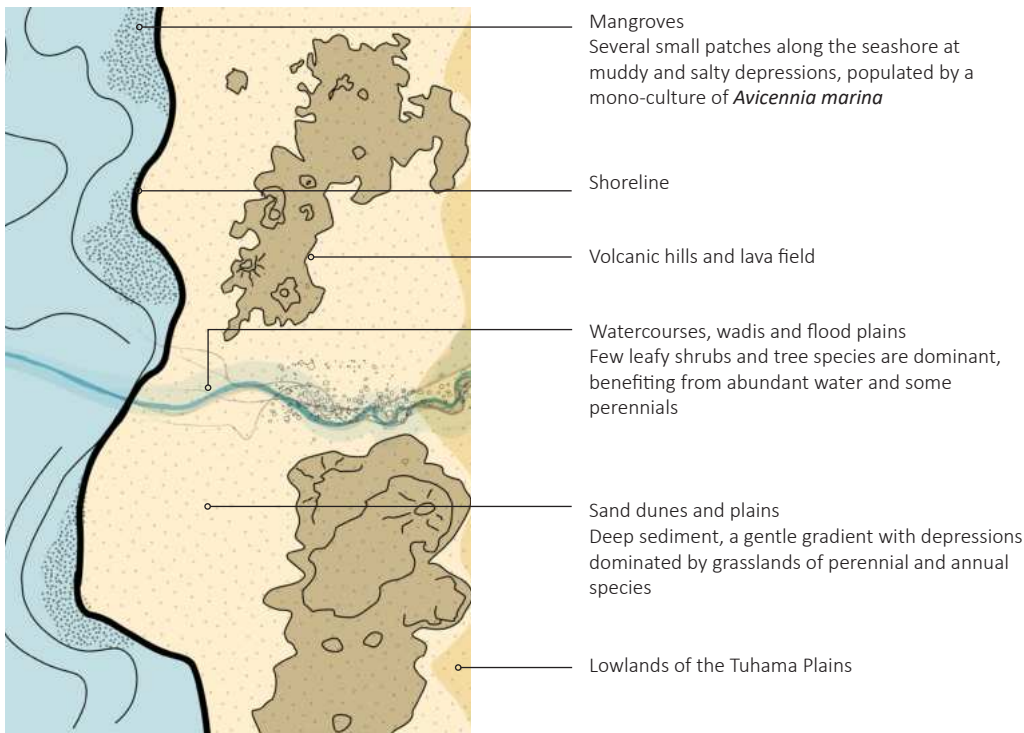


Figure 14 Diagram illustrating the Coastal Area features



Site images illustrating composition of mangrove habitat, settlement and distant volcanic hills, typical sand dune habitat with volcanic hills in the distance, and heavily disturbed mud flats and mangrove habitat adjacent to urban

Tuhama Plains

Overview

The Tuhama Plains are characterized by foothills (rocky hills and small mountains) and undulating basins separated by water courses, creating a wide range of micro-environments. The vegetation is typically arid acacia vegetation or semi-arid acacia woodland dominated by Acacia ehrenbergiana. However, the variety of micro-environments has led to high species diversity and at least seven vegetation groups have been identified. Vegetation coverage is moderate. Overall, soil is typically found to be granite rocky hillsides, aeolian deposits from the mountains, water courses and disturbed grounds.

It can be established from initial desktop studies, that the area features at least 6 landscape characters, including the wadi corridors.

Arid Region

- Precipitation: 100-180mm
- Elevation: 200-1000m
- Temperature: Average 29-32°C

Guidance

The Tuhama Plains and Muhayil's landscape characteristics can be summarized into the following categories and general descriptions:

Rocky Hills & Small Mountains:

mostly characterized by foothills (rocky hills and small mountains) and undulating basins separated by water courses. Many plant species are found on the slopes of foothills where granite rocky slopes, cliffs, and crevices provide ideal and diverse conditions, contributing to the rugged and textured appearance of the hills. The main component of the soil is granite sand.

Basin:

are characterized by flat plains typically set between the rocky hills and vary in scale. In some locations 360 degree views of mountain ridges define the skyline and reinforce the flat yet enclosed experience of the basins. Wide wadis gently wind through these basins informing settlement patterns. The wadi and wadi tributaries in less urbanized areas define the valley basins. Vegetation is often sparse due to extensive sprawling urbanization featuring only productive green. The soil is typically hard sandy deposits mixed with rocks.

Volcanic Mountain: features sporadic volcanic forms and lava fields that are visually prominent due to their exposed rich red brown volcanic rock and soils. Hail Volcanic Mountain is one such example and lacks any vegetation.

Sarwat Mountain Foothills: feature a mosaic of north-west oriented rocky hills, watercourses, wadi farms and sporadic settlements. Vegetation appears as a moderate coverage and intact on hillsides.

Urban Areas: Settlement is sprawling and non specific, however limited by the rock hills and foothills to the flat areas. In some cases development has begun on lower slopes of the mountains or rocky outcrops that are scattered in the flatter valleys and basins between the ridges. Traditional settlement patterns with watch towers and terrace farming, are still evident within the rural valleys. Productive landscapes are scattered along major wadi channels and wadi arms, in places extending some distance from the wadi corridor.

Wadi Corridors: typically feature boulders, rocks, stones, and sand and carry aeolian deposits from the mountains. Along the major wadis, settlement is dominated by productive land and farming patterns. Few natural interfaces remain. The main wadi corridors are Wadi Taiah and Wadi Dahaban. While Wadi Taiah is rather shallow and wide, both wadis have extensive wadi farming particularly on flat lands adjacent to urbanized areas. Wadi tributaries and stormwater creeks typically appear natural with soft edges and an organic wadi bed where natural hydrological functions, water flow and sedimentation are facilitated. Many stormwater creeks are visible, slowly eroding the mountains.

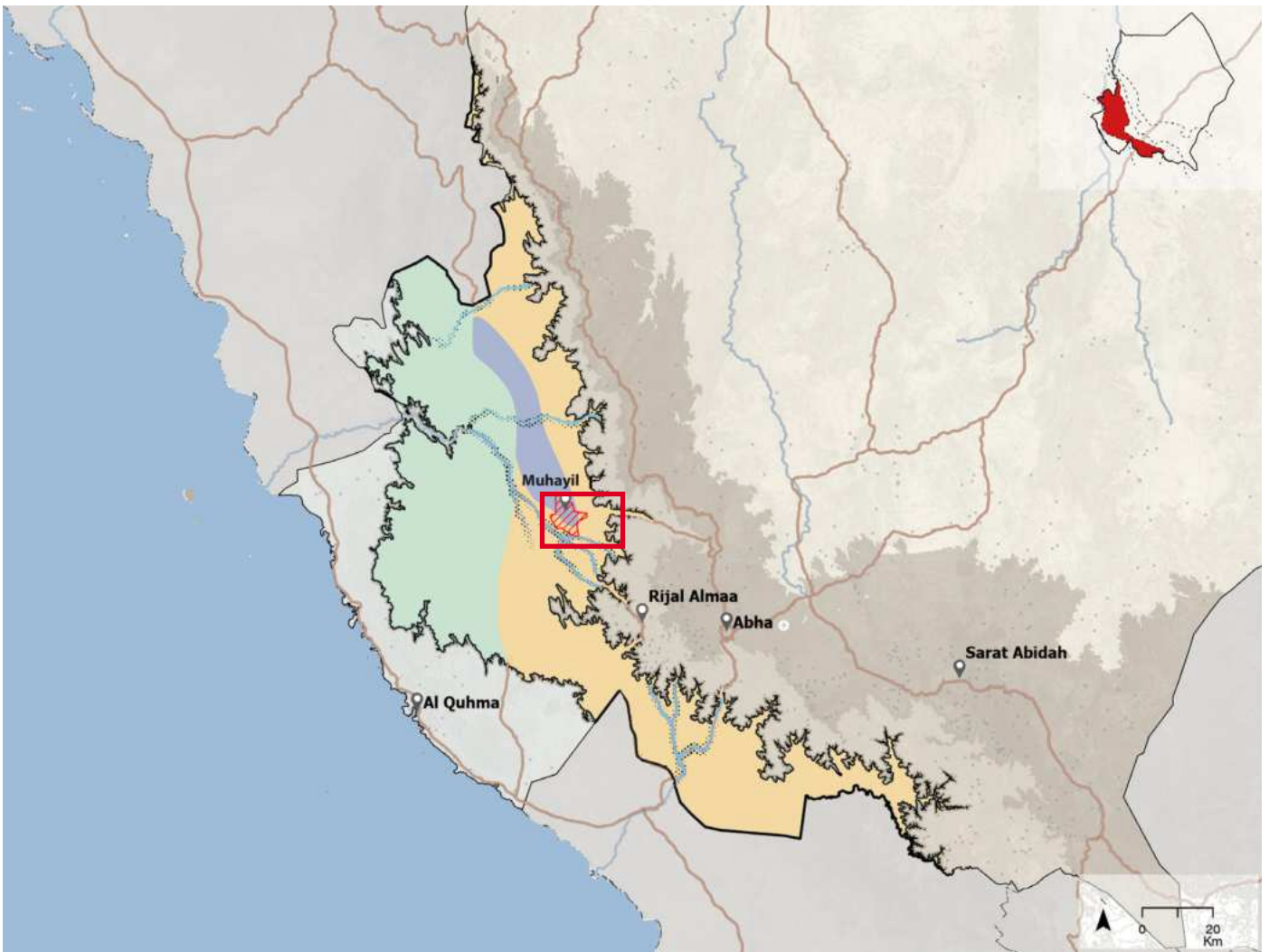










Figure 15 Map of typical landscape character areas of Tuhama Plains

Legend

-  Tuhama Plains
-  Muhayil
-  Rocky Hills & Small Mountains
-  Basin
-  Volcanic Mountain
-  Sarwat Mountains Foothills
-  Urban Areas
-  Wadi Corridors

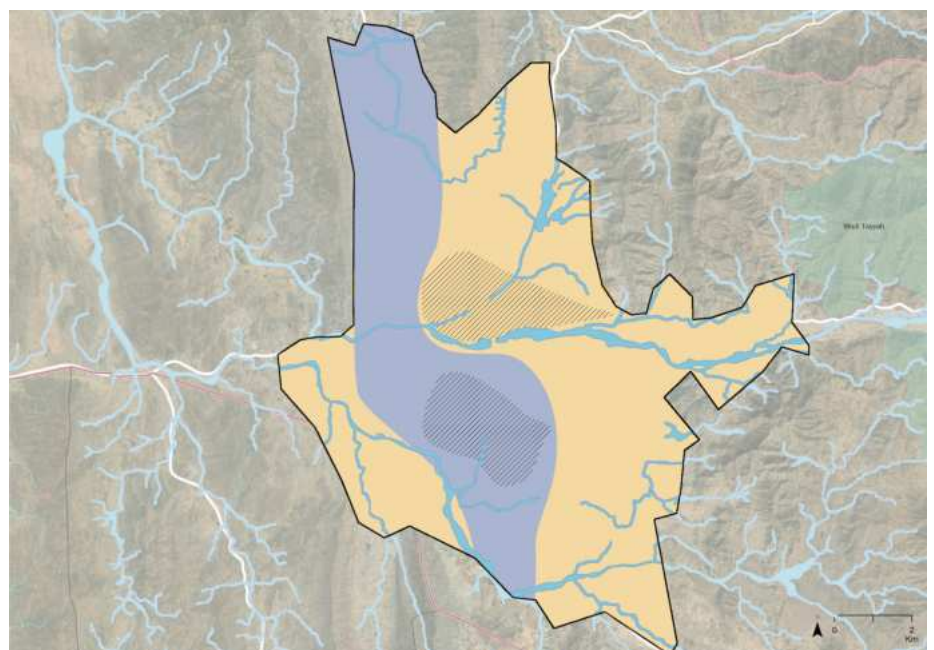


Figure 16 Map of typical landscape character areas of Muhayil

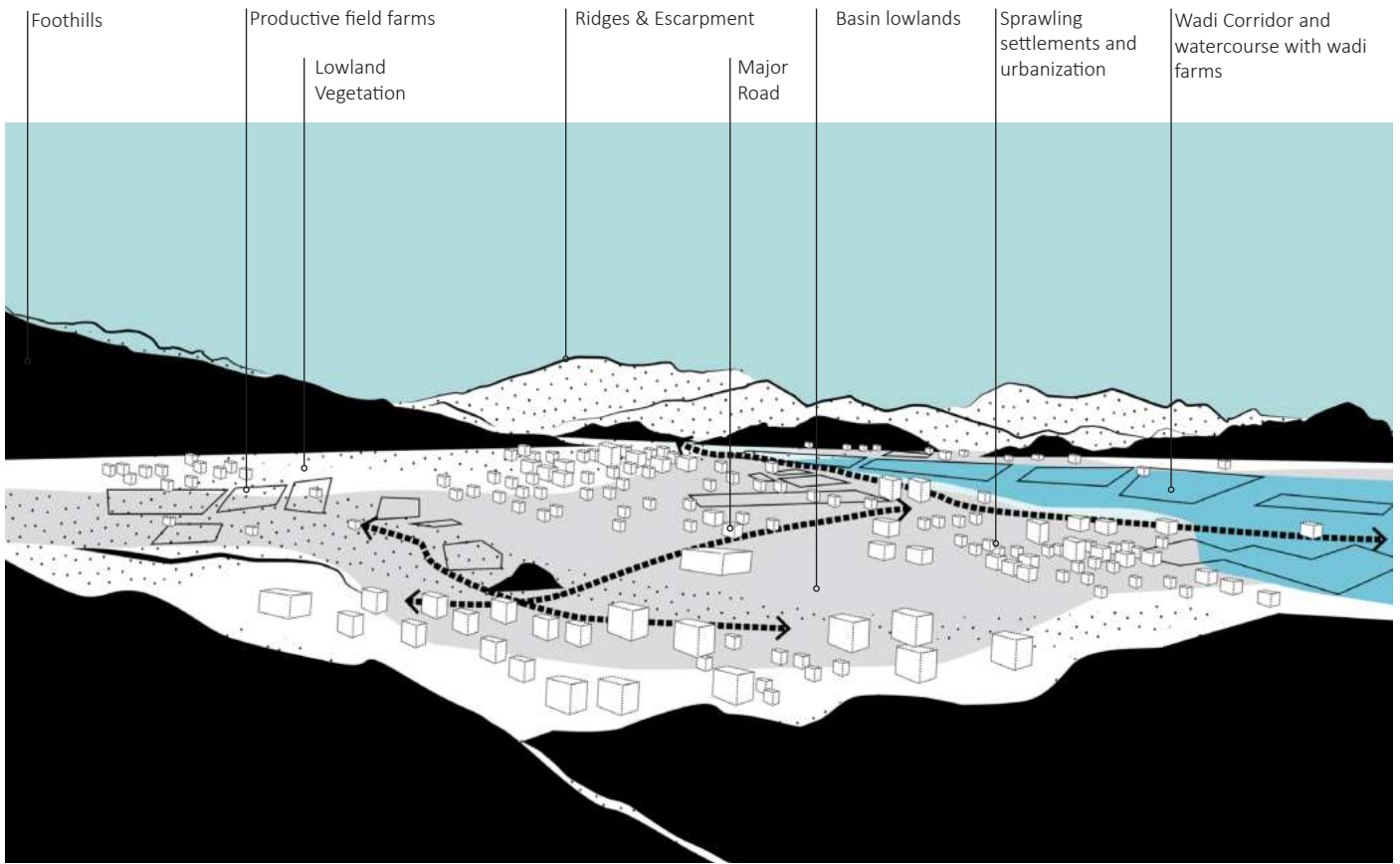


Figure 17 Diagram illustrating elements that contribute to the landscape experience of the Tuhama Plains featuring distinctive north south mountain ranges that define and contrast vast flat basins. Bouldery rocky features and extinct volcanoes add further interest to the skyline, whilst the open basins maintain views to the surrounding ridges establishing a feeling of enclosure enclosed. The wadis dominate the basins and informed traditional settlement patterns which has now become sprawling and modern

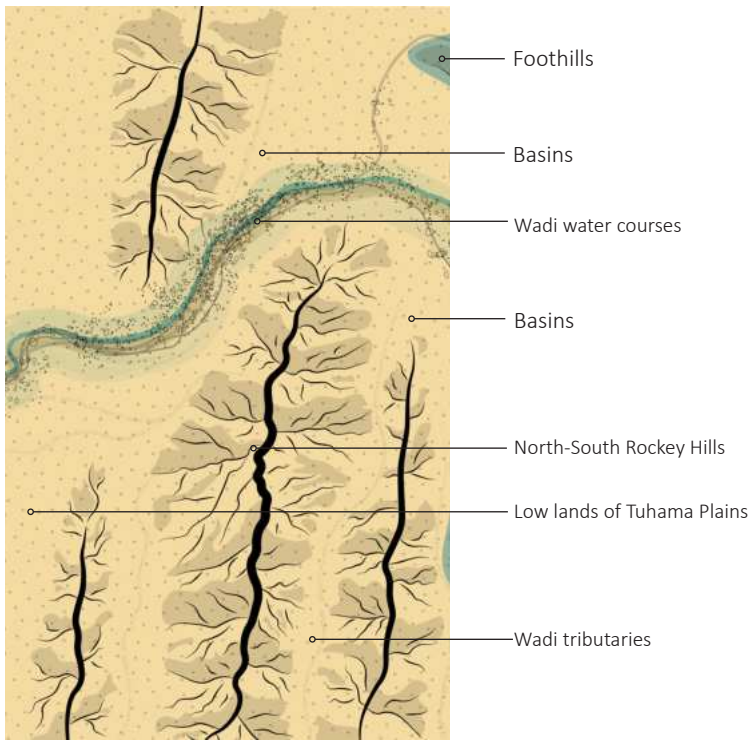
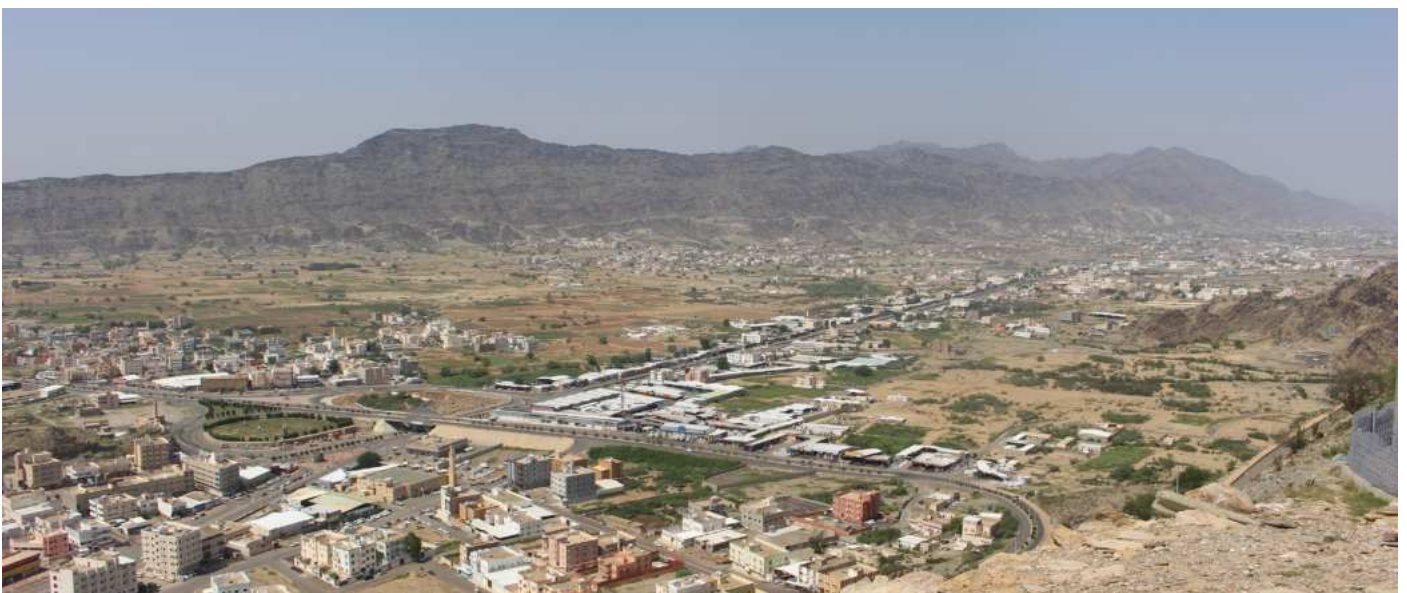


Figure 18 Diagram illustrating the Tuhama Plains features



Site images illustrating rocky hills defining the basin and scattered vegetation on hillsides, eroded wadi corridor and wadi farms with distant mountain ridges and a heavily urbanized basin with a matrix of modern sprawl, field and wadi farms, roads and scattered vegetation on hillsides

Escarpments

Overview

The Escarpments are characterized by lower foothills (lower escarpments), water courses, and hillsides (upper escarpments), which are generally steep. Vegetation is diverse and of higher density than the Tuhama Plains and Coastal Areas. There is a high extent of slopes and escarpments where the bedrock is often exposed (high erosion) and fine soil material is confined to pockets and crevices. Three vegetation groups have been defined which correlate to these landscape characters and are broadly defined as evergreen woodlands.

It can be established from initial desktop studies, that the area features at least 5 landscape characters, including the wadi corridors.

Semiarid Region

- Precipitation: Exceeds 200mm
- Elevation: 1000-2000m
- Temperature: Humid winds 22-29°C

Guidance

The Escarpments and Rijal Alma's landscape characteristics can be summarized into the following categories and general descriptions:

Escarpments: are characterized by low foothills, water courses, and hillsides. The lower foothill conditions create various micro-habitats which appear in the forms of rocky or sandy cliffs and crevices. The hillside slopes in the upper escarpments are generally steep and appear in the forms of cliffs, ridges, sharp peaks, and consist of granite boulders, sandstone and limestone rocks. Soil is commonly sandy stony. Disturbed ground is found near farms and villages, on roadsides, and on wastelands. Soil is mainly of sandy-gravelly type. The resulting linear valleys are defined by wadi corridors that wind through the landscape resulting in a dramatic landscape that draws the eye down the valley. Dark olive green Juniper forests found along the escarpment are in good condition, however fragmented by urbanization, roads and disturbed areas. This is particularly evident in the south. Ephemeral watercourses are abundant and water is very likely to be seen during or shortly after rain,

or in some cases further up the steep escarpments, water may persist throughout the year.

South Facing Escarpment: features dry south facing slopes, where the soil appears more diverse than other areas of the escarpments, consisting of sand dunes and bedrock that has been eroded by the watercourses. Vegetation is sporadic and low density.

Escarpment Protected Area Overlay: features high quality juniper forest and evergreen trees, watercourses and terrace farming.

Urban Areas: typically appear as pockets of rural, low density settlements established along the valley basins and flatter sections of the wadi corridors. More urban modern dense settlements can be seen in the flatter basins in the lower foothills. The productive landscape of the escarpments are typically characterized as wadi farms along the wadi corridor or terraces at the lower escarpments and urban edge creating a patchwork of buildings and farms.

Wadi Corridors: are numerous within the Escarpments, consisting of several wadis, stormwater creeks and water bodies. Wadis are typically narrower with natural soft edges and flow patterns in rural and natural contexts. Within urban areas wadis and watercourses are disturbed by farms, developments and roads but typically maintain soft edges and natural varied flow patterns. The main wadi corridors are Wadi Taiah in the north, Wadi Al Ous in the east, Wadi Al Shabain traversing from the east to the south west and Wadi Hali flowing from the north west to the south. The wadis are valuable green corridors, both visually and ecologically, and important hydrologically, typically forming braided stream patterns due to abundant sediments being deposited.

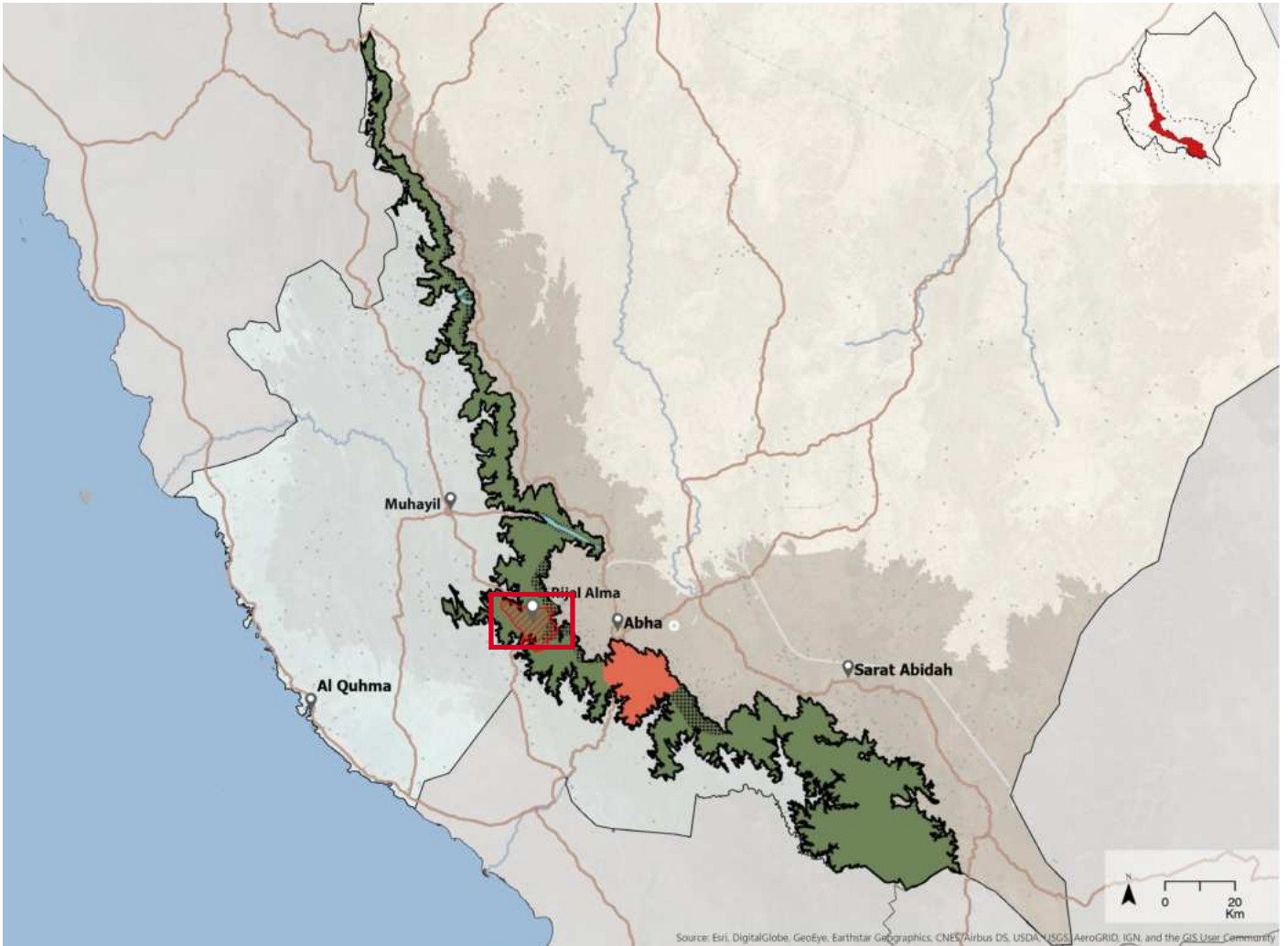









Figure 19 Map of typical landscape character areas of Escarpments

Legend

-  Escarpments
-  Rijal Alma
-  Escarpments
-  South facing Escarpment
-  Escarpment Protected Area Overlay
-  Urban Areas
-  Wadi Corridors

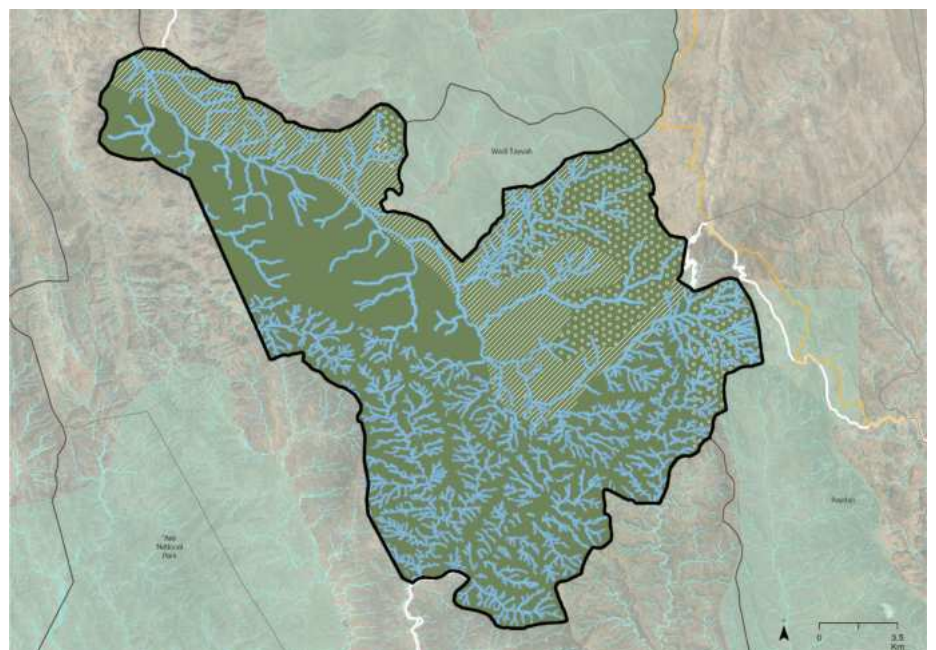


Figure 20 Map of typical landscape character areas of Rijal Alma

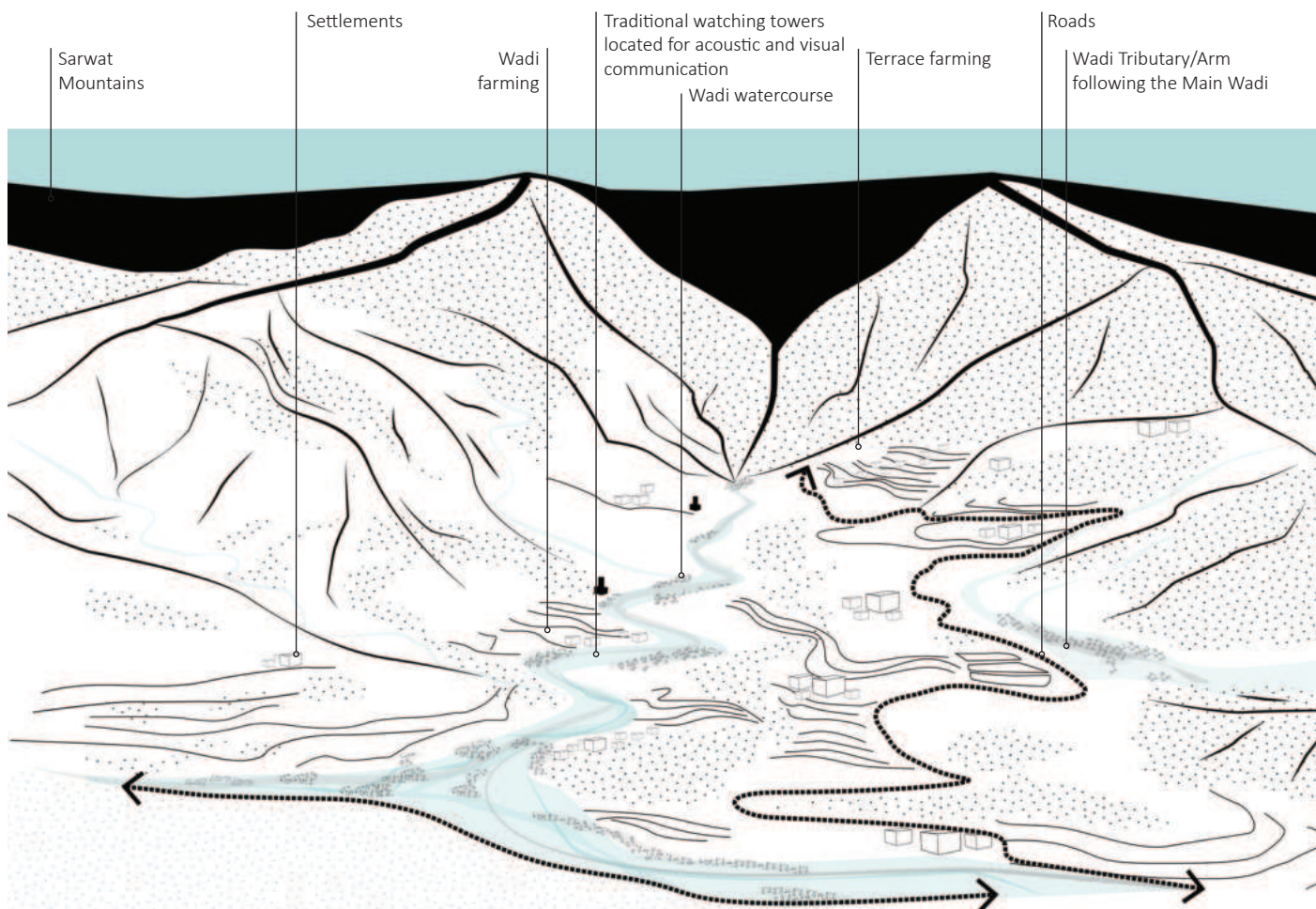


Figure 21 Diagram illustrating elements that contribute to the landscape experience of the Escarpments featuring high monumental ridges and deep wadi valleys. The landscape is vast, impressive and highly textured as natural vegetation covers much of the escarpment slopes. Shadows and complex ridges provide depth and detail from the ridges, whilst the sky draws the eye up the slopes from within the valleys

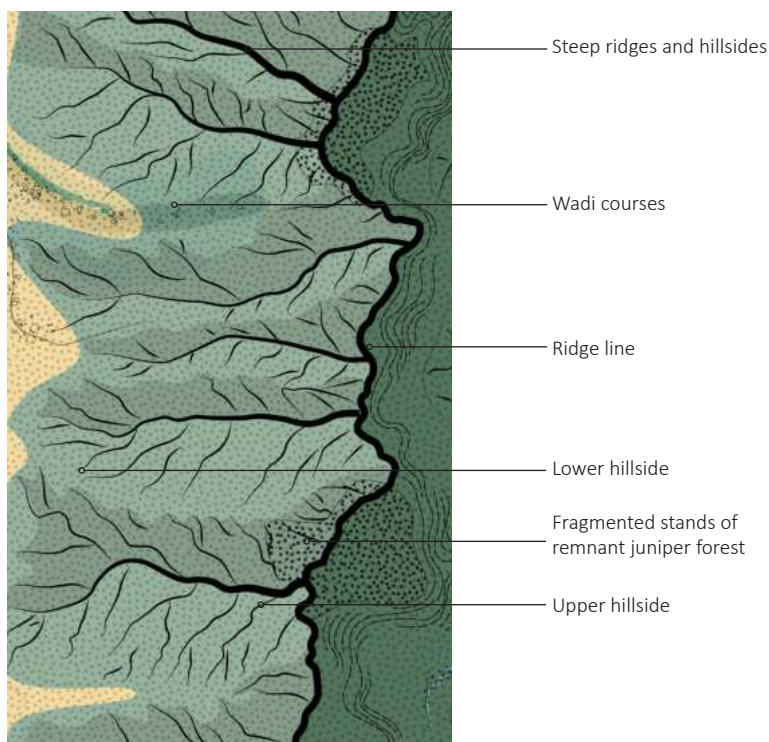
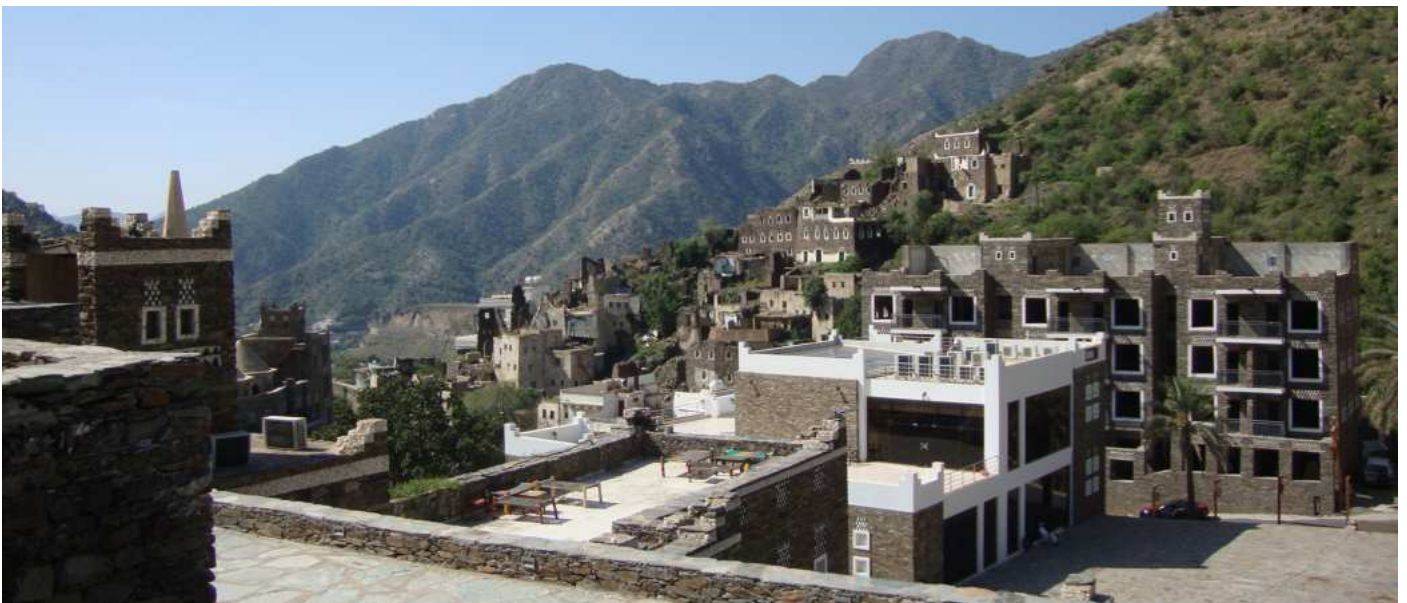


Figure 22 Diagram illustration the landscape character of Rijal Alma and the Escarpments



Site images illustrating the unique and monumental escarpment and wadi valley landscapes offering a dramatic, textured landscape experience and the traditional settlement of Rijal Alma within a valley

High Mountains

Overview

The high mountains are characterized by the ridge line, hillsides, water courses, some gently sloping plains and disturbed sites. Dry slopes and boulder-strewn wet slopes, ridges and crests are densely covered by juniper forest, with shrub, annual and perennial under-story. However due to human activity natural vegetation habitats have become significantly fragmented and degraded. Two vegetation groups have been defined reflecting the dryer slopes and wetter slopes.

It can be established from initial desktop studies, that the area features at least 6 main landscape characters, including the wadi corridors.

Guidance

The High Mountains and Abha's landscape characteristics can be summarized into the following categories and general descriptions:

Ridge: The ridge features a distinctive mosaic of fragmented juniper forests that rap down the escarpment and appear to be intact and of high quality, scattered rural development, terrace farming (both of traditional and contemporary character) and wadi farming. The gently eastward sloping plateau immediately adjacent to the ridge line, features rocky hills, wadi watercourses, fragmented vacant land with seemingly intact, yet sparse vegetation habitat types. Soil is generally of a granite sandy type. Additionally, flat plains of various sizes are found among hills. Soil is generally sand pans or gravel pans of granite origin and are typically impervious to water.

Southern Ridge and Plateau:

appears significantly altered by human activities. It features a mosaic of scattered rural development that intensifies along road corridors, disturbed sites with degraded vegetation, and terrace and field farming within a gently eastward sloping plateau. The landscape is generally flat and devoid of large topographic features, whilst the soil appears sandy with rocky boulder strewn areas and many wadi tributaries are evident. An area of fragmented juniper forest that appears to be intact and of high quality, is evident at the interface with the escarpments and includes a nature reserve. In the south, a secondary rocky plateau is evident with north facing low escarpments.

Rocky Plateau: features a gently eastward sloping landscape covered in geological formations, rocky hills and rocky ridges that appear to be predominantly yellow, red, brown in color, featuring many wadi tributaries, sandy plains and scattered arid vegetation. Wadi farming appears as the most dominant anthropogenic feature, whilst sprawling development tends to follow road corridors and in flatter areas, a patchwork of rural development and field farming can be seen. There is evidence of a significant modern development blanketing an area of the rocky landscape, whilst some areas appear untouched due to difficult and harsh rocky terrain.

Urban Areas: features a mosaic of wadis, wadi farming and urban development. Disturbed vegetation is evident within the wadi beds and wadi edges except where it is diverted underground or features hard edges. The productive landscape are typically characterized as wadi farms or terrace farms and sporadic vacant land is evident throughout.

Semiarid Region

- Precipitation: 260-655mm
- Elevation: 2000-3000m
- Temperature: Wet, foggy, cold/ less than 22°C average

Wadi Corridors: the main wadi corridors are considered Wadi Bisha and Wadi Abha. Both feature extensive wadi farming and pass through several urban districts and rural settlements. Within Abha downtown, the wadi has been channelized in some areas, however in other urban areas, rural areas and within the natural context, the wadi tributaries appear in a more natural condition with soft edges and an organic wadi bed where natural hydrological functions, water flow and sedimentation are facilitated.

Flat Basin (sub-character): features a mosaic of wide and shallow wadi corridors, wadi farms, field farms and is generally featureless in terms of vertical topographic elements. The gentle eastward sloping landscape features modern development patterns along major road corridors, areas of sub-urban sprawl, pockets of organic settlements establishing satellite cities between the Abha and Khamis Mushayat, rural development, roads and vacant arid and denuded land. Some very fragmented and small stands of intact vegetation are evident, mostly along undeveloped wadi tributaries.

Upper Escarpment (sub-character): features predominantly steep rocky escarpments, cliffs, sharp peaks, and ravines with exposed bedrock and granite boulders, stormwater creeks, and juniper forests which appears intact and high quality. The geology is typically granite boulders, sandstone and limestone rocks and the soil are commonly sandy & stony. Anthropogenic impacts are evident in some areas of the escarpment such as roads, resulted in fragmentation and significant erosion.

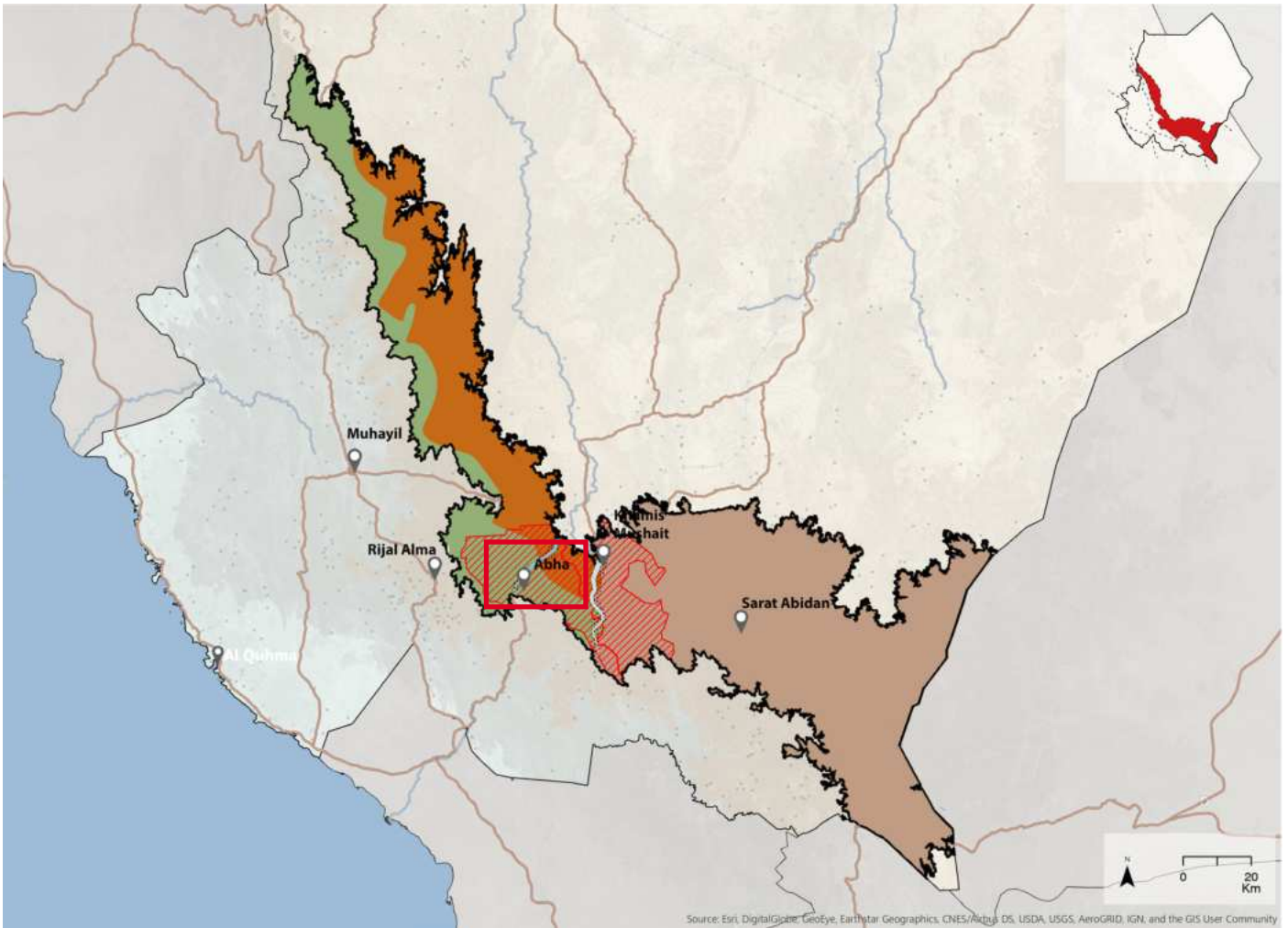


Figure 23 Map of typical landscape character areas of High Mountains

Legend

- High Mountains
- Abha / Khamis Mushayat
- Ridge
 - Upper Escarpment sub-character
 - Flat Basin sub-character
- Southern Ridge and Plateau
- Rocky Plateau
- Lava Fields & Volcanic Hills sub-character
- Urban Areas
- Wadi Corridors

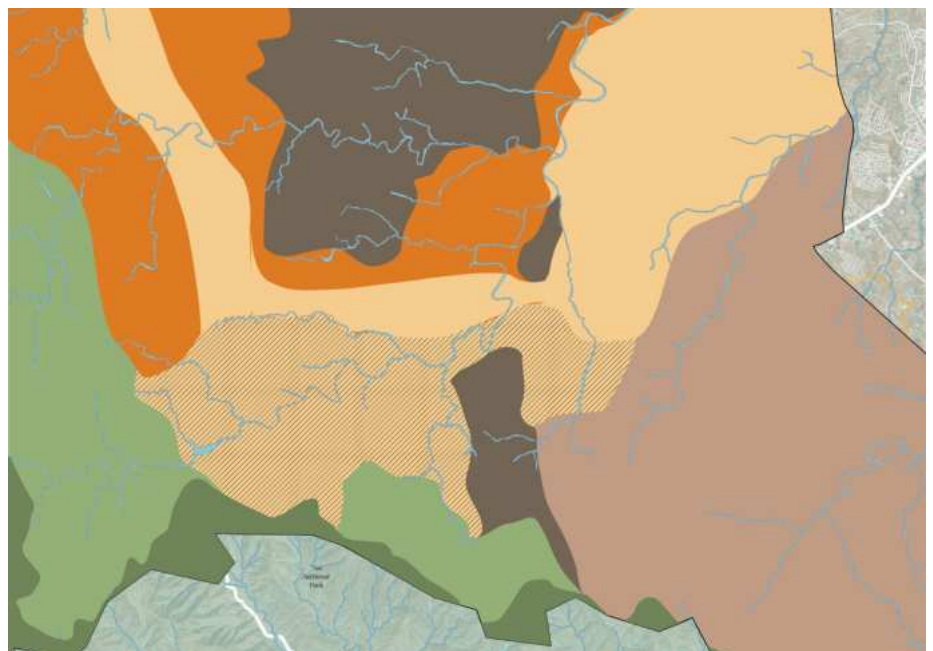


Figure 24 Map of typical landscape character areas of Abha

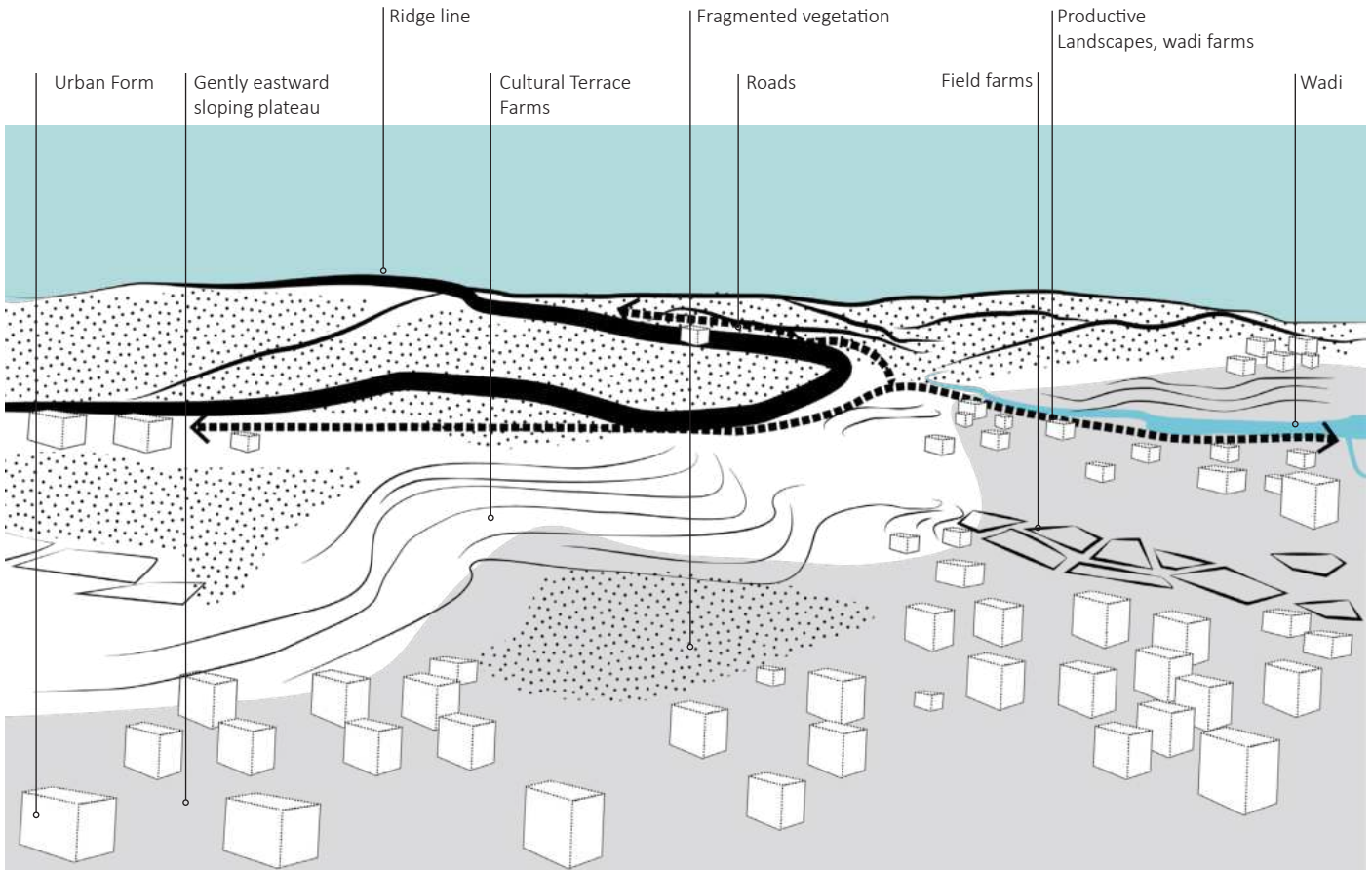


Figure 25 Diagram illustrating elements that contribute to the landscape experience of the High Mountains. The mountain ridge forms a strong contrast to the less dramatic yet more complex, eastward sloping plateau of valleys, low mountains, wadis, rocky features and rippled mountains significantly modified by terrace farms and settlements, forming a rugged landscape matrix. This results in a variety of distinct landscape characters across the Sarwat Mountains. This varied and complex landscape disrupts the vastness experienced at the ridge creating a more human scale and detailed landscape. The many ridges and valleys also create natural boundaries that define settlement patterns

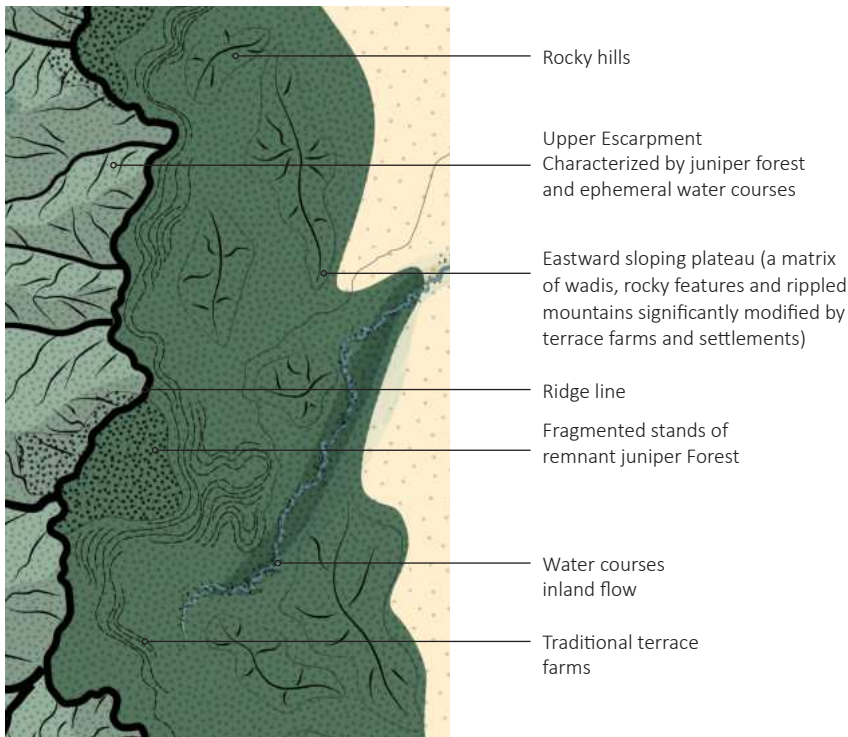


Figure 26 Diagram illustrating the landscape character of High Mountains



Site images illustrating the experience from and along the ridge line, rural character of the plateau and typical terrace farming landscape adjacent to the ridge line

Inland Desert

Overview

The Inland Desert is characterized as moderate desert with low annual rainfall and is located to the east of the high mountains from where it gradually declines toward the east. This character results in a warmer summer and cooler winter than the adjacent mountains. The land form is typically made up of sporadic rocky hills, sand dunes, water courses, plains and disturbed land. The vegetation consists of Al-Talah, tamarisk and Acacia trees, reflecting the moderate desert climate with low density sporadic vegetation where micro-climates or periodic water facilitate establishment.

It can be established from initial desktop studies, that the area features at least 6 landscape characters, including the wadi corridors.

Arid Region

- Precipitation: Less than 100mm
- Elevation: 2200 to 1700m
- Temperature: Average 32 C

Guidance

The Inland Deserts and Bisha's landscape characteristics can be summarized into the following categories and general descriptions:

Rocky Hills: are covered with rocky hills and few sporadic sand sheets to the east. Narrow wadi corridors cut through the hills creating micro-climates. Sporadic and sparse settlements can be seen in the lowlands, situated along road corridors.

Arid Plateau: is a vast and predominately flat area that features a variety of geomorphological features including shallow soils and sand covered pediplains, white sand sheets and hillocks, gypseous pediplains and alluvial plains with sand cover where wadi corridors are evident. Sand dunes are also evident and are associated with scattered and sparse arid vegetation reflecting the moderate desert climate where micro-climates or periodic water facilities establishment.

Desert: consists of a flat plain featuring yellow and sand colored sand dunes, some rocky hills and narrow wadi corridors that support sporadic arid vegetation.

Inland Desert: is the predominant landscape character and features a complex matrix of gently eastward sloping land covered in geological formations that appear yellow and red brown in color, with gypseous and deep soil pediplains, and sporadic rock formations are scattered throughout that range in height from a few to 20m above the general sloping surface. Typically these formations consist of rocky granite, rocky outcrops, or sand stone and soil is either white sand or granite sand. The primary wadi corridors and tributaries appear shallow and support arid vegetation. Wadi farming and rural settlements are scattered along wadi corridors, whilst clusters of industrial areas are evident and modern development tends to follow road corridors.

Urban Center: Settlements are concentrated along the wadi basins and connected by a major road, becoming more sporadic, small and sparse the further away from vegetation and the water source. Wadi farming and field farming (supported by wells) are the most dominant land-use visible.

Wadi Corridors: The main wadi corridors are Wadi Bisha and Wadi Tathleeth which both feature extensive wadi farming and pass through several urban districts and rural settlements. Wadi tributaries appear in a more natural condition with arid edges and an organic wadi bed where natural hydrological functions, water flow and sedimentation are facilitated. Soils are typically white sand soil and support arid landscape vegetation communities.

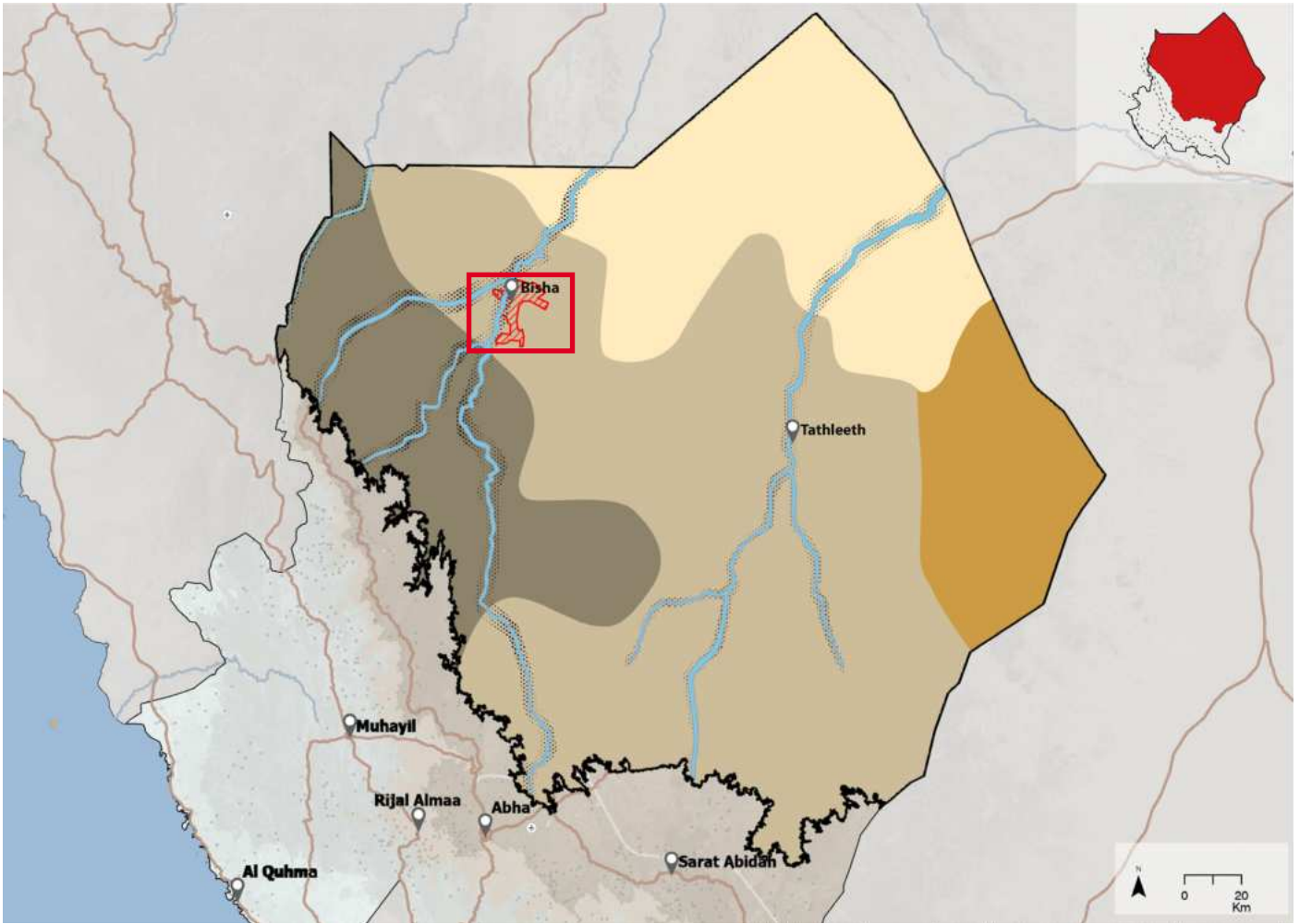


Figure 27 Map of typical landscape character areas of Inland Desert

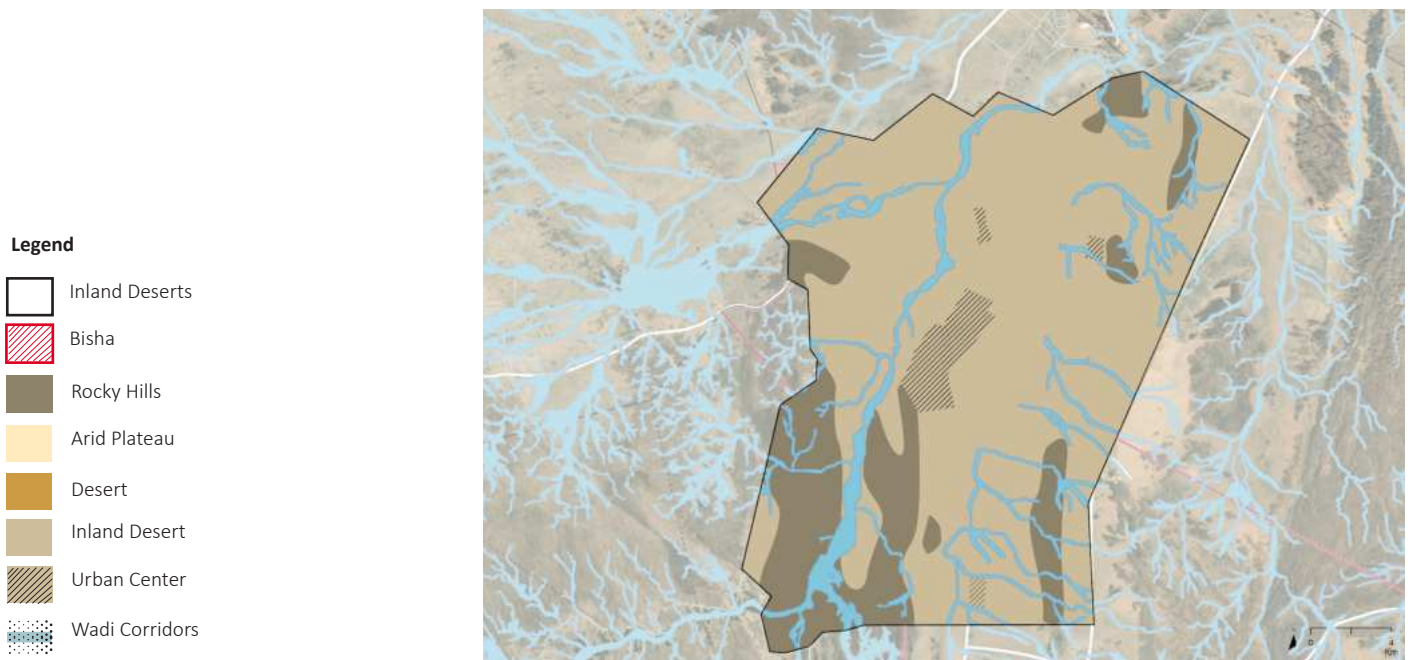


Figure 28 Map of typical landscape character areas of Bisha

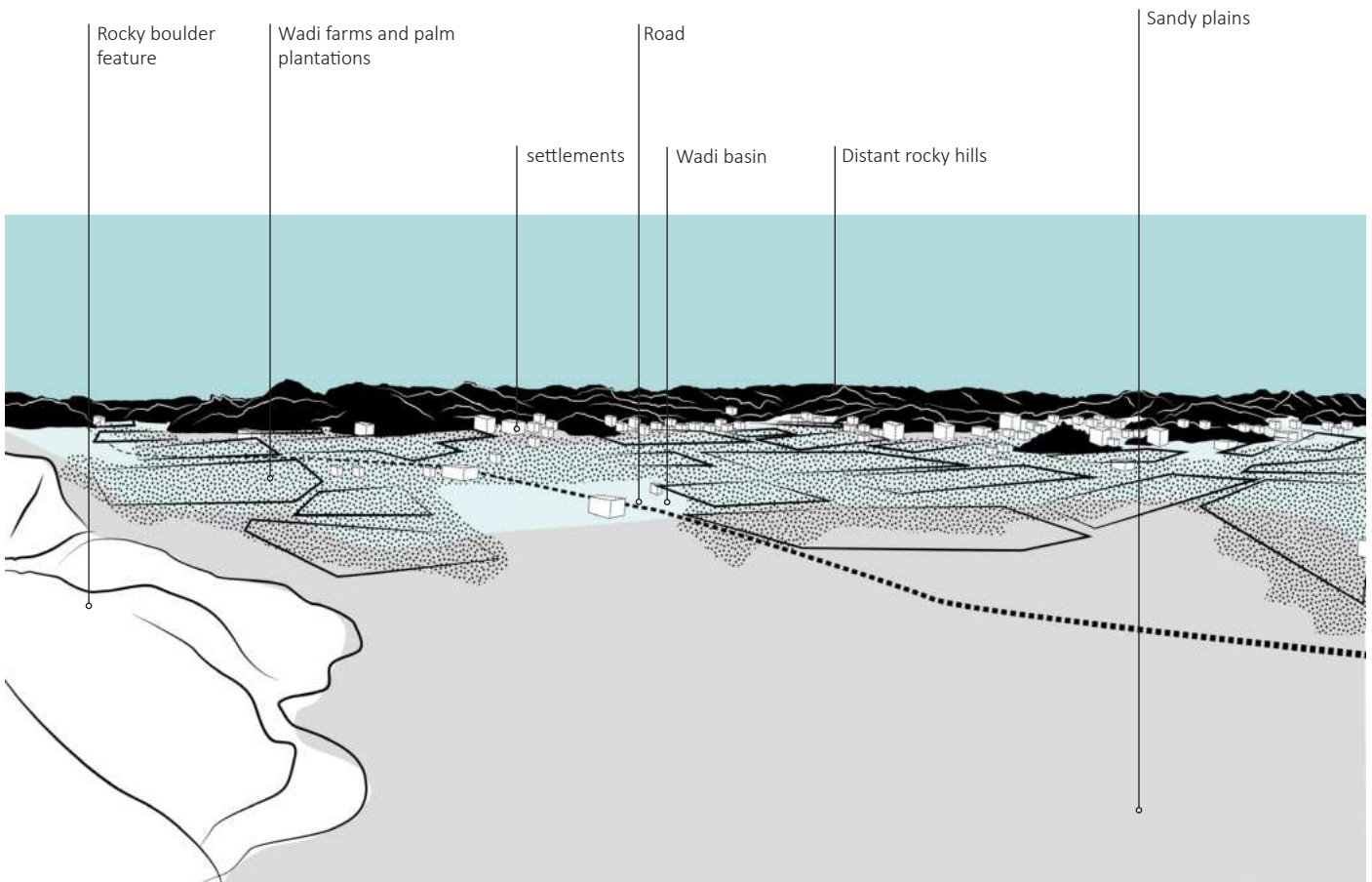


Figure 29 Diagram illustrating elements that contribute to the landscape experience of the Inland Desert. The Inland Desert’s distinctive landscape is defined by desert plains, monumental and rocky bouldery features and low mountain ridges. The landscape is vast, open and the scale is expansive. The texture is produced predominantly by the contrasting rocky features, sandy plains and green wadi farms

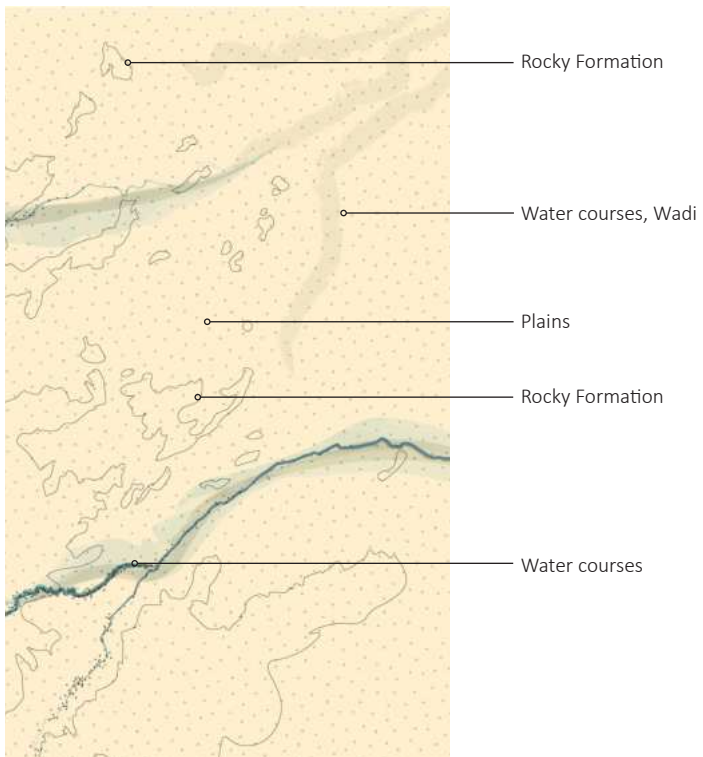


Figure 30 Diagram illustration the character of the Inland Desert



Site images illustrating distant volcanic hills, wadi farms and palm plantations, sand sheets covered by sparse arid vegetation and rock boulder features of the Inland Desert around Bisha

1.1.7 Landscape and Visual Impact Assessment

Objective

To control and manage sensitive development with the use of visual studies illustrating development impacts, and determine any mitigation or improvements necessary to ensure the development is in keeping with the natural landscape setting.

Overview

Visual assessments of the landscape and visual effects as a result of development can be undertaken in a formal capacity (i.e. EIA for a significant development project using Landscape and Visual Impact Assessment methodology), or an informal capacity (i.e. for plot development on slopes using a Two Point Study).

This process assists both the developer and authority to ensure the development is in keeping with the context and any mitigation measures can be agreed.

A Landscape and Visual Impact Assessment (LVIA) is the process of demonstrating the effects on the landscape (or Townscape (TVIA) or Seascape (SVIA)) a proposed development will have. An LVIA is a **technical** process that establishes a description of the effects on the landscape by identifying landscape sensitivity and visual receptor, values, susceptibility to change and magnitude of effects. An LVIA can however be an time consuming and costly exercise.

A Two Point Study (2PS) is an **illustrative** visualization process that required two view points from different publicly accessible spaces to be agreed with the permitting authority. From these two points, high quality base line images should be taken that can then be used to overlay the proposed development to illustrate the effects.

Guidance

The steps of the Landscape Assessment shall cover the following

- A proportionate approach should be taken, whereby the type or scale of the development, purpose and audience making decisions, and sensitivity and magnitude of potential landscape and visual change should be consider to decide on the most appropriate method and visualization type and number of view points.
- Formal visualizations of **Type 1, 2, 3 or 4** shall be required for developments over **10,000sqm**, subdivision plans, master plans, special development areas, regionally significant infrastructure projects, or projects requiring an EIA. The methodology used may follow the LVIA process or a **2PS**.
- Informal visualization **Type 1 or 2** shall be required for developments within protected view corridors, within protected areas, on slopes, hillsides or adjacent to ridgelines, within the Wadi Development Zone or adjacent to water bodies. The methodology shall follow the **2PS** process.
- The location of the agreed views should be carefully decided. They shall be from an accessible open space and shall be documented to ensure it captures sufficient context to assess impacts to the landscape setting.
- Agreed location from which a view should be assessed shall be within **3km** of the development site.
- The height of the camera shall be approximately **1.75m** from the ground, a good quality image taken on a clear day shall be used for base line photographs and subsequent visualization studies.
- Any baseline photographs shall show existing conditions, whilst the visualization shall show the proposed situation.
- Planning permission should be refused where the impact is detrimental to the landscape setting and mitigation measures can not be agreed or achieved.

Methodology

- 4 visualization types:
- Type 1: annotated viewpoint photographs, uses annotations to represent context and outline or extent of development, and of key features. Applies to **LVIA & 2PS**.
- Type 2: 3D Wireline / Model (non-photographic). The type of visualization represents the 3D form of development in its context, but not overlaid onto a photograph. Applies to **LVIA & 2PS**.
- Type 3: photomontage/ photowire. Appearance, context, form and extent of development is overlaid onto a photograph. Applies to **LVIA**.
- Type 4: Photomontage / Photowire Survey / Scale Verifiable. Scale, appearance, context, form, and extent of development is overlaid onto a photograph. A full frame sensor camera and tripod are required for photography, as well as verifiable data sources and a description of the methodology. Applies to **LVIA**.
- In either an **LVIA** or **2PS** the outcome should contain:
- Base line image of the site before development from agreed publicly accessible location.
- Visualizations of either **Type 1, 2, 3 or 4** illustrating proposed development on an **A3 sheet**.
- A description of the project and effects on the landscape setting.
- Accompanying matrix or tables may also be submitted as part of an LVIA.
- Refer to Checklist for sources providing additional guidance on LVIA methodology and visualization types.

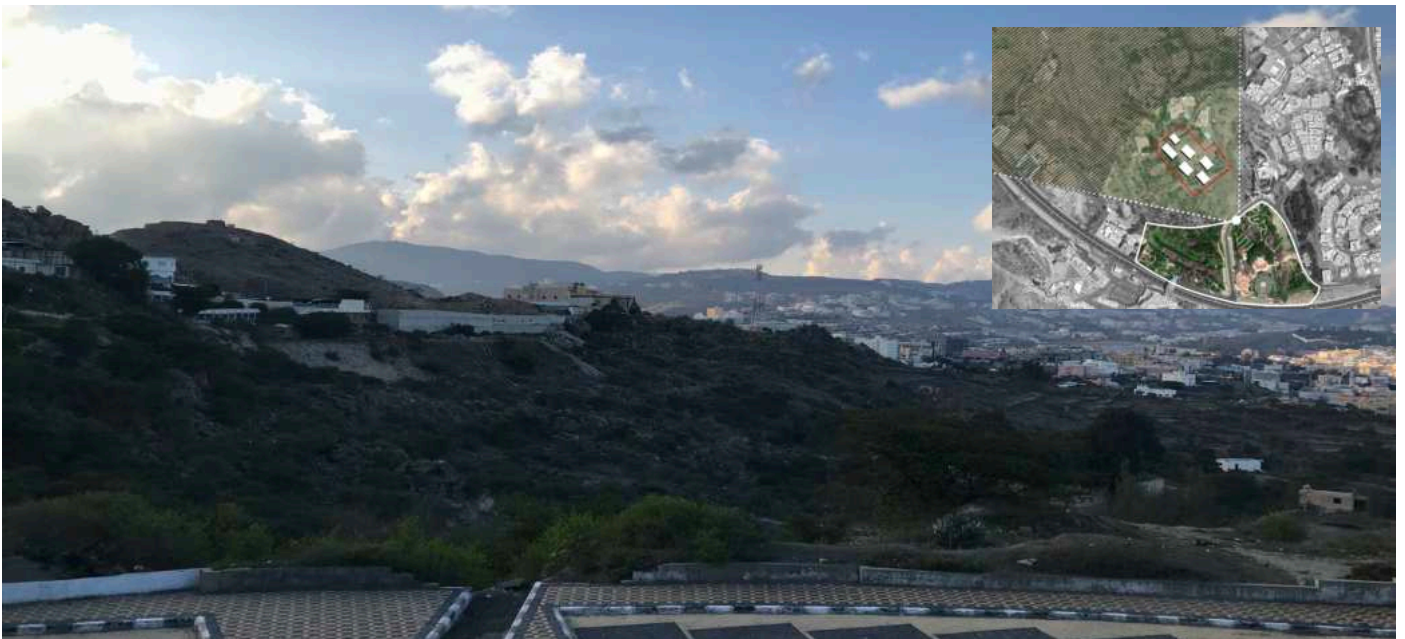


Figure 31 Base line Photograph of agreed view and key plan, showing landscape setting, site, publicly accessible site and agreed view point

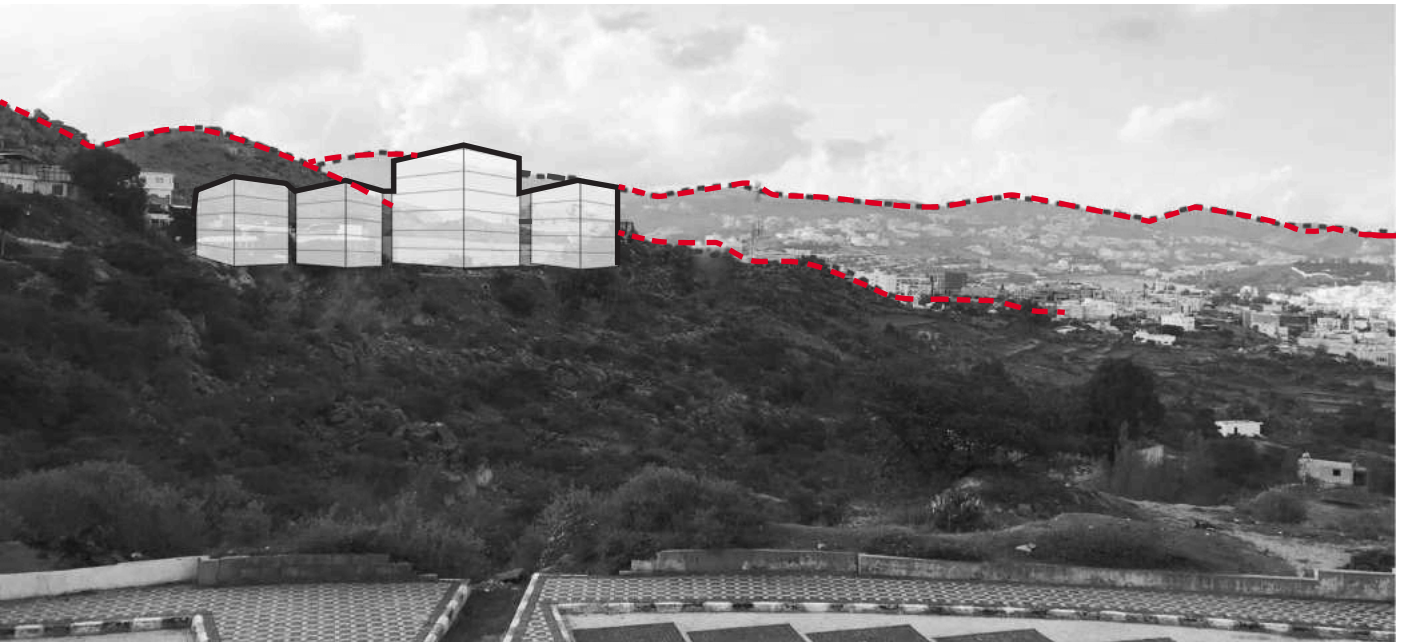


Figure 32 Type 1 visualization from view of initial proposal undertaken as part of a 2 Point Study



Figure 33 Type 1 visualization from view with modification to reduce impact on the landscape setting, maintaining ridge line, terracing development on slope and sensitive terracing to minimize retaining and erosion, undertaken as part of a 2 Point Study

1.2 Protect Natural Landscape Character

Overview

Aseer’s natural landscape is an expression of the diversity of its heritage and a foundation of its identity. Protecting Aseer’s natural features and its scenic qualities mean enhancing its identity, preserving its past and protecting the landscape character for future generations.

General Guidance

- Protect the shoreline character with buffers to maintain views and natural character for the public and visitors to enjoy.
- Preserve horizontal and vast character of Coastal Plains and Inland Desert, a special and contrasting landscape experience to the mountain areas that contribute to Aseer’s diversity, beauty and identity.
- Protect the ridge lines & plateau to maintain the unique quality of the Sarwat Mountains.
- Protect views & skyline to maintain the natural appearance of skylines and preserve valuable views for public enjoyment and aesthetic quality.
- Control development on hillsides and slopes to protect the landscape character and environment and minimize visible scars on the landscape.
- Control grading & retaining using appropriate limitations to mitigate visual pollution.
- Apply regional techniques and detail for grading & retaining to enhance the character of Aseer.



Existing condition and opportunities for visual improvement

1. Manage shoreline with appropriate retaining
2. Enhancing and preserving marine vegetation
3. Pedestrian friendly roads & streets
4. Access to open spaces
5. Preserve sea shoreline and horizontal view with natural buffer

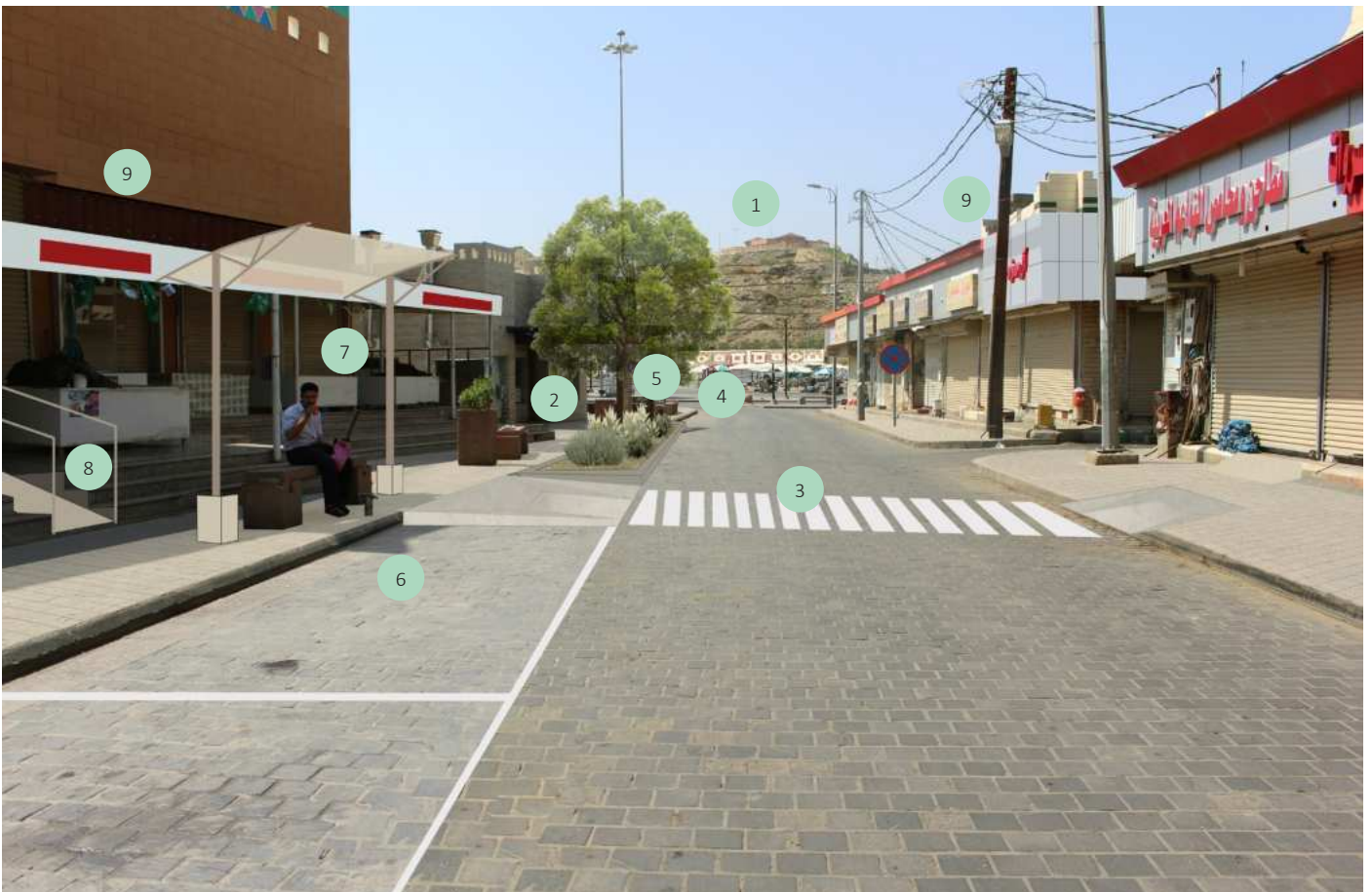


Photomontage showing possible landscape improvements through the application of AUDC guidance



Existing condition and opportunities for visual improvement

1. Manage slopes with appropriate retaining
2. Appropriate softscape on pedestrian sidewalks
3. At-grade pedestrian and cycle crossing, integrating drop-kerb
4. Maintaining horizontal view
5. Implementing local art where possible
6. Organize and rationalize parking, minimizing to one side where possible
7. Integrate street furniture and shading structures with a consistent design and quality
8. Implementation of ramps for ease of access on levels.
9. Consistent and controlled signage. Refer to Infrastructure and Signage chapter.



Photomontage showing possible landscape and road improvements through the application of AUDC guidance



Existing condition and opportunities for visual improvement

- 1. Manage slopes with appropriate retaining
- 2. Buffer and limit building on slopes
- 3. Pedestrian friendly roads & streets
- 4. Accessible open spaces
- 5. Protect and enhance traditional terrace farms



Photomontage showing possible landscape improvements through the application of AUDC guidance



Existing condition and opportunities for visual improvement

1. Manage slopes with appropriate retaining
2. Buffer and limit building on slopes
3. Pedestrian friendly roads & streets
4. Accessible open spaces
5. Natural vegetation buffers to unused plots



Photomontage showing possible landscape and road improvements through the application of AUDC guidance

1.2.1 Protect the Sea Shoreline

Shoreline Buffer

Objective

To protect the shoreline and preserve it as natural as possible. Preserving the natural quality of the Red Sea shoreline is important not only for its aesthetic qualities, but to preserve biodiversity, character and sense of place, and maintain natural processes.

Guidance

- Generally, development directly interfacing with the shoreline shall not be permitted to minimize environmental and visual impact.
- A **50m** buffer shall be established from the natural edge. Development shall be prohibited within the buffer area. Public open space uses are accepted however, but shall be subject to additional controls and shall be in keeping with the natural character and not detrimental to views along the coastline. The natural edge includes, but is not limited to beaches, mud flats, wadi fans, mangrove habitat.
- All new development adjacent to and within a 50m offset or the first urban block from the shoreline buffer shall be subject to additional scrutiny and adhere to shoreline guidance.
- Existing development may be assessed on a case by case basis to establish development that does not meet the AUDC requirements and appropriate mitigation measures agreed and implemented.

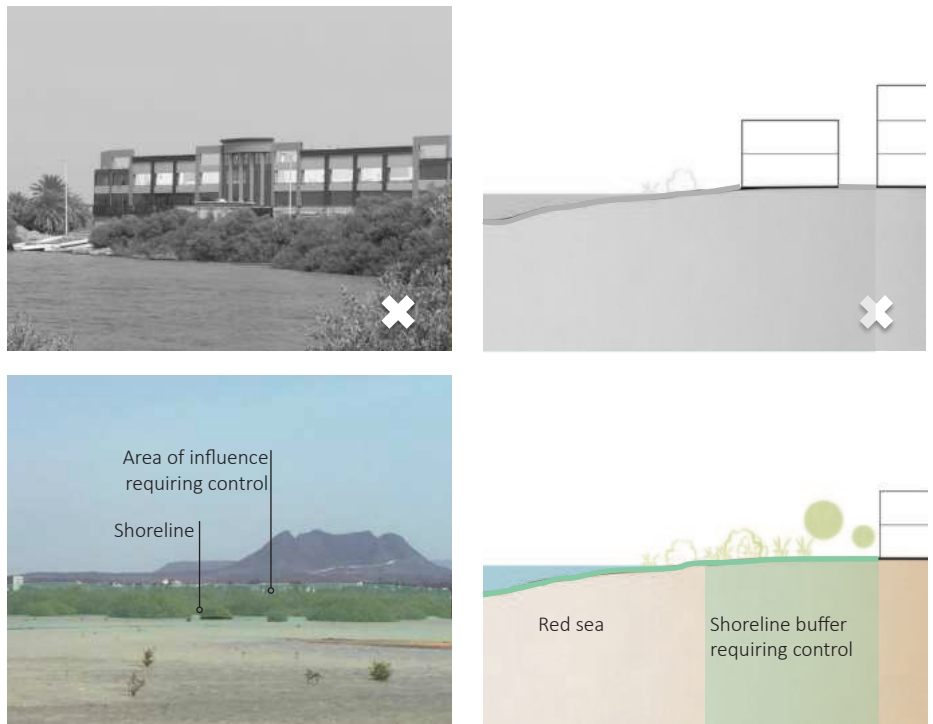


Figure 34 Diagrams illustrating appropriate siting of building in Shoreline zone

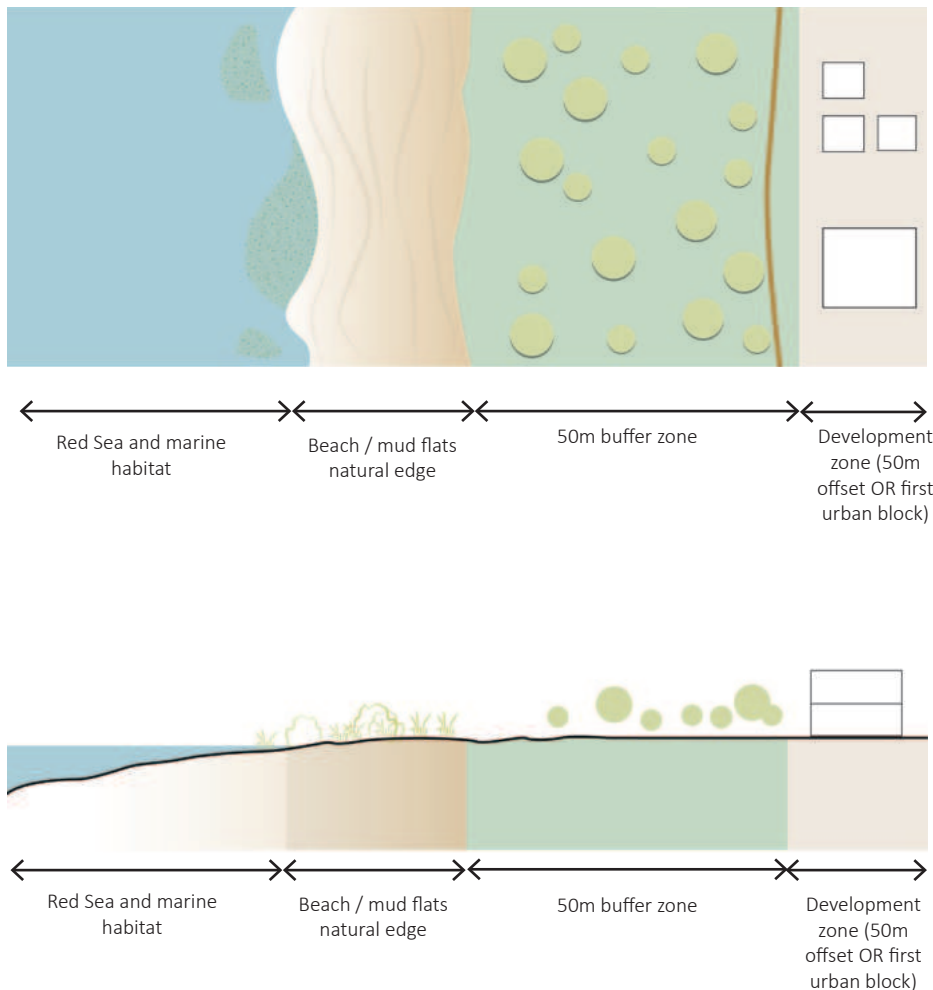


Figure 35 Typical diagrammatic section of shoreline controls



Site photograph illustrating natural, gently sloping beach condition where natural tidal process and visual quality can persist

- Development should be sensitively designed so as not to impact the visual character or inhibit the natural processes of the landscape, rather designs should enhance them. These natural processes may include wadis, wadi fans or estuaries, areas of basaltic lava flows, or dunes with productive cultural landscapes or areas of intact natural vegetation.
- Natural, textured, and organic edges must be preserved and protected and integrated into new development wherever possible.
- Plots adjacent to the shoreline buffer, or sited within **200m** form the shoreline, or known important view line, shall be subject to additional scrutiny by the authority to ensure impact is avoided or mitigated. A **2 Point Study** or formal LVIA shall be required.
- General views of shoreline from major road corridors and key public open spaces/civic spaces should be maintained up to **3km** away. A **2 Point Study** or formal LVIA shall be required. The assessment points for the view shall be agreed with permitting authority.
- Environmental Impact Assessments may be required to establish impacts and required mitigation.
- Protect all mangrove areas. Removal and destruction of mangrove habitat is prohibited.
- Vegetation shall not be removed without a permit from the relevant authority and may including compensation measures such as replacement planting or revegetation.
- Where possible, re-naturalization of the shoreline should be implemented.
- Revegetation and conservation zones should be established to provide habitat connectivity, steppingstones and ensure natural hydrological flow patterns and sedimentation.
- Open space design and improvements should aim to reflect the natural setting of the shoreline with a preference for natural and contextual materials, colors, planting and general character.
- The shoreline shall feature natural vegetation, and where possible revegetation should take place.
- Permeable materials should be used where possible ensuring they are fit for purpose.

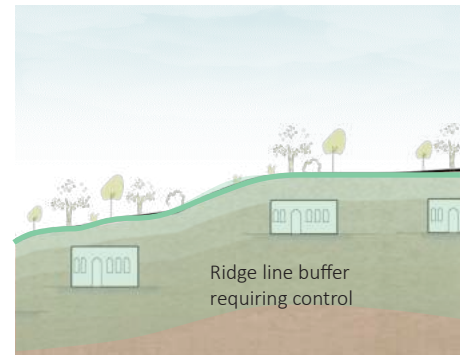
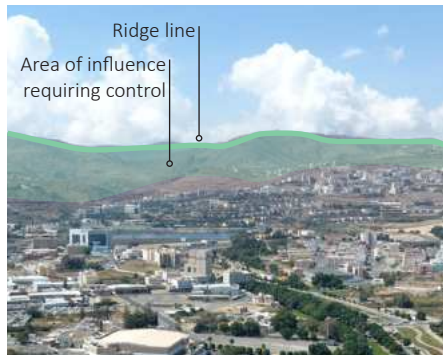
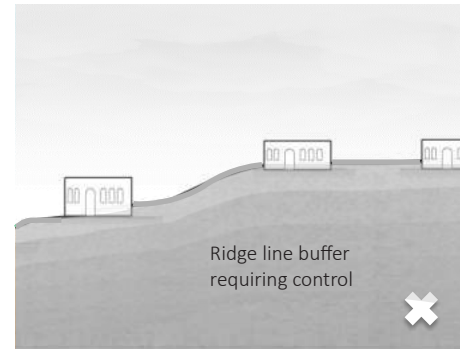
1.2.2 Protect Ridge Lines and Plateau

Objective

To ensure that the significant ridge lines are visible and its surroundings are protected; thereby maintaining the natural appearance of skylines for public enjoyment, aesthetic quality and local identity. The measure of protecting ridge-lines seeks to limit the number of “skylined” situations.

Guidance

- AUDC defines the ridge line as the natural line of the ridge against the sky and should take into account adjacent hill sides and general mountain setting.
- Generally, ridge line development shall not be permitted.
- Plots containing a ridge line, or sited within **200m** form a ridge line, or known important view line, shall be subject to additional scrutiny by the authority to ensure impact is avoided or mitigated. A **2 Point Study** or formal LVIA shall be required.
- General views of ridge line from major road corridors and key public open spaces/civic spaces should be maintained up to 3km away. A **2 Point Study** or formal LVIA shall be required. The assessment points for the view shall be agreed with permitting authority.
- Above ground utilities and infrastructure shall be generally prohibited from ridge lines.
- Where erosion is evident on private plots, revegetation must take place along with any erosion control methods (ie. terracing).
- Plot and road grading shall be kept to a minimum to ensure the existing vegetation and the natural and topographic character of the site is retained.
- Existing buildings that do not meet the aforementioned shall be subject to an assessment and may be required to implement vegetation buffers, reinstate of high walls with appropriate grading and retaining techniques.



Diagrams illustrating appropriate siting of building in ridge line zone

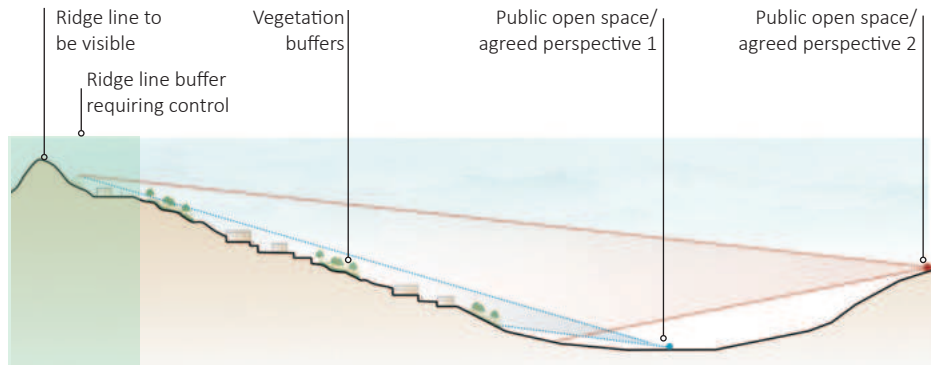


Figure 36 Sections showing ridge line zone. Plots adjacent to the ridge line are subject to additional scrutiny and must provide a 2 Point Study or LVIA

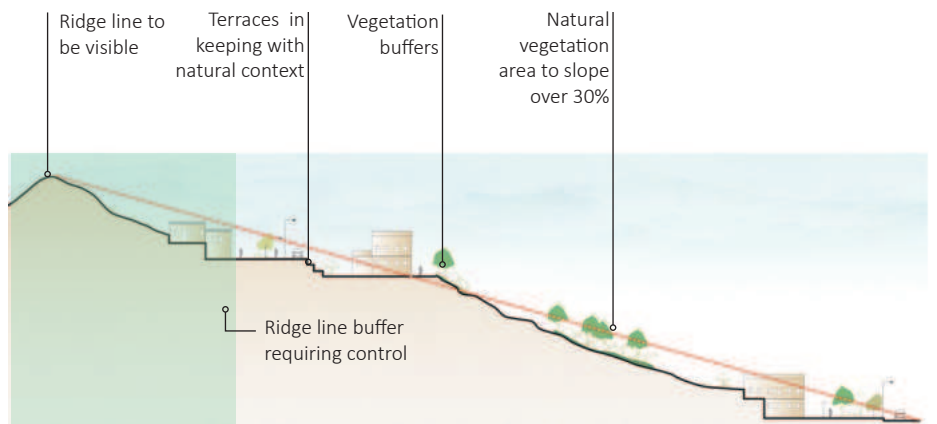


Figure 37 Sections showing ridge line zone. Plots adjacent to the ridge line are subject to additional scrutiny and must provide a 2 Point Study or LVIA



Site photograph illustrating composition of natural rocky feature with constructed retaining in keeping with natural colors and materials and setting of buildings within the slope

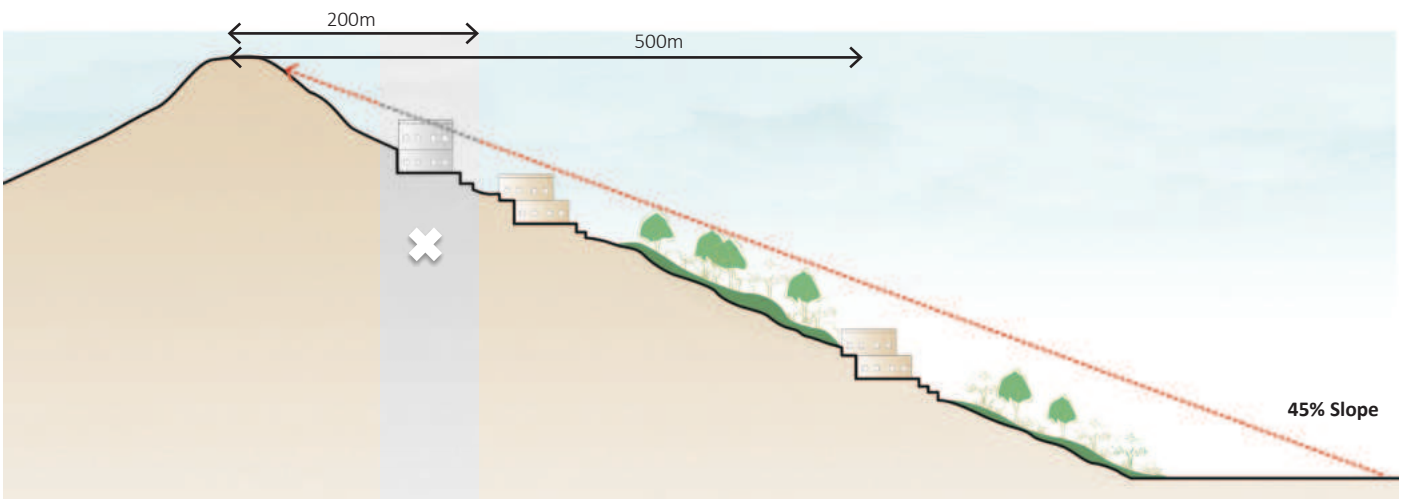


Figure 38 Sections showing ridge line zone. Plots adjacent to the ridge line are subject to additional scrutiny and must provide a 2 Point Study or LVIA

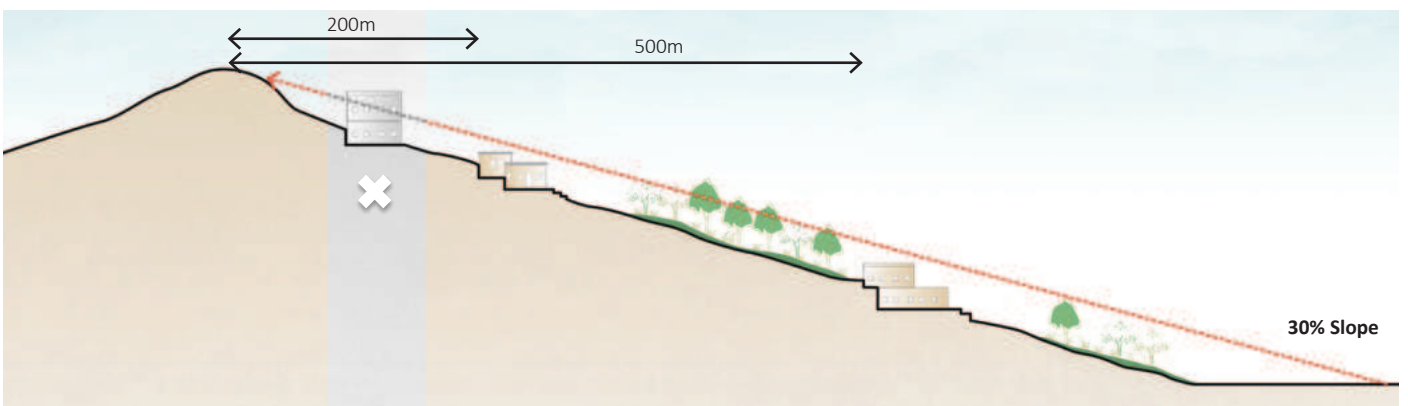


Figure 39 Sections showing ridge line zone. Plots adjacent to the ridge line are subject to additional scrutiny and must provide a 2 Point Study or LVIA

1.2.3 Preserve Horizontal and Open Character

Objective

To maintain the vastness of specific areas of Aseer, such as the Coastal Plains and Inland Desert. The expansive views with sporadic vertical features, offer unique landscape experiences that shall be preserved for the public enjoyment, aesthetic quality and local identity.

Guidance

- As horizontal and open character is difficult to define, all development within the Coastal Zone and Inland Desert shall be subject to a **2** Point Study to demonstrate the impact on the landscape character is minimal. General views from major road corridors and key public open spaces/ civic spaces should be maintained up to **3km** away. The assessment points for the view shall be agreed with permitting authority.
- Generally, development shall be limited to **G+2** floors.
- Development should be sensitively designed so as not to impact the flat, open and vast visual character.
- General views of rocky features, rocky hills or ridges from major road corridors and key public open spaces, civic spaces and in particular wadis, should be maintained up to **3km** away. A **2** Point Study including before and after proposed development, shall be required. The assessment points for the view shall be agreed with permitting authority.
- Wadi buffer guidance and preservation of wadi network guidance shall be adhered to.
- Wadi farms and date palm nurseries /plantations shall be preserved where possible and sustainable, particularly within the Inland Desert zone along Wadi Bisha, as an integral cultural landscape that enhances the horizontal character.

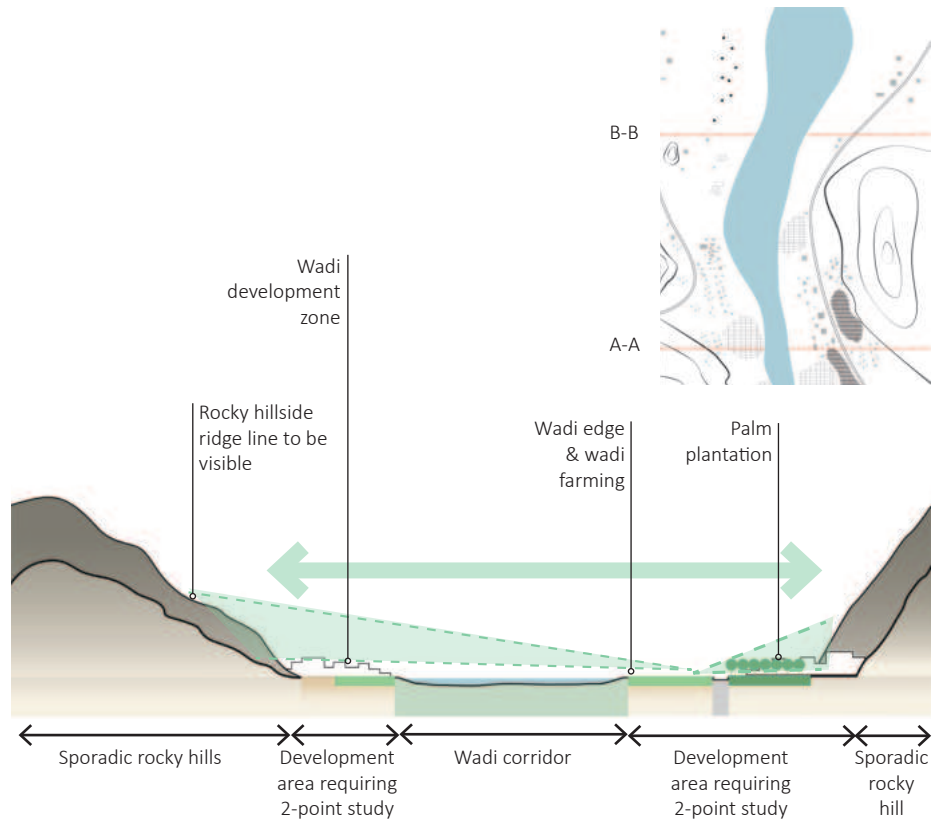


Figure 40 Section A-A showing typical horizontal view within the Inland Desert Zone with adjacent ridge lines

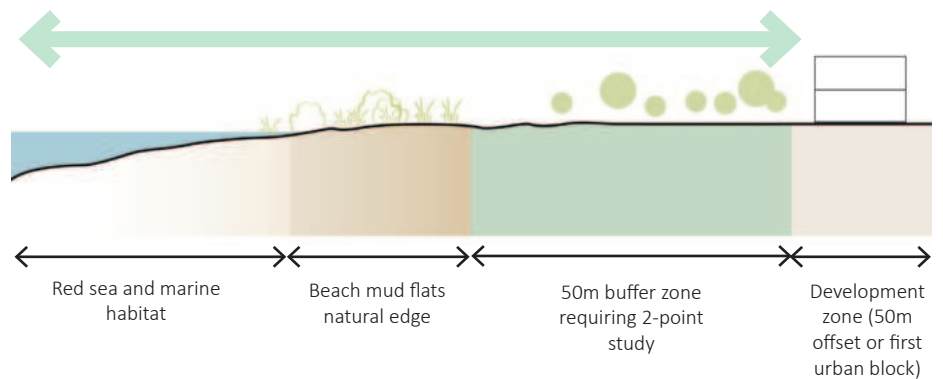


Figure 41 Typical diagrammatic section of shoreline horizontal character

- Vegetation shall not be removed without a permit from the relevant authority and may include compensation measures such as replacement planting or revegetation.
- Revegetation and conservation zones should be established to provide habitat connectivity, steppingstones and ensure that pockets of open natural landscape is preserved to maintain open and vast character.
- Open space design and improvements should aim to reflect the natural setting with a preference for natural and contextual materials, colors, planting and general character.



Site photo illustrating horizontal character with limited development and building heights along Wadi Bisha

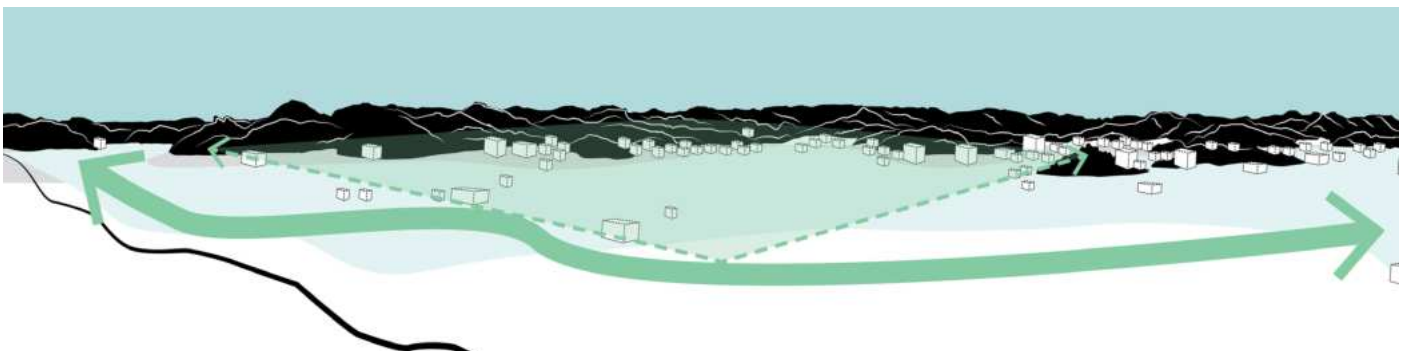


Figure 42 Illustrative diagram highlighting Inland Desert horizontal character

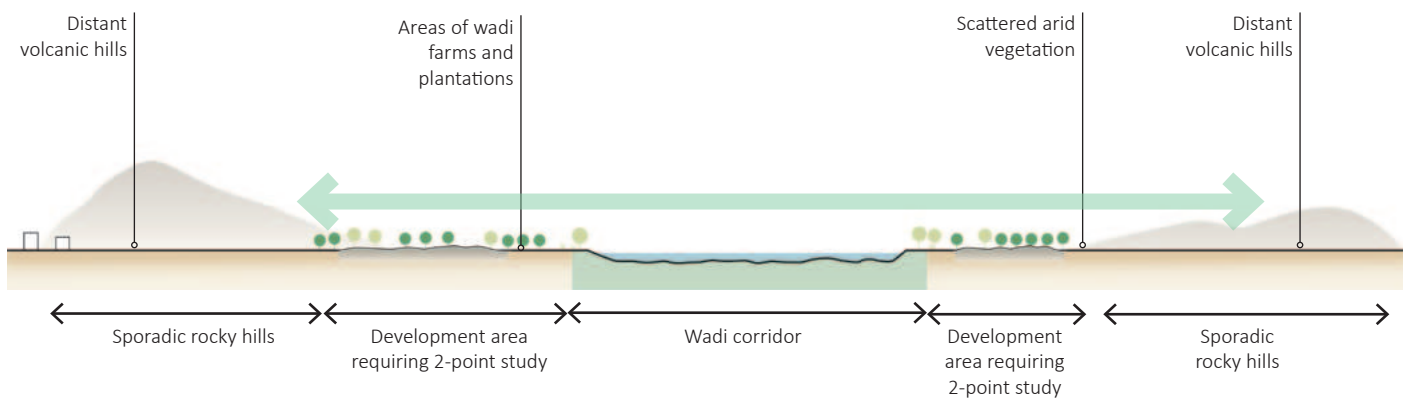


Figure 43 Section B-B showing typical horizontal view and open space character

1.2.4 Protect Views & Skyline

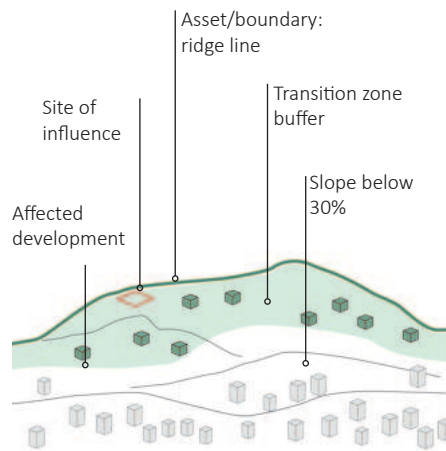
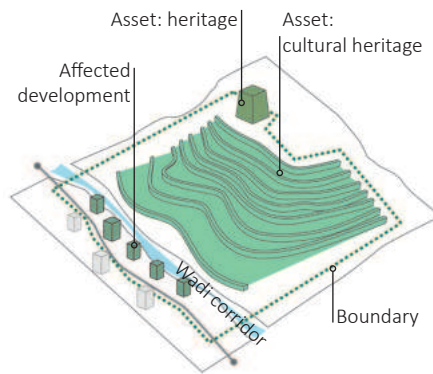
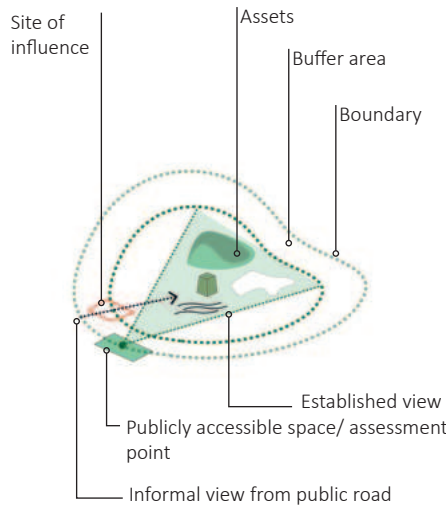
Objective

To protect much loved views of the city, views to green areas and the distinctive landscape character throughout Aseer. A strong contrast between the up-close views and the more distant vistas can enhance interest, visual drama and excitement to the region's setting within the landscape.

Guidance

- In general, established public views must be respected and maintained.
- Protection and control measures are defined as Assets, Boundaries, Transition Zone Buffer and Established Views.
- New control measure extent should be discussed and defined with the permitting authority (in conjunction with public consultation) from publicly accessible spaces, major access roads or from important open spaces to natural feature or open space landmarks.
- Development within established views, buffers zones, boundaries or adjacent to view corridors shall be subject to additional requirements such as increased set backs and/or limits to maximum building heights.
- Development within established views, adjacent to established view corridors, buffers zones or boundaries shall be subject to further assessment criteria and must submit an informal visual study such as a **2 Point Study** to illustrate proposed development. A formal LVIA may be required in some cases for established views. Refer to Chapter 1 for guidance.
- Building into view corridors shall be prohibited and development of public open spaces along view corridors should be encouraged.
- Massing, scale, materiality, color and detailing of buildings within established views must be in keeping with the character of the view, additional vegetation buffers may be required for mitigation.

Diagrams illustrating application of view protection guidance in different scenarios.



Protection and control measures

- Asset to be protected: natural heritage, cultural heritage (refer to Chapter 2), landscape features (i.e. wadi, ridge line, hillside, remnant vegetation, escarpment, landmarks)
- Boundary
- Transition Zone Buffer
- Established views: corridor, splay, panoramas or sheds
- Informal views

A. Natural heritage boundary - applied to hills side & cultural heritage

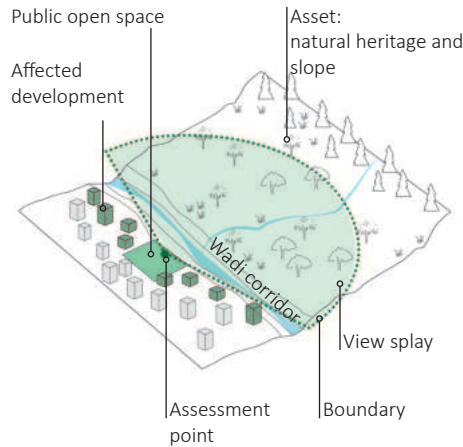
- Building height and set-back to be controlled within boundary.
- 2 Point Study visualizations must be provided for proposed developments.
- For cultural heritage sites a buffer from the boundary should be established as a 200m offset.

B. Boundary & buffer - applied to ridge line

- In the case of ridge lines, the boundary shall be equal to the line of the ridge.
- Transition Zone Buffer is subject to protection and controls.
- Building height, set-back, setting of the building and access roads, lighting, material and color shall be subject to additional scrutiny.
- Infrastructure projects shall also be subject to the same controls.
- 2 Point Study visualizations must be provided for proposed developments within Transition Zone Buffer.

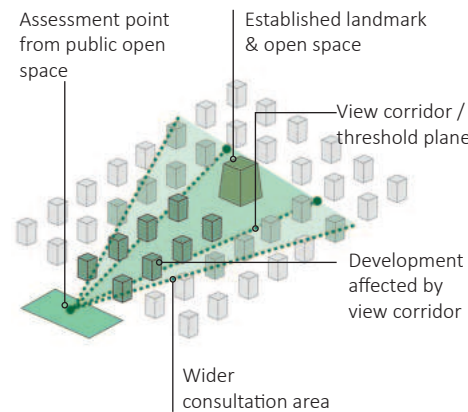
Guidance continued

- Land uses within view corridors shall be controlled to ensure over development and unsightly uses are avoided.
- Lighting strategies of new developments within established views, buffers or boundaries shall be subject to additional scrutiny to ensure night time views are appropriate.
- Boundaries shall include all attributes that are directly tangible expressions of the assessed value or significants of the landscape setting.
- Transition Zone Buffer offset shall be **200m** from the established boundary, except for ridge lines where the offset shall be **500m**.
- Established Views and Informal Views shall be established from publicly accessible spaces.
- To determine view corridors or wider consultation areas like view sheds, the coordinates of the assessment points need to be defined by the authority (including Easting, Northing and Height). For the establishment of view corridors, a minimum three points need to be defined to create a triangular-shaped assessment area. For more guidance refer to **Chapter 2, Define a Visual Buffer Area**.
- Informal views may be establish from up to **3km** from the site of influence.
- Informal views should use a **2 Point Study** methodology to establish assets to be protected, boundaries, buffer and view/assessment point.
- Refer to **Chapter 2** for further guidance on cultural heritage protections.
- Refer to **Chapter 1.3** for further guidance on wadi buffers and Wadi Development Zone.



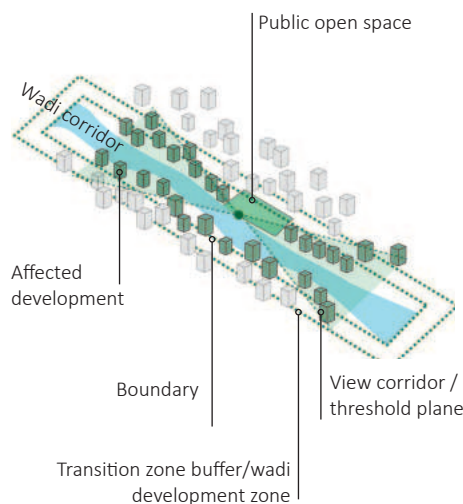
C. Viewsheds - applied to hillside and natural heritage

- Building height, massing, materials and color should be controlled within view shed.
- 2 Point Study visualizations must be provided for proposed developments within view shed.



D. View corridor - to and from landmarks

- Land use, building height and set-back to be controlled within Transition Zone Buffer.
- New development within view corridor shall be prohibited.
- 2 Point Study visualizations must be provided for proposed developments within Transition Zone Buffer.
- When new open spaces are planned, view corridors shall be considered and new corridors should be established where appropriate.



E. View corridors - applied to wadi

- New developments within wadi view corridor are prohibited.
- Land use, building height and set-back to be controlled within, view corridor, view boundary and transition zone buffer.
- Refer to sub-chapter 1.3 for further guidance on wadi treatment including Wadi Development Zone.
- 2 Point Study visualizations must be provided for proposed new developments within Transition Zone Buffer.

1.2.5 Control Development on Hillsides and Slopes

Objective

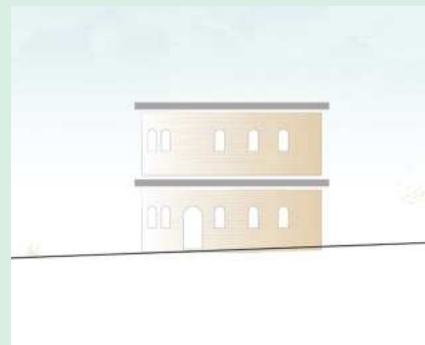
To control or in some cases prohibit development on Aseer’s hillsides. This measure is important to:

- Reduce the negative impacts of unattractive slope scars.
- Reduce the need of expensive infrastructure.
- Reduce the negative visual impacts of excessive cut and fill.
- Reduce erosion and drainage problems that may arise and compromise the integrity of the environment and create danger to public safety.
- Promote forest recovery, biodiversity and habitat corridor creation.

Guidance

0-5% Slope

- New development shall be subject to general development controls. Where small terraces, walls or retaining elements are required it shall be in keeping with contextual colors and materials.



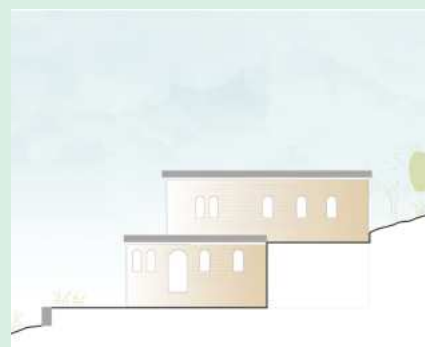
5-15% Slope

- New development shall be subject to additional development controls. Where terraces, walls or retaining elements are required it shall be in keeping with contextual colors and materials.
- Existing development may be assessed on a case by case basis to establish development that does not meet the AUDC requirements and appropriate mitigation measures agreed and implemented.



15-30% Slope

- New development shall be subject to additional development controls. Where terraces, walls or retaining elements are required it shall be in keeping with contextual colors and materials. A general approach to keep flattening and leveling of the slope to the minimum required shall be pursued.
- Existing development shall be assessed on a case by case basis to establish development that does not meet the AUDC requirements and appropriate mitigation measures agreed and implemented.



>30% Slope

- Development shall not be permitted.
- Existing development shall be assessed on a case by case basis to establish appropriate mitigation measures to be implemented.

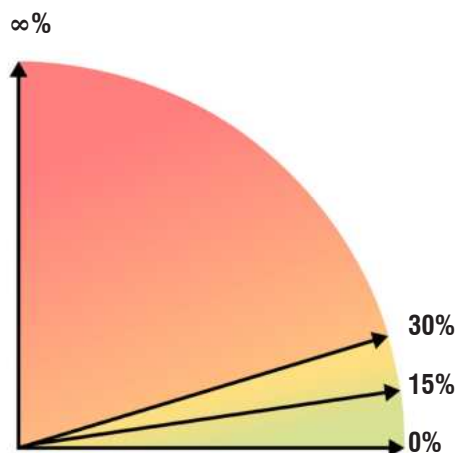
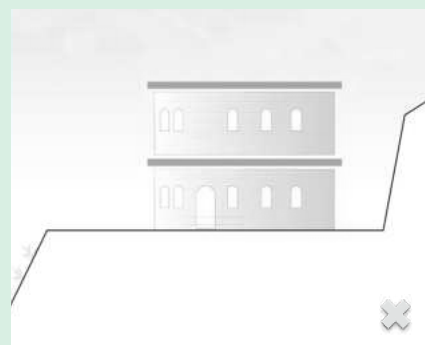


Figure 44 Slopes: maximum intensity diagram

Development on Slope Guidance & Additional Development Controls	Checklist		
	0-5% Slope	5-15% Slope	15-30% Slope
<ul style="list-style-type: none"> Development on slopes over 30% shall be prohibited. 			
<ul style="list-style-type: none"> Slope analysis shall be required for all new development proposals. 			
<ul style="list-style-type: none"> Industrial land uses shall be generally restricted from slopes above 15%. 			
<ul style="list-style-type: none"> A minimum 30% of green space shall be required within plot. 			
<ul style="list-style-type: none"> Where development is restricted on a plot due to slope, ridge line or hillside requirements, transfer of development rights may be agreed with authority on flatter areas of the site to ensure sustainable development. 			
<ul style="list-style-type: none"> A 2 Point Study visualizations or formal LVIA must be provided as part of planning application to demonstrate how the project fits into the context and any mitigation measures adopted. Pre-development images shall also be provide for comparison. 			
<ul style="list-style-type: none"> Building must be stepped with terrain to minimize grading and enhance appearance of setting within the landscape. 			
<ul style="list-style-type: none"> Building finishes must be in keeping with context and blend with the landscape - see architectural guidance for materials, finishes and colors in Chapter 5. 			
<ul style="list-style-type: none"> The re-naturalization of slopes and blending of transitions between lots or adjacent undeveloped areas shall be required. 			
<ul style="list-style-type: none"> Required retaining must be in keeping with natural context - see sub strategies for material, color, scale and design guidance. 			
<ul style="list-style-type: none"> Vegetation must be in keeping with context to enhance appearance of setting within the landscape, additional vegetation buffers may be required for mitigation. 			
<ul style="list-style-type: none"> Access routes such as roads and driveways shall be sloped and graded in such a way it respects the natural topography. Deep cuts and retaining walls shall be minimized. 			
<ul style="list-style-type: none"> A straight, linear top of slope shall be avoided. Radii and undulations that resemble pre-development slope conditions shall be used. 			
<ul style="list-style-type: none"> Sharp cuts and long or wide slopes with a uniform grade shall be avoided. Natural pre-development slope conditions shall be replicated wherever possible. 			
<ul style="list-style-type: none"> Existing development shall be assessed to establish development that does not meet the AUDC requirements and appropriate mitigation measures agreed and implemented. This may include vegetation buffers, grading or retaining techniques or changes in color or material. 			

1.2.6 Control Grading & Retaining Walls

Objective

To control and limit changes to the natural topography and grades for retaining the landscape character and ensuring that visual impacts are mitigated. Topographic changes are one of the biggest visual impacts on the natural landscape in the region.

The following provisions should be applied in urban, rural and natural areas throughout the Aseer Region. Elements to control level changes:
Natural slopes.
Low terraced retaining walls.
High retaining walls.

Guidance

- Slope control and retaining must be in keeping with the context, including materiality, color and scale.
- Generally, slopes shall be stabilized with rip-rap /armour stone to a max slope of **1:3**.
- Generally, retaining walls for terracing shall be to a maximum height of **1.2m** and spaced a minimum of **1m** apart.
- All new retaining walls over **1.2m** tall shall require a building permit.
- Walls shall have a maximum height of **3m**, exceptions may be granted if in the interest of the public and must be subject to additional scrutiny and engineering.
- Graded areas shall be blended back in to the natural slope and appear as natural as possible.
- Disturbance to natural vegetation shall be minimized and vegetation retained where possible to mitigate erosion. If vegetation must be removed, replanting shall be undertaken as soon as possible.
- Where traditional agricultural terracing is evident adjacent to development, efforts shall be made to reflect the retaining type and scale.

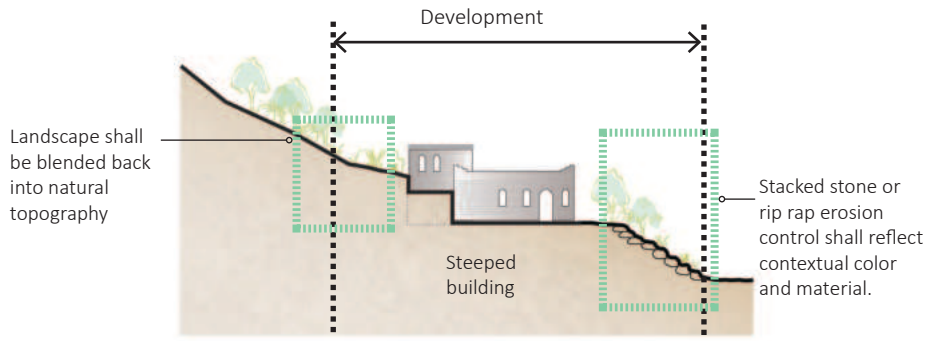


Figure 45 Slope option 1- ideal situation

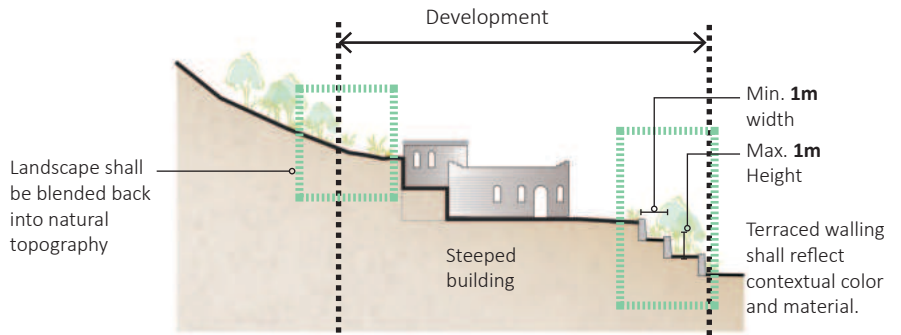


Figure 46 Slope option 2- limited space

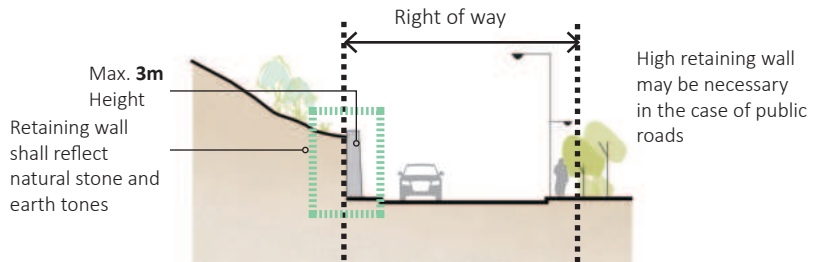


Figure 47 Slope option 3- space crunch

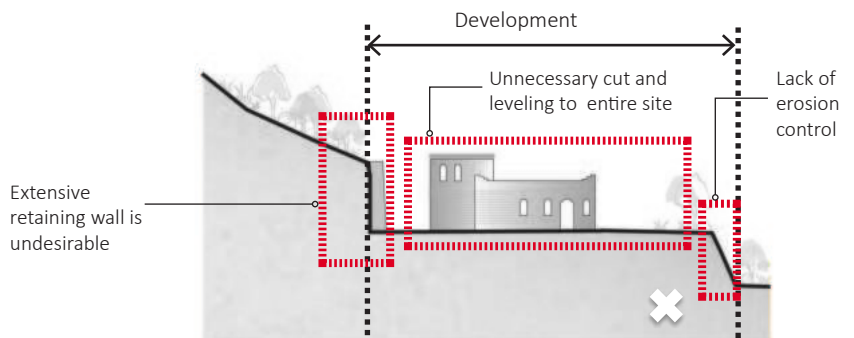


Figure 48 Unacceptable leveling of site and retaining

1.2.7 Techniques Character for Grading & Retaining Walls

Objective

To keep the grading, retaining and wall details, techniques, character and quality in line with the with the natural context to not create an obvious visual scar on the landscape. These elements play an important roll in the visual quality and amenity of Aseer region.

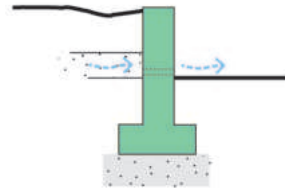


Figure 49 Masonry or concrete retaining wall



Guidance

- Exposed material and finishes shall match natural surroundings.
- Drainage and storm-water controls shall be integrated into walling and terraces to avoid erosion.
- High walls may be combined with steel mesh to provide additional safety measures in case of falling rock or vegetation.
- Vegetation shall be combined with retaining to further improve retention and control erosion.
- Where traditional agricultural terracing is evident adjacent to development, efforts shall be made to draw on the material, color, detail, construction technique and scale.
- Natural stone slabs should be placed overlapped $\frac{1}{3}$ of slab width.
- Berms must have convex shape at the top and concave shape at the bottom.
- Recommended types of retaining shall be:
 - Dry stone wall.
 - Mortared random stone wall or mortared coursed stone wall.
 - Culvert boulder wall or reinforced mass concrete walls.
 - Gabion baskets.
 - Concrete lining retaining wall.
 - Stone faced inclined retaining wall with reinforced concrete core.
 - Boulder inclined stepped retaining wall.
 - Rip rap embankment.
 - Grouted rip rap embankment.
- Recommended material shall be local natural stone, mud brick, plaster finish, pre-cast or in-situ concrete with contextual finishes.

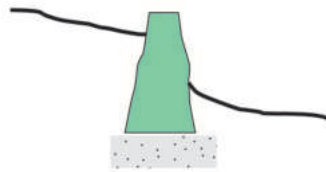


Figure 50 Concrete or stone battered wall

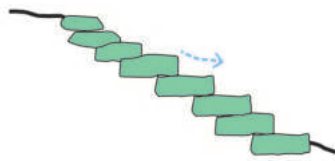
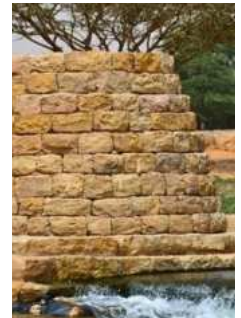


Figure 51 Natural stacked stone

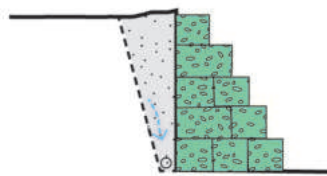


Figure 52 Gabion engineered retaining wall

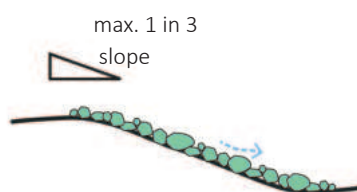


Figure 53 Berm with natural stone riprap



1.3 Preserve and Enhance Wadi Network

Overview

The wadi network that runs through Aseer is an important visual, hydrological, topographical and ecological landscape feature that contributes to the sense of place and landscape character of the region. The AUDC promotes the establishment of the wadi network as a system for Aseer; a publicly accessible green linear open space for the enjoyment of residents and visitors, unique to the region. It must therefore be protected, enhanced and its functions clarified and strengthened where possible.

Guidance

- Wadis, wadi tributaries/wadi arms/sub-wadis, runnels and stormwater creeks shall be protected to maintain natural hydrological patterns, stormwater flow and natural movement of highly permeable and fertile soils down stream.
- Wadis, wadi tributaries/wadi arms/sub-wadis, runnels and stormwater creeks shall be protected as ecological corridors.
- The wadi network and water bodies should form part of the strategic open space network of AUDC.
- Public access shall be facilitated to wadis and the edges of water bodies.
- The wadi area shall be clearly defined to assist with the control of development.
- Wadi buffers shall be implemented to both primary wadis and sub-wadis.
- Wadi systems are extremely fragile natural systems and the physically form (i.e. depth, width and sedimentation) and hydrological processes (i.e. flow rates, flash flood characteristics, ground water) of wadis can vary. Therefore, all new development shall require a hydrological survey to inform development and ensure natural systems are maintained.

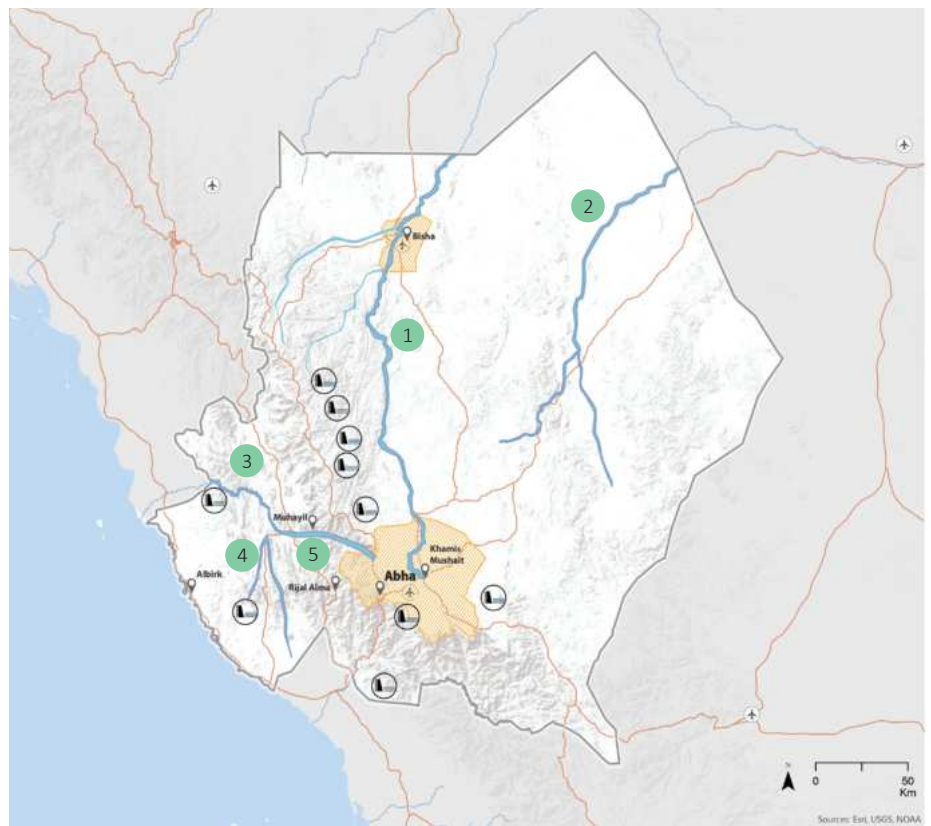
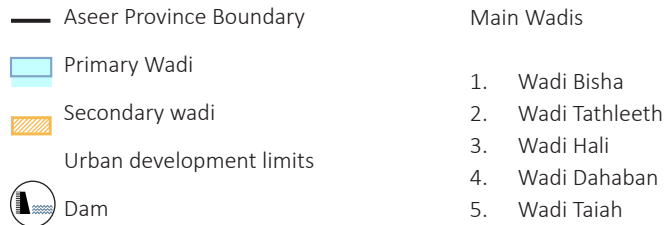


Figure 54 Aseer wadi and water management network



1.3.1 Preserve & Enhance Wadi Network

Objective

To establish the wadi system as a key open space network for AUDC by categorizing, defining and protecting the wadi area.

Guidance

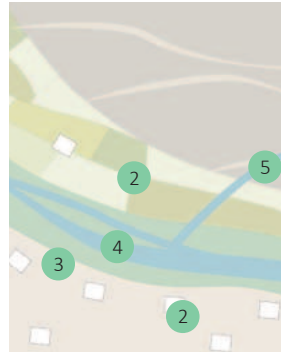
- The AUDC defines 4 categories of wadi as:
 - Primary wadi
 - Secondary wadi (sub-wadi, wadi tributary, wadi arm)
 - Tertiary wadi (wadi tributary, wadi arm, wadi side-arm with less importance, less width or flow than a secondary wadi)
 - Stormwater creeks and runnels
- The AUDC defines 3 distinctive areas associated with wadis:
 - Wadi Corridor,
 - Wadi Edge and,
 - Wadi Development Zone (Area of Influence).
- Where possible, re-naturalization of the wadi should be implemented.
- Revegetation and conservation zones should be established to provide habitat connectivity, steppingstones and ensure natural hydrological flow patterns and sedimentation.
- All new development adjacent to and within a **100m** offset or the first urban block from a wadi area shall be subject to additional scrutiny and adhere to wadi area guidance.
- Open space design and improvements should aim to reflect the natural setting of the wadi with a preference for natural and contextual materials, colors, planting and general character.
- The wadi area shall feature natural vegetation, and where possible revegetation should take place.
- Permeable materials should be used where possible ensuring they are fit for purpose.

A. Primary wadi character



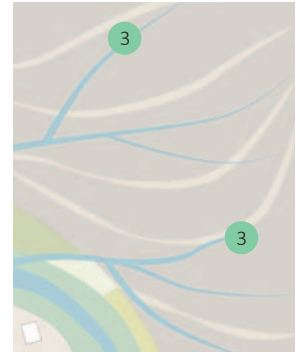
1. Profile and topography varies across the AUDC
2. Urban, rural and agricultural interfaces vary through out AUDC
3. Buffer guidance applies
4. Wadi bed and wadi corridor
5. Secondary wadi connection

B. Secondary wadi & tertiary wadi character



1. Profile and topography varies across the AUDC
2. Urban, rural and agricultural interfaces vary through out AUDC
3. Buffer guidance applies
4. Secondary wadi bed and wadi corridor
5. Stormwater creek connection

C. Stormwater/ drainage creek character



1. Profile and topography varies across the AUDC
2. Buffer guidance may not apply, however connectivity, stormwater course and hydrological function shall be preserved.
3. Storm water / drainage creeks

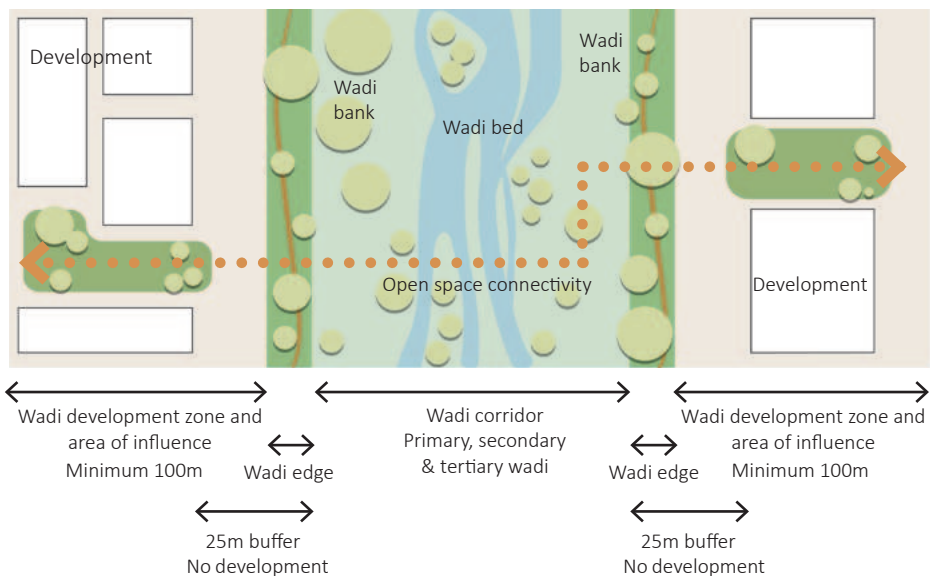


Figure 55 Diagram showing wadi elements

Wadi Corridor

- Wadi Corridor must facilitate natural hydrological processes including capacity for the **1 in 100 year** flood event. The AUDC defines the wadi corridor as the extent of the flood zone comprised of the **1 in 100 year** flood event.
- Development shall be prohibited within the Wadi Corridor.
- The Wadi Corridor may provide public access, support passive recreational activities and natural spaces, and where appropriate, sports spaces contributing to the open space network allocations and catchments.
- Pedestrian access shall be facilitated within the Wadi Corridor.
- Wadi farming may be permitted.
- Wadi Corridor shall feature indigenous vegetation and enhance habitat.
- Wadi banks shall be as natural as possible and gentle in slope to a maximum **1:3 slope**.
- Erosion control must be in keeping with natural context with a preference for rip-rap, natural stacked stone retaining or terraced gabion retaining.
- Natural stone, rip-rap, landforms or vegetation clusters may be used to control flow within the Wadi Corridor.
- Sensitive ecological or hazardous hydrological areas in proposed development must be identified and protected.
- Public open space lighting strategies shall be limited and subject to additional scrutiny to ensure night time views are appropriate and that lighting pollution is limited particularly within the natural context.
- Public safety and security must be maintained and measures shall be provided for safe exit from the corridor during flash floods.

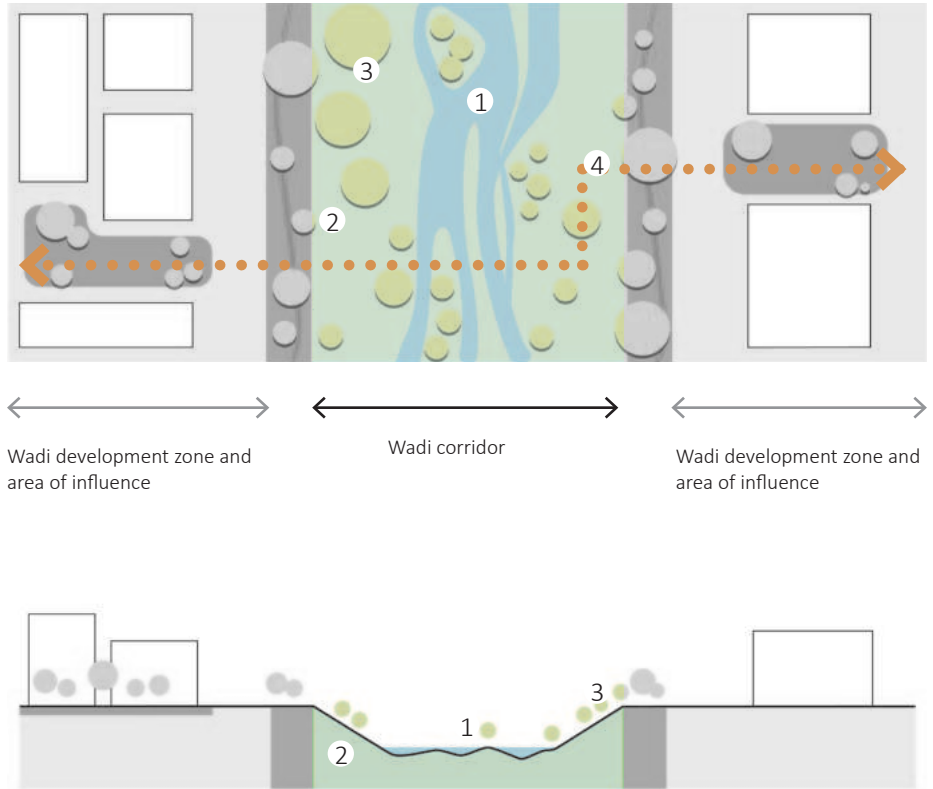


Figure 56 Wadi corridor condition

1. Wadi bed.
2. Wadi bank.
3. Retained and enhanced native wadi vegetation.
4. Open space upland connection.



Best practice: naturalized wadi corridor, hydrological control elements

Wadi Edge

- Public access shall be facilitated along the length of the Wadi Edge and limited to pedestrian, cycle and micro mobility. Continuity of linear public space should be provided.
- A typical minimum width of **10-20m** should be allocated for public space and a soil survey may be required to ensure stability of edge where the level change is over **2m**, adjacent wadi bank is steeper than **1:3** or the edge is modified.
- Public open space lighting strategies should be subject to additional scrutiny to ensure night time views are appropriate, and lighting pollution is limited particularly within the natural context.
- Public safety and security must also be maintained and measures should be taken to facilitate night time uses.
- Wadi Edge shall feature continuous native vegetation to enhance habitat.
- Permeable surfaces shall be specified where possible. Hard sealed surfaces shall be limited to areas of high use.
- SuDS shall be integrated where possible. Storm water from urban areas shall be directed safely to wadi.
- Vegetation shall be contextual species.
- Generally the character shall be naturalistic. Areas of high use or interfaces with areas of high use, may be treated differently to establish activity nodes, enhance identity and wayfinding.

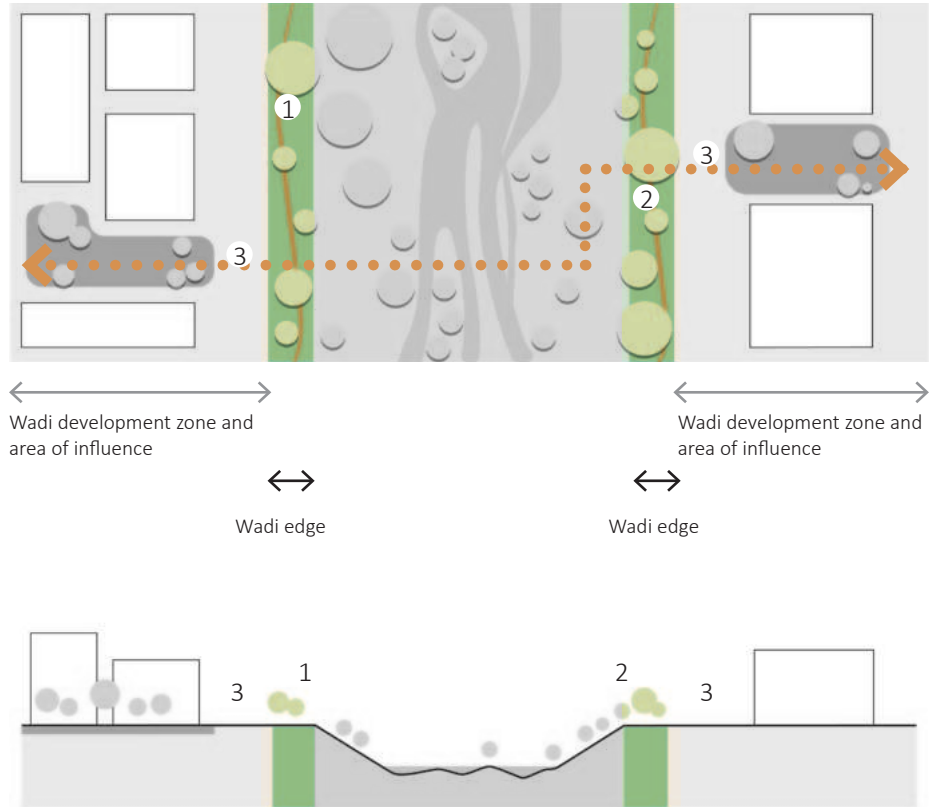


Figure 57 Wadi edge conditions

1. Landscape buffer and vegetated edge.
2. Continuous public pedestrian and cycle access.
3. Open space upland connection within private development. Additional controls to landscape treatment.



Best practice: naturalistic planting and materiality ideal for wadi edge treatment

Wadi Development Zone

- The Wadi Development Zone shall be defined as the area offset from the wadi edge to a minimum **100m** or the first urban block.
- The Wadi Development Zone shall be subject to additional controls including building height, plots size and uses to protect views, natural functions and character. Refer to Chapter 4 for additional guidance.
- Polluting industries and infrastructure uses shall not be permitted.
- Strategic public access points and spaces should be established to provide links and continuity upland into urban fabric and integration with the urban functions and activity nodes along wadi network.
- All development adjacent or within the Wadi Development Zone must provide hydrological modeling to demonstrate the built form sits outside **1 in 100-year** flood zone as part of development application or mitigation measures provided.
- Generally, development shall not be permitted within the **100-year** flood line.
- If productive landscapes are present within the site, they shall be protected, maintained and integrated into new developments.
- Wadi areas shall be protected from pollution, waste dumping and vehicle access.
- Interfaces with adjacent land uses that require erosion control and retaining shall also be in keeping with the natural context with a preference for rip-rap, natural stacked stone retaining, terraced gabion retaining or stone walls.

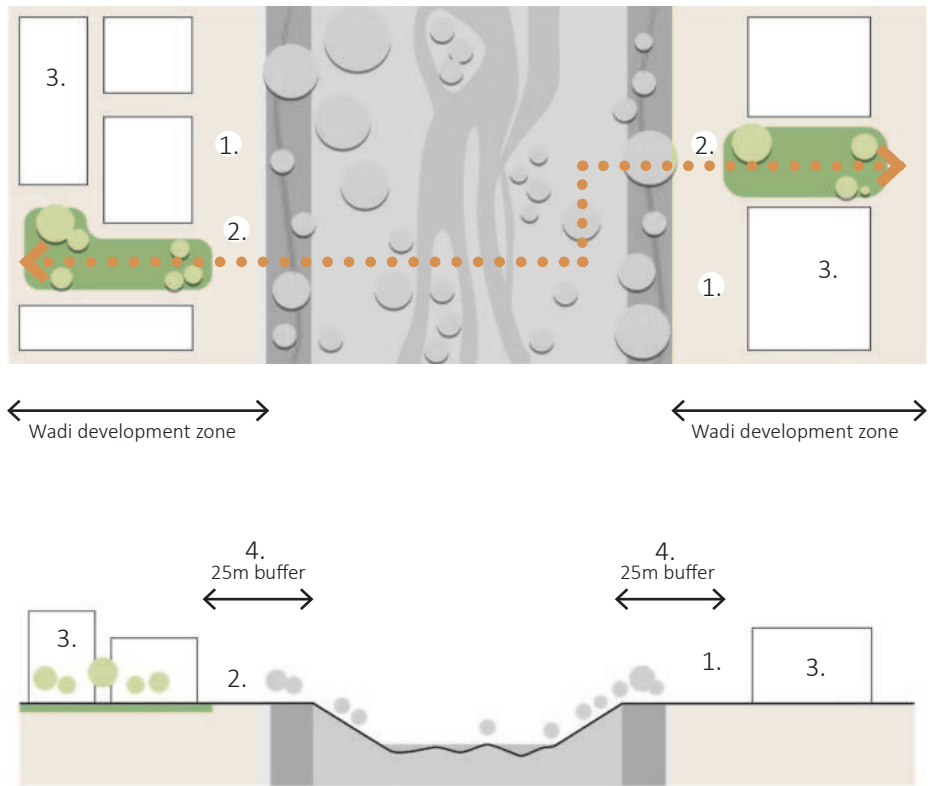


Figure 58 Wadi development zone & interface; area of influence

1. Active frontage opportunity
2. Open space upland connection within private development. Additional controls to landscape treatment.
3. Development parcels.
4. Minimum 30m buffer from wadi edge to building plot.



Best practice wadi edge and wadi development zone interface

Wadi Development Zone (continued)

- Development plots within the Wadi Development Zone shall contain a minimum **25m** buffer from Wadi Edge to the plot edge. Additionally, a soil survey may be required to ensure stability of the Wadi Edge where the level change is over **2m**, adjacent wadi bank is steeper than **1:3** or the edge is modified.
- Buffers shall be subject to additional controls to landscape treatment including:
 - Shall feature native vegetation.
 - Active edges may be allowed at strategic locations in urban areas and may feature naturalized tree species.
 - Should prioritize the use of permeable surfaces limiting hard sealed surfaces to areas of high use and activity nodes.
- Lighting strategies of new and existing developments should be subject to additional scrutiny to ensure night time views are appropriate and lighting pollution is limited, particularly within the natural context.
- Public safety and security must be maintained and night time uses facilitated.
- Where an access road is required, it should be located within the Wadi Development Zone and should be limited to one side of the wadi.
- Public open spaces within the wadi Development Zone should provide further storm water mitigation such as retention areas, floodable open spaces, bio-swales and other SuDS techniques to slow stormwater and filter for contaminants.

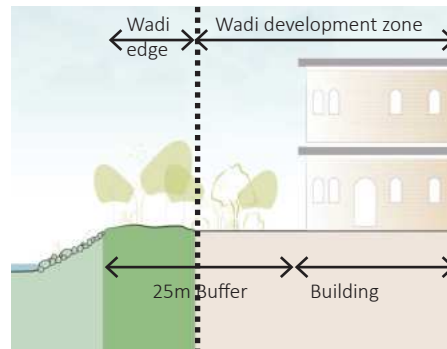


Figure 59 Natural edge with rip-rap bank and vegetated buffer

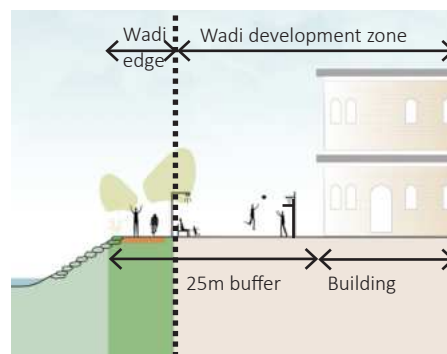


Figure 60 Recreational open space interface with accessible terraced wadi bank

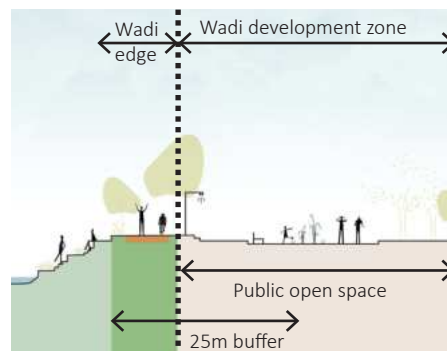


Figure 61 Public park interface with plaza and stepped accessible wadi bank

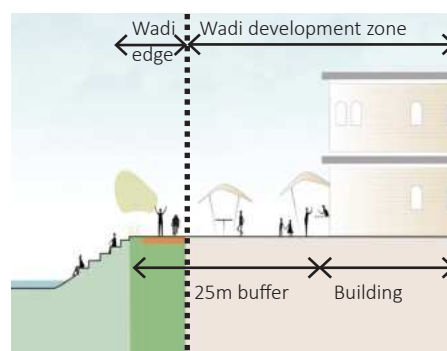
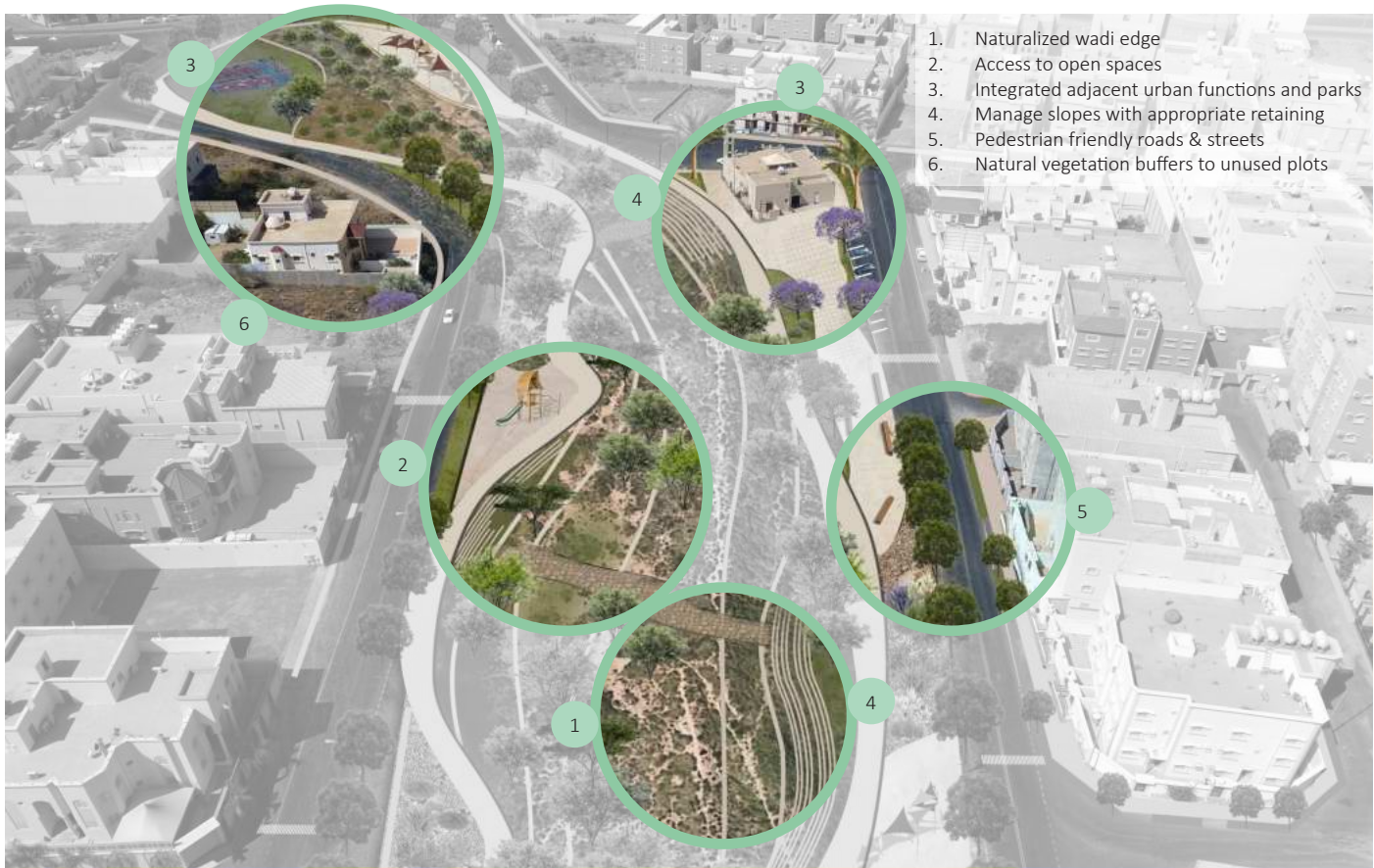


Figure 62 Strategically located active frontage with accessible hardscaped terraced wadi bank



1.3.2 Wadi Open Space Interfaces - Design and Quality



- 1. Naturalized wadi edge
- 2. Access to open spaces
- 3. Integrated adjacent urban functions and parks
- 4. Manage slopes with appropriate retaining
- 5. Pedestrian friendly roads & streets
- 6. Natural vegetation buffers to unused plots

Example of wadi re-naturalization establishing linear open space and drawing on contextual functions



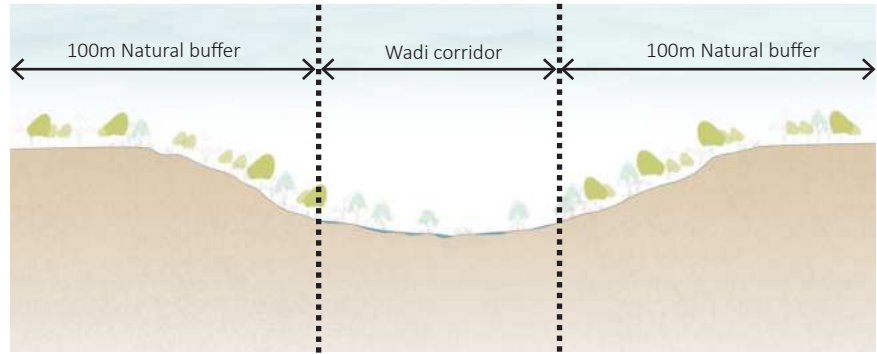
- 1. Protect traditional terrace farms
- 2. Pedestrian friendly roads & streets
- 3. Access to open spaces
- 4. Natural vegetation buffers to unused plots
- 5. Integrated park network

Example of illustrating improved access and connections to wadi farming areas as public open space network

1.3.3 Wadi Buffers - Ecological and Hydrological Functions

Objective

To provide buffers along the Wadi Corridor to limit development and provide generous space for natural functions to prevail, for visual connectivity and to enhance public open space amenities.

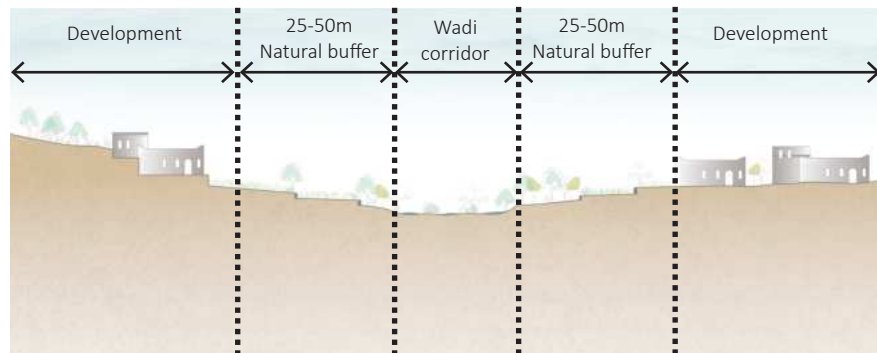


100m habitat buffer in rural or natural setting

- Prohibit development
- Limit lighting and light pollution
- Limit noise pollution

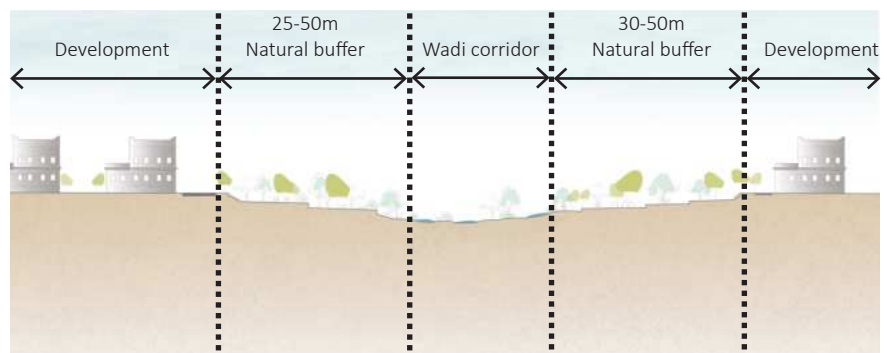
Guidance

- **100m** minimum wadi habitat buffer to plot line shall be recommended for areas in the natural context. Within the buffer, development shall be prohibited and naturalistic indigenous planting is encouraged.
- **50m** minimum wadi hydrological setback buffer shall be required in the rural context to plot line. Within the buffer, development shall be prohibited and naturalistic indigenous planting is encouraged. Wadi farms shall be permitted as part of the hydrological system.
- **50m** wadi hydrological setback buffer to plot line shall be required for all new development areas in urban context. Exceptions may include subdivision plans that provide a geological soil study to confirm a reduced setback of **25m** minimum may be permitted.
- Buffer widths should be set to either side of the wadi corridor and the distance measured from the established Wadi Corridor outer edge and take into account the **100 year** flood event.



25 - 50m hydrological buffer rural or peri-urban

- Prohibit development
- Maintain access to wadi edge for cycle and pedestrian tracks
- Limit lighting and light pollution
- Limit noise pollution
- Limit vehicle crossing points to minimize fragmentation of wadi edge



25 - 50m hydrological buffer urban areas

- Prohibit development
- Expand spatially where possible to increase functions and green network including public parks, cycle and pedestrian network
- Maintain access to wadi edge for cycle and pedestrian tracks
- Limit lighting and light pollution
- Limit noise pollution

1.4 Protect and Use Natural vegetation

Overview

Vegetation foremost contributes to the texture and color of Aseer and it's natural setting. In addition to buffering visual pollution and creating a pleasing open space, vegetation offers human comfort, scale, visual respite and can influence the micro-climate. Indigenous vegetation is suited to the tough climatic conditions, contributes to the ecosystem, provides habitat and biodiversity. Therefore, the AUDC promotes the use of natural vegetation where possible, contributing to preserve and enhance the overall character and sustainability of the region.

Guidance

- Protect and preserve natural vegetation by controlling and limiting its removal.
- Use contextual vegetation wherever possible.
- Enhance habitats and re-vegetate deteriorated areas.
- Connect remnant vegetation patches with vegetation corridors, stepping stones and buffers where possible.



Contextual vegetation in Abha city

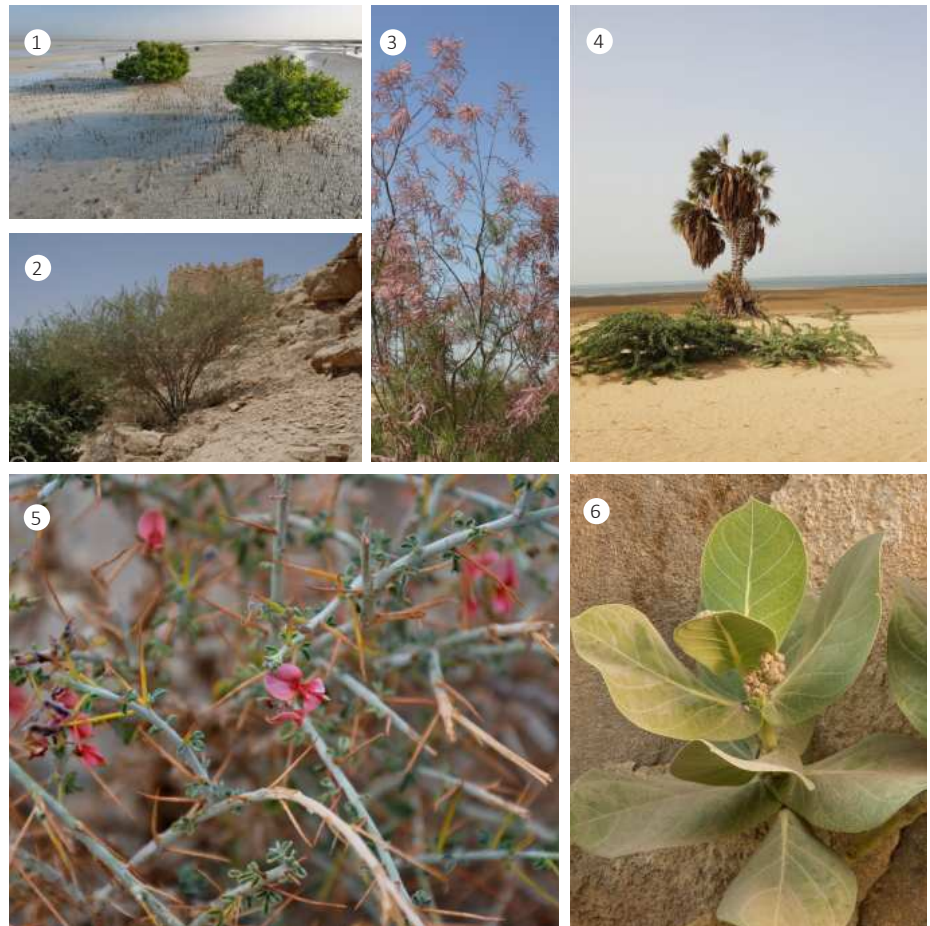
1.4.1 Protect Natural Vegetation

Objective

To protect existing natural vegetation and promote the use of natural vegetation within new developments.

Guidance

- Approval shall be required for the removal of high quality stands of natural vegetation. Replacement with similar vegetation and equivalent area shall be required in green field development.
- Greenfield development sites over **10,000sqm** shall provide a flora study and arboricultural report as part of development application.
- Greenfield development sites over **10,000sqm** shall provide revegetation / compensation plans, including management strategy for up to **2 years** after completion, for any natural vegetation areas that will be removed as part of the development.
- Removal of native vegetation from protected sites, ridges and wadi beds shall be prohibited. (Exception for key public infrastructure or regionally important projects and subject to replacement and /or compensation obligations).
- Native vegetation on hills sides shall be protected. Any loss through development shall be mitigated with re-vegetation or improvements elsewhere on the plot.
- All trees over **3m** in height shall require approval before removal and shall be subject to replacement obligations of a similar tree and a minimum height of **1.5m**.
- Pristine vegetation in any context shall be protected and integrated into habitat corridor plans where possible.



Typical vegetation of the coastal plains zone:

- Evergreen sclerophyllous mangal vegetation; **Avicennia marina (1)**, *Rhizophora mucronata* at the shoreline
- Evergreen broad-leaved shrubs; **Calotropis procera (6)**
- Perennial dwarf shrubs; **Aerva javanica, Indigofera spinosa (5)**
- Climbing plants; *Ceropegia* spp.
- Trees; **Tamarix nilotica (3)** or leafless shrubs *Leptadenia pyrotechnica, Capparis decidua*
- Salt tolerant plants; *Suaeda fruticosa* and *S. monoica*
- Succulents; *Caralluma* spp., *Duvalia velutina*, *Euphorbia* spp., *Pavonia* spp
- Drought deciduous trees; **Acacia ehrenbergiana (2)**, *Commiphora myrrha*
- Perennial grasses; *Aeluropes lagopoides*
- Tropical evergreen palms; **Hyphaene thebaica (4)**
- Tussock and dune-forming plants; *Panicum turgidum*, *Cassia senna*, *Cadaba rotundifolia*, *Salvadora persia*, *Tamarix nilotica*

1.4.2 Typical Planting Standards & Principles

Objective

To specify and provide high quality and appropriate plants essential for successful planting schemes that meet the AUDC requirements for the landscape setting.

Guidance

- Generally, minimum tree space for roads should be adhered to.
- The quality of planting stock for new developments must meet minimum quality and size standards to fulfill design vision within **5 years**. For example, shading requirements shall be met within **5 years**.
- Stock size at installation shall be appropriate for plant type and function.
- Maintenance and Management Plan shall be submitted as part of development plans over **10,000sqm** or subdivision plans to ensure that what is proposed can be maintained.
- Irrigation requirements and demands shall be submitted as of developments over **10,000sqm**, subdivision plans.
- Priority shall be given to plants with low water demands, native vegetation and/or the clustering of species with similar water demands together.
- Use of high water demanding species shall be restricted to areas of special or high use.
- Planting in depressions and the creation of swales to direct storm water to garden beds or planting areas, groups or stands of natural vegetation shall be encouraged.
- Vegetation shall be located in such a way to ensure benefits from passive cooling (shading and evapotranspiration), and filtered air.
- Generally, tree pits shall be a min **2x2x2m**, free of structures, footings, fixings and utilities, with appropriate drainage layers, structural support, root barrier (when adjacent to utilities) and irrigation installed.

Guidance on Minimum Plant Spacing	
Plant Type	Spacing
Large trees (H=6m-12m+ height) to ROW <ul style="list-style-type: none"> • >60m • 60-40m • 40-18m • <18 • Minimum height at planting • Minimum offset from buildings 	8- 15m road/6.5-8m sidewalk 8- 15m road/6.5-8m sidewalk max. 15m, 6.5-8m sidewalk max.12m, 6.5-8m sidewalk 3m 5m
Large trees (H=6m-12m+ height) to Parks, plazas, natural areas <ul style="list-style-type: none"> • Group or copse of trees • Minimum offset from buildings 	4.5m 5m
Medium trees (H<6m) ROW Group/copse Minimum offset from buildings	4m 3.5m 5m
Palms Use should be limited to areas of very high importance <ul style="list-style-type: none"> • ROW • Group or copse • Mini. height at planting • Minimum offset from buildings 	6m 6m 4m 5m
Large shrubs (H ≥ 2m)	150mm
Medium shrub (H=0.8-2m)	900mm
Small shrubs (H ≤0.8m)	500mm
Herbaceous species (H ≤0.8m)	300mm
Grasses	500mm
Ground cover	300mm
Succulents	300mm

Table illustrating general vegetation spacing. Refer to Green Riyadh for further guidance.



Example of low water use planting in clusters, swales and in a naturalistic manner

Contextual & Sustainable Planting Guidance					
Context	Character	Typical Irrigation demands	Species / Plant Type	Density/spacing	Comments
Natural	Planting character, layout, density and cover shall be in keeping with the natural contextual vegetation.	Irrigation shall be for establishment period only, and where possible, planting should take place in appropriate wet and cooler seasons. In some cases irrigation may not be required.	Areas for revegetation shall be carefully assessed to establish appropriate species and diversity.	As per contextual vegetation areas.	Consider species suited for erosion control/ stabilization where required in addition to gravel or mulch.
Rural	Planting character should be naturalistic and clustered.	Irrigation shall be for establishment period only, and where possible, planting shall take place in appropriate wet and cooler seasons. In some cases irrigation may not be required.	Contextual species appropriate for desired function. Consider diversity to improve habitat quality and ensure resilience. Consider shade and wind break tree and shrub planting, and understory vegetation species for habitat.	As per contextual vegetation areas.	Gravel or mulch may be specified.
Urban	Planting character should reinforce the urban context and a sense of place. Consider mass planting for reduced maintenance and/or layered planting for screening and shading.	Low to medium water demand in general. Promenades and plazas medium to high water demand. Side walks and street scape may feature high water demanding trees.	Trees, shrubs, climbers, understory species including grasses and ground covers. Consider species diversity to ensure resilience and improve overall biodiversity, avoid monocultures.	Refer to minimum spacing guidance on previous page.	Prioritize species with urban resilience, combined with less resilient species.
Street Trees	Planting should feature appropriate street trees. Ensure visibility and sight lines are maintained for all users.	Low to medium water demand in general. Side walks may have trees with higher water demands.	Trees, understory species such as grasses, low shrubs and ground covers. Consider tree species diversity to ensure resilience and improve overall biodiversity, avoid monocultures.	Refer to minimum spacing guidance on previous page.	Consider tree canopy size at maturity to ensure right tree for right location. Prioritize species with known urban resilience. Ensure visibility from road at junctions and tree clearance height along roads and sidewalk.
Open Spaces	Naturalistic, medium or high design character, relative to design intent, urban context, function, frequency of use and importance. Consider: mass planting, layering, naturalistic drifts accent planting, specimen planting, shading, foliage contrast and color.	Low to high water demands, relative to frequency of use and function.	Trees, shrubs, climbers, understory species including grasses and ground covers. Consider species diversity to ensure resilience and improve overall biodiversity, avoid monocultures.	Refer to minimum spacing guidance on previous page.	

1.4.3 Planting Palette - Contextual Landscape

Coastal Plains

Objective

To ensure the protection of existing natural vegetation and the appropriate revegetation of native and adaptive species suited to AUDC’s environment and character areas.

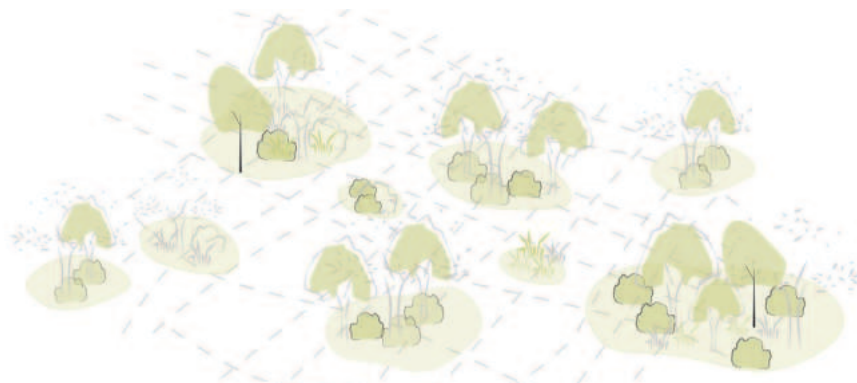


Figure 63 Typical setting out of staggered clusters of vegetation in an attempt to reflect natural patterns

Guidance

- Contextual planting shall reflect native contextual vegetation.
- Contextual planting shall be appropriate for buffers, revegetation areas, remediation areas, rural areas and development in or adjacent to natural areas.
- A site flora survey shall be required for revegetation projects to ensure correct species diversity, density and arrangement.
- Low irrigation demands shall be specified for areas of contextual planting with a focus on achieving no irrigation requirements once vegetation has established.
- Xeriscape principles should be observed.
- Planting in appropriate seasons to benefit from natural rain fall shall be encouraged.
- Planting time shall be dependent on species specification.
- Drought tolerant local species shall be specified.
- Plants specified for exposed locations shall be tolerant to wind and shall have strong rooting characteristics.
- Arrangements within areas of contextual planting shall typically be staggered clusters of trees, shrubs and under-story. This may vary between the landscape character areas of the AUDC and shall therefore be informed by and site flora survey.
- Sustainable Drainage Systems (SuDS) shall be integrated where possible.
- Planting in depressions and the creation of swales to direct storm water to planted areas, groups or stands of natural vegetation shall be encouraged.



Representative naturalistic and contextual planting character and density

Trees	<i>Acacia asak, Acacia ehrenbergiana, Acacia mellifera, Acacia tortilis, Commiphora myrrha, Delonix elata, Hayne subsp. raddiana, Hyphaene thebaica, Moringa peregrina, Pandanus odoratissimus, Tamarix nilotica, Ziziphus spina-christi</i>
Trees/ Large shrubs (Mud flats)	<i>Avicennia marina, Rhizophora mucronata,</i>
Large shrubs	<i>Abrus bottae, Calotropis procera, Capparis decidua, Salvadora persica</i>
Shrubs	<i>Aerva javanica, Cadaba rotundifolia, Cassia senna, Indigofera spinosa, Leptadenia pyrotechnica, Dipterygium glaucum, Heliotropium longiflorum</i>
Herbaceous	<i>Alternanthera pungens, Pavonia spp, Trianthema portulacastrum, Verbesina encelioides, Polygala erioptera, Salvia aegyptiaca, Trianthema crystallina</i>
Succulents	<i>Caralluma spp., Crassula atropurpurea, Duvalia velutina, Euphorbia spp.,</i>
Grasses/ strap leaf	<i>Aeluropes lagopoides, Cymodoceaceae, Cyperus conglomeratus, Eragrostis ciliaris, Panicum turgidum,</i>
Climbers	<i>Ceropegia devecchii, Ceropegia tihamana, Combretum aculeatum, Merremmia tridentata var. angustifolia</i>

Note: species listed are guidance only

Trees & Large Shrubs



Acacia ehrenbergiana(N)



Acacia tortilis(N)



Avicennia marina(N)



Calotropis procera (N)



Salvadora Persica (N)



Tamarix nilotica(N)

Understory



Indigofera spinosa (N)



Cadaba rotundifolia (N)



Dipterygium glaucum (N)



Leptadenia pyrotechnica (N)



Panicum turgidum (N)

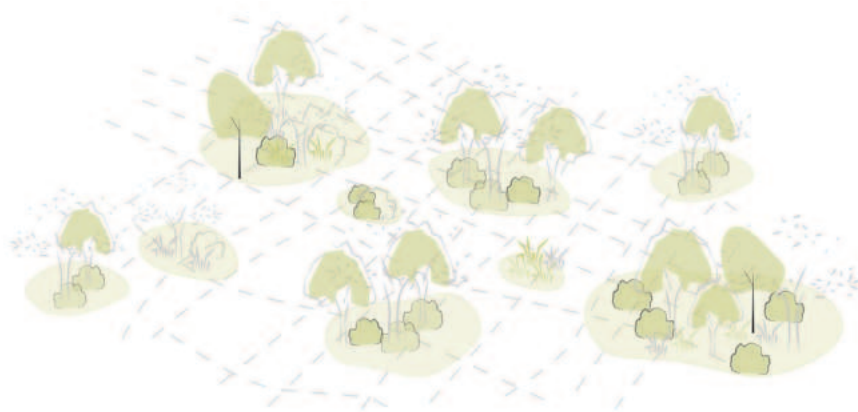


Polygala erioptera (N)

Tuhama Plains

Objective

To ensure the protection of existing natural vegetation and the appropriate revegetation of native and adaptive species suited to AUDC’s environment and character areas.



Typical setting out of staggered clusters of vegetation in an attempt to reflect natural patterns

Guidance

- Contextual planting shall reflect native contextual vegetation.
- Contextual planting shall be appropriate for buffers, revegetation areas, remediation areas, rural areas and development in or adjacent to natural areas.
- A site flora survey shall be required for revegetation projects to ensure correct species diversity, density and arrangement.
- Low irrigation demands shall be specified for areas of contextual planting with a focus on achieving no irrigation requirements once vegetation has established.
- Xeirscape principles should be observed.
- Planting in appropriate seasons to benefit from natural rain fall shall be encouraged.
- Planting time shall be dependent on species specification.
- Drought tolerant local species shall be specified.
- Plants specified for exposed locations shall be tolerant to wind and shall have strong rooting characteristics.
- Arrangements within areas of contextual planting shall typically be staggered clusters of trees, shrubs and under-story. This may vary between the landscape character areas of the AUDC and shall therefore be informed by and site flora survey.
- Sustainable Drainage Systems (SuDS) shall be integrated where possible.
- Planting in depressions and the creation of swales to direct storm water to planted areas, groups or stands of natural vegetation shall be encouraged.



Representative naturalistic and contextual planting character and density

Trees	<i>Acacia asak, Acacia ehrenbergiana, Acacia etbaica, Acacia tortilis, Commiphora myrrha, Ficus salicifolia, Ficus vasta, Maerua crassifolia, Mimusops laurifolia, Tamarindus indica, Salvadora persica, Ziziphus spina-christi</i>
Large shrubs	<i>Anisotes trisulcus, Capparis tomentosa, Jatropha glauca</i>
Shrubs	<i>Abutilon bidentatum, Abrus bottae, Aerva javanica, Anisotes trisulcus, Aristolochia bracteolata, Desmodium gangeticum, Grewia tenax, Grewia velutina, Gomphocarpus sinaicus, Jatropha glauca,</i>
Herbaceous	<i>Convolvulus prostratus, Evolvulus alsinoides, Fagonia indica, Limeum arabicum, Monsonia senegalensis, Ruellia prostrata, Senra incana, Trianthema triquetra, Zaleya pentandra,</i>
Succulents	<i>Adenium obesum, Aloe vera var. officinalis, Aloe sp. aff. niebuhriana, Aloe sabaea, Ammannia auriculata, Caralluma sp, Corallocarpus schimperi, Euphorbia spp., Kalanchoe Lanceolata, Sansevieria abyssinica</i>
Grasses/ strap leaf	<i>Cyperus rubicundus, Fimbristylis spathacea, Schoenus nigricans</i>
Ferns	<i>Selaginella imbricata</i>

Note: species listed are guidance only

Trees & Large Shrubs



Acacia tortilis(N)



Acacia ehrenbergiana(N)



Acacia etbaica (N)



Aderium abesum yemen (N)



Aloe sabaqa(N)



Commiphora myrrha(N)

Understory



Aerva javanica(N)



Cyperus conglomeratus (N)



Fagonia indica (N)



Kalanchoe Lanceolata (N)



Jatropha glauca (N)

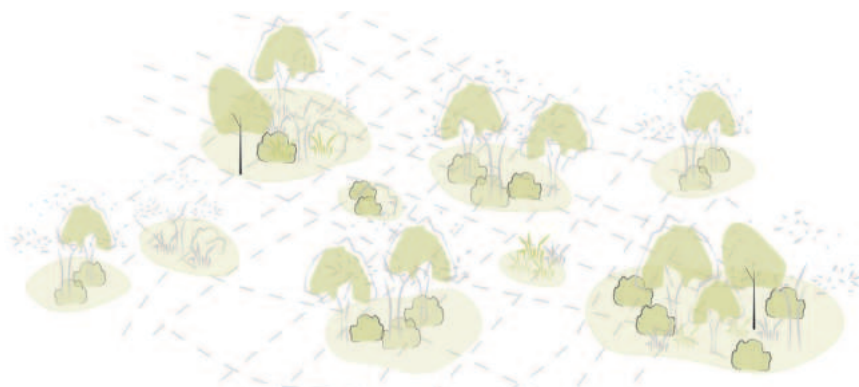


Ruellia prostrata (N)

Escarpments

Objective

To ensure the protection of existing natural vegetation and the appropriate revegetation of native and adaptive species suited to AUDC’s environment and character areas.



Typical setting out of staggered clusters of vegetation in an attempt to reflect natural patterns

Guidance

- Contextual planting shall reflect native contextual vegetation.
- Contextual planting shall be appropriate for buffers, revegetation areas, remediation areas, rural areas and development in or adjacent to natural areas.
- A site flora survey shall be required for revegetation projects to ensure correct species diversity, density and arrangement.
- Low irrigation demands shall be specified for areas of contextual planting with a focus on achieving no irrigation requirements once vegetation has established.
- Xeirscape principles should be observed.
- Planting in appropriate seasons to benefit from natural rain fall shall be encouraged.
- Planting time shall be dependent on species specification.
- Drought tolerant local species shall be specified.
- Plants specified for exposed locations shall be tolerant to wind and shall have strong rooting characteristics.
- Arrangements within areas of contextual planting shall typically be staggered clusters of trees, shrubs and under-story. This may vary between the landscape character areas of the AUDC and shall therefore be informed by and site flora survey.
- Sustainable Drainage Systems (SuDS) shall be integrated where possible.
- Planting in depressions and the creation of swales to direct storm water to planted areas, groups or stands of natural vegetation shall be encouraged.



Representative naturalistic and contextual planting character and density

Trees	<i>Acacia albida, Acacia asak, Acacia etbaica, Acacia negrii, Acacia tortilis, Commiphora kataf, Commiphora myrrha, Dichrostachys cinerea, Euclea schimperi, Moringa peregrina, Olea europaea, Olea chrysophylla, Ficus salicifolia, Ficus vasta, Juniperus excelsa, Tamarindus indica, Ziziphus spinachrista</i>
Large shrubs	<i>Anisotes trisulcus, Buddleja polystachya, Rhus retinorrhaea</i>
Shrubs	<i>Abutilon bidentatum, Cadia purpurea, Dodonaea viscosa, Hibiscus vitifolius, Lycium Shawii, Plumbago zeylanica, Rosa abyssinica, Withania somnifera</i>
Herbaceous	<i>Argemone ochroleuca, Barleria acanthoides, Barleria proxima, Blumea bovei, Nepeta deflersiana, Osteospermum vaillantii, Pulicaria arabica, Vernonia cinerascens</i>
Succulents	<i>Aloe fleurentinorum, Aloe sabaia, Euphorbia cactus, Kalanchoe citrina, Kalanchoe glaucescens, Kalanchoe sp. aff. glaucescens, Kleinia odora, Plectranthus marrubioides</i>
Grasses/ strap leaf	<i>Andropogon distachyus, Bromus fasciculatus, Carex divisa, Cenchrus ciliaris, Cymbopogon schoenanthus, Eragrostis papposa, Pennisetum setaceum, Stipagrostis obtusa</i>
Climbers	<i>Asparagus falcatus, Cissus rotundifolia, Coccinia grandis, Ceropegia sp. aff. variegata, Jasminum grandiflorum, Rosa abyssinica</i>

Note: species listed are guidance only

Trees & Large Shrubs



Acacia asak(N)



Acacia Albida (N)



Ficus salicifolia (N)



Juniperus procera (N)



Tamarix Indica (N)



Zizipus spina christi (N)

Understory



Andropogon distachyus (N)



Buddleja polystachya (N)



Plectranthus marrubioides (N)



Plumbago zeylanica (N)



Pennisetum setaceum (N)

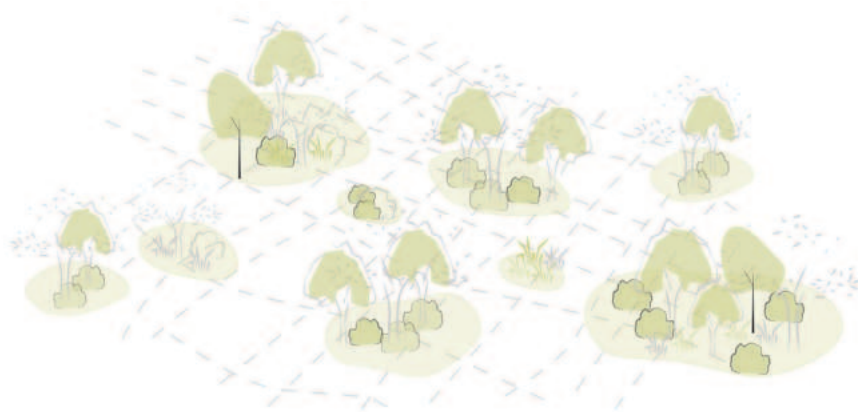


Withania somnifera (N)

High Mountains

Objective

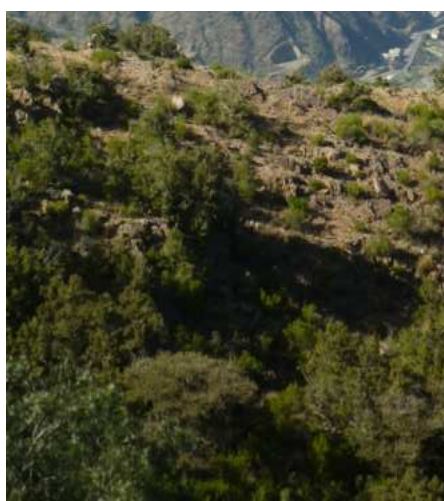
To ensure the protection of existing natural vegetation and the appropriate revegetation of native and adaptive species suited to AUDC’s environment and character areas.



Typical setting out of staggered clusters of vegetation in an attempt to reflect natural patterns

Guidance

- Contextual planting shall reflect native contextual vegetation.
- Contextual planting shall be appropriate for buffers, revegetation areas, remediation areas, rural areas and development in or adjacent to natural areas.
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- Plants specified for exposed locations shall be tolerant to wind and shall have strong rooting characteristics.
- Arrangements within areas of contextual planting shall typically be staggered clusters of trees, shrubs and under-story. This may vary between the landscape character areas of the AUDC and shall therefore be informed by and site flora survey.
- Sustainable Drainage Systems (SuDS) shall be integrated where possible.
- Planting in depressions and the creation of swales to direct storm water to planted areas, groups or stands of natural vegetation shall be encouraged.



Representative naturalistic and contextual planting character and density

Trees	<i>Acacia negrii, Acacia origena, Dracaena serrulata, Ficus carica forma, Juniperus procera, Nuxia congesta, Maesa lanceolata, Moringa peregrina, Olea chrysophylla, Olea europaea subsp. cuspidata, Pistacia falcata</i>
Large shrubs	<i>Buddleja polystachya, Dodonaea viscosa, Maytenus undata</i>
Shrubs	<i>Euryops arabicus, Indigofera arabica, Lavandula citriodora, Lavandula dentata, Lavandula pubescens, Lavandula stricta, Rosa abyssinica, Solanum incanum,</i>
Herbaceous	<i>Achillea biebersteinii, Ajuga bracteosa, Amaranthus hybridus, Cichorium bottae, Crinum yemense, Campanula edulis, Dianthus uniflorus, Echinops sp, Malva neglecta, Marrubium vulgare, Micromeria imbricata, Nepeta deflersiana, Panctarium maximum, Plectranthus asirensis, Psidium arabica, Primula verticillata, Verbascum longibracteatum,</i>
Succulents	<i>Aloe rubroviolacea, Aloe Sp. aff. tomentosa, Aloe Sp. nov. aff. vacillans, Caralluma sp, Crassula alba, Delosperma harazianum, Euphorbia schimperii, Sedum hispanicum, Senecio hadiensis</i>
Grasses/ strap leaf	<i>Andropogon distachyos, Bromus pulchellus, Carex distans, Cenchrus ciliaris, Crassula alba, Juncus pauciflorus, Pennisetum setaceum, Pennisetum villosum, Themeda triandra, Tetrapogon villosus,</i>
Ferns	<i>Adiantum incisum, Asplenium aethiopicum, Asplenium trichomanes, Ceterach officinarum, Cheilanthes coriacea,</i>
Climbers	<i>Asparagus africanus, Jasminum grandiflorum, Lonicera etrusca, Rosa abyssinica</i>

Note: species listed are guidance only

Trees & Large Shrubs



Acacia originaherb (N)



Ficus salicifolia (N)



Juniperus procera (N)



Maesa lanceolata (N)



Olea chrysophylla (N)



Pistacia falcata (N)

Understory



Achillea biebersteinii (N)



Aloe Sp. aff. tomentosa (N)



Buddleja polystachya (N)



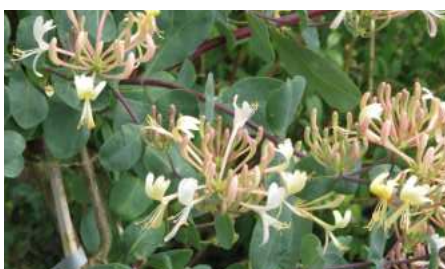
Cenchrus ciliaris (N)



Euryops arabicus (N)



Lavandula dentata (N)



Lonicera etrusca (N)



Rosa abyssinica (N)

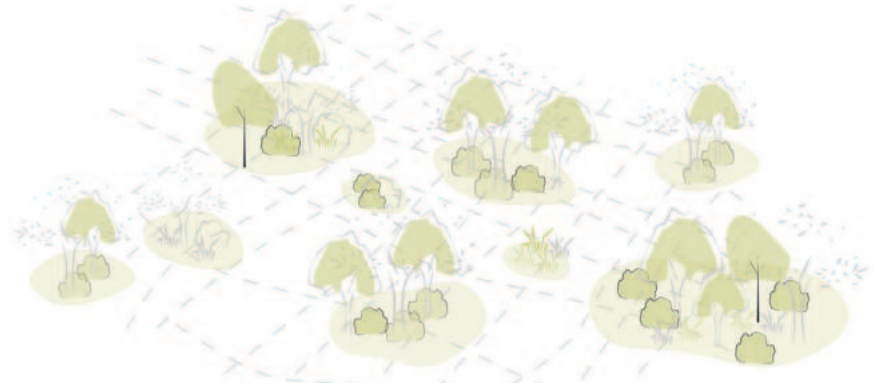


Teucrium yemense (N)

Inland Desert

Objective

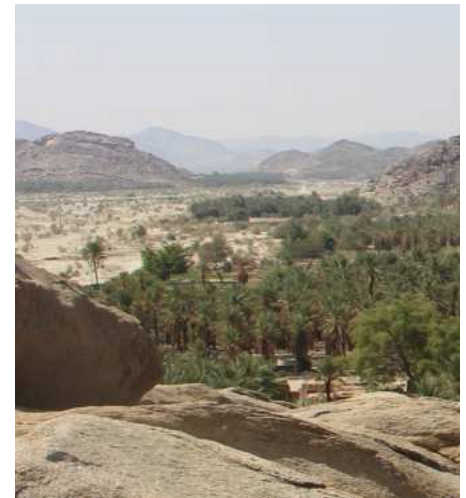
To ensure the protection of existing natural vegetation and the appropriate revegetation of native and adaptive species suited to AUDC’s environment and character areas.



Typical setting out of staggered clusters of vegetation in an attempt to reflect natural patterns

Guidance

- Contextual planting shall reflect native contextual vegetation.
- Contextual planting shall be appropriate for buffers, revegetation areas, remediation areas, rural areas and development in or adjacent to natural areas.
- A site flora survey shall be required for revegetation projects to ensure correct species diversity, density and arrangement.
- Low irrigation demands shall be specified for areas of contextual planting with a focus on achieving no irrigation requirements once vegetation has established.
- Xeirscape principles should be observed.
- Planting in appropriate seasons to benefit from natural rain fall shall be encouraged.
- Planting time shall be dependent on species specification.
- Drought tolerant local species shall be specified.
- Plants specified for exposed locations shall be tolerant to wind and shall have strong rooting characteristics.
- Arrangements within areas of contextual planting shall typically be staggered clusters of trees, shrubs and under-story. This may vary between the landscape character areas of the AUDC and shall therefore be informed by and site flora survey.
- Sustainable Drainage Systems (SuDS) shall be integrated where possible.
- Planting in depressions and the creation of swales to direct storm water to planted areas, groups or stands of natural vegetation shall be encouraged.



Representative naturalistic and contextual planting character and density

Trees	<i>Acacia gerardii</i> spp. <i>negevensis</i> , <i>Acacia ehrenbergiana</i> , <i>Acacia seyal</i> , <i>Acacia tortilis</i> , <i>Cordia sinensis</i> , <i>Phoenix caespitosa</i> , <i>Phoenix dactylifera</i> , <i>Salvadora persica</i> , <i>Tamarix aphylla</i> , <i>Tamarix nilotica</i> , <i>Ziziphus spina-christi</i>
Large shrubs	<i>Calotropis procera</i> , <i>Cocculus pendilus</i> , <i>Lycium shawii</i> ,
Shrubs	<i>Argyrobium arabicum</i> , <i>Arnebia hispidissima</i> , <i>Aerva javanica</i> , <i>Calligonum polygonoides</i> ssp. <i>comosum</i> , <i>Dipterygium glaucum</i> , <i>Euphorbia balsamifera</i> ssp. <i>adenensis</i> , <i>Leptadenia pyrotechnica</i> , <i>Phragmanthera</i> sp. aff. <i>rufescens</i> , <i>Rhazya stricta</i> ,
Herbaceous	<i>Aizoon canariense</i> , <i>Farsetia long siliqua</i> , <i>Mentha longifolia</i> ssp. <i>schimperii</i> , <i>Plantago ciliata</i> , <i>Pulicaria crispa</i>
Succulents	<i>Aloe vacillans</i> , <i>Adenium obesum</i> , <i>Caralluma petraea</i> , <i>Kalanchoe lanceolata</i> ,
Grasses / strap leaf	<i>Panicum turgidum</i> , <i>Phragmites australis</i> , <i>Tetrapogon villosus</i>
Climbers	<i>Cocculus pendilus</i>

Note: species listed are guidance only

Trees & Large Shrubs



Acacia ehrenbergiana (N)



Cordia sinensis (N)



Leptadenia pyrotechnica (N)



Phoenix caespitosa (N)



Salvadora persica (N)



Tamarix aphylla (N)

Understory



Aloe vacillans (N)



Amebia hispidissima(N)



Aizoon canariense (N)



Calotropis procera (N)



Cocculus pendulus (N)



Euphorbia balsamifera Lanzarote (N)

1.4.4 Planting Palette - Urban

Objective

To provide sustainable and sensitive planting schemes for the public realm that respects the climate of AUDC and enhances visual and environmental elements.

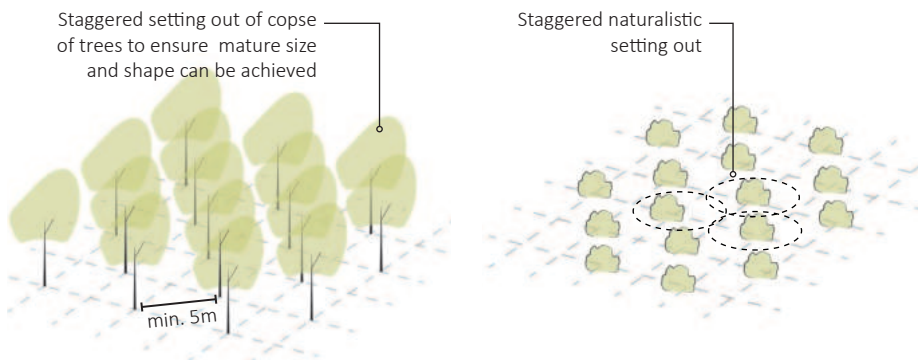


Figure 64 Diagram illustrating typical staggered layout of trees and shrubs

Guidance

- Softscape design in urban areas shall be predominately local species with adaptive species that suit the design language, character and environmental conditions incorporated.
- Softscape design shall include trees, palms, shrubs, grasses and groundcovers.
- Tree and palm layout shall take into consideration size at maturity and priorities staggered setting out to ensure space allows full size and shape to be achieved.
- Xeirscape principles should be applied.
- The minimum recommended planting distance for trees, away from curbstones shall be **1.5m**, from buildings shall be **5m** and from other trees shall be a **5m**.
- Canopy trees within public and semi-public areas should have a **min. 2.5m** clear stem height and palm trees a **min. 4.5m** clear stem height at installation.
- Softscape design shall consider species' qualities such as form, color, prominence, flowering period, texture, tolerance of salinity and urban context and shading ability.
- Softscape should consider variation in texture, form, color and massing.
- Softscape design shall be utilized to provide screening, buffers, layered planting and define spaces.
- Understory setting out shall be staggered in design to ensure naturalistic appearance and sufficient space for mature size.
- Softscape design should consider clustered groups of plants within gravel mulch areas in extensive areas.



Example of planting clusters with contrasting color, texture and medium density

Selected Species

Trees	<i>Acacia asak, Acacia ehrenbergiana, Acacia tortilis, Albizia julibrissin, Azadirachta indica, Cercidium hybrid, Dracaena serrulata, Ficus altissima, Ficus salicifolia, Jacaranda mimoso, Juniperus procera, Nuxia congesta, Maesa lanceolata, Miletia pinnata, Moringa peregrina, Olea chrysophylla, Olea europaea subsp. cuspidata, Parkinsonia aculeata, Pistacia falcata, Schinus terebinthifolius, Tamarindus indica, Tamarix nilotica Tarchonanthus camphoratus, Teclea nobilis, Vitex agnus-castus, Ziziphus spina-christi</i>
Palms	<i>Phoenix dactilifera, Washingtonia filifera, Washingtonia Robusta</i>
Large shrubs	<i>Buddleja polystachya, Dodonaea angustifolia, Dodonaea viscosa, Ehretia obtusifolia, Maytenus arbutifolia</i>
Shrubs	<i>Atriplex leucoclada, Argyrolobium confertum, Carissa edulis, Carissa macrocarpa 'Green Carpet', Clerodendrum inerme, Encelia farinosa, Euphorbia schimper, Euryops arabicus, Indigofera arabica, Jatropha integerrima, Lantana camara, Lavandula angustifolia, Lavandula citriodora, Lavandula dentata, Lavandula pubescens, Lavandula stricta, Leucophyllum frutescens, Psadia arabica, Rosa abyssinica, Rosmarinus officinalis, Vitex trifolia 'Purpurea',</i>
Herbaceous	<i>Achillea sp., Ajuga bracteosa, Amaranthus sp., Campanula edulis, Cichorium bottae, Dianthus zonatus, Echinops sp, Malva neglecta, Marrubium vulgare, Nepeta deflersiana, Pancratium maximum, Plectranthus asirensis, Plumbago zeylanica, Primula verticillata, Ruellia tuberosa, R. ciliosa Salvia merjamie, Senecio hadiensis, Verbascum longibracteatum,</i>
Succulents	<i>Agave attenuata, Aptenia cordifolia, Aloe rubroviolacea, Aloe Sp. aff. tomentosa, Aloe Sp. nov. aff. vacillans, Caralluma spp., Crassula alba, Delosperma harazianum, Euphorbia ammak, Euphorbia schimper, Sedum hispanicum</i>
Grasses/ strap leaf	<i>Andropogon distachyos, Bromus pulchellus, Cenchrus ciliaris, Juncus pauciflorus, Pennisetum setaceum, Pennisetum villosum, Themeda triandra, Tetrapogon villosus,</i>
Ferns	<i>Asplenium aethiopicum, Ceterach officinarum, Cheilanthes spp.</i>
Climbers	<i>Asparagus africanus, Jasminum grandiflorum, Lonicera etrusca</i>

Note: species listed are guidance only

Trees & Large Shrubs



Albizia julibrissin (Ex)
Use: Streets, parks and plazas



Azadirachta indica (Ex)
Use: Streets, parks and plazas



Jacaranda mimosa (Ex)
Use: urban parks and plazas



Phoenix dactylifera (N)
Use: Limited use in streets, parks and plazas



Vitex agnus-castus (Ex)
Use: urban parks and plazas



Ziziphus-spina-christi (N)
Use: Streets, parks and plazas

Understory



Aptenia cordifolia (Ex)



Leucophyllum frutescens (Ex)



Bougainvillea sp. (Ex)



Carissa edulis (N)



Carissa macrocarpa 'Green Carpet' (Ex)



Lavandula angustifolia (Ex)



Pennisetum setaceum (N)



Rosemary officialis prostratus (Ex)



Ruellia tuberosa (Ex)

Urban Streetscape

Objective

To provide sustainable and sensitive planting schemes for the streetscape that respects the climate of AUDC and enhances visual and environmental elements whilst limiting maintenance and irrigation requirements.

Guidance

- Softscape design along urban streetscape and roads shall be species adapted to pollution and hardscape surrounds.
- Softscape design shall consider preference for species with low maintenance, reliability, resilience to pest and disease, availability, tolerance of salinity and the urban context.
- Softscape design shall include trees, palms, shrubs, grasses, groundcovers and succulents.
- Softscape design shall ensure safe visibility, clearances and routes free from obstacles for all users.
- Streetscapes and medians shall take into consideration tree and shrub pruning maintenance.
- Tree and palm layout shall take into consideration size at maturity.
- Sustainable Drainage Systems (SuDS) shall be integrated where possible.
- Xeirscape and extensive planting design principles should be applied.
- Softscape design should consider medium density clustered groups of plants within gravel mulch areas.
- The minimum recommended planting distance for trees, away from curbstones shall be **1.5m**, from buildings shall be **5m** and from other trees shall be a **5m**.
- Canopy trees shall have a **min. 2.5m** clear stem height and palm trees a **min. 4.5m** clear stem height at installation.
- Softscape should consider variation in texture, form, color and mass planting.
- Tree location shall be coordinate with street lighting and utility design and setting out.

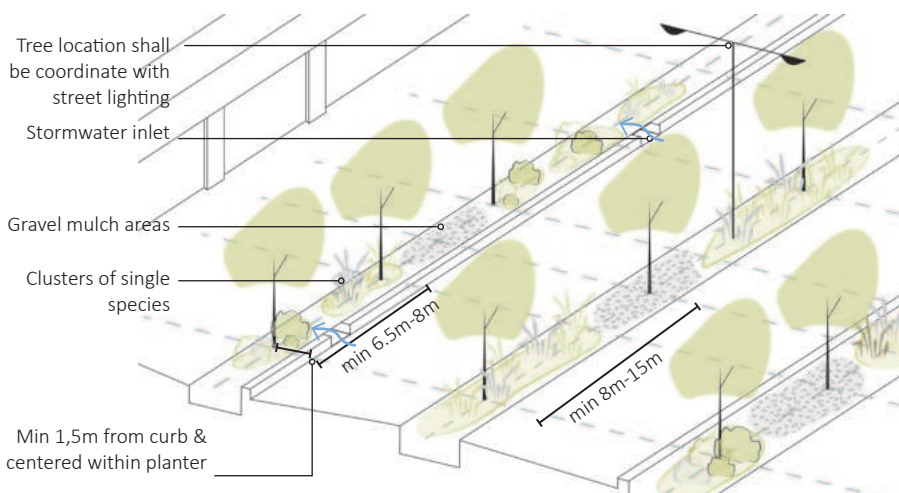


Figure 65 Diagram illustrating typical staggered layout of trees and shrubs along roads

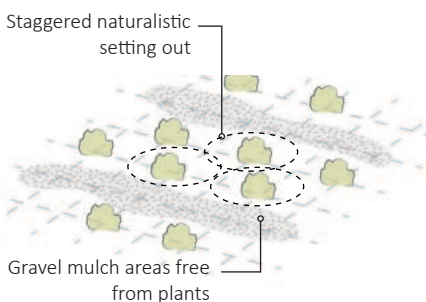


Figure 66 Diagram illustrating typical staggered layout of understory species in clusters within gravel mulch areas.

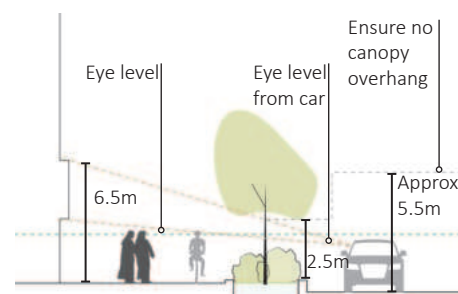


Figure 67 Diagram illustrating typical visibility requirements



Example of streetside extensive planting

Selected Species

Trees	<i>Acacia asak</i> , <i>Acacia salgina</i> , <i>Albizia lebbeck</i> , <i>Albizia julibrissin</i> , <i>Ficus altissima</i> , <i>Juniperus procera</i> , <i>Maesa lanceolata</i> , <i>Parkinsonia aculeata</i> , <i>Prosopis chilensis</i> , <i>Pistacia falcata</i> , <i>Schinus terebinthifolius</i> , <i>Tamarindus indica</i> , <i>Tarchonanthus camphoratus</i> , <i>Teclea nobilis</i> , <i>Vitex agnus-castus</i> , <i>Ziziphus jubjuba</i> , <i>Ziziphus spina-christi</i>
Palms	<i>Phoenix dactilifera</i> , <i>Washingtonia filifera</i>
Shrubs	<i>Atriplex leucoclada</i> , <i>Carissa macrocarpa</i> 'Green Carpet', <i>Clerodendrum inerme</i> , <i>Dodonaea viscosa</i> , <i>Encelia farinosa</i> , <i>Euryops arabicus</i> , <i>Indigofera arabica</i> , <i>Lantana camara</i> , <i>Lavandula angustifolia</i> , <i>Lavandula citriodora</i> , <i>Lavandula dentata</i> , <i>Lavandula pubescens</i> , <i>Lavandula stricta</i> , <i>Leucophyllum frutescens</i> , <i>Limoniastrum monopetalum</i> , <i>Plumbago zeylanica</i> , <i>Psiadia arabica</i> , <i>Rosa abyssinica</i> , <i>Rosmarinus officinalis</i> , <i>Ruellia tuberosa</i> , <i>Vitex trifolia</i> 'Purpurea'.
Succulents	<i>Aptenia cordifolia</i> , <i>Aloe rubroviolacea</i> , <i>Aloe Sp. aff. tomentosa</i> , <i>Aloe Sp. nov. aff. vacillans</i> , <i>Crassula alba</i> , <i>Delosperma harazianum</i> , <i>Sedum hispanicum</i> , <i>Sesuvium portulacastrum</i> .
Grasses / strap leaf	<i>Cenchrus ciliaris</i> , <i>Juncus pauciflorus</i> , <i>Pennisetum setaceum</i> , <i>Pennisetum setaceum rubrum</i> , <i>Pennisetum villosum</i> , <i>Themeda triandra</i> , <i>Tetrapogon villosus</i> ,

Note: species listed are guidance only

Trees & Large Shrubs



Albizia julibrissin (Ex)
Use: Streets, parks and plazas



Albizia lebbeck (Ex)
Use: Streets, parks and plazas



Ficus altissima (Ex)
Use: Streets, parks and plazas



Parkinsonia aculeata (Ex)
Use: Streets, parks and plazas



Prosopis chilensis (Ex)
Use: Streets, parks and plazas



Ziziphus-spina-christi (N)
Use: Streets, parks and plazas

Understory



Aptenia cordifolia (Ex)



Carissa macrocarpa 'Green Carpet' (Ex)



Dodonaea viscosa (N)



Euryops arabicus (N)



Lavandula dentata (N)



Leucophyllum frutescens (Ex)



Pennisetum setaceum (N)



Rosemary officinalis (Ex)



Ruellia tuberosa (Ex)

1.4.5 Mitigate Visual Impacts with Vegetation Buffers

Objective

To protect and provide contextual vegetation for vegetation buffers to assist with mitigating visual pollution, while enhancing habitat corridors and other ecological functions.

Guidance

- Buffer areas shall be required between land use and to interfaces with the natural environment and may feature native vegetation, landforms/berms and swales.
- To be effective, habitat buffers shall be a minimum of **100m**, whilst visual buffers may range from **10-50m**.
- Buffers to natural areas must reflect contextual indigenous vegetation including density, species diversity and coverage and should feature trees, shrubs and understory species.
- Buffers to rural areas must reflect contextual indigenous vegetation, including density, species diversity and coverage and should feature trees, shrubs and understory species.
- Buffers in urban areas shall reflect the contextual vegetation along with introduced species, should be layered in design and should feature trees, shrubs and understory species.
- Wadi buffers shall utilize indigenous vegetation including density, species diversity and coverage and should feature trees, shrubs and understory species. For further guidance refer to wadi buffers section.

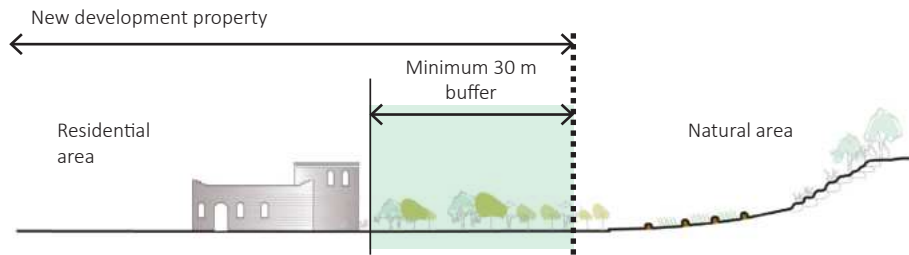


Figure 68 Natural landscape and residential

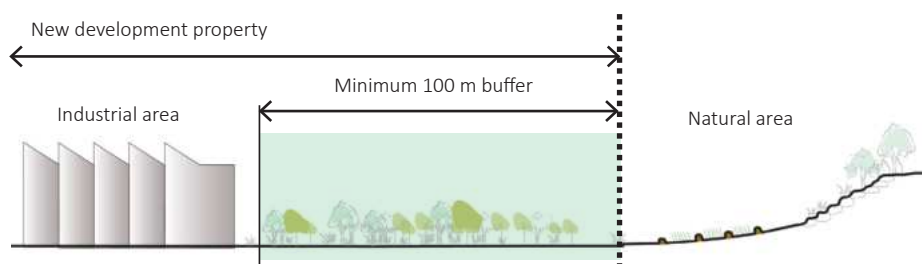


Figure 69 Natural area and industrial

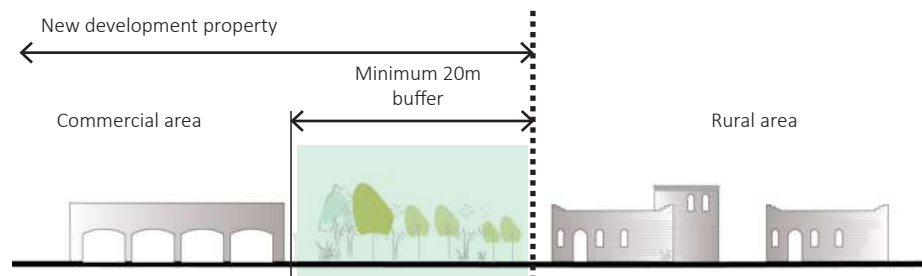


Figure 70 Commercial and rural development

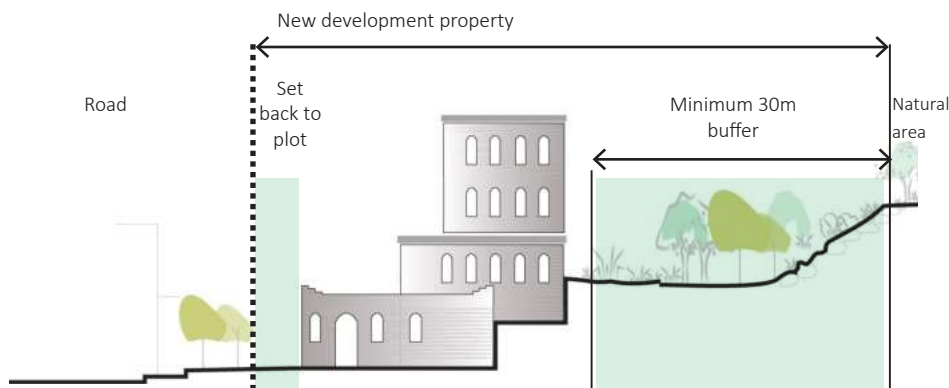


Figure 71 Natural area and urban development

1.4.6 Mitigate Visual Impacts of Vacant Land

Objective

To mitigate visual pollution caused by vacant and derelict sites within the urban context and adjacent to major public open spaces with the use of appropriate areas of vegetation planting, topographic elements or physical screens.

Guidance

- Vacant land adjacent to publicly accessible spaces shall be enhanced with buffers.
- Buffers shall be a minimum **6m** wide and start within the first **6m** from the plot boundary along edges with direct frontage to public open space.
- Buffers shall include native vegetation, berms or swales. In locations with limited space, hoarding may be accepted.
- Elements shall be arranged in such a way that direct views from the public open space are screened and arrangements shall be staggered clusters. Min. **70%** screening shall cover the direct frontage to public open space.
- Planting shall reflect contextual vegetation including density, species diversity and coverage and shall feature trees, shrubs and understory species.
- Tree groupings shall be setback a minimum of **2m** from the plot edge.
- Topographic elements shall be a max. slope of **1:3**, shall be planted with natural vegetation and shall be a minimum height of **1.5m**.
- Physical screening elements (i.e. hoarding) shall be a maximum height of **1.8m**, shall reflect local patterning, colors, materials, art and may be temporary or permanent in nature. Application shall be limited to **25%** of plot boundary along edges with direct frontage to public open space.
- In areas of steep terrain natural retaining techniques to mitigate erosion shall be used. Refer to sub-Chapter 1X.

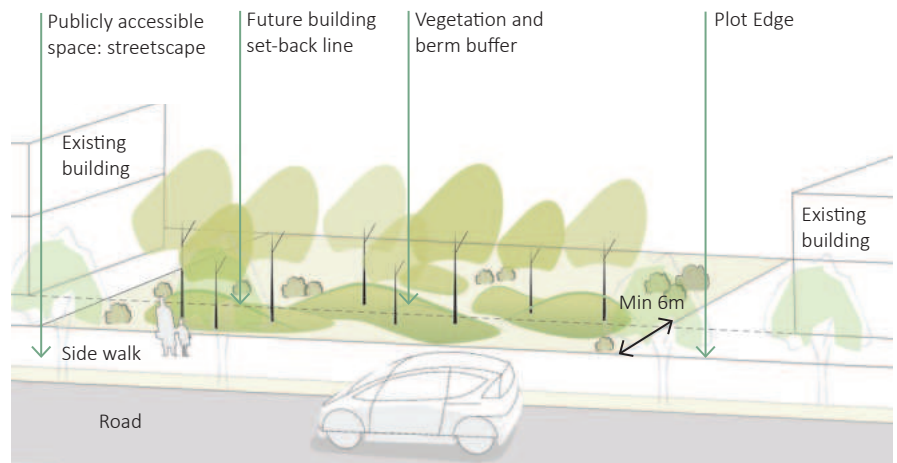


Figure 72 Diagram illustrating vacant plot between existing buildings with vegetation buffer, berms

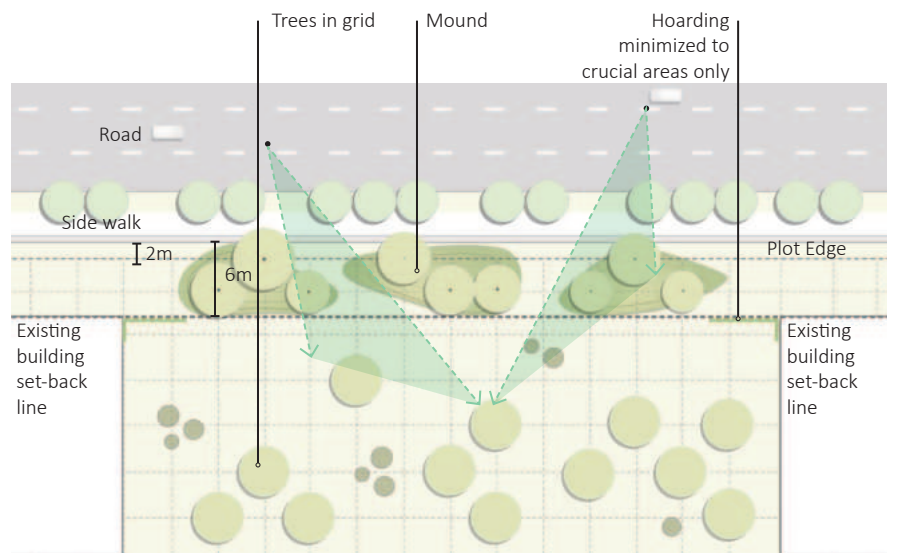


Figure 73 Diagram illustrating vacant plot between existing buildings with vegetation buffer, berms and hoarding, using a grid over lay to assist setting out of vegetation and ensure coverage

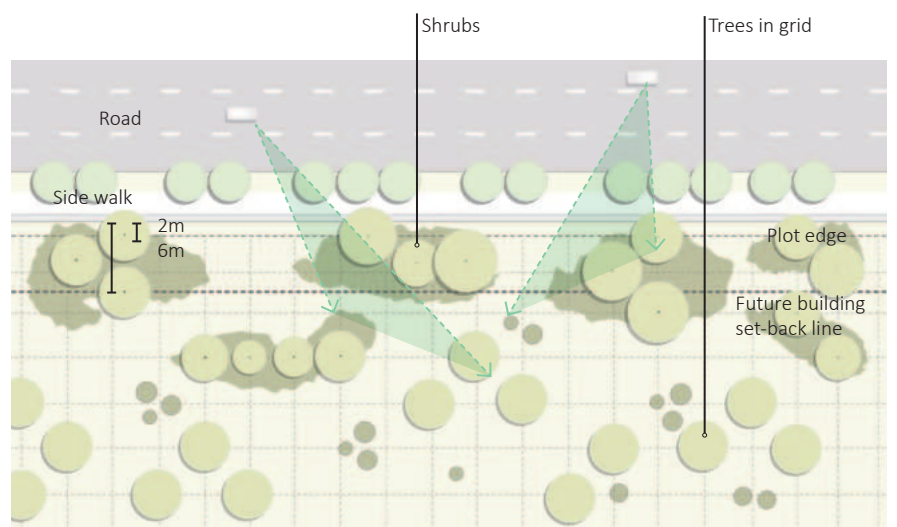


Figure 74 Diagram illustrating standard vacant plot treatment with vegetation buffer, using a grid over lay to assist setting out of vegetation and ensure coverage

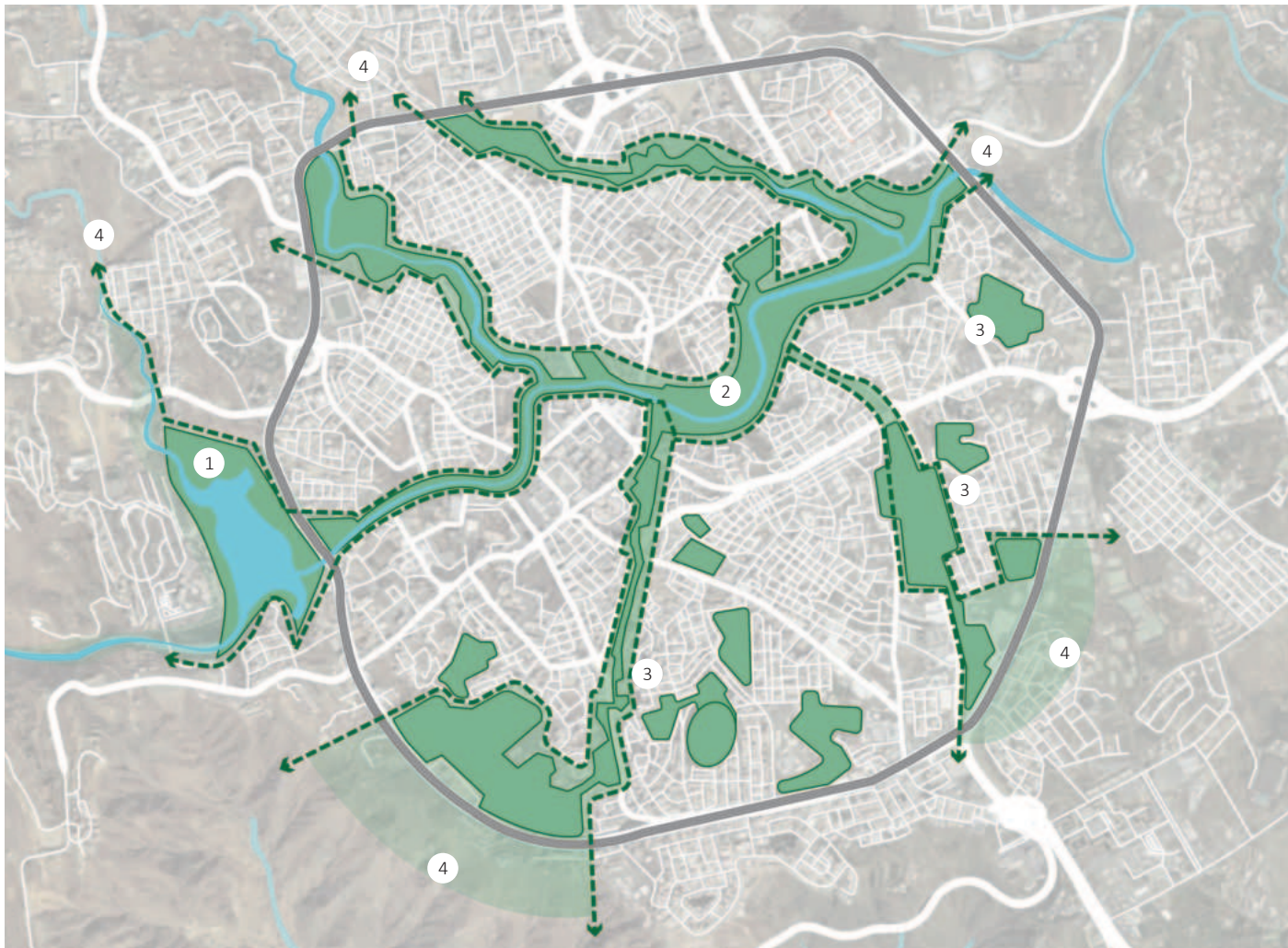
1.5 Designing Open Space

Overview

The AUDC promotes an open space network that is well planned, integrated, accessible, and of high quality. With diverse functional spaces that draw on the local natural landscape character to establish a sense of place, support ecological functions and provides visual amenity. This is essential for healthy cities. The following section aims to guide the functional aspects, type and quality of elements to be considered.

General Guidance

- The public open space includes:
- Parks, plazas and gardens
- Natural areas
- Wadis and other water bodies
- Roads and streets
- Best practice



Diagrammatic open space network utilizing existing water bodies and wadi corridors of Abha down town

1. Water bodies
2. Abha Wadi corridor
3. Existing and potential open space areas
4. Opportunities for contextual connections

1.5.1 Quality of the Public Realm

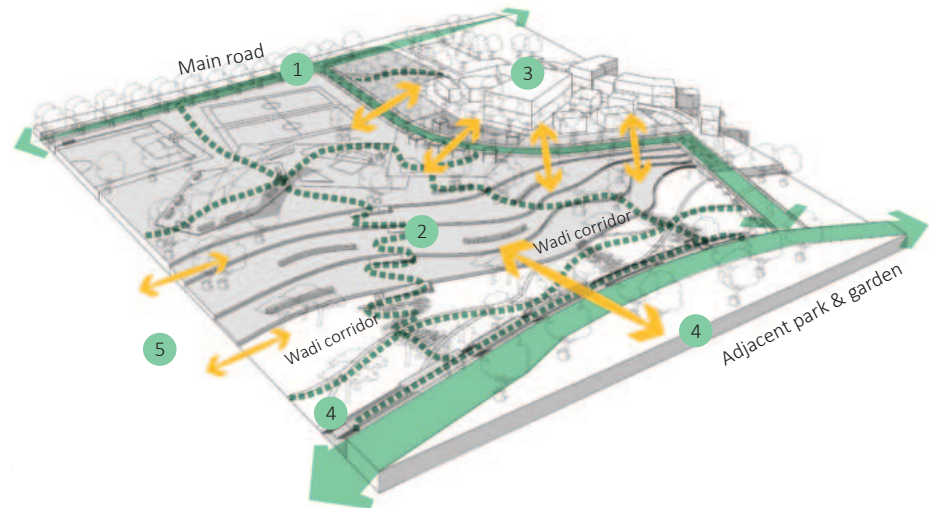
Parks, Plazas & Gardens

Objective

To design public parks, plazas and gardens to provide safe, accessible, comfortable and attractive places for people.

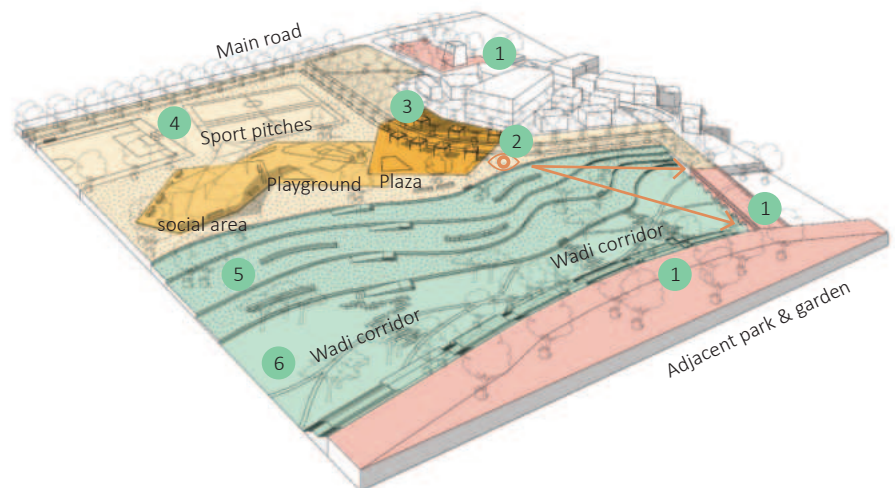
Guidance

- Open spaces shall be legible (i.e. function clear), easily navigated, connected, safe, attractive and universally accessible for a variety of users.
- Layout and definition of space shall be human scale and comfortable for pedestrian use.
- Functions shall relate to the natural topography and vegetation.
- Functions shall relate to the adjacent urban functions to establish connectivity, safety and regular use.
- Designs must be coordinated with utilities and emergency access requirements.
- Typically, grading shall be limited.
- Spaces shall be designed in such a way that makes them safe, inclusive and universally accessible. Steps, ramps and level changes must be safe, clearly indicated and ensure alternative routes are available for users with limitations.
- Impacts to natural topographic features and vegetation shall be limited or mitigated with appropriate retaining and replanting.
- Spaces of high importance shall express a distinctive design character and quality, enhancing navigation and diversifying experiences.
- Shaded routes should be maximized and the use of shade trees should be prioritized before structures.
- Layout should facilitate natural surveillance.
- Layout should facilitate social interactions.
- Opportunities for flexible space in addition to programmed active spaces and casual recreational spaces should be offered.



New park development: shall consider movement hierarchy and connections

1. Primary paths shall be a minimum 3m wide and hard paved for year round functionality.
2. Secondary paths should feature permeable surfaces and take a meandering route where possible.
3. Maximize connectivity with adjacent heritage neighborhood.
4. Maximize connectivity to other green open spaces and existing routes.
5. Maximize connectivity with adjacent neighborhood and commercial areas.

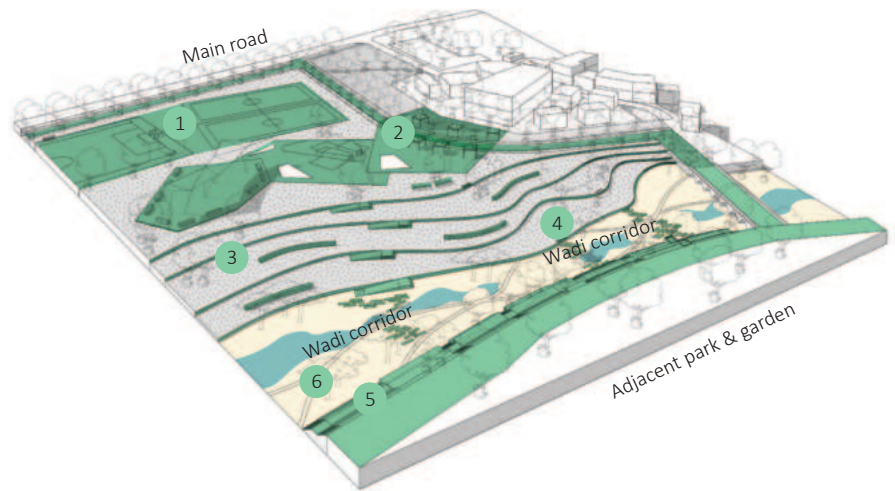


New park development: shall consider layout and hierarchy of spaces

1. Maximize connectivity with heritage buildings and structures as attractors.
2. Consider views.
3. Establish centralized high use areas such as plazas and playgrounds.
4. Active recreation shall be located outside wadi corridor.
5. Passive recreation may be located inside wadi corridor.
6. Wadi Corridor shall maintain a natural character or be re-naturalized, and pedestrian access facilitated.

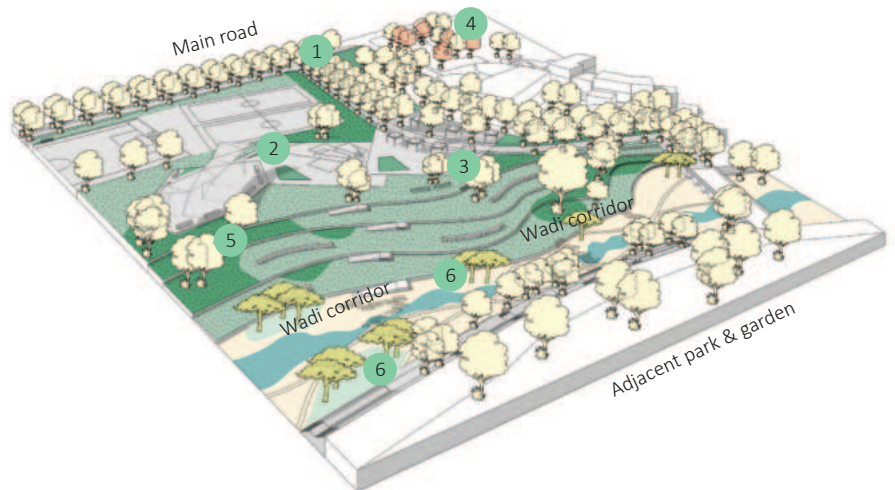
New park development: consider composition of hardscape

1. Hard paved area should contribute to character and ensure functionality.
2. Hard paved areas shall be minimized to spaces with heavy use such as plazas.
3. Retaining elements shall reflect local stone and/or colors.
4. Permeable and natural gravel surfaces shall be used wherever possible.
5. Hard terraced edges to wadi should be limited to strategic locations and natural soft edges should be prioritized.
6. Wadi corridor shall be naturalized and permeable, floodable pathways should be provided.



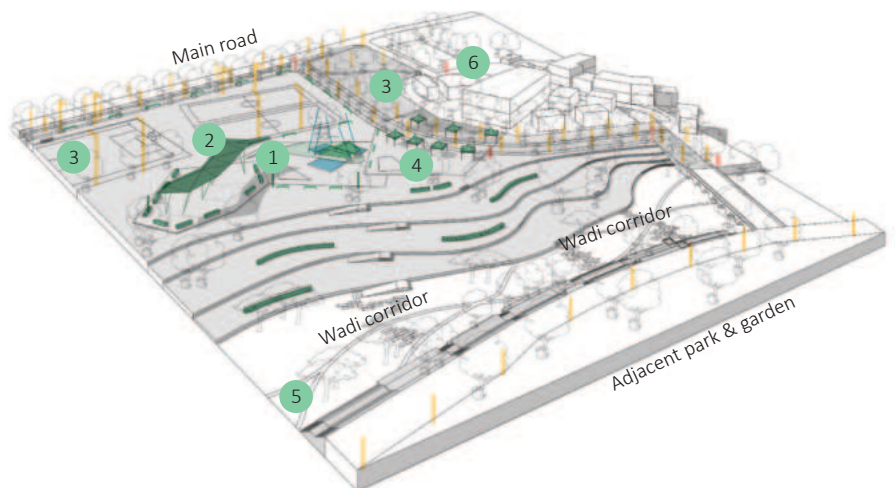
New park development: consider composition of softscape

1. Primary paths may be highlighted with boulevard planting.
2. High intensity, medium to high water use planting shall be located in areas of high use.
3. Trees shall be used for shading. Layout and arrangement should maximize shading capacity.
4. Trees may be used to highlight destinations or points of importance assisting wayfinding and navigation.
5. Cluster vegetation.
6. Indigenous species shall be used for the wadi corridor.



New park development: consider furniture, lighting and shading

1. Furniture should be clustered in areas of high use and offer varied seating arrangements.
2. Shading structures should be considered where natural shading is not sufficient. Design should enhance park character.
3. Functional lighting should be provided for all primary routes and active recreation areas.
4. Flexible space should provide infrastructure for market and event furniture.
5. Lighting shall be limited in the wadi corridor and natural areas.
6. Wayfinding and information panels should be located at nodes and points of interest.



- A maintenance and management plan maybe required as part of planning application.
- Water features may be considered for areas of high use. Use should be limited however. Designs must take into account minimization of water use and loss, maintainability, appearance during no operational hours or failure, safety, appropriate location, local water availability and design quality and character is in keeping with context.
- Opportunities for flexible space in addition to programmed active spaces and casual recreational spaces should be offered.



Best practice open spaces: varied scale and intimacy of spaces



Best practice open spaces: integrated and strategically located passive and active recreational areas



Best practice open spaces: shaded formal and informal play areas



Best practice open spaces: comfort, contextual materials, appropriate use

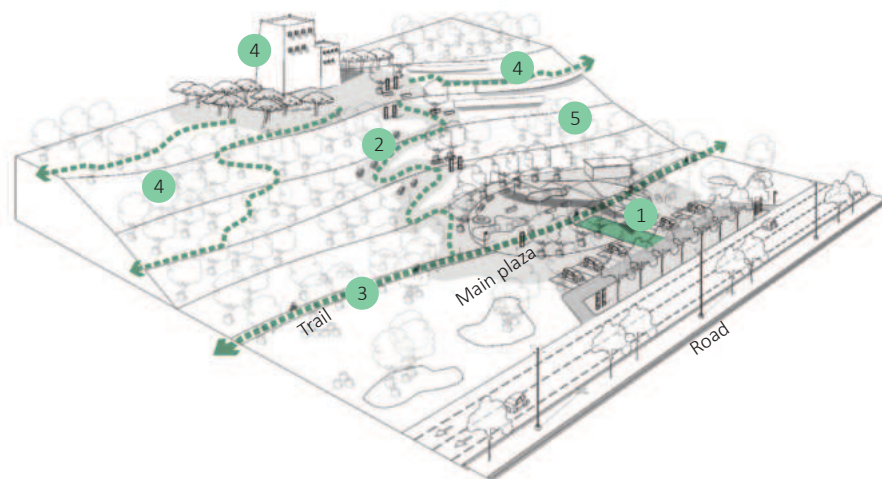
Natural Areas

Objective

To reflect and respect the natural setting in the design of open spaces in natural areas.

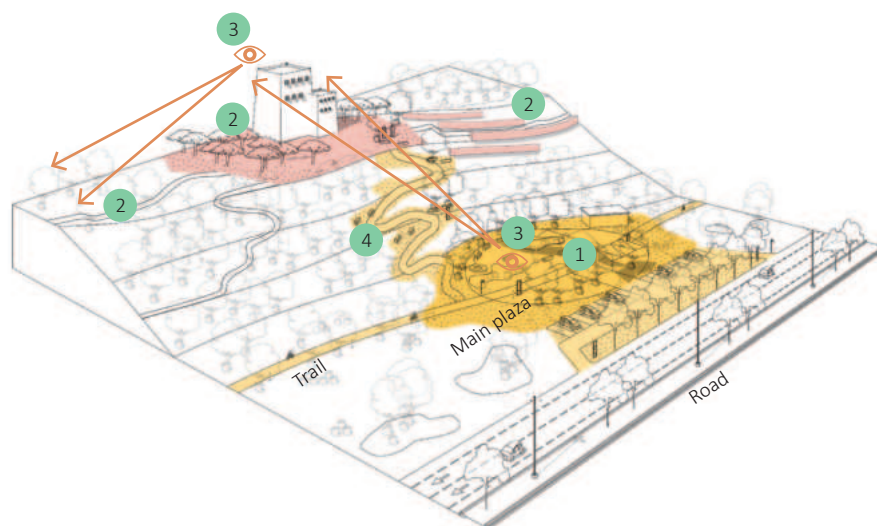
Guidance

- Access to areas of natural vegetation for education and awareness, social and passive recreation activities shall be promoted.
- Any uses within natural areas shall not conflict with the natural systems, flora and fauna and shall reflect the immediate natural contextual landscape qualities.
- Visiting areas shall be provided in strategic natural settings. The setting shall be kept as close as possible to its natural state, and may contain infrastructure to support visitation.
- Low impact activities (rest, play and environmental awareness interpretation signage), infrastructure and amenities may be provided in designated visiting areas.
- Any open space areas developed within natural areas shall submit **2 Point Study** visualizations as part of development application. A formal LVIA may also be requested.
- Any furniture within natural areas should reflect the natural context.
- Natural materials such as natural stone, timber, and where possible, permeable surfaces shall be preferred.
- Buffers should be established to high quality, ecologically sensitive or endangered habitats.
- Lighting strategies for new open spaces shall be subject to additional scrutiny to ensure night time lighting is limited to safety and accessibility purposes only and light pollution is limited and impact on wildlife is minimal.



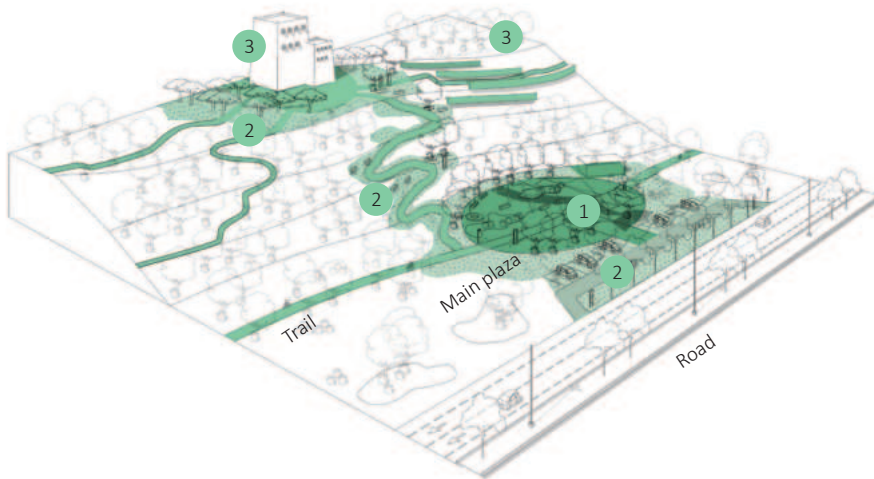
New park development: shall consider movement hierarchy and connections

1. Primary paths shall be a minimum 3m wide and shall feature contextual materials.
2. Secondary paths shall feature permeable surfaces, take a meandering route where possible.
3. Maximize connectivity and where possible provide universally accessible routes, to any adjacent heritage assets (Architectural, cultural or natural).
4. Link site to any adjacent open space networks such as tourist routes and parks.
5. Pathways should be sensitively design to minimize impact to the natural setting. Pathways should follow the natural topography where possible, minimizing the need for cut, fill and retaining.



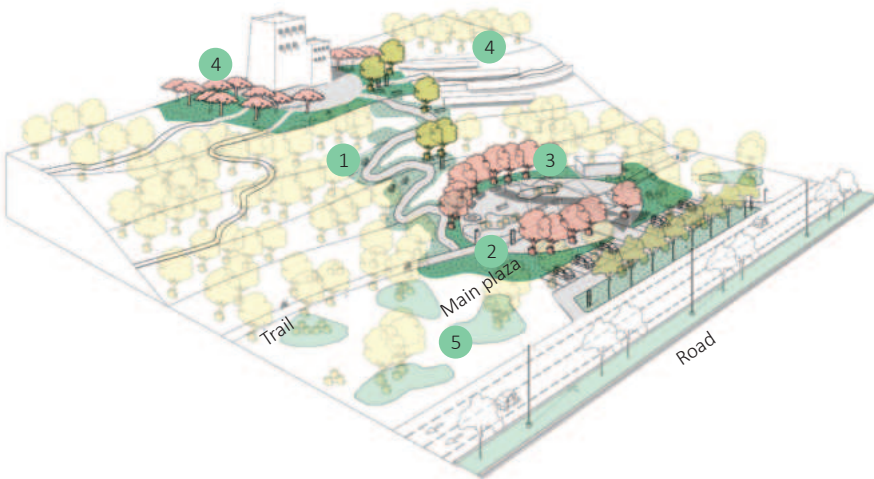
New park development: shall consider layout and hierarchy of spaces

1. Establish arrival plaza or trail head where any facilities (information/toilets/seating/shading) can be clustered within a single space to minimize impact on natural setting. Location should be with in flat areas and as close to existing road network as appropriate to further reduce impacts on the landscape.
2. Any enhancement of heritage assets (architectural, cultural or natural), should be in keeping with the qualities of the heritage asset.
3. Consider and maintain views.
4. Only passive recreation shall be facilitated (i.e. hiking, edutainment).



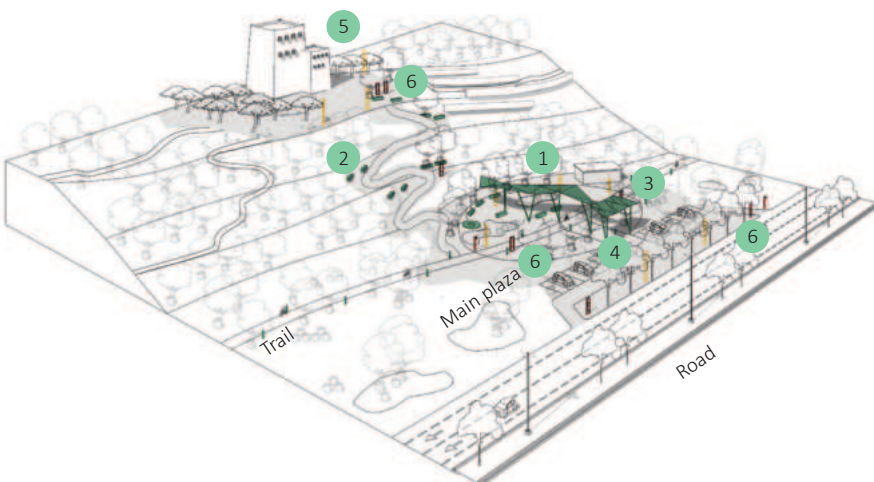
New park development: consider composition of hardscape

1. Hard paved area should contribute to character and ensure functionality and be limited in uses to spaces with heavy use such as arrival plazas.
2. Permeable and natural gravel surfaces shall be used wherever possible.
3. Existing heritage assets should be protected, preserved or restored as per heritage guidance. Refer to Chapter 2.
4. Retaining elements shall reflect local stone and/or colors.
5. Interventions should be minimal and sensitive to the natural landscape setting, minimizing damage.



New park development: consider composition of softscape

1. Planting should reflect the contextual indigenous planting including diversity, naturalistic arrangement and coverage.
2. Areas of high use may feature more designed planting schemes, but they must reflect contextual indigenous plants.
3. Trees shall be used for shading at arrival plazas. Layout and arrangement should maximize shading capacity.
4. Vegetation to heritage assets (Architectural or cultural) should reflect the heritage asset's true qualities.
5. Buffer planting should reflect buffer guidance.



New park development: consider furniture, lighting and shading

1. Furniture should be clustered in areas of high use and offer varied seating arrangements.
2. Rest areas should be periodically located along pathways.
3. Shading structures should be considered only where natural shading is not sufficient. Design should enhance park naturalistic character.
4. Functional lighting should be provided to primary routes only.
5. Lighting may be provided to heritage assets (Architectural/cultural) however it should be in keeping with the qualities of the asset.
6. Wayfinding and information panels should be limited in use and only located at nodes, arrival points, path intersections and points of interest.

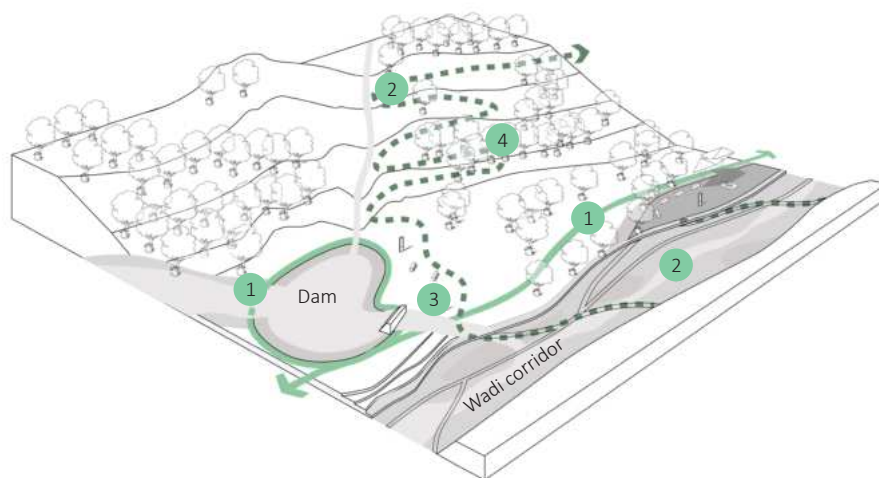
Wadis & Water Bodies

Objective

Wadis shall form part of an integrated functioning and attractive public open space network. It should function as social, recreational, hydrological and ecological infrastructure.

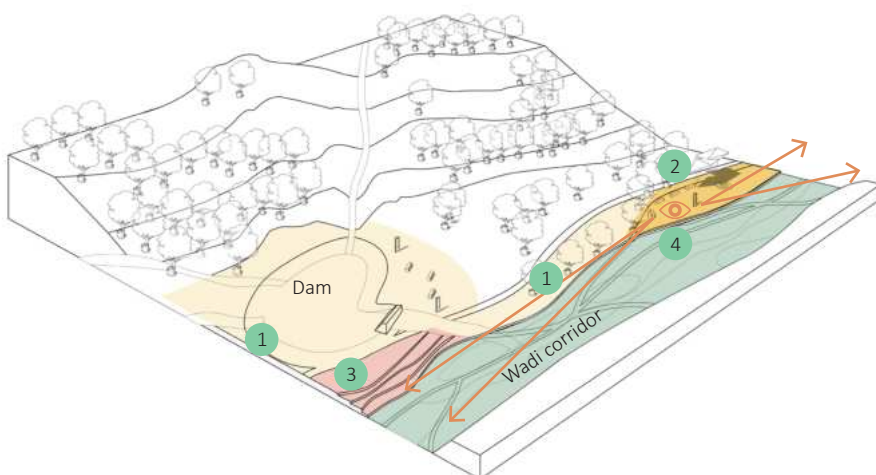
Guidance

- Water bodies shall be accessible and integrated into the public open space network where possible and should reflect the naturalistic context.
- Water bodies shall be protected from pollution, contamination, and erosion through the use of natural vegetation to filter and buffer.
- The general character shall be naturalistic and reflect the immediate natural contextual landscape qualities.
- Any uses within wadis and water bodies shall not conflict with the natural systems (geological, hydrological, ecological) and fauna.
- Hydrological functions of primary, secondary and storm water creeks must be maintained.
- Industrial land uses shall be prohibited including interfacing plots.
- Passive recreation activities are permitted and encouraged. Refer to sub-chapter Preserve & Enhance Wadi Network for further guidance on wadis.
- Materiality, design language and color shall reflect the natural contextual landscape setting.
- The placement, arrangement and design of elements (i.e. furniture, lighting wayfinding) shall focus of function and universal accessibility.
- Where wadis and water bodies are within undisturbed natural landscapes, refer to guidance on Quality of the Public Realm - Natural Areas
- Any proposed developed adjacent to wadis or water bodies shall submit 2 Point Study visualizations as part of development application.



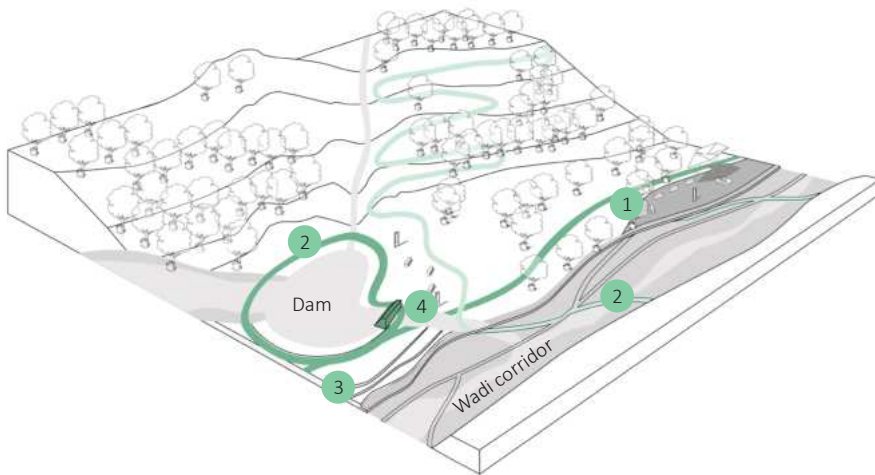
New park development: shall consider movement hierarchy and connections

1. Primary paths shall be a minimum 3m wide and shall feature contextual materials. Permeable surfaces shall be used where possible. Primary paths shall be able to with stand flooding and shall provide access to higher ground in case of flash floods. Primary paths shall be universally accessibility.
2. Secondary paths shall feature permeable surfaces and meandering route where possible and contextual materials.
3. Link site to any adjacent open space networks such as tourist routes, cultural landscapes or nature trails.
4. Pathways should be sensitively design to minimize impact to the natural setting. Pathways should follow the natural topography where possible, minimizing the need for cut, fill and retaining.



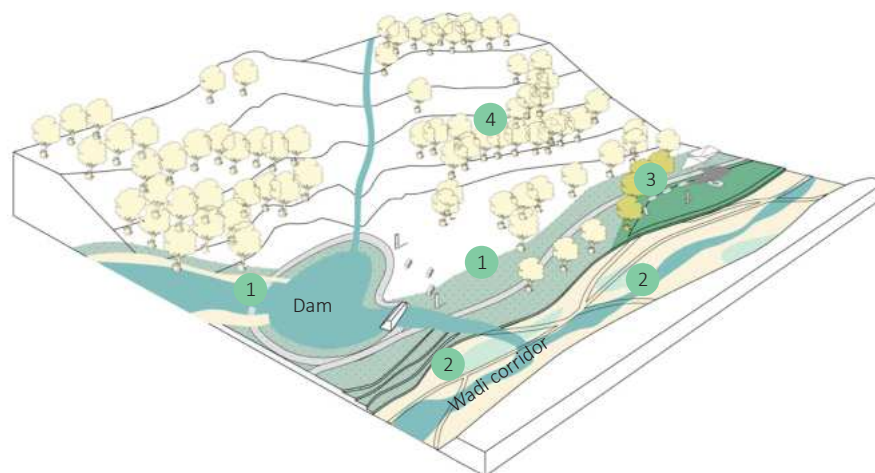
New park development: shall consider layout and hierarchy of spaces

1. Provide access to wadi and dam edge. Provide continuous path and cycle paths where possible establishing network of open space.
2. Provide periodic recreational activities to wadi edge at junctions, nodes or any other strategically located points or to meet open space catchment requirements. Care shall be taken to minimize impact on natural setting. Location should be with in flat areas to further reduce impacts on the landscape.
3. Any enhancement of heritage assets (architectural, cultural or natural), should be in keeping with the qualities of the heritage asset.
4. Consider and maintain views.
5. Maintain naturalised edges to water bodies where possible, particularly within natural or rural settings.



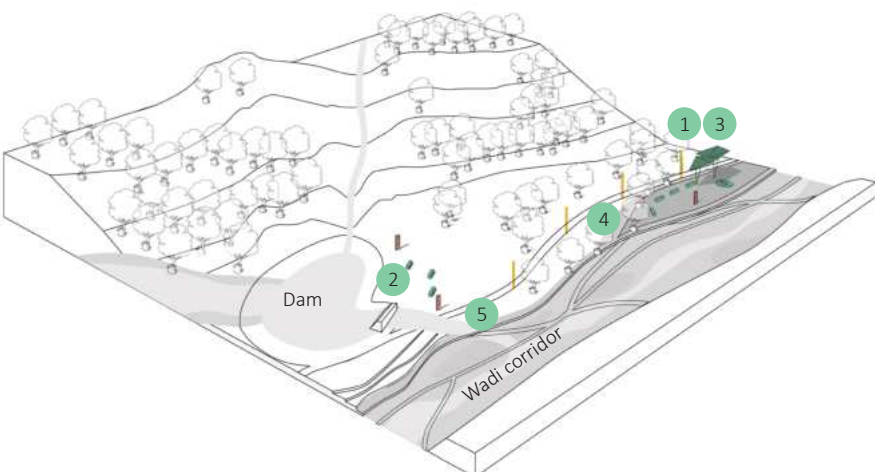
New park development: consider composition of hardscape

1. Hard paved area should contribute to character and ensure functionality and be limited to areas of high use and as primary paths.
2. Permeable and natural gravel surfaces shall be used wherever possible.
3. Existing heritage assets should be protected, preserved, restored or repaired as per heritage guidance. Refer to Chapter 2.
4. Retaining or structural stormwater elements shall reflect local stone and/or colors.
5. Interventions should be minimal and sensitive to the natural landscape setting, minimizing damage.



New park development: consider composition of softscape

1. Wadi corridor and water bodies shall be buffered with contextual vegetation. Refer to sub-chapter 1.4.
2. Planting should reflecting contextual indigenous planting including diversity, naturalistic arrangement and coverage.
3. Areas of high use may feature more designed planting schemes, but they must reflect contextual indigenous plants. Trees shall be used for shading. Layout and arrangement should maximize shading capacity.
4. Areas of remnant natural vegetation shall be protected and preserved.



New park development: consider furniture, lighting and shading

1. Furniture should be clustered in areas of high use and offer varied seating arrangements.
2. Rest areas should be periodically located along pathways.
3. Shading structures should be considered only where natural shading is not sufficient. Design should enhance park naturalistic character.
4. Functional lighting should be provided to primary routes only and shall take into account contextual functions such as natural habitat areas requiring protection from light pollution.
5. Wayfinding and information panels should be limited in use and only located at nodes, arrival points, path intersections and points of interest.

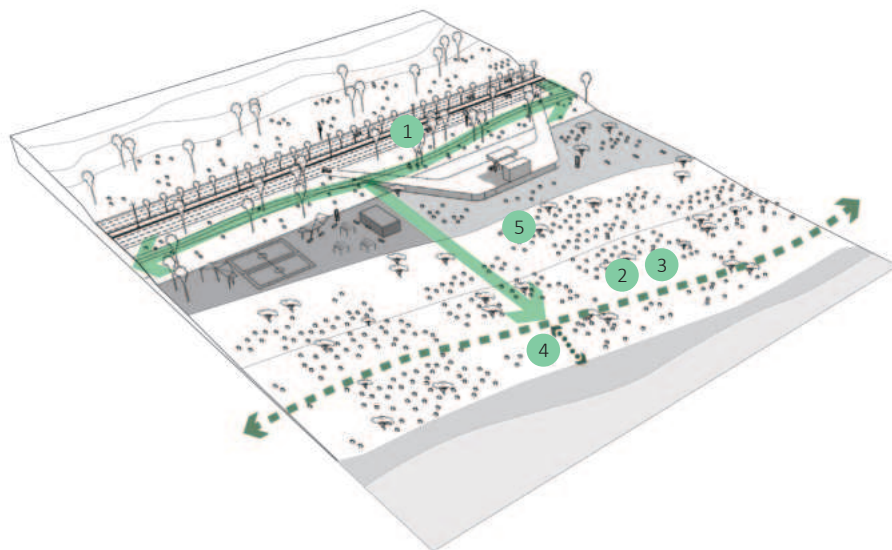
Shoreline (50m Natural Buffer)

Objective

To protect, enhance and naturalize the shoreline to ensure the natural character is preserved for generations to come, public access is facilitated, natural systems are maintained and over-development is avoided.

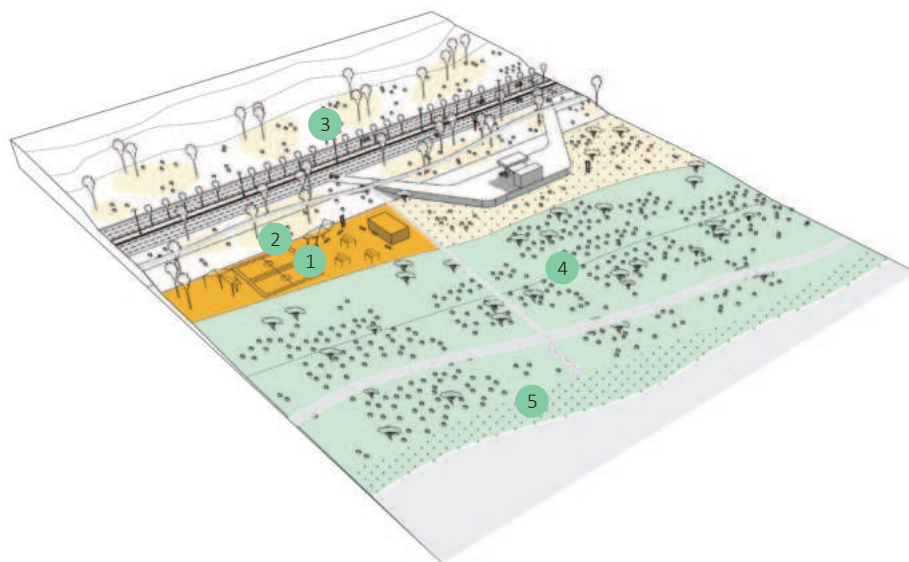
Guidance

- Shoreline accessibility shall be limited to pedestrian and emergency access only, or where special conditions related to marine activities.
- Public access and open space activities are promoted within the **50m** buffer area, as long as they are in keeping with the natural landscape character and are not detrimental to natural systems.
- The shoreline shall be protected from pollution, contamination, and erosion through the use of natural vegetation to filter and buffer.
- The general character shall be naturalistic and reflect the immediate natural contextual landscape qualities.
- Any uses within shoreline development shall not conflict with the natural systems (geological, hydrological, ecological) and fauna.
- Industrial land uses shall be prohibited including interfacing plots.
- Low impact activities (rest, play and environmental awareness interpretation signage), infrastructure and amenities may be provided in designated visiting areas or trail heads.
- Any open space areas developed within natural areas shall submit **2 Point Study** visualizations as part of development application. A formal LVIA may be requested.
- Materiality, design language and color shall reflect the natural contextual landscape setting.
- The placement, arrangement and design of elements (i.e. furniture, lighting wayfinding) shall focus of function and universal accessibility..



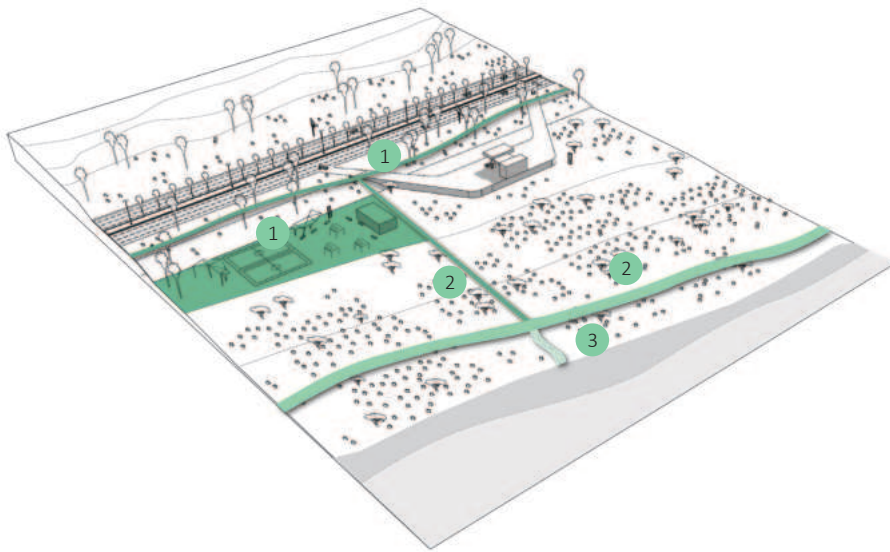
Shoreline development: shall consider movement hierarchy and connections

1. Primary paths shall be a minimum 3m wide and shall feature contextual materials. Permeable surfaces shall be used where possible. Primary paths shall be able to withstand flooding and shall provide access to higher ground in case of flash floods. Primary paths shall be universally accessible.
2. Secondary paths shall feature permeable surfaces and take a meandering route where possible and contextual materials.
3. Link site to any adjacent networks such as tourist routes, cultural landscapes or nature trails.
4. Controlled link to seashore with permeable material and minimum impact on nature setting.
5. Pathways should be sensitively design to minimize impact to the natural setting. Pathways should follow the natural topography where possible, minimizing the need for cut, fill and retaining.



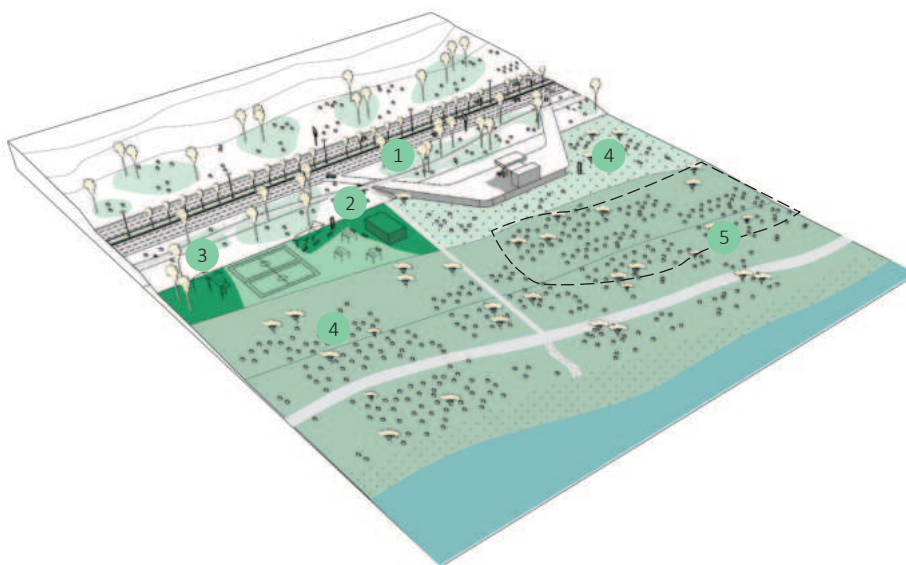
Shoreline development: shall consider layout and hierarchy of spaces

1. Active recreation such as plazas and playgrounds shall be located outside natural buffer corridor.
2. Any facilities (information/restaurants/toilets/seating/shading) can be clustered to minimize impact on natural setting. Natural materials, colors, design languages and vegetation should be specified. Location should be within flat areas and as close to existing road network as appropriate to further reduce impacts on the landscape.
3. Consider and maintain views
4. Shoreline buffer shall be re-naturalized and pedestrian access facilitated.
5. Areas with high natural value or environmental sensitivity along the shoreline shall be protected and prohibited for public access.



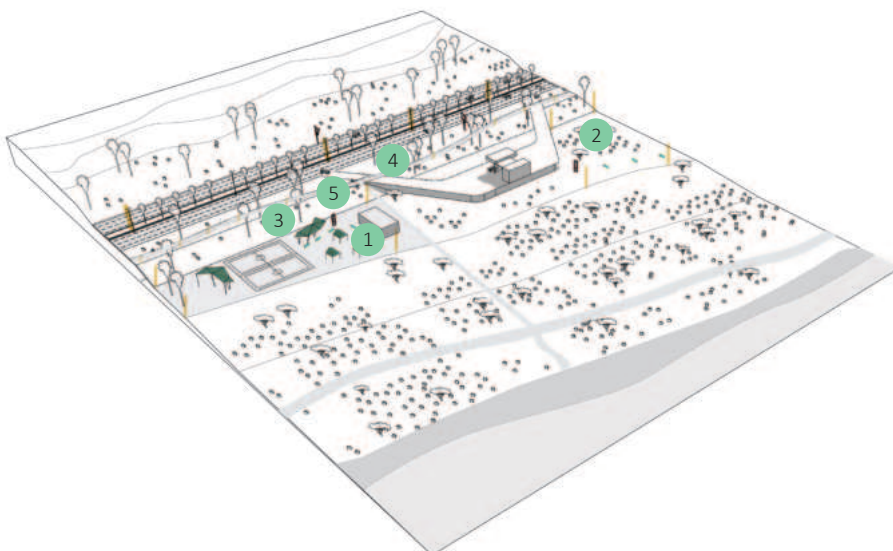
Shoreline development: consider composition of hardscape

1. Hard paved area should contribute to character and ensure functionality and be limited to areas of high use or routes such as primary paths.
2. Permeable and natural gravel surfaces shall be used wherever possible.
3. Shoreline shall be naturalized, however permeable, floodable pathways should be provided.



Shoreline development: consider composition of softscape

1. Primary paths may be highlighted with boulevard planting.
2. High intensity, medium to high water use planting shall be located in areas of high use only.
3. Trees shall be used for shading. Layout and arrangement should maximize shading capacity.
4. Shoreline shall be buffered with contextual vegetation. Refer to sub-chapter 1.4. Indigenous species shall be used for the shoreline natural buffer.
5. Areas of environmentally sensitive habitat shall be protected and public access prohibited.



Shoreline development: consider furniture, lighting and shading

1. Furniture should be clustered in areas of high use and offer varied seating arrangements.
2. Rest areas should be periodically located along pathways.
3. Shading structures should be considered only where natural shading is not sufficient. Design should enhance park naturalistic character.
4. Functional lighting should be provided to primary routes only and shall take into account contextual functions such as natural habitat areas requiring protection from light pollution.
5. Wayfinding and information panels should be limited in use and only located at nodes, arrival points, path intersections and points of interest.

Street & Roads

Objective

To prioritize the comfort, enjoyment and safety of pedestrians and cyclists and contribute to an attractive urban frontage within the roads and particularly streets in urban areas.

Guidance

- Pedestrian and cycle path hierarchy shall be established and legible.
- Materiality shall be used to differentiate various functions. Variation in module size, laying pattern, color and texture may be used to differentiate surfaces.
- Appropriate crossing points should be provided to streets and roads to facilitate connectivity.
- Shaded routes should be maximized and shade trees should be prioritized.
- Furniture along streets shall be located within the Furniture Zone only and adjacent to but not directly within intersections (i.e. outside of the corner clear zone).
- Street furniture should be fit for purpose and provided at regular intervals. Refer section on furniture for further guidance.
- Obstacles and furniture should not be located within line of movement.
- Refer to chapter 3 for further guidance on street design and public realm arrangement



Figure 75 Example of cycle & pedestrian route improvement with private development setback area

1. Extended walkway (once developed)
2. Furniture zone
3. Parking
4. Paved access roads with raised tables
5. Combined walkway / cycle lane (shared surface)
6. Open joint paving above tree pit



Best practice: shared spaces with variation in paving, buffers to major roads, high quality active street

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1.5.2 Elements of the Public Realm

Movement & Open Space

Objective

To establish a well connected pedestrian and slow mobility network and ease of access, encouraging pedestrians within the urban areas of Aseer region.

Guidance

- Networks should be safe, easy to navigate, efficient and reflect the local character and utilize the natural open space network where possible.
- Hierarchy of routes and function should be established and legible.
- Primary paths should be direct, efficient, logical, and connecting uses. Secondary recreational paths may be less direct and meandering.
- Routes should link to major features and destinations.
- Street sidewalks must be min. 1.5m and a max. 4m wide.
- Pathways shall be a min. 2m wide and min. 3.5m and maximum 6m wide for shared pedestrian and cycle tracks.
- Cycle paths should be a minimum 1.5m width and a minimum 1.8m for unidirectional tracks. Color, warnings, material and laying pattern should contrasting to other uses.
- Material should be durable, fit for purpose and laying pattern and color should be differentiated between uses.
- Open space must be universally accessible; to mobility or visually impaired users, including inclusive seating, navigation, play or fitness equipment and general surface grading.

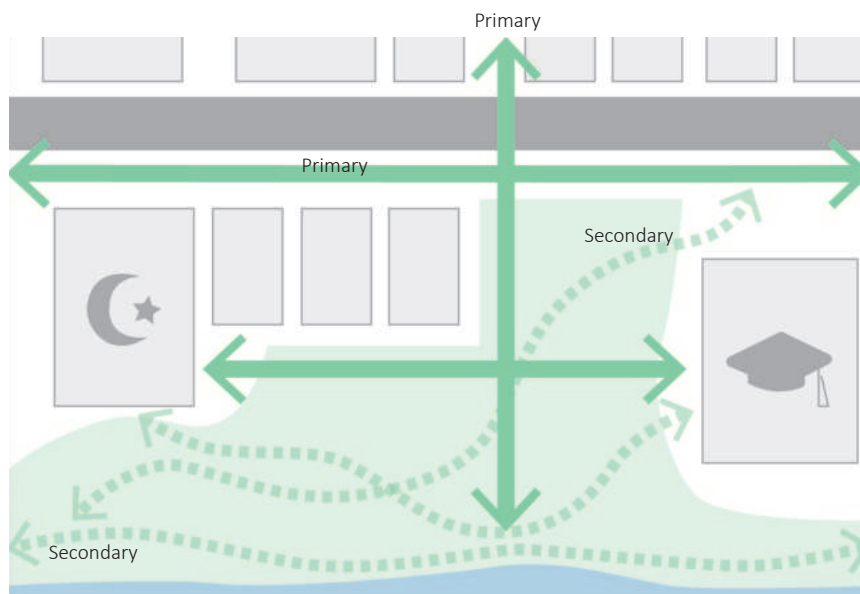


Figure 76 Primary routes should be direct, efficient and where appropriate paved

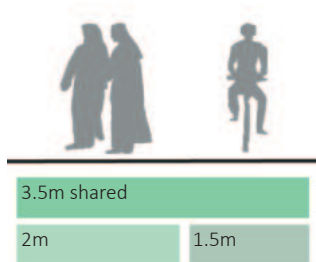


Figure 77 General path width principles



Primary route. Variation in materials helps to communicate uses and hierarchy



Example secondary routes; meandering, gravel surfaces, planting and and rest areas



Example primary route; direct, shaded and hard paved, periodic benches

Guidance (continued)

- All hard paving surfaces to incorporate cross falls between 1.5 & 2.0 % to aid surface water run off.
- 1.5m clearway required for opening of vehicle door / wheelchair access. This can be either part of the parking bay or within the adjacent public realm (curb or furniture zone).
- Provide level or flush crossing points at all controlled crossing points, junctions at side roads and other access points.
- Ensure crossings incorporate dropped curbs at both sides.
- Locate crossings where they are safe and convenient for all road users.
- Make sure crossings are well drained, lit and visible.
- There should be a 1m distance from center of tree pits from curb.
- Bicycle parking clearance is required to be at least 1.5m from fire hydrants, loading zones, and driveways. At least 0.6m from utility meters, street signs, tree pits and trash bins.
- Bike stands installed perpendicular to curbs shall allow a minimum of 1m clearance at the curb and 1.5m of clear pathways with a standard sized bicycle properly locked to the stand.

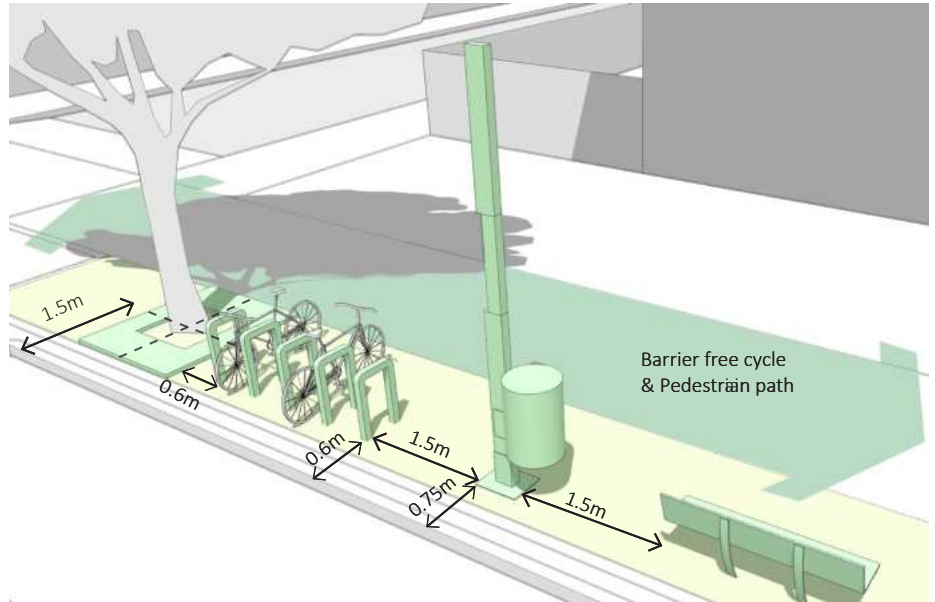


Figure 78 Examples of furniture arrangement on streets scape to ensure obstacle free movement and functionality and comfortable use of elements



Examples of furniture zones aligned with pedestrian path



Movement & Universal Accessibility

Objective

To provide a generally accepted best practice examples and references to appropriate guidance which should apply to the public realm surface design on how the built environment for the AUDC to enable one to approach, enter, use and evacuate independently.

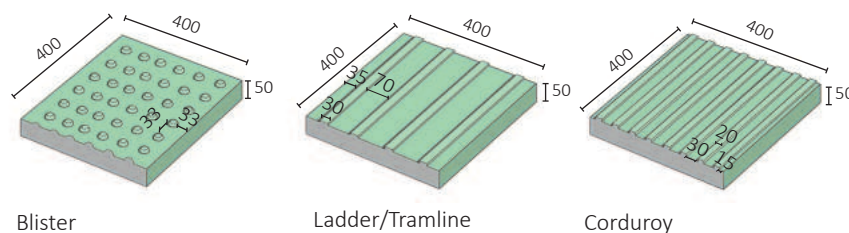


Figure 79 Typical tactile paving types. Blister for crossings, Ladder/tram to cycle routes to indicate end of cycle priority, corduroy to steps or to indicate edge of public transport platform

Guidance

- Universal accessibility shall be achieved. The use of steps and ramps should be minimize where practical and grading should be a minimum of **1:20**. Where routes are steeper than **1:20**, ramps shall prioritized over steps.
- Tactile paving should be specified at appropriate locations for universal accessibility and navigation.
- At crossing points, the tactile surfacing should extend for the full width of the dropped curb and for a depth of at least **800mm**.
- Corduroy paving should be installed at the top and bottom of steps, **400mm** back from the edge of the step/ start of ramp and **800mm** deep.
- The color of the proposed tactile paving shall contrast (even when wet) with the surrounding surfacing to assist the partially sighted and be non-slip.
- Tactile paving shall be pre-cast concrete, natural granite or individual brass or stainless steel studs may be specified in special cases.
- Covered resting areas should be provided at appropriate intervals along long sections of road.
- Landings between sections or ramps or steps shall be a minimum **1.5m**.
- Landings at the foot and header of ramps and steps shall be a minimum **1.2m**.
- Handrails shall be considered for steps and ramps.
- Typical step riser shall be between **150mm** and **170mm**, typical step tread shall be between **280mm** and **425mm**. The riser and tread shall be consistent throughout flight of steps.

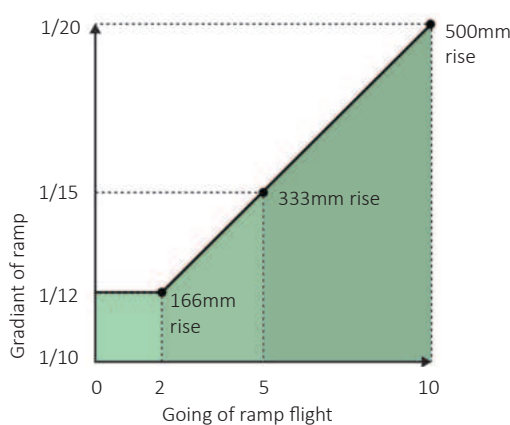


Figure 80 Typical application of blister paving to pedestrian raised table crossing

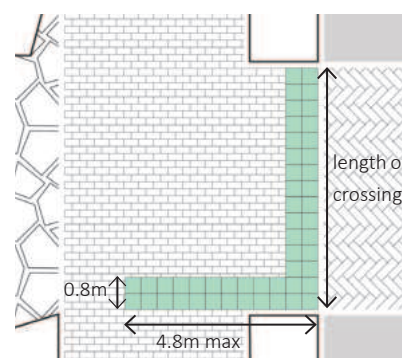


Figure 81 Typical application of blister paving to pedestrian raised table crossing

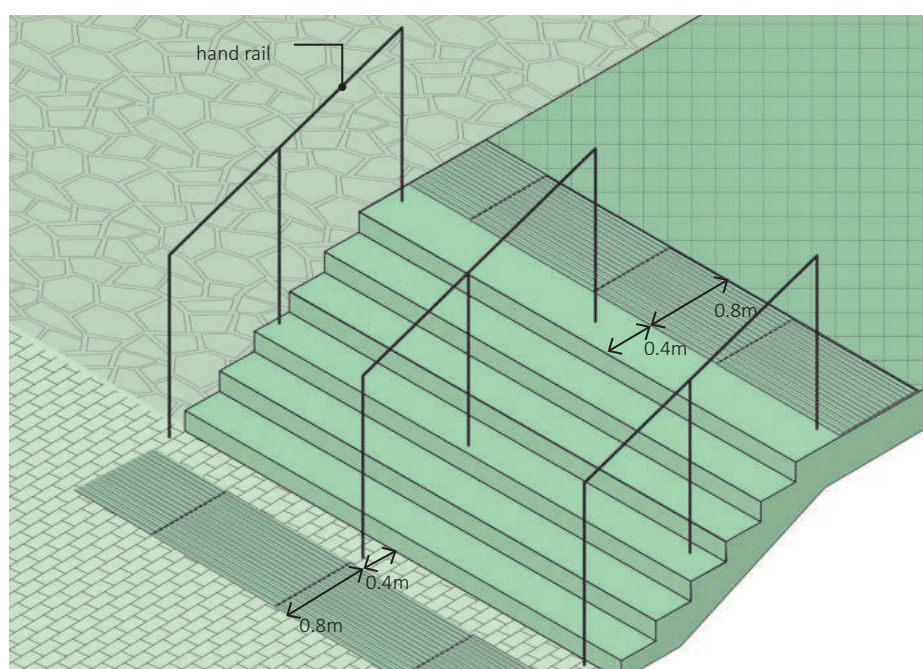


Figure 82 Corduroy paving to top and bottom of steps to signal level change for visually impaired users

Hardscape

Objective

To enhance the visual quality and legibility of open spaces, and to promote local identity with the use of hardscape elements.

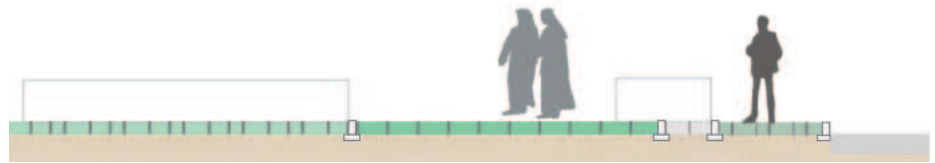


Figure 83 Section illustrating materiality and pattern should be used to define spaces and functions

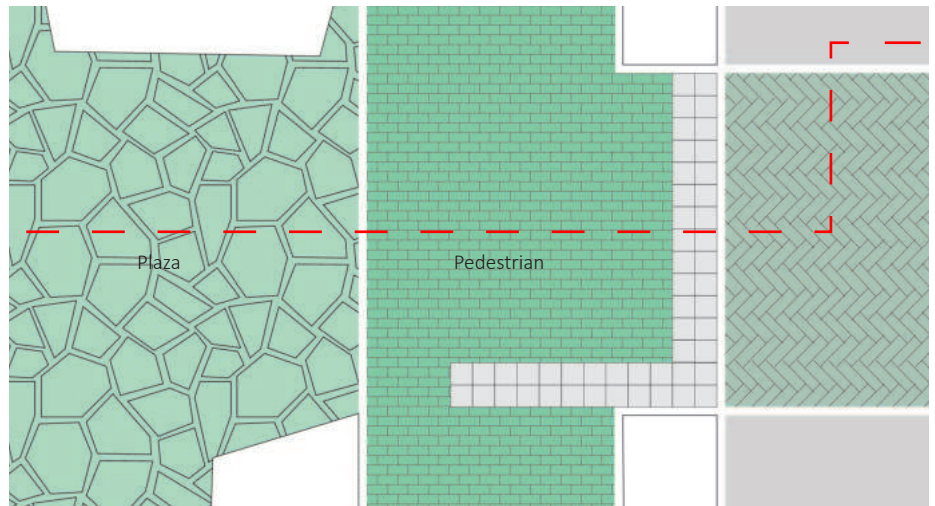
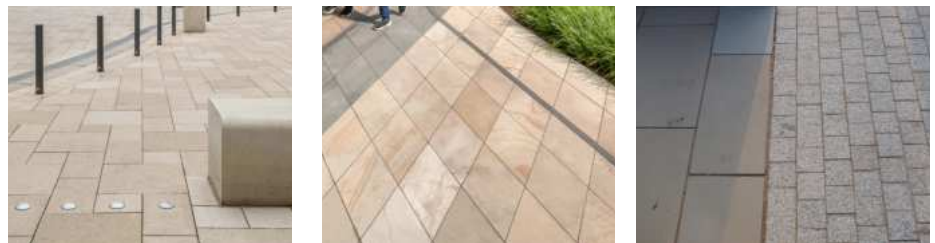


Figure 84 Plan illustrating materiality and pattern should be used to define spaces and functions

Guidance

- Material should correspond to the use/function of spaces, scale of the space, comfort and reinforce hierarchy and character.
- Variation in module size, laying pattern, color and texture should be adopted to differentiate functions.
- Surface materials must be durable, and fit for purpose. Material dimensions/module size and construction technique should reflect the intended use. (i.e. pedestrian or vehicular: ridged/flexible surface, build up depth and type, and paver thickness.)
- Surface patterns and color should reflect local natural and heritage character of Abha.
- Permeable, previous and porous surfaces should be specified where possible.
- Soft fall surfaces must be specified for play equipment where falling is possible from a height of **500mm** or above.
- Surface materials should be non-slip.
- Utility access covers in paving shall be carefully detailed, aligned with paving and recessed with infill paving.
- Avoid dark and highly reflective materials.



Variation in material can help communicate change in use, ownership, yet maintain character



Variation in material can help communicate function or enhance character



Permeable surfaces and natural materials may be used to reflect a naturalistic and even contemporary character

Furniture

Objective

To design street furniture enabling functional open spaces for people and contribute to the character of the urban areas in Aseer region.

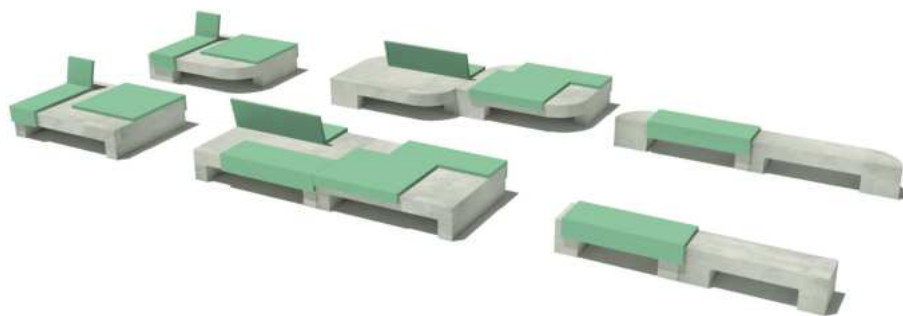


Figure 85 Example furniture family and identity application

Guidance

- Furniture includes, but is not limited to: seating, lighting, tree grills and protection rails, cycle stands, bus shelters, waste bins, raised planters, bollards, smart city elements and drinking fountains.
- City wide furniture shall be specified for streetscapes and may be specified for public open spaces such as plazas, parks and squares.
- Furniture families shall be specified for site wide distribution of new developments, open space designs and heritage sites and may reflect the site specific design character.
- Furniture shall provide opportunities to express local identity and art.
- Design must be sympathetic to culturally or historically significant area/sites.
- Elements should not be located in pedestrian desire lines or disrupt cycle routes and shall not cause obstructions in the open space.
- Furniture shall be located and allocated appropriately to meet expected number and diversity of users to avoid over allocation of furniture and cluttered open spaces.
- Furniture should be fit for purpose, universally accessible, maintainable and durable to withstand climatic conditions.
- Generally, advertising on street furniture shall be prohibited.



Example of cycle stand style



Example of integrated tree grate with patterned removable sections










Example of vehicular protection elements, traditional bollards or furniture elements



Example pre-cast concrete bench with identity detail



Example wall using natural stone

Component		Guidance
Benches		<ul style="list-style-type: none"> Seating should be provided at regular intervals. 50m is considered the maximum distance mobility impaired users can travel without rest. Areas of high use should consider spacing between 50 -100m, roads and streets 100-250m. Provisions for back and arm rests should be considered to 25% of benches on a site. Furniture fixing must be below ground in a solid foundation and not visible. Paving should then finish flush to fixing. Road and street furniture should be distinctive and differentiated from park and plaza and natural area furniture. Benches should set within the furniture zone along roads at a minimum 1m from curb.
Bollards		<ul style="list-style-type: none"> The total width of a bollard array (measured from the outermost bollard structures) should be greater than the exit width being protected. Consider height and visibility to avoid obscurity by a crowd at low light conditions. Use should be minimized to necessary locations to avoid over cluttered open spaces. Consider alternatives such as furniture. Bollards should have a max height of 900mm, typically spaced at 1400mm intervals, 3000m intervals to prevent cars mounting the curb, 500mm offset from curb road edge.
Cycle Stands		<ul style="list-style-type: none"> Cycle stands can be located parallel, perpendicular or at a 45 degree angle to the road curb provide a minimum set back of 0.5m is provided. Typically 900 height x 1000mm width at 1000-1200mm spacing, appropriately located and grouped to support active street or park functions. Cycle stands should be located outside 0.50m buffer zone and/or a 0.50m frontage zone if provided.
Railing		<ul style="list-style-type: none"> Guardrails should be used to aid pedestrian safety at crossings and intersections. Minimum height should be should 1100mm and must permit clear sight. The railing should complement other street furniture and may form part of the city wide furniture family.
Tree Guard & Grate		<ul style="list-style-type: none"> Tree guards must be of appropriate design so as not to cause damage to the tree cambium layer. Tree guard design must permit easy removal once tree has established or reached maturity. Tree guard must not conflict with tree pit functions or tree root system. Tree pit should remain free of footings and fixings. Tree grating should be fit for purpose including loading, accessible/removable, allow water and air circulation.
Waste Bin		<ul style="list-style-type: none"> Waste bins should be integrated with the city wide or site wide furniture family, reflecting the Abha city color palette. Waste bins should be suited to management strategy. Consider capacity, waste type, access and intensity of use. Waste bins should be appropriately located with uses and density to reflect intensity of use. They should be located in parks, plazas, BBQ and picnic areas, transit points, recreational centers, roads and streets.
Water Fountains		<ul style="list-style-type: none"> Water fountains may be considered for urban areas of high use such as plazas. Water fountains should be integrated with the city wide or site wide furniture family, reflecting the Abha City color palette. Fountains should be easily maintained, cleaned and to safe standards. Water fountains should be appropriately located with uses and density to reflect intensity of use, such as plazas, play grounds, BBQ and picnic areas. Water fountains should be universally accessible.

Softscape

Objective

To promote the greening of open space and streets to provide environmental, health and wellbeing benefits. Open spaces should have a balanced proportion of softscape and hardscape

Guidance

- The local vegetation palette of AUDC shall be used.
- Open spaces should endeavor to enhance the ecology and biodiversity of AUDC .
- Existing vegetation on development site shall be protected and integrated into open space design.
- Vegetation shall reinforce the character of the open space, define space and provide human scale.
- Conservation and reuse of site materials and elements such as soil for fill, existing trees, existing rock and sand shall be encouraged.
- Garden beds shall be a **minimum 1m** width and **1.5m** length.
- Tree pits in hardscape should be fit for purposes to support surface activity. (i.e. vehicular traffic).
- Tree and palm layout shall be coordinated with underground services and utilities, overhead utilities, signage, advertising and lighting.
- Gravel, rocks or mulch should be specified to provide additional quality to planted areas (i.e. areas of low density planting), reduce soil moisture loss, control erosion and in some cases suppress weeds.
- Irrigation demands shall be calculated to ensure sufficient demand. Where TSE is required species shall be suited to water quality, i.e. high salt content.
- Tree pits in rocky ground shall be tested for permeability prior to tree installation. Where impermeable ground is evident bore holes may be required to ensure drainage.
- Refer to Green Riyadh Design Guidelines for further guidance.



Example of mass planting



Example of detailed and managed planting



Example of naturalistic sparse planting



Example naturalistic planting

Signage & Wayfinding

Objective

To design signage, way-finding and public art building a sense of place, creating or emphasizing visual landmarks and foremost, assist navigation and provides direction.

Guidance

- Wayfinding elements should be easily recognizable & readable (language, font, color, dimensions).
- Signage should be legible from different heights and distance, appropriate to function and users (i.e. automobiles, pedestrians, cyclists).
- Signage should be hierarchical to assist easy way-finding.
- Design should correspond to the branding strategy of the AUDC or development.
- Signage families should be established for AUDC or site wide distribution.
- Wayfinding should be located appropriately at key locations, junctions, nodes and points of interest.
- Street signage should be a **min. 1.5m** from other street furniture and fire hydrants.
- For further guidance refer AUDC, Chapter 6, Organize Infrastructure and Signage.

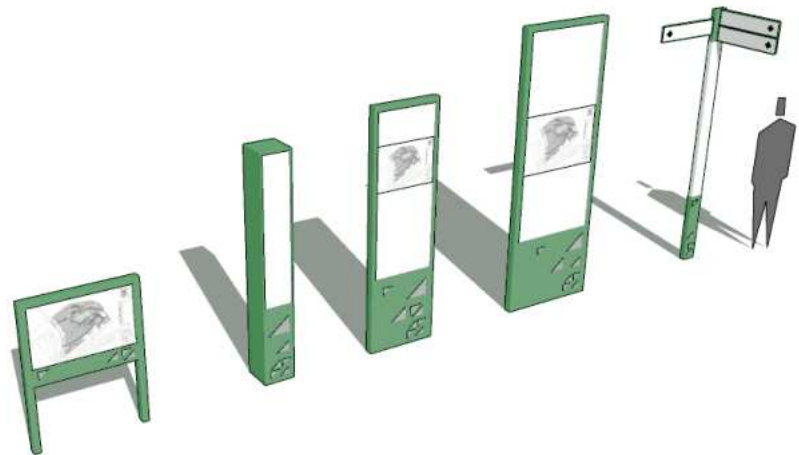


Figure 86 Example signage family with identity application



Example of urban street sign



Example of street sign



Example of park sign



Example of contextual wayfinding



Example of educational sign in natural area

Shading

Objective

To design open spaces open spaces enabling pedestrian comfort, year-round use and encouraging pedestrian and cycle use.

Guidance

- Natural shading through trees and shrubs shall be prioritized for their cooling effect on the micro-climate.
- Where natural shading or shading from buildings is not sufficient, artificial shading should be considered.
- Provide adequate shading to maximize shaded routes.
- Consider likely durability and growth period required for shade trees to be functional. 5 years maximum for shade trees to achieve intended shading design intent.
- Provide **60%** shading along primary routes.
- Provide **50%** shade at gathering spaces, plazas and secondary walkways and cycle paths.
- Provide **70%** shading to play areas
- Provide shaded **1 rest** area every **250m** on walkways and every **100m** in parks and plazas.
- When designing shade structures time of day at peak use, desired duration of shade, direction of cooling winds and seasons should be taken into consideration.
- Design of shade structures should reinforce character of AUDC and establish a distinctive sense of place. Material, color, scale, patterns and UV properties should be carefully considered.



A. Shading strategies: natural shading



Example of naturally shaded plaza



B. Shading strategies: shade structures



Shading structure utilizing vegetation



C. Shading strategies: building shade



Off the shelf shading elements may be combined with natural and building shade

Figure 87 3 categories of shading strategies

Lighting

Objective

To create safe and easy to navigate spaces, whilst lengthening the usable time of the open space with appropriately lit and designed public open spaces.

Guidance

- Lighting fixtures should take into account function, durability, user (i.e. pedestrian or traffic) and provide suitable light quality.
- Lighting fixtures should be low maintenance, readily available and where possible locally sourced.
- Lighting specifications should include light temperature (Blue-white, neutral white, warm-white). Mixing temperatures is not recommended.
- Shields should be fitted to luminaries to control lighting direction and limit pollution.
- Lighting designs should appropriately specify symmetrical and asymmetrical fixtures.
- Lighting strategies shall be carefully design and specified with function in mind to avoid over specification leading to light pollution.
- The minimum appropriate quality of lighting for functions must be specified.
- Lighting pollution should be minimized to reduce impacts on fauna and insect species.
- In natural areas lighting should be limited, and only provided for public safety and prioritizes areas of darkness for habitat conservation.
- Feature lighting should be limited to high use, high quality special areas.
- Consider most appropriate lighting fixtures for purpose: bollards, posts, up lights, downlights, catenary lighting.
- Lighting families should be established for site wide distribution.
- Lighting fixture design and finished color should reflect the AUDC color palette.
- Refer to Chapter 6 for further guidance.



Figure 88 Avoid unnecessary light pollution with light shields and directional lighting.



Figure 89 Consider a variety of lighting fixtures: bollards, integrated lighting with furniture, up-lighting to boulevard trees

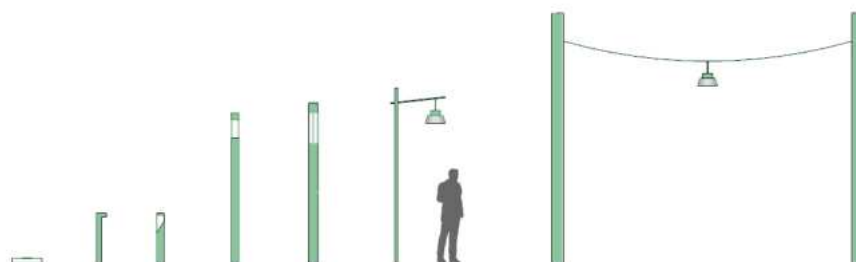


Figure 90 Lighting strategies should look to provide consistent products such as product families



Example lighting strategies: feature lighting to architectural heritage, functional street lighting

1.5.3 Materials & Detail

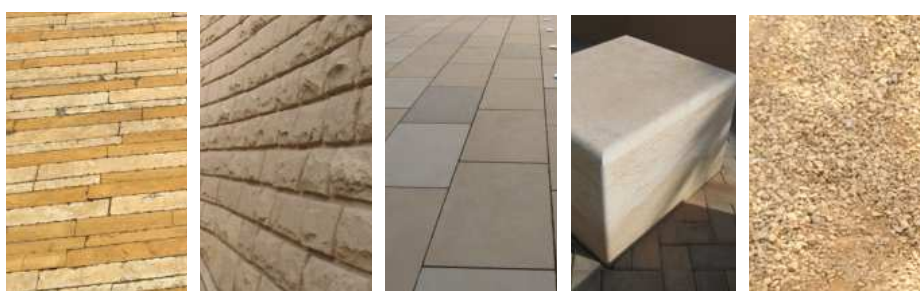
Surfaces, Walls, Structures

Objective

Materials and patterns should compliment the natural and local heritage context of Aseer Region to enhance the visual quality of open spaces and establish a distinctive sense of place.

Guidance

- Materials, patterns, construction techniques and details should reflect and reinforce local character, traditions and hierarchy.
- Desirable materials shall be: natural stone, concrete, rendered wall, palm and juniper timber, powder coated steel, corten steel, rope/twine.
- Materials must be durable, robust, easily replaced, of high quality, comfortable for intended use, maintainable and fit for purpose.
- General finishes shall be: non reflective with low heat absorption, non-slip/ textured, anti-graffiti, durable, UV tolerant. Materials that reflect sunlight causing glare (honed or polished) shall be avoided.
- Natural stone finishes may be flamed, natural, fine picked, sawn, crushed, tumbled.
- Concrete finishes may be acid etched, sand blasted, pigmented, precast off-form (natural, flutes, zig zag, graggy, charred, sand blasted, rugged), or precast may incorporate special molds.
- Patterns should be reflective of local culture and heritage and may include, painting, tiling, relief details and hand detailed plaster patterns.
- Developments should maximize the reuse and recycling of material arising during demolition, remediation and construction to reduce waste.
- Materials should be sustainable and locally sourced scoured where possible.
- In cases where LVIA/TVIA's are required, materials shall also be illustrated to ensure the proposal fits within the context.
- Sample materials may be requested as part of the approval process.



Natural stone



Concrete



Finishes



Patterns & detail

Colors

Coastal Plains

Objective

Colors should compliment the natural context of Coastal Area to enhance the visual quality of open spaces and establish a distinctive sense of place.

Guidance

- Colors must be limited to within the spectrum of the natural context of Abha Metropolitan Area or where appropriate, colors used throughout cultural heritage elements.
- **70%** range of the project's colors palette shall be composed of light gradations of earth tones, with a maximum of **20%** of the total composition reserved for stronger gradations and complementary colors.
- Intensified and/or contrasting colors shall be reserved for accentuating important elements, such as to enhance designed identity on furniture. The range for intensified and/or contrasting colors should be within **10%**.
- A maximum of **20%** of the total composition shall be reserved for complementary colors.
- In cases where LVIA/TVIA's are required materials shall also be illustrated to ensure the proposal fits within the context.
- Sample color may be requested as part of approval process.

Min. 70% Range

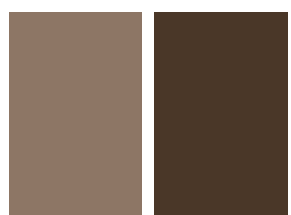
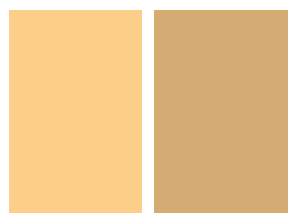


Desired earth tone color palette



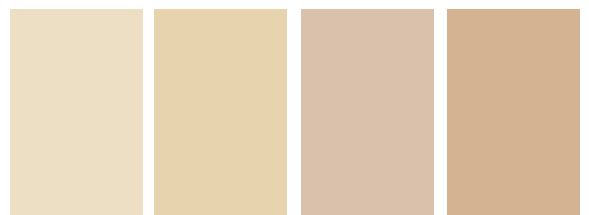
Contextual color inspiration

Max. 20% Range



Desired earth tone color palette

Max. 20% Range



Desired complementary color palette

Tuhama Plains

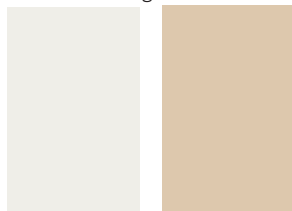
Objective

Colors should compliment the natural context of Tuhama Plains to enhance the visual quality of open spaces and establish a distinctive sense of place.

Guidance

- Colors must be limited to within the spectrum of the natural context of Abha Metropolitan Area or where appropriate, colors used throughout cultural heritage elements.
- **70%** range of the project's colors palette shall be composed of light gradations of earth tones, with a maximum of **20%** of the total composition reserved for stronger gradations and complementary colors.
- Intensified and/or contrasting colors shall be reserved for accentuating important elements, such as to enhance designed identity on furniture. The range for intensified and/or contrasting colors should be within **10%**.
- A maximum of **20%** of the total composition shall be reserved for complementary colors.
- In cases where LVIA/TVIA's are required materials shall also be illustrated to ensure the proposal fits within the context.
- Sample color may be requested as part of approval process.

Min. 70% Range

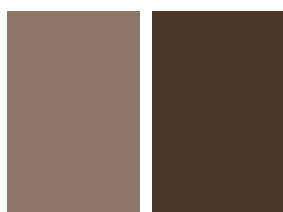
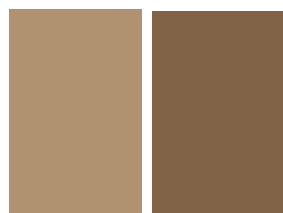


Desired earth tone color palette



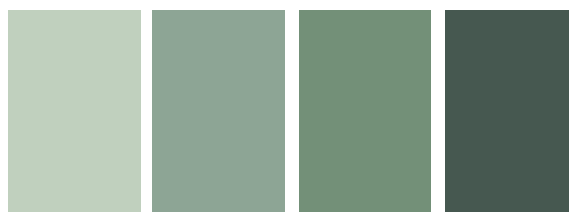
Contextual color inspiration

Max. 20% Range



Desired earth tone color palette

Max. 20% Range



Desired complementary color palette

Escarpment

Objective

Colors should compliment the natural context of Escarpments to enhance the visual quality of open spaces and establish a distinctive sense of place.

Guidance

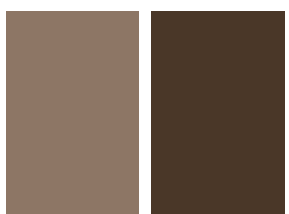
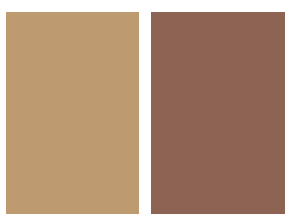
- Colors must be limited to within the spectrum of the natural context of Abha Metropolitan Area or where appropriate, colors used throughout cultural heritage elements.
- **70%** range of the project's colors palette shall be composed of light gradations of earth tones, with a maximum of **20%** of the total composition reserved for stronger gradations and complementary colors.
- Intensified and/or contrasting colors shall be reserved for accentuating important elements, such as to enhance designed identity on furniture. The range for intensified and/or contrasting colors should be within **10%**.
- A maximum of **20%** of the total composition shall be reserved for complementary colors.
- In cases where LVIA/TVIA's are required materials shall also be illustrated to ensure the proposal fits within the context.
- Sample color may be requested as part of approval process.

Min. 70% Range



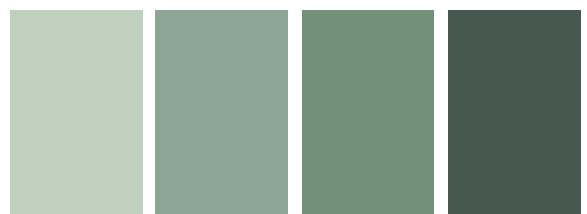
Desired earth tone color palette

Max. 20% Range



Desired earth tone color palette

Max. 20% Range



Desired complementary color palette



Contextual color inspiration

High Mountains

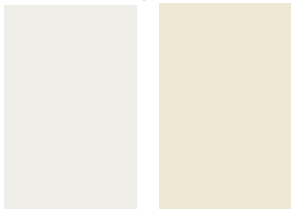
Objective

Colors should compliment the natural context of High Mountains to enhance the visual quality of open spaces and establish a distinctive sense of place.

Guidance

- Colors must be limited to within the spectrum of the natural context of Abha Metropolitan Area or where appropriate, colors used throughout cultural heritage elements.
- **70%** range of the project's colors palette shall be composed of light gradations of earth tones, with a maximum of **20%** of the total composition reserved for stronger gradations and complementary colors.
- Intensified and/or contrasting colors shall be reserved for accentuating important elements, such as to enhance designed identity on furniture. The range for intensified and/or contrasting colors should be within **10%**.
- A maximum of **20%** of the total composition shall be reserved for complementary colors.
- In cases where LVIA/TVIA's are required materials shall also be illustrated to ensure the proposal fits within the context.
- Sample color may be requested as part of approval process.

Min. 70% Range



Desired earth tone color palette



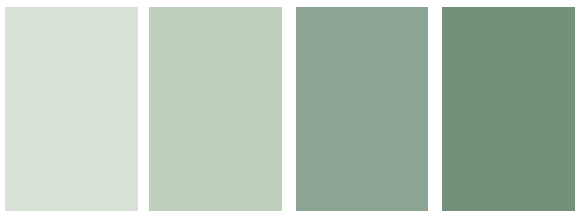
Contextual color inspiration

Max. 20% Range



Desired earth tone color palette

Max. 20% Range



Desired complementary color palette

Inland Deserts

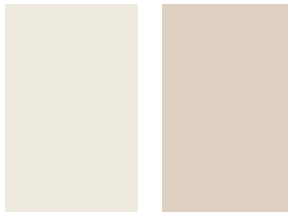
Objective

Colors should compliment the natural context of Inland Deserts to enhance the visual quality of open spaces and establish a distinctive sense of place.

Guidance

- Colors must be limited to within the spectrum of the natural context of Abha Metropolitan Area or where appropriate, colors used throughout cultural heritage elements.
- **70%** range of the project's colors palette shall be composed of light gradations of earth tones, with a maximum of **20%** of the total composition reserved for stronger gradations and complementary colors.
- Intensified and/or contrasting colors shall be reserved for accentuating important elements, such as to enhance designed identity on furniture. The range for intensified and/or contrasting colors should be within **10%**.
- A maximum of **20%** of the total composition shall be reserved for complementary colors.
- In cases where LVIA/TVIA's are required materials shall also be illustrated to ensure the proposal fits within the context.
- Sample color may be requested as part of approval process.

Min. 70% Range



Desired earth tone color palette



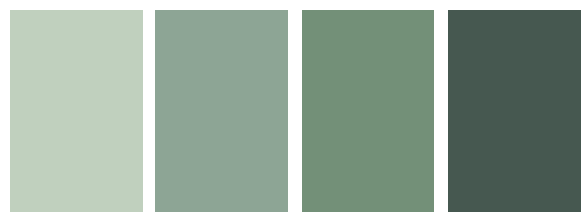
Contextual color inspiration

Max. 20% Range



Desired earth tone color palette

Max. 20% Range



Desired complementary color palette

Local Art & Craft

Objective

To enhance awareness and value of local art, traditional culture and identity within the open space.

Guidance

- Local art and traditional craft may be represented through integration with details, finishes, construction techniques and colors of paving surfaces, hardscape elements (i.e. walls, retaining, fences), urban furniture (i.e. seating, bins, lighting, wayfinding), structures (i.e. shading) or installations.
- Paving and surfaces may feature banding, inlay patterns or motifs, or general paving patterns that reflect local art.
- Regional or traditional plants may be integrated into public open space designs, such as edible or medicinal species that traditionally provided resources for craft or architecture (i.e. juniper timber for building or grasses for weaving).
- Elements may be temporary or permanent in nature.
- Representations of local art and traditional craft within the public realm shall be focused in high use areas. Degraded areas may also benefit from temporary or permanent interventions (i.e. murals to walls and surfaces or street furniture) to promote urban renewal and should be assessed on a case by case basis.
- Representations of local art and traditional craft may be applied to up to **20%** of the open space design.



Contemporary furniture design could be adapted to reflect traditional art and craft of the Aseer region



Paving treatment could be adapted to reflect traditional art and craft of the Aseer region



Contemporary walling treatment could be adapted to reflect traditional art and craft of the Aseer region

Geological feature, Deriyah, could inspire patterns and designs



Example of public space sculpture that could be adapted to reflect traditional art and craft of the Aseer region



Patterns, geometries and colors used in local art



Example of traditional weaving seen at the Janadriyah Festival near Riyadh that may inspire patternation or material use within the public realm



Example of traditional painting seen at the Janadriyah Festival near Riyadh



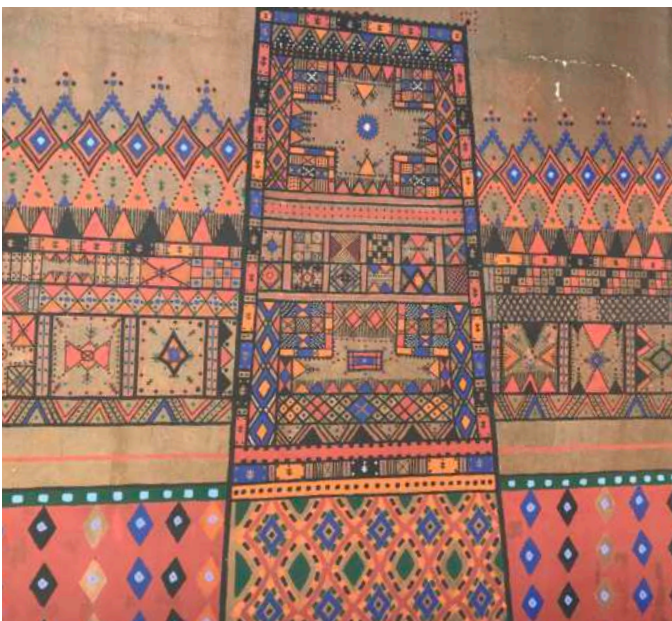
Example of traditional painted timber seen at the Janadriyah Festival near Riyadh.



Example of a paving interpreting building facade treatment in Riyadh Old Center and in Al Bujairi Quarter in Ad-Diriyah



Example of contemporary mosai artwork to water channel at KAAHC in Riyadh



Traditional art on building facade in Abha City can be used on walling, fencing or reinterpreted into paving patters, relief work on pre-cast concrete benches or other furniture elements



Example of vernacular architecture massing and adjacent traditional farming fields in Dhahran Al Janub village in Aseer demonstrating the use of scale and layout of open spaces can reinforce art and cultural traditions

1.5.4 Control Storm Water

Objective

To integrate stormwater principles into all open spaces. Climate and natural features of Aseer must be seen as an opportunity to design an attractive, distinctive and functional stormwater system integrated into a visually appealing public realm.

Guidance

- Generally, the natural discharge into wadis should be maintained and reestablished. Mitigation of flood events must be considered.
- Stormwater management must be integrated in new developments and engagement with authorities early is necessary.
- Permeable / pervious / porous surfaces should be specified where possible with appropriate sub-base to ensure water percolation.
- Roads and streets should feature vegetation swales and management of runoff on the surface wherever possible.
- Public realm should feature open drainage where possible and other Sustainable Drainage System (SuDS) principles including retention, attenuation and infiltration to store and slowly release run off helping to mitigate flash floods. Surface runoff water shall be managed wherever possible on the surface.
- Cross falls of hardscaped areas should be between **1.5 & 2.0%** and to engineers specifications.
- Where appropriate storm water should be directed to adjacent planting beds with appropriate drainage layers to avoid planting failure.
- Natural areas should retain their natural surfaces and drainage processes.

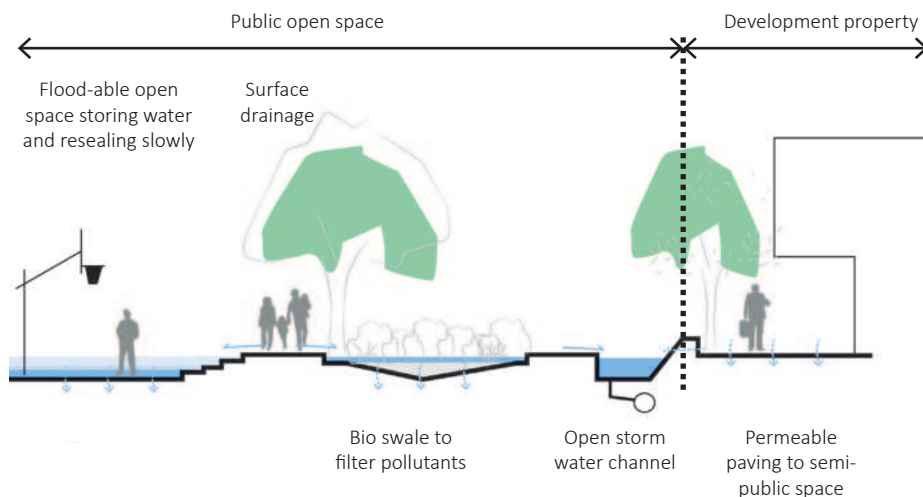


Figure 91 Typical section incorporating SuDS in public open spaces

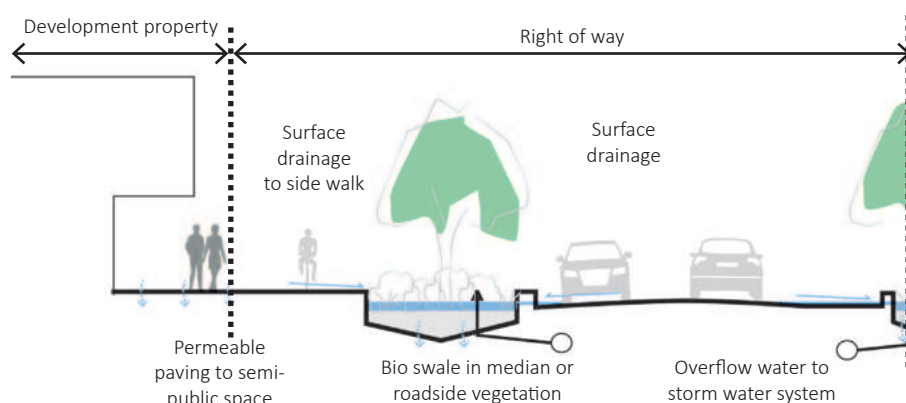
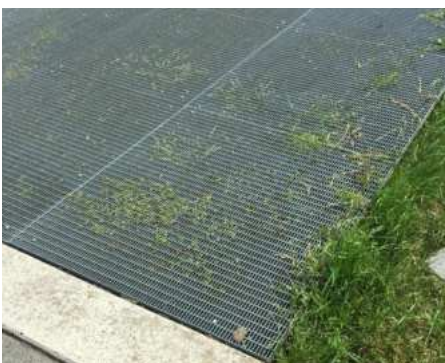


Figure 92 Typical section incorporating SuDS in the right of way



Best practice: naturalistic drainage in natural areas or wadi corridor



Best practice sustainable urban drainage: naturalistic bio swale, agricultural swale, naturalistic drainage swale, naturalist water feature, floodable roads, hardscape channel drain drainage, contemporary drainage crossing, roadside swale, roadside swale, contemporary floodable pedestrian path, drainage channel to hardpaved surface, surface drainage to channel drain, sensitive crossing to floodable area, natural drainage area, and contemporary floodable area within park



2 | ENHANCE HERITAGE & CULTURAL LANDSCAPES



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2 Enhance Heritage & Cultural Landscapes

2.1 General Guidance & Checklist

2.1.1 Introduction

The AUDC encourages the preservation and adaptive reuse of historic buildings and cultural landscapes in a manner that preserves historic materials and character-defining features, thus preserving Aseer's region identity and image for future generations. Furthermore, the AUDC promotes the establishment of a heritage protection framework at the regional level, with the definition and enforcement of special regulations for adaptive reuse of identified heritage sites and for new developments in heritage buffers and viewshed zones.

2.1.2 General Guidance

- No Interventions or new developments of any kind shall be allowed to partially or completely destroy, alter or remove features of existing heritage and cultural landscapes without prior approval of the Heritage Authority, part of the Ministry of Culture and ASDA.
- Heritage assets and cultural landscapes shall be authentically restored, preserving the natural environment, and utilizing the traditional materials, construction techniques and detailing as defined by the Heritage Authority regulations.
- In general, if new development is proposed in a heritage, buffer/transition or visual buffer zone, this shall be located, designed and scaled so that its form, massing, layout, facade treatment, land uses, retaining walls and proximity, do not have a detrimental impact on the existing heritage, cultural landscapes and their visual setting.
- New developments shall complement the existing heritage and cultural landscape reinforcing the historic urban fabric, settlement typologies and open space network.
- Activities with a high visual impact shall be located in such a way so to minimize any detrimental impact on existing heritage and cultural landscape assets.



Rijal Almaa heritage village in Aseer



Heritage structures in Al Majaredah, Aseer

2.1.3 Requirements Checklist

The following checklist of requirements is intended as an agile tool to be used by the evaluating Authority or by the Applicant. It should be used to ensure all important topics related to a new development have been addressed and highlight where there may be a need for additional studies.

Evaluating Authority - Heritage Design Review Checklist		
Base Line Information	<p>LISTED SITES / NEW POTENTIAL HERITAGE ASSETS</p> <p>For projects / sites listed, or where a new potential heritage / cultural asset is located:</p> <ol style="list-style-type: none"> An archaeological / spatial / environmental survey (as needed) has been conducted following the requirements of the respective authorities (Heritage Authority, MoMRA, ASDA, MEWA). For new potential assets, it has been determined whether it should be included or not into the official national or regional Antiquities/ Urban Heritage/ Cultural Landscape Records, as well as its category. <input type="checkbox"/> Based on the asset's significance, category and/or on the fulfillment of the private owner of the asset's preservation requirements, the right to own or temporarily take the site from the private owner (based on the Law of Eminent Domain and Temporary Taking of Property) has been taken into consideration. <input type="checkbox"/> <p>LISTED SITES (Classes A, B and C; High, Moderate and Low significance respectively)</p> <p>If the asset is considered valuable and is listed or included in the official national / regional record:</p> <ol style="list-style-type: none"> Mandatory heritage boundary, buffer/transition and/or visual buffer zone (if required) have been defined and officially incorporated in their respective detailed urban and structural legal plans. <input type="checkbox"/> A risk assessment and conservation, management and implementation plans for the project/site have been provided with the proposal. <input type="checkbox"/> Location of existing and/or proposed linear or localized utilities and services infrastructures do not have a negative direct, indirect or cumulative impact on heritage assets and cultural landscapes. A heritage constraints study or risk assessment has been provided to prove so. <input type="checkbox"/> The restoration / intervention / new development proposal has Heritage Authority approval regarding the massing, layout, uses, construction techniques, materials, facade treatment, detailing, and open space treatment. <input type="checkbox"/> <p>NON-LISTED</p> <p>If the asset is not considered valuable, and therefore is not listed or included in the official national / regional record:</p> <ol style="list-style-type: none"> The intervention / alteration / demolition / new development proposal has Heritage Authority approval. <input type="checkbox"/> 	
	<p>NON-LISTED NEIGHBORING BUILDINGS</p> <p>For non-listed projects / sites located in Buffer/ Transition or Visual Buffer Zones:</p> <ol style="list-style-type: none"> A Heritage Impact Statement / Assessment has been provided. <input type="checkbox"/> The intervention / new development proposal fulfills the AUDC requirements in terms of massing, layout, facade treatment, permitted land uses and open space treatment. <input type="checkbox"/> 	
Pre-application Advice	Provide an opportunity for developer/owner to receive guidance on the proposed development and on what type of information/study may be required to obtain permitting.	<input type="checkbox"/>

Applicant (Developer / Owner) - Heritage Design Review Checklist

Applicant (Developer / Owner) - Heritage Design Review Checklist		
Required Information	<p>For review and approval as part of development permitting application:</p> <p>LISTED SITES / NEW POTENTIAL HERITAGE ASSETS</p> <p>For projects / sites where a listed or a new potential heritage / cultural asset is located, the following requirements need to be submitted:</p> <ol style="list-style-type: none"> 1. An archaeological / spatial / environmental survey (as needed) according the requirements of the respective authorities (Heritage Authority, MoMRA, ASDA, MEWA). <input type="checkbox"/> <p>LISTED SITES (Classes A, B and C; High, Moderate and Low significance respectively)</p> <p>If the asset is considered valuable and is listed or included in the official national or regional record:</p> <ol style="list-style-type: none"> 1. A Heritage Impact Statement for the proposal. <input type="checkbox"/> 2. A conservation, management and implementation plan for the project/site. <input type="checkbox"/> 3. Project documentation as stated in the AUDC B.5.1.2 Design Review Checklist, incorporating evidence that the project complies with the Heritage Authority regulations in terms of materials, construction techniques, detailing, massing, layout, facade treatment, open space treatment and permitted land use requirements. <input type="checkbox"/> <p>NON-LISTED SITES</p> <p>If the asset is not considered valuable, and therefore is not listed or included in the official national record:</p> <ol style="list-style-type: none"> 1. Project documentation as stated in the AUDC B.5.1.2 Design Review Checklist. <input type="checkbox"/> 	
	<p>NON-LISTED NEIGHBORING BUILDINGS</p> <p>For non-listed projects / sites located in Buffer/ Transition or Visual Buffer Zones:</p> <ol style="list-style-type: none"> 1. A Heritage Impact Statement for the proposal. <input type="checkbox"/> 2. Project documentation as stated in the AUDC B.1.5.2 Design Review Checklist, to evidence the project complies with the AUDC regulations in terms of massing, layout, facade treatment, open space treatment and permitted land use requirements. <input type="checkbox"/> 	

Supporting Regulating Documents:

- MoMRA, (2005). A Guide to Preserve Urban Heritage.
- STCH, (2014). Law of Antiquities, Museums and Urban Heritage.

Additional References:

- Al Saud, N. B. M. (2013). Impact of urban heritage conservation policies on historical sites in Saudi Arabia. Saudi Commission for Tourism and Antiquities & National Urban Heritage Center.
- Alzahrani, D. A. (2016). Heritage, Conservation and Good Governance, Enhancing the heritage law framework in Saudi Arabia. University of Western Australia.
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- St.-J. Philby, H. (1952). Arabian Highlands. Ithaca.
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- WHC & UNESCO (2019). Operational Guidelines of the World Heritage Convention. (<https://whc.unesco.org/en/guidelines/>)

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2.2 Heritage Protection Framework - For Evaluating Authorities

Introduction

The establishment of a heritage protection framework for the Aseer region is responsibility of the public authority. This section summarizes steps and best practices in the organization of a local heritage framework as reference and guidance for local planners.

2.2.1 Inventory, Categorize and Prioritize

Objective

To determine the value of a heritage assets through inventory, categorization and prioritization. Throughout the Kingdom, it is the Heritage Authority (under Ministry of Culture) that determines the archaeological value of antiquities, urban heritage and cultural landscapes, and decides which asset should be registered in the official national heritage record. Once registered, the Heritage Authority classifies the asset and determines its level of significance, establishing intervention priorities based on the asset's value and degree of risk.

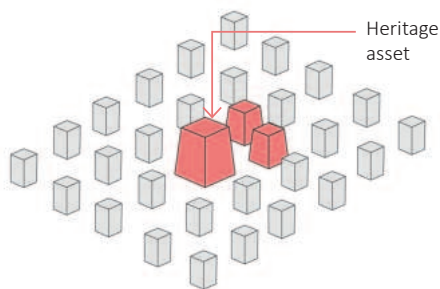


Figure 93 Single monuments or group of buildings Single monument in Tanouma

Guidance

- To define the value of an unknown asset, a Heritage Assessment Report must be developed, including the gathering of documentary and physical evidence, a multidisciplinary analysis and assessment of the evidence gathered, and the statement of significance.
- Categorization should be done based on the type of heritage and level of significance including:
 - Immovable cultural heritage (i.e. settlement typologies, buildings, structures).
 - Movable cultural heritage (i.e. objects, building contents).
 - Intangible cultural heritage (i.e. art, processes, traditions).
 - Cultural landscapes (i.e. combined works of nature and man).
- Intervention priorities should take into consideration the asset's integrity, authenticity, the degree of new interventions/developments allowed, as well as the degree of permitted demolition.



Thurban palace in Al Namas



Figure 94 Urban heritage sites and historic towns Heritage site in Mahayel



Heritage site, Sarat Abidah

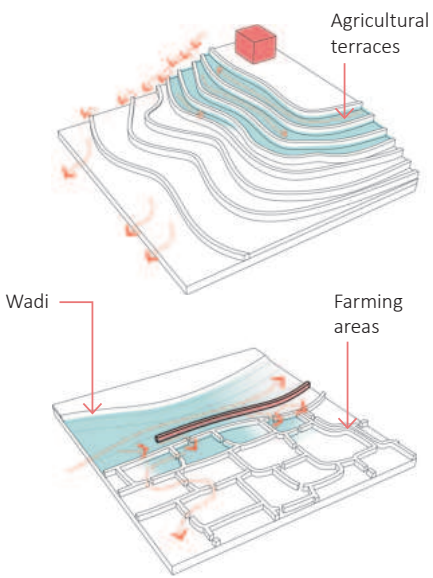


Figure 95 Agricultural terraces and wadi farming, example of cultural landscapes



Wadi farming, Beesha



Agricultural terraces

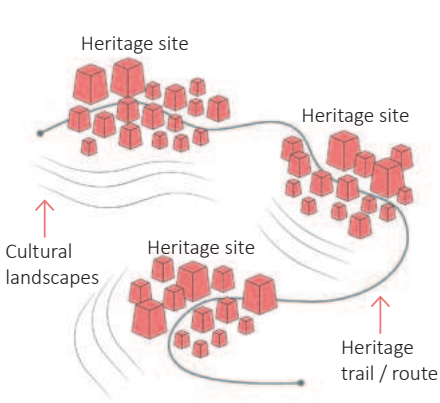


Figure 96 Example of combined immovable and cultural landscape heritage, routes across different countries or regions



Al Bawah site along the Aseer heritage trail



Aseer heritage trail

2.2.2 Establish Heritage Boundaries

Objective

To clearly identify, map and include heritage and cultural landscapes designated areas at the local plan level. For immovable heritage and cultural landscapes the Heritage Authority establishes and designates in collaboration with MoMRA, MEWA and ASDA the limits of the heritage asset boundary.

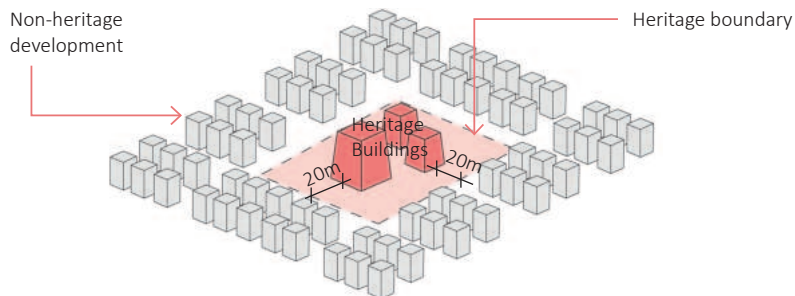


Figure 97 Boundary for single monuments or building groups

Guidance

Define a Heritage Boundary

- For the immovable cultural heritage, boundaries shall be drawn to include all those areas and attributes which are a direct tangible expression of the assessed value or significance of the property, as well as those areas which, in the light of future research possibilities, offer potential to contribute to and enhance such understanding.
- For single monument / building or building groups, the heritage boundary should be defined as the limits of the **plot boundary** or an offset of a minimum of **20m** from the building facade¹.
- For sites or historic settlements, the heritage boundary should be defined as the **historic physical or natural boundaries** (like city walls or rivers) or an offset from the building facade of typically **20m** for urban areas and **200m** for rural or natural areas (Refer to Article 46° of the Law of Antiquities, Museums and Urban Heritage, SCTH).
- For cultural landscapes the heritage boundary may be defined as:
 - **100m** offset habitat buffer for rural and natural settings.
 - **30-50m** hydrological offset for suburban and urban settings.
 - **10-20m** wide publicly accessible area around the perimeter of the asset.

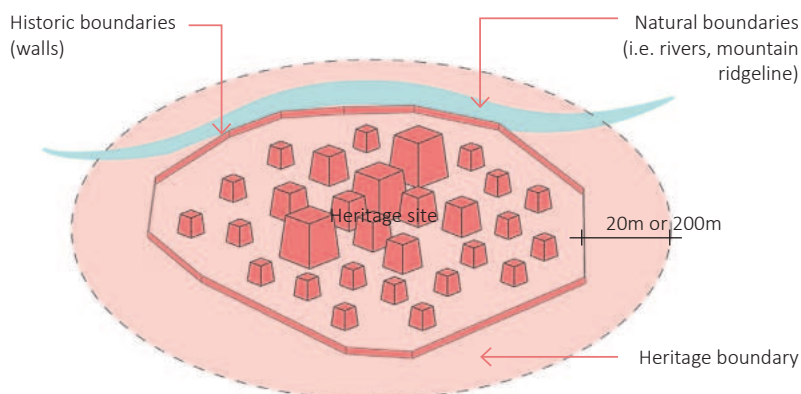


Figure 98 Boundary for sites or historic settlements: the historic or natural limits, or an offset from the building facade, typically 20m for urban areas and 200m for rural or natural areas

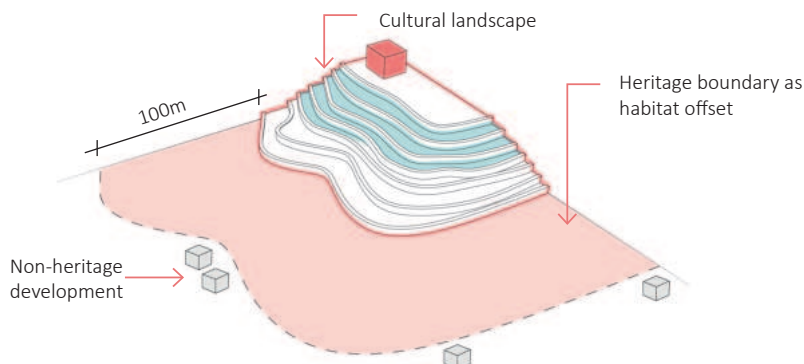


Figure 99 Boundary for cultural landscapes in rural or natural areas

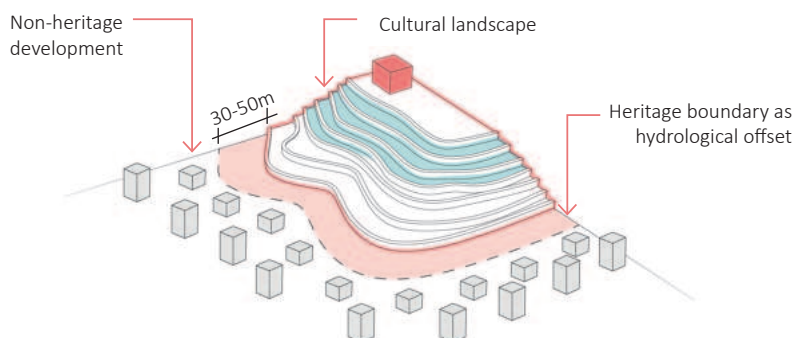


Figure 100 Boundary for cultural landscapes in urban areas

1. Based on the Al-Turaif 20m offset precedent used for the WHC nomination, in Ad-Diriyah

2.2.3 Establish Buffer / Transition Zones and Visual Buffer Areas

Objective

To clearly identify and map heritage buffer/transition zones and visual buffer areas at the local plan level. For immovable heritage and cultural landscapes, the Heritage Authority establishes and designates in collaboration with MoMRA, MEWA and ASDA the limits of the buffer / transition zone and eventually of the visual buffer area.

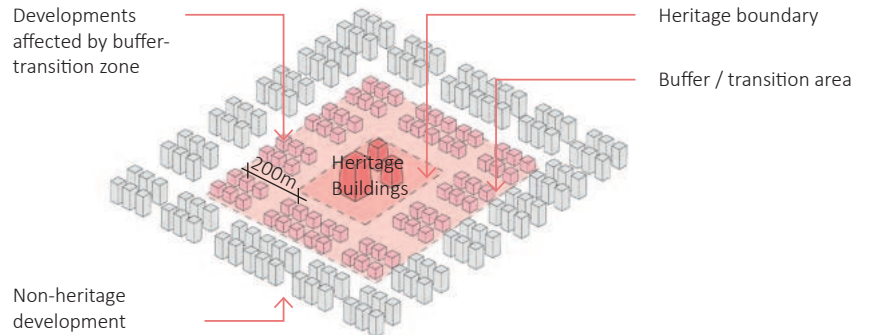


Figure 101 Buffer / transition zone boundary for single monuments or building groups

Guidance

Define a Buffer / Transition Zone₂

- For single monument or building the Buffer / Transition Zone should be a minimum of **200m** offset from the asset's heritage boundary limits.
- For sites or historic settlements the Buffer / Transition Zone should be a minimum of **300m** offset from the heritage boundary limits.
- For cultural landscapes the Buffer / Transition Zone should be defined as a **200m** offset from the heritage boundary.

Define a Visual Buffer Area₂

- To determine view corridors or wider consultation areas like viewsheds, the coordinates of the assessment points need to be defined by the authority (including Easting, Northing and Height). For the establishment of view corridors, a minimum three points need to be defined to create a triangular-shaped assessment area.
- These coordinates must be used to determine the precise height of the Threshold Plane.
- The defined Threshold Plane shall be the limit of the maximum allowed height for any new developments located inside this area.
- The extension of the visual buffer zones may vary depending on the topographic conditions of the assessment points.

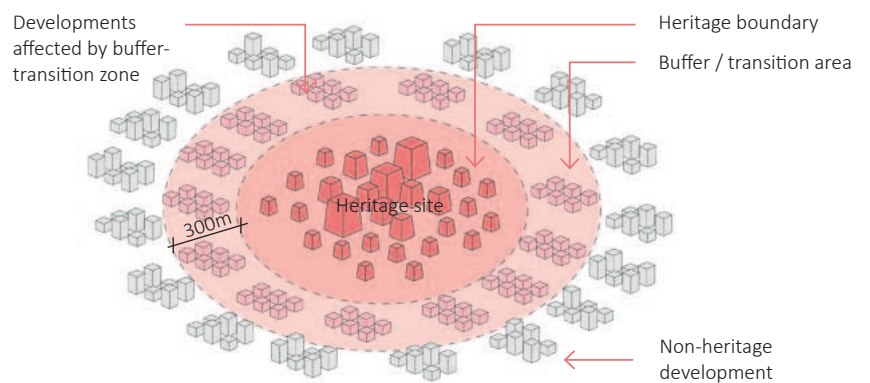


Figure 102 Buffer / Transition zone boundary for sites or heritage settlements

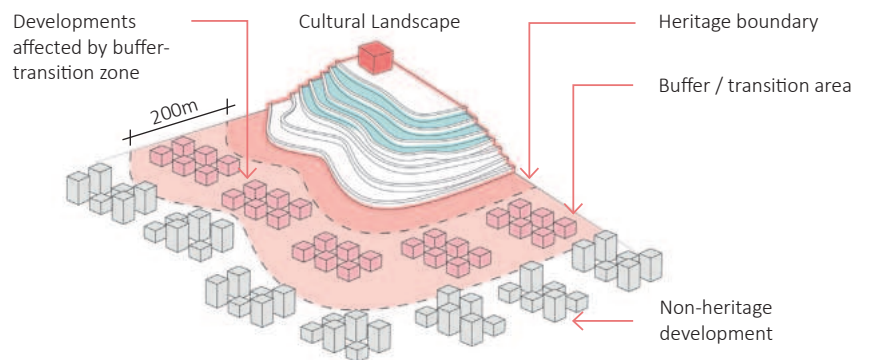


Figure 103 Buffer / Transition zone boundary for cultural landscapes

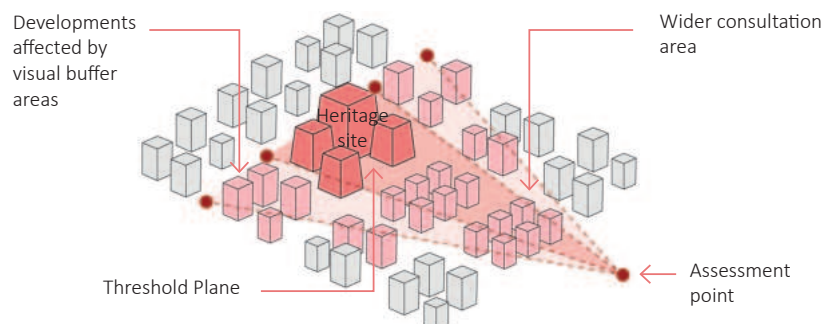


Figure 104 View corridors as linear visual buffer zones

2. For the definition of a Buffer / Transition Zone and Visual Buffer Area refer to the Glossary

2.2.4 Utilities and Service Infrastructure

Objective

To design and locate utility and service networks so that they do not have a negative direct, indirect or cumulative impact on heritage assets and cultural landscapes.

Guidance

- The construction of utility and service networks can impact heritage assets in a significant, permanent and irreversible way, including:
 - Removal or part removal of asset during construction works.
 - Ground disturbance which damages subterranean listed or unknown features.
 - Visual intrusion affecting the setting, historic views or inter-visibility between heritage assets.
 - Degradation of the setting causing the fragmentation of interrelated features.
- As part of any utility network project a Heritage Constraints Study shall be conducted. For this study both listed and potential heritage assets should be evaluated and mapped, consulting the official national records and the Heritage Authority. The setting of heritage assets should also be analyzed through an Environmental Impact Assessment.
- For new linear or localized utility projects, the proposed site or route should be located away from heritage assets, requiring the Heritage Authority, MoMRA and ASDA approvals.
- The proposed utility should reduce the land-take in sensitive areas. It should also reduce the visual pollution through landscape design and through the incorporation of less intrusive construction methods.
- If unknown heritage assets are located during construction works, the proposal should change the design or methods to render effects less severe, funding excavation and recording of the asset and repairing or reinstating any new damage caused by the constructions works.
- Existing utilities currently affecting heritage assets should reduce their

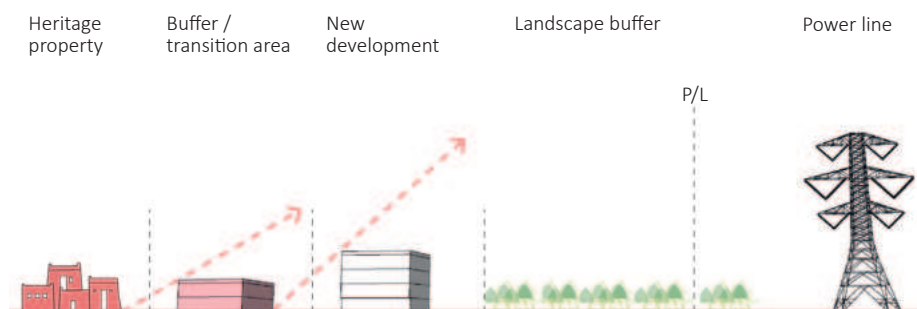


Figure 105 Narrower streets with taller buildings may enable utilities to be located closer to heritage assets without increasing visual impact

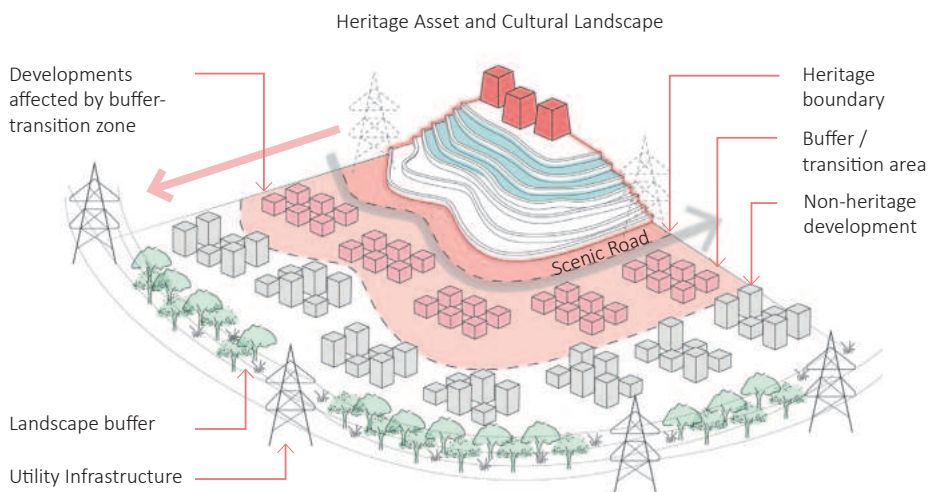


Figure 106 The proposed route or site for utility projects should be located away from heritage assets to avoid negative impacts

visual pollution through either landscape design or relocation, depending on the impact on the heritage asset.

- Additional utilities compensation actions towards impacted heritage assets include conducting compensation works to restore nearby assets, or the improvement of access to the nearby assets to enhance the respective local areas.
- For further guidance on utilities and service infrastructure, refer to AUDC B.6.1.



Photo-montage example of a before and after intervention in a heritage site in the Aseer region to remove visual pollution, upgrading utilities, and with contextual treatment of facade, rooftop and colors, as well as open spaces

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2.3 Development in Heritage Areas - For Applicants (Developer / Owner)

Overview

This section provides general guidance for new or existing development located within a potential or designated heritage boundary under 3 conditions:

- Development of Heritage Properties.
- Development of Properties in Buffer / Transition Zones.
- Development of Properties in Visual Buffer Areas.

For each condition, guidance is provided for the relevant topics including: building massing, layout, facade treatment, permitted land uses, and open space treatment.

General Guidance

- Ensure development preserves all existing heritage and cultural landscape sites in accordance with Heritage Authority and international standards.
- Listed heritage or potential heritage assets must not be altered, partially or completely destroyed, and their features or debris must not be removed or used without prior approval and supervision from the Heritage Authority and ASDA.
- If unknown cultural heritage sites are discovered, an internationally recognized archaeological survey must be carried out before resuming further development.
- Any new intervention, development or infrastructure element within the heritage area should be strictly controlled so not to affect the integrity, authenticity and value of significance of the existing heritage asset.
- Any new exterior addition to a heritage building should be considered in a rehabilitation project only after determining that requirements for the new or adaptive use cannot be successfully met by altering non-significant interior spaces.
- Generally, new architectural elements should be minimized and limited to those required to support the permissible level of impact.
- Prior to any construction, a site management plan must fully outline the measures to protect the heritage asset during all phases of implementation.

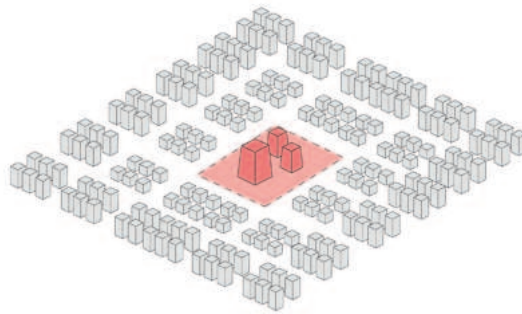
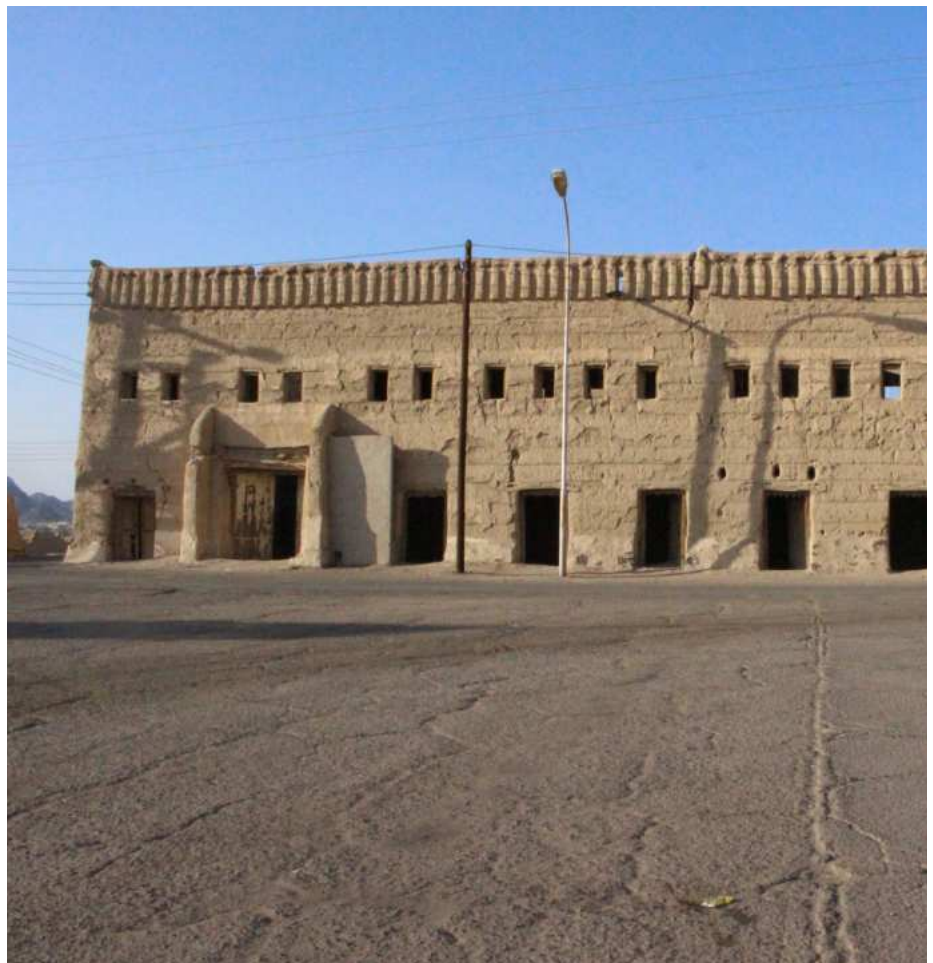


Figure 107 Development of heritage properties, properties in buffer areas and properties in visual buffer areas



Heritage building in Tathleeth

2.3.1 Massing

Objective

To prevent detrimental impact of buildings on heritage assets and cultural landscapes with appropriate scale and massing design.

Guidance

Existing Structure

- Restoration, reconstruction or repurposing of existing or potential heritage assets shall follow the respective vernacular architecture forms and massing as defined by the Heritage Authority.

New Development

- If new development is allowed, it should have the same layout and form of the respective environment having height and scale in compliance with adjacent heritage elements.
- Massing and floor plates must represent the heritage characteristic of its environment and recessed to introduce variation and foster human scale.
- For cultural landscapes linked to wadi preservation areas, building footprints should be minimized and kept to pavilions, restrooms and similar structures.
- Buildings should be stepped in relationship to the landscape.
- For further guidance refer to Aseer Contextual Architecture Guidelines.

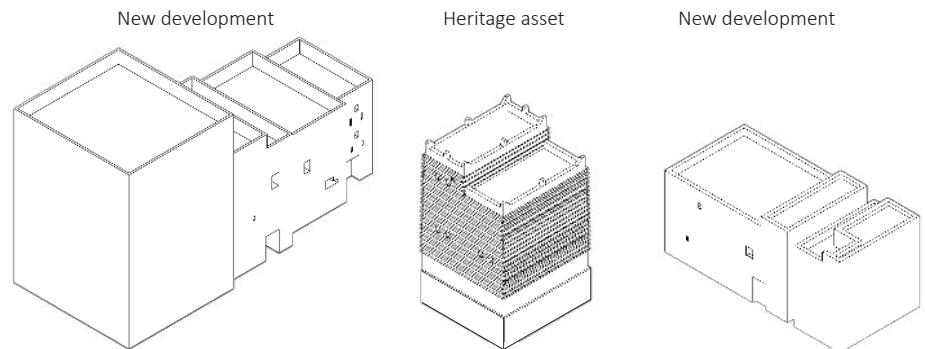


Figure 108 New development with compact architectural forms having between 1 to 4 stories

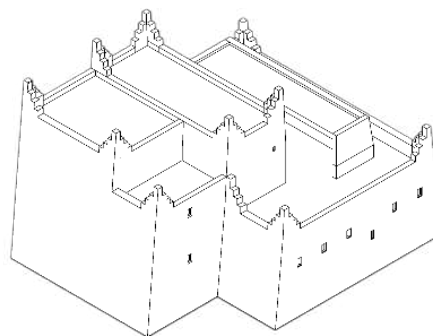


Figure 109 Stepped architectural forms integrating terracing

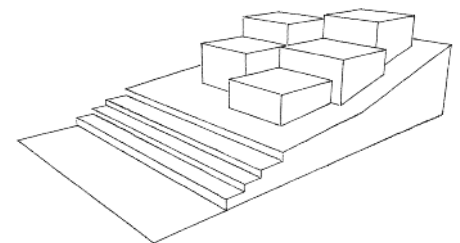


Figure 110 Stepping buildings in relation with the natural terrain



Example of vernacular architecture massing in Al Basta and Sarat Abidah villages



Example of vernacular architecture massing in Dhahran Al Janub village in Aseer

2.3.2 Settlement & Building Layout

Objective

To design settlement and building layouts so that the location, proximity and disposition of the building and open space does not have a detrimental impact on heritage assets and cultural landscapes.

Guidance

Existing Structure

- Restoration, reconstruction or re-purposing of existing or potential heritage assets shall match the respective original architectural layout as defined by the Heritage Authority.

New Development

- If an intervention and/or new development is allowed, it shall contribute to reinforce the historic urban fabric by respecting the historic building typologies and open space network, and by promoting a network of pedestrian-oriented passageways and squares.
- Alleys and pathways should typically follow the same with and characteristic of the pre-existing environment's pathways.
- In commercial areas, the widening of pavement on the ground floors through the setback of buildings should be promoted to create spill out spaces and café seating areas that pick up on the irregular building fabric of the region's historic villages.
- New developments shall be located with enough distancing from heritage assets not to affect their landscape and visual setting, and to protect desired view corridors.
- For further guidance refer to Aseer Contextual Architecture Guidelines.

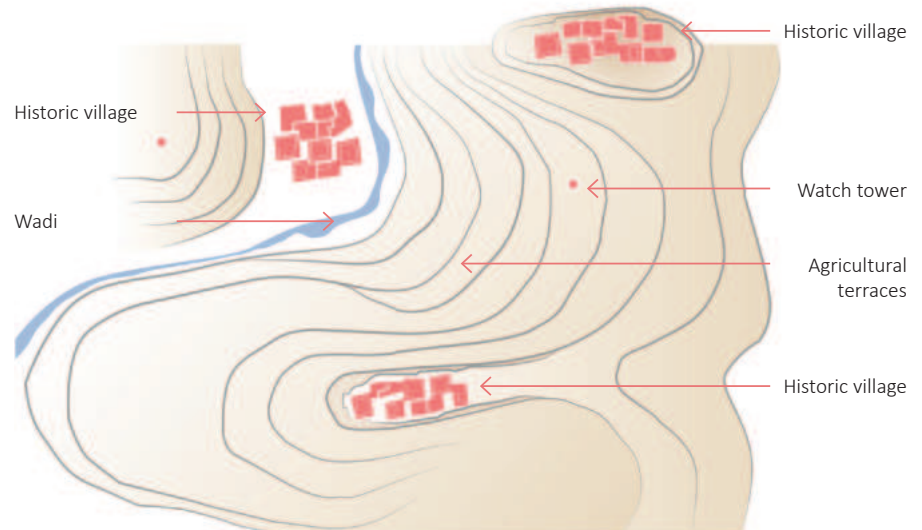
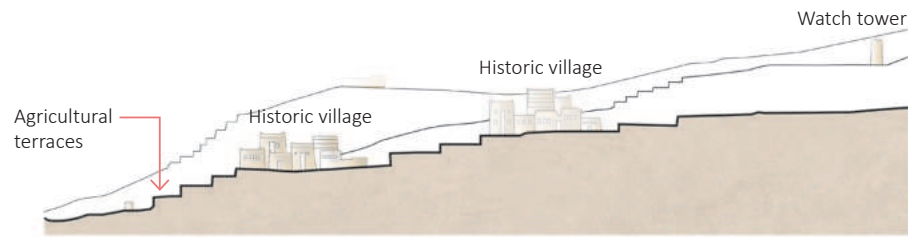


Figure 111 Plan and section of a typical village layout in the highlands of the Sarwat Mountains



Settlement layout creating a network of passageways and squares in Rijal Almaa

2.3.3 Facade Treatment

Objective

Exterior materials, colors, facade treatment and retaining or perimeter walls should match or complement the existing heritage buildings and cultural landscapes palette.

Guidance

Existing Structure

- Heritage assets shall be authentically restored, utilizing matching materials, construction techniques and detailing as defined by the Heritage Authority.
- New architectural elements should be minimized, utilizing a minimalistic material palette and a clean modern architectural language to focus attention on the restored cultural asset.
- The required modern utilities should be sensitively integrated and their visual impact on the authentic restoration should be minimized. Particularly along the public side of the property.
- For further guidance refer to Aseer Contextual Architecture Guidelines.

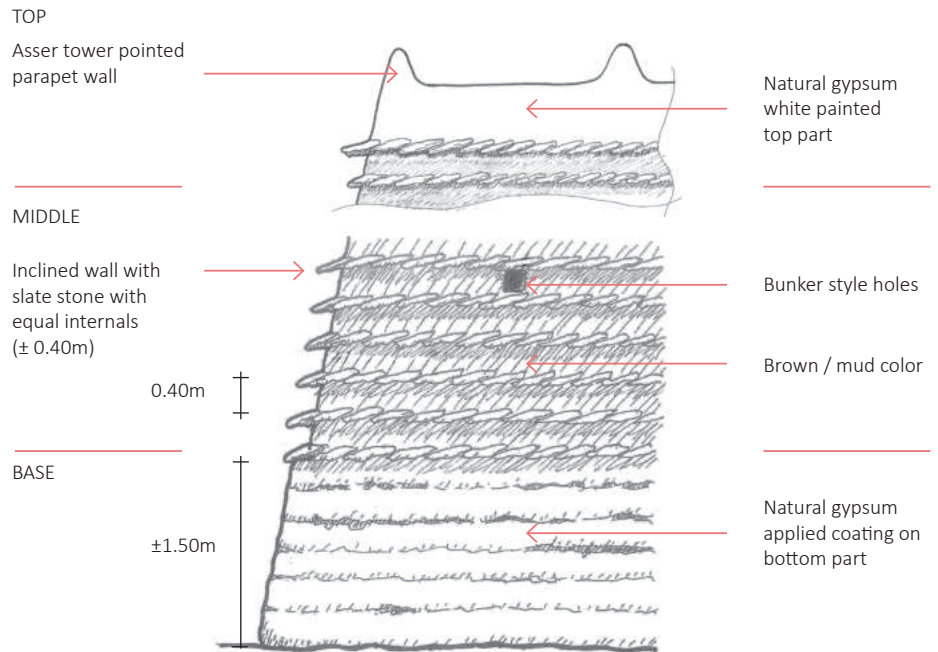


Figure 112 Examples of facade organization for vernacular architecture in Sarwat Mountain

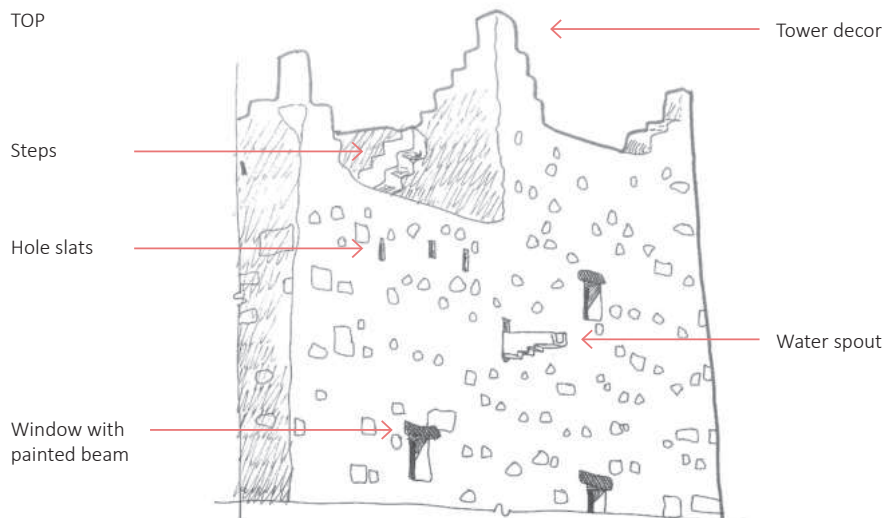


Figure 113 Example of facade organization for vernacular architecture in the Sarwat Mountain

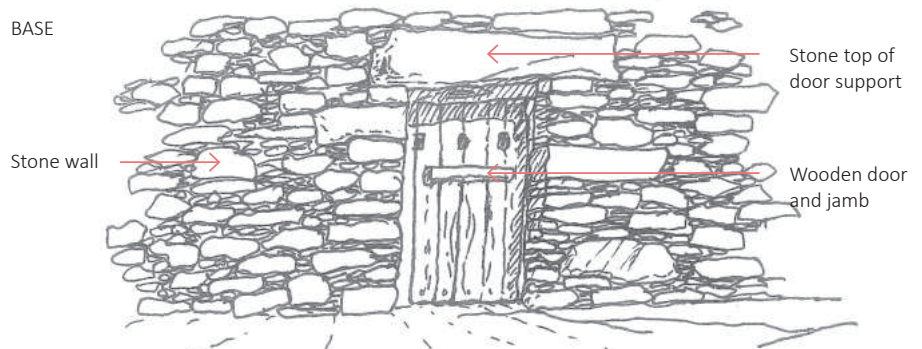


Figure 114 Example of a door in the vernacular architecture of the Sarwat Mountain

Guidance

New Development

- If new functions are located within the landscape or visual setting of existing cultural heritage assets, new built structures should match the material quality, type, durability of the heritage asset whenever possible.
- Facade design for new development should respond to the heritage asset in terms of opening proportions, recesses, roof lines, facade breaks, decorative detailing, materials and colors.
- Contemporary adaptation of the pre-existing local environment typical building techniques and materials shall be encouraged.
- For guidance on facade and rooftop treatment for interventions and/or new developments, refer to AUDC B.5.3 and Aseer Contextual Architecture Guidelines.

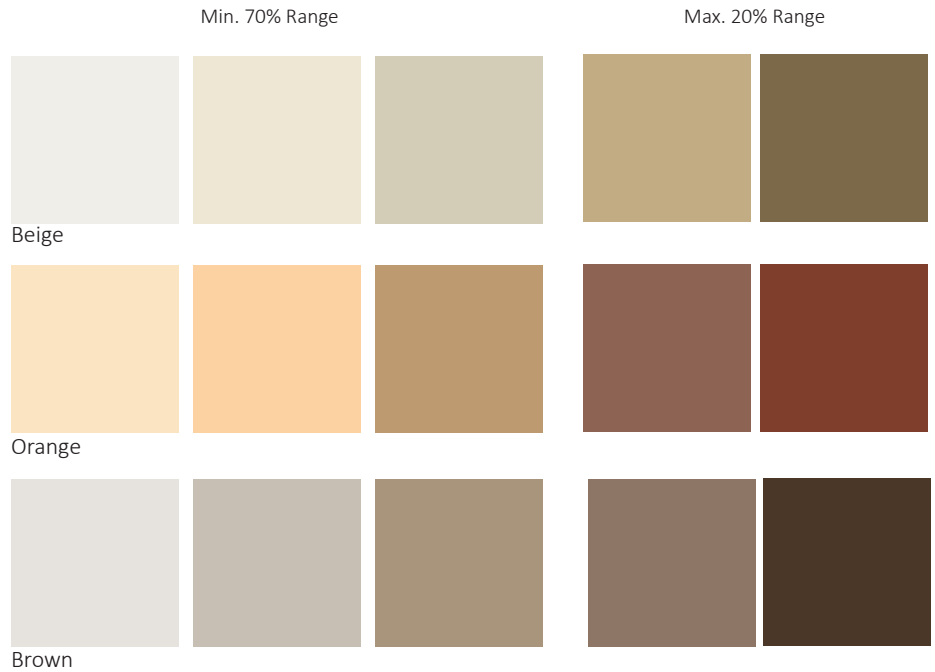


Figure 115 Example of desired earth tone color palette in Sarwat Mountain



Desired and durable natural stone surface textures Sarwat Mountain



Concrete (pigmented) surface textures



Charred Sanded Rugged



Fluted Zig Zag Craggy

Desired and durable concrete finishes and surface textures in Sarwat Mountain



Example of facade present in the Sarwat Mountain's vernacular architecture



Pointed parapet



Al-Ragaf cornices



Stepped parapet



Wooden top support and window panel

2.3.4 Sympathetic External Additions to Heritage Assets

Objective

To preserve the significant historic materials, features and form of the historic buildings. Any new exterior addition to heritage assets must be compatible but differentiated from the heritage building. When planning a new addition, the placement or location of the new addition, its size, scale and massing should be carefully considered.

Guidance

- A new addition should be simple and unobtrusive in design, and should be distinguished from the historic heritage asset.
- The new addition should include simplified architectural features that reflect, but do not duplicate, similar features on the historic building. The historic building must be clearly identifiable and its physical integrity must not be compromised by the new addition.
- The new addition should be smaller than the historic building—it should be subordinate in size, scale and design to the historic building.
- A new addition should not be highly visible from the public right of way; a rear or other secondary elevation is usually the best location for a new addition.
- The incorporation of a simple, recessed, small-scale hyphen to physically separate the old and the new volumes or set the addition back from the wall plane(s) of the historic building should be encouraged.
- The building materials should be in the same color range or value as those of the heritage asset. The materials need not be the same as those on the heritage asset, but they should be harmonious; they should not be so different that they stand out or distract from the heritage asset.
- The material loss of an historic external wall for attaching new extensions should be minimized.
- The use of existing doors or the enlargement of existing windows should be encouraged to limit the size and number of openings between old and new fabric.



Examples of a simple addition which is set backed and/or uses a connecting hyphen not to compete with the historic building



Example of addition reflecting similar features of the historic building in Colmar, France



Example of a simple pavilion addition blended into a cultural heritage site in New Zealand



Example of an Arab tower restoration in Spain with an unobtrusive addition

- Base the size, rhythm and alignment of the new addition's window and door openings on those of the historic building.
- The architectural expression should respect the historic building types. For example, an addition to an institutional building should maintain the architectural character associated with this building type rather than using details and elements typical of residential or other building types.
- New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the heritage asset and its environment would be unimpaired.
- In the case of freestanding buildings where all facades have a significant treatment, for a group of structures with a significant relationship to each other, or when an addition alters the historic form by filling up a planned void on a highly-visible elevation, a separate building should be constructed. This separate building should be located where it will not negatively affect the historic structure and its settings.

Rooftop Additions

- A rooftop addition should be minimally visible and not more than one story in height.
- Roof reconstructions with harmonious materials should be encouraged whenever they contribute to a better heritage preservation and/or to its re-purposing for permitted uses.
- A rooftop addition shall be set back from the primary elevation of the building so that it is hidden from the view by pedestrians on the street. The same applies for the other elevations if the building is freestanding or highly visible.
- A rooftop addition is generally not appropriate for a one, two or three-story building. It is more likely to be compatible on a building that is adjacent to similarly-sized or taller buildings.



Example of a separate visitor pavilion added to the Hambach Castle in Germany with building materials on the same range color and with similar window rhythm



Example of an addition which is compatible and subordinate to the historic building reconverted to a hospitality use in Mexico



Example of a rooftop additions and reconstruction with harmonious materials and colors in ancient city of Nessebar, a UNESCO world heritage site



Example of a rooftop reconstruction with harmonious materials for its re-purposing in the UK

2.3.5 Recommended Uses

Objective

To prevent non-compatible uses with heritage assets or those which may pose a risk to the asset's value near immovable heritage assets, except upon Heritage Authority's and ASDA's approval.

Guidance

Existing Use

- Once a heritage site has been listed or included in the official national heritage record, the Heritage Authority in collaboration with MoMRA and ASDA, should update the respective detail urban and structural legal plans to review the permitted uses in relationship to the asset's existing use and the defined heritage boundary limits.
- A heritage property should be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.
- Re-purposing an asset's original use should only be allowed for permitted uses that do not represent a detrimental change to the asset's values in terms of massing, layout and facade treatment, and only upon approval of the Heritage Authority and ASDA.



Al-Turaif heritage site as an open-air museum, in Ad-Diriyah, Saudi Arabia



The historic center of Jeddah as an example of an active urban heritage site



Al-Asfa heritage site as an example of a productive cultural landscape

Guidance

New Development

- Walkable and non-car dominated environments should be promoted, avoiding vehicle encroachment. On-street parking should be minimized and parking lots or structures should be allocated in the buffer/transition zones.
- Any heritage property on a plot equal to or less than **300m²** is exempt from additional parking requirements.
- Active building edges should be promoted wherever applicable.
- Generally, permitted uses should be defined by location and circumstances, and existing use of the area and may preferably include: civic, cultural, religious, commercial, hospitality, recreational, traditional agricultural, food or handcraft production, and residential.
- Non-permitted uses may include: highly car-driven commercial uses like shopping malls and drive - throughs, gas stations, logistics, industrial, mining and other resource extraction, as well as large utility infrastructures.
- For further guidance on uses distribution, refer to AUDC B.4.



Al-Ula heritage site as an example of a productive cultural landscape



The historic quarter of Byblos, Lebanon as an example of an active urban heritage site



The historic center of San Gimignano in Italy as an example of an active urban heritage site

2.3.6 Open Space Treatment

Objective

To maintain and/or restore the historic cultural landscapes and urban fabric, promoting the traditional connection between the historic settlements and their surrounding landscapes through treatment of open spaces. It should also help to minimize the impact of development on the natural landscape and visual setting.

Guidance

- Generally, new development shall not destroy, significantly alter or remove existing cultural landscapes.
- New development shall contribute to the authentic restoration of the existing heritage and cultural landscapes.
- Impact on heritage features shall be kept to a minimum, keeping flattening or leveling of a slope to the minimum required.
- Open space treatment should reinforce the character and sense of place of a heritage site by adding contextual paving, street furniture, lighting, signage and wayfinding, upon approval of Heritage Authority, Amanah and ASDA.
- The removal of existing native vegetation should be minimized, compensating for the removed vegetation by replacing it with plant species native to the respective environment in the Aseer region.
- Any new landscape features, including plants and trees, should be kept at a scale and density that will not interfere with understanding of the heritage asset but rather complement it.
- All publicly visible areas from the main public road shall be kept clean from trash, construction materials and/or other refuses at all time.
- For further guidance refer to AUDC B.1.2.2 and Aseer Contextual Architecture Guidelines.



New developments should contribute to the preservation of existing cultural landscapes



The use of natural stones reinforces the sense of place of the open space treatment



Example of open space treatment complementing the heritage assets in Riyadh Old Center

- Waste bins should be appropriately located and reflect the Aseer region color palette. Trash containers shall be located at the back of the plot away from the main public frontage and screened from public view.
- Interventions or new developments should promote walkable environments through the implementation of a safe and accessible network of pathways and squares.
- The implementation of a network of recreational trails connecting different heritage sites, and integrating such sites with their surrounding cultural and natural landscapes should be promoted. These trails should typically be designed to merge with their surrounding natural landscapes.
- For further guidance on open space treatment, refer to AUDC B.1.
- For further guidance on waste management, refer to AUDC B.6.1.7.



Recreational trails, promoting a safe, clean, and walkable environment while integrating the heritage assets to their context



Pathways promoting a safe and walkable environment

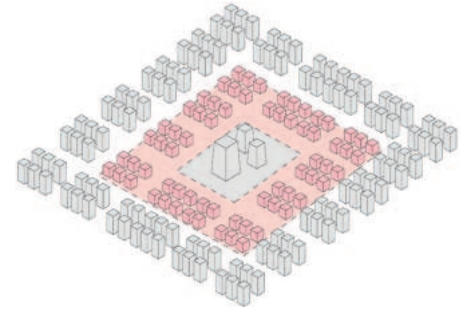


Example of landscape treatment not interfering with the understanding of a heritage asset in Ad-Diryah

2.4 Properties in Buffer and Transition Zones - For Applicants (Developer / Owner)

Overview

The guidelines prescribed in this section address the plots or sites located within a designated heritage buffer or transition zone, as defined by the Heritage Authority in collaboration with MoMRA and ASDA. Improvements, upgrades and interventions for existing buildings should generally strengthen the district's sense of place and create an adequate transition from the heritage asset to the modern urban fabric. Partial or complete demolitions should be approved by the Heritage Authority and not to have a negative impact on the heritage assets. Interventions and new developments will be subject to the AUDC standards and guidelines. Utilities and infrastructure interventions should be only allowed in this zone upon approval of the Heritage Authority, MoMRA and ASDA.



2.4.1 Massing

Objective

To design and scale the massing of new built form to match or complement the existing heritage and cultural landscapes within their specific context and visual setting.

Guidance

New Development

- If new development is allowed, it should have a compact form having height and scale in compliance with adjacent heritage elements.
- Landmark buildings may vary in height, being limited in number, located to protect existing view lines and inspired by the vernacular architectural forms and massing as defined by the Heritage Authority.
- Large building massing and floor plates shall be broken down and recessed to introduce variation and foster human scale.
- Buildings should be stepped in relationship to the natural landscape and integrate terracing when possible.
- For additional massing guidance, refer to AUDC B.5.2 and Aseer Contextual Architecture Guidelines.



Vernacular architecture massing in the Aseer region



Examples of contemporary interpretations of vernacular massing forms

2.4.2 Settlement & Building Layout

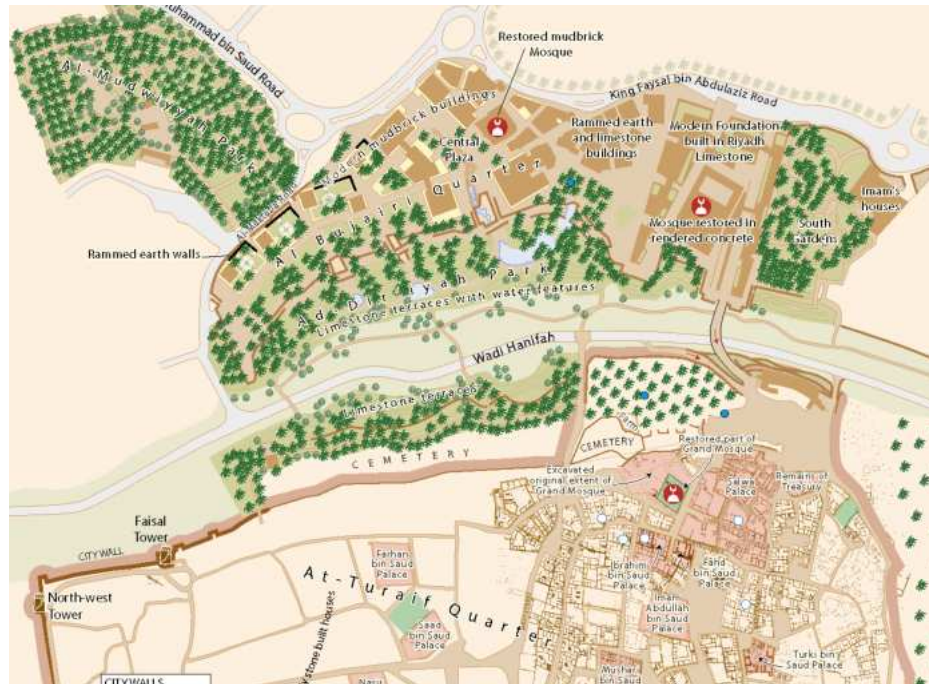
Objective

To design the settlement and building layout so that the location, proximity and disposition of the building and open space matches or complements the existing heritage and cultural landscapes within their specific context and visual setting.

Guidance

New Development

- As a master planning or site planning principle interventions and/or new developments shall contribute to reinforce the historic urban fabric through respecting the historic building typologies and open space network, and by promoting a network of pedestrian-oriented passageways and squares.
- In commercial areas, the widening of pavement on the ground floors should be promoted to create spill out spaces and café seating areas that pick up on the irregular building fabric of the region's historic villages.
- For additional layout guidance, refer to AUDC B.5.2 and Aseer Contextual Architecture Guidelines.



Example of new developments reinforcing the historic fabric in the Al-Bujairi buffer area in Ad-Diriyah



Contemporary interpretation of the vernacular layout with human scale open space

2.4.3 Facade Treatment

Objective

Exterior materials, colors, facade treatment and retaining or perimeter walls should match or complement the existing heritage buildings and cultural landscapes.

Guidance

Existing Development

- All government and community-facility buildings in disrepair located in the buffer / transition zone should be repaired and retrofitted to bring them further into compliance with AUDC B.5 and Aseer Contextual Architecture Guidelines.

New Development

- Facade design for new development should respond to the heritage asset in terms of opening proportions, recesses, roof lines, facade breaks, decorative detailing, materials and colors.
- The building materials should be in the same color range or value as those of the heritage asset. The materials need not be the same as those on the heritage asset, but they should be harmonious; they should not be so different that they stand out or distract from the heritage asset.
- Contemporary adaptation of local / Sarwat Mountains typical building techniques and materials shall be encouraged.
- For guidance on facade and rooftop treatment for interventions and /or new developments, refer to AUDC B.5.3 and Aseer Contextual Architecture Guidelines.



Example of a contemporary interpretation of a vernacular facade treatment in Al Bujairi Quarter in Ad-Diriyah



Example of a contemporary interpretation of a vernacular facade treatment of the National Museum in the King Abdulaziz Historical Center in Riyadh



Example of a contemporary interpretation of a vernacular facade treatment in Riyadh Old Center

2.4.4 Recommended Uses

Objective

To prevent placement of uses non-compatible with heritage assets or those which may pose a risk to the asset's value near immovable heritage assets, except upon Heritage Authority's and ASDA's approval.

Guidance

New Development

- Active building edges in accordance with vernacular architectural traditions shall be promoted.
- Mitigate the impact of access for delivery trucks and servicing. Where possible, delivery and servicing should occur away from primary and secondary public spaces to minimize the impact on culture heritage.
- Permitted uses may include: civic, cultural, religious, hospitality, commercial, touristic and recreational.
- Non-permitted uses may include: highly car driven uses like gas stations, logistics, industrial, mining and other resource extraction, as well as large utility infrastructures.
- Mixed-use development should be preferred.
- For further guidance on uses distribution, refer to AUDC B.4.



Example of active spaces in Riyadh Old Center



Commercial uses in the Al Bujairi district in Ad-Diriyah



Example of a mixed-use district in Al Balad Jeddah

2.4.5 Open Space Treatment

Objective

To maintain and/or restore the historic cultural landscapes and urban fabric, promoting the traditional connection between the historic settlements and their surrounding landscapes through treatment of open spaces. It should also help to minimize the impact of development on the natural landscape and visual setting.

Guidance

- Open space treatment should reinforce the character and sense of place of a heritage site by adding contextual paving, street furniture, lighting, signage and wayfinding, upon approval of the Heritage Authority and ASDA. For further guidance refer to AUDC B.1.5.
- The removal of existing native vegetation should be minimized, compensating for the removed vegetation by replacing it with plant species native to the respective environment in Aseer region.
- All publicly visible areas from the main public road shall be kept clean from trash, construction materials and/or other refuses at all time.
- Waste bins should be appropriately located and reflect the respective environment color palette. Trash containers shall be located at the back of the plot away from the main public frontage and screened from public view.
- Interventions or new developments should promote walkable environments.
- The implementation of a network of recreational trails connecting different heritage sites, and integrating such sites with their surrounding cultural and natural landscapes should be promoted. These trails should typically be designed to merge with their surrounding natural landscapes.
- For further guidance on open space treatment, refer to AUDC B.1.



New developments should contribute to the preservation of existing cultural landscapes



Example of recreational spaces respecting the context from the Al Bujairi quarter in Ad-Diriyah

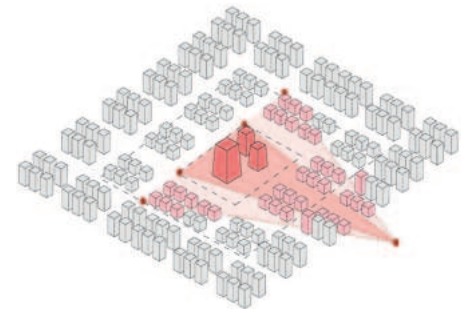


Example of contextual paving and street furniture in open spaces in Riyadh

2.5 Properties in Viewsheds and View Corridor Zones

Overview

The guidelines prescribed in this section address the plots or sites located within a designated view corridor or viewshed, as defined by the Heritage Authority in collaboration with MoMRA and ASDA. Improvements, upgrades and interventions for existing buildings following the AUDC guidelines are generally encouraged, strengthening the visual corridor or viewshed. Interventions and new developments are subject to the AUDC standards and guidelines. Utilities and infrastructure interventions are only allowed in this zone upon approval of the Heritage Authority, MoMRA and ASDA.



2.5.1 Massing, Facade and Rooftop Treatment

Objective

To design massing, facade and rooftop treatment so that it complements the existing heritage and cultural landscapes within their specific context and visual setting.

Guidance

- The defined Threshold Plane shall be the limit of the maximum allowed height for any new developments located inside this area.
- Facade design for new development should respond to the heritage asset in terms of opening proportions, facade breaks, materials and colors.
- Contemporary adaptation of local/typical building techniques and materials shall be encouraged.
- Particularly within the Threshold Plane, any rooftop equipment, fixtures, fittings, and telecommunications equipment seen from above, should be properly screened behind a parapet or in an enclosure, to avoid visibility from the assessment point. If not enclosed, it should be painted to match the rooftop.
- Within Threshold Planes only pedestrian and building wall signage are allowed. Rooftop signage shall not be installed.
- No highly visible utilities and services infrastructures shall be located within the Threshold Planes.
- For guidance on massing, facade, rooftop treatment and signage refer to AUDC B.5, B.6.2 and Aseer Contextual Architecture Guidelines.

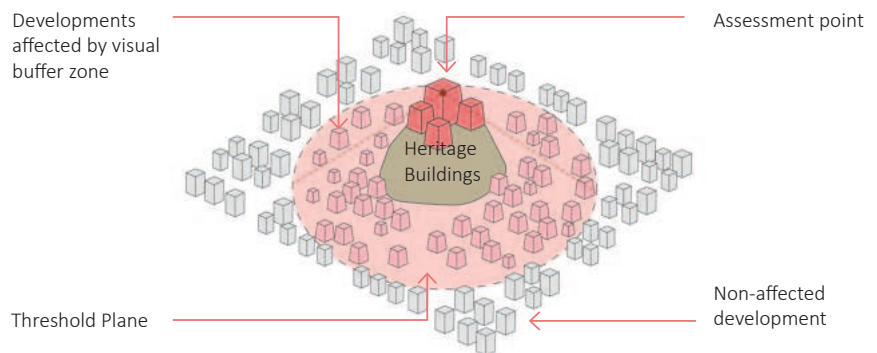


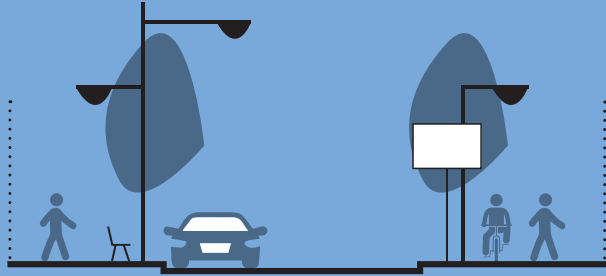
Figure 116 Viewshed as the area visible from a property (including everything in line-of-sight) or from which a property can be seen within a wider area of influence



Example of a viewshed for the Jaisalmer Fort in India



Example of a view corridor for the Umayyad Mosque in Damascus, Syria



3

COMPLETE
STREETS &

MOVEMENT NETWORK

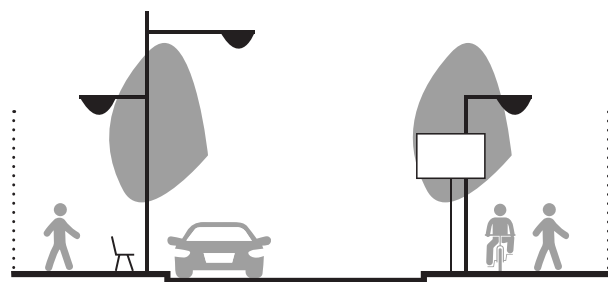


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3 Complete Streets and Movement Network

3.1 General Guidance & Checklist

3.1.1 Introduction

The AUDC recognizes that streets are an essential part of the visual identity of development and its community, and that they fulfill two core functions: providing mobility and places for people.

The AUDC promotes the creation of an attractive public realm and permeable street network that is well integrated with surrounding land uses. Furthermore, the AUDC promotes Complete Streets - streets that are designed and operated with the overall objective of enabling safe access for all users in the community. People of all ages and abilities should be able to move along and across streets in Aseer region, regardless of how they are traveling.

3.1.2 General Guidance

- Provide a site responsive and highly connected street network, which provide access for multi-modal movement for all users.
- Balance vehicle traffic management with walking, cycling parking, the streetscape and community spaces by incorporating different design elements.
- Ensure that the street layout provides a continuous street frontage that is safe, attractive and efficient for pedestrians, cyclists and vehicles and creates a sense of place.
- Particular attention must be placed to public frontages in new development, to their interface with the street and to the provision of high quality and attractive public realm.



Existing conditions of King Fahd Road in Abha City



Example of complete street and attractive public realm frontages treatment of main access corridor in urban area



Example of complete street and attractive public realm frontages treatment of main access corridor in suburban area

3.1.3 Requirements Checklist

The below checklist of requirements is intended as an agile tool to be used by the evaluating Authority or by the Applicant to review the important elements to be addressed and required study.

Evaluating Authority - Complete Streets Design Review Checklist		
Base Line Information	Project design to clearly illustrate:	
	1. Street classification & layout	<input type="checkbox"/>
	2. Proposed public realm arrangement for all public frontages	<input type="checkbox"/>
	3. Topography	<input type="checkbox"/>
	4. Sidewalks	<input type="checkbox"/>
	5. Walkways	<input type="checkbox"/>
	6. Pedestrian crossing	<input type="checkbox"/>
	7. Traffic islands	<input type="checkbox"/>
	8. Pedestrian refuge areas	<input type="checkbox"/>
	9. Cycle track	<input type="checkbox"/>
	10. On street parking	<input type="checkbox"/>
	11. Services lanes	<input type="checkbox"/>
	12. Street furniture	<input type="checkbox"/>
	13. Street lighting	<input type="checkbox"/>
	14. Public transit	<input type="checkbox"/>
15. Universal accessibility	<input type="checkbox"/>	
Pre-application Advice	Provide an opportunity for developer/owner to receive guidance on the proposed development and on what type of information/study may be required to obtain permitting.	<input type="checkbox"/>

Applicant (Developer / Owner) - Complete Streets Design Review Checklist

Required Information	<p>For review and approval as part of development and/ or land subdivision permitting application:</p> <ol style="list-style-type: none">1. Location map of the street in relation to UGB's road network and contextual analysis.2. Location of the street in relation to the adjacent land use system of UGB.3. Design plans as needed and to an appropriate scale to clearly illustrate its relationship with context.4. Mobility plan showing vehicular, pedestrian, cycling and transit circulation and access.5. Public realm plan and proposed design elements for all public frontages.6. Typical sections as required to explain design intent.7. Detail landscape design showing specification of hardscape and softscape treatment, materials, and planting palette.8. Street furniture details and materials.9. Environmental plan showing measures to improve micro-climate and climatic comfort.10. Design references and ideas inspired by local contextual analysis.11. Photo-realistic CGI as needed-(2 minimum), to clearly illustrate design intent focusing particularly on the public realm arrangement of all public frontages.	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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Supporting Regulating Documents:

- MoMRA,(1441-2019). Engineering Design Manual for Roads.
- MoMRA,(1426-2005). Handbook of Planning Standards of Parking Lots.
- MoMRA,(1426-2005). Transportation Planning Guide in Saudi Cities.
- MoMRA,(1426-2005). Design Elements Guide for Street Furniture.
- MoMRA,(1441-2019). Streets and Squares Lighting guide.

Additional References

- National Association of City Transportation Officials, (2013). Urban Street Design Guide.

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3.2 Design with Nature

Objective

To complement road design with the topography and landscape features of the site.

Guidance

- Straight lines and rectilinear shapes do not complement natural hillsides and wadi networks. Gentle horizontal and vertical curves shall be preferable for the road alignment rather than straight lines.
- Road widths should be kept to a minimum to reduce cuts, fills and retaining walls which environmentally can have a strong negative and visual impact.
- In general double loaded road design should be preferred as it minimizes infrastructure requirements and site use per lot created (reduce land use with single loaded road).



Figure 117 Rectilinear road alignment with cuts, fills and retaining walls have a strong negative environmental and visual impact



Figure 118 Road alignment to complement natural hillsides



Example of correct organization of road alignment to complement natural hillsides

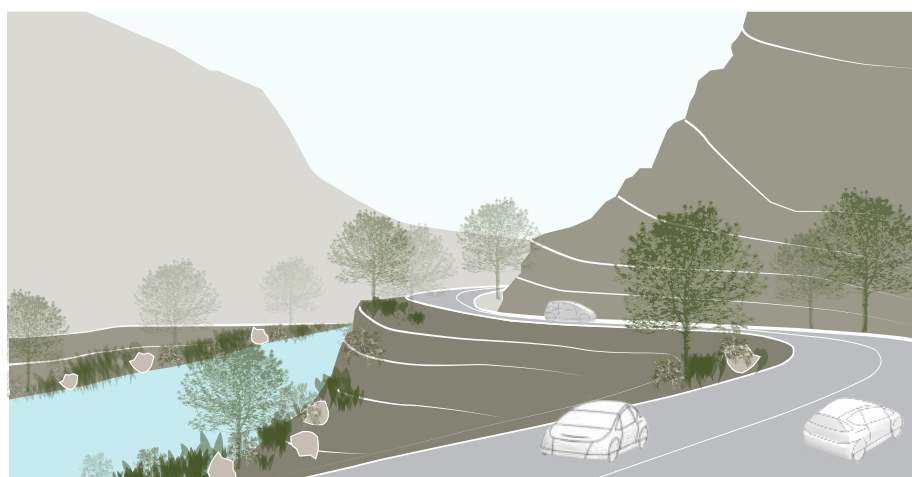


Figure 119 Road alignment to compliment natural wadi and water body

3.3 Movement Network

Overview

The AUDC consider all streets within the urban growth boundaries in Aseer as multi-functional spaces. All these functions can be broadly grouped into two categories, movement and place. Movement is about moving people or goods, by various modes of transportation. 'Place' relates to functions which attract people to walk or spend time in areas adjacent to the street; these functions are for the AUDC equally important to movement. The AUDC recognizes that it is 'place' that gives communities character, amenity, and purpose, and ultimately makes them livable, desirable places to spend time.

Objective

To provide the right balance between movement and place functions for the movement networks.

Guidance

- Understanding streets in terms of 'movement' and 'place' functions.
- Understanding street in terms of relationship to existing road designations (e.g. MOT).
- Identify street corridor types (refer to AUDC B.4.2.5).

Layered Networks

- Establish layered network approach of transportation facilities - not all streets can or should be prioritized for bicycles or pedestrians, given the need to accommodate essential automobile trips on strategic routes. Likewise, vehicle throughput cannot take priority in the design of every street.
- Identify user needs in different circumstances and set priorities / make trade-offs accordingly.
- Reflect changing functions and aspirations as streets change over time.

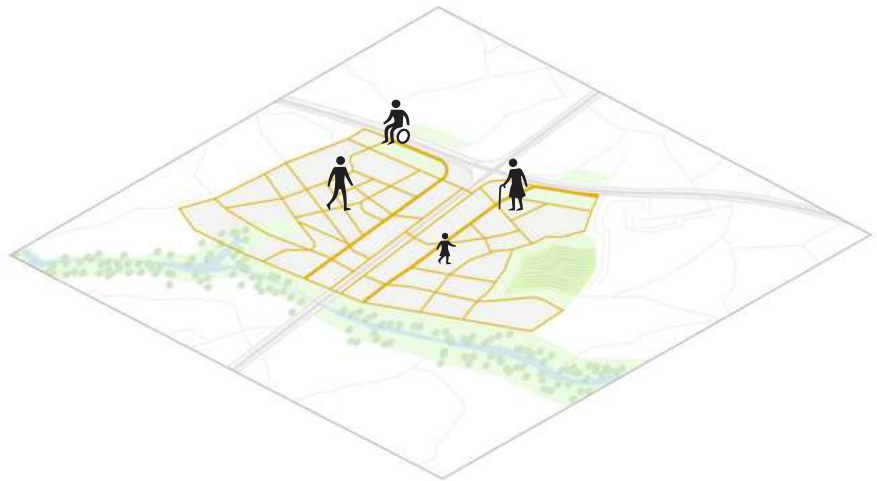


Figure 120 | 1- Map the pedestrian network

Establish a continuous, connected, unobstructed, safe and universally accessible network

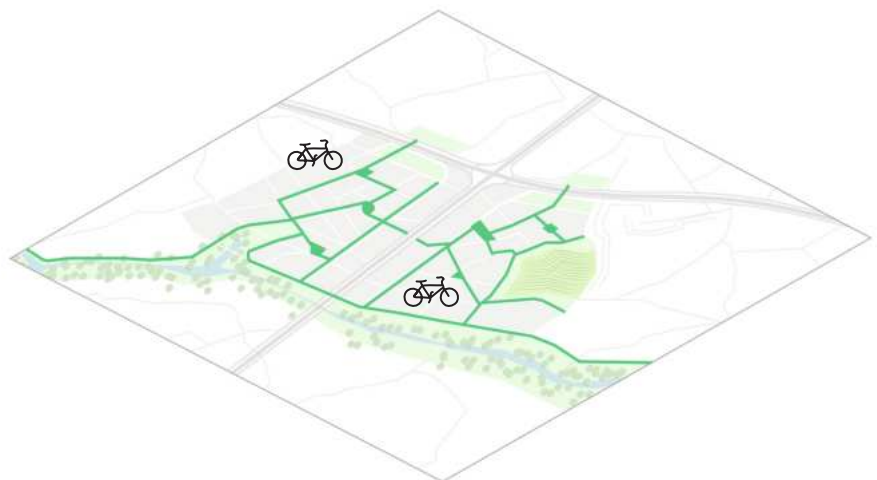


Figure 121 | 2- Map the bicycle network

Establish a continuous, connected, unobstructed and safe network

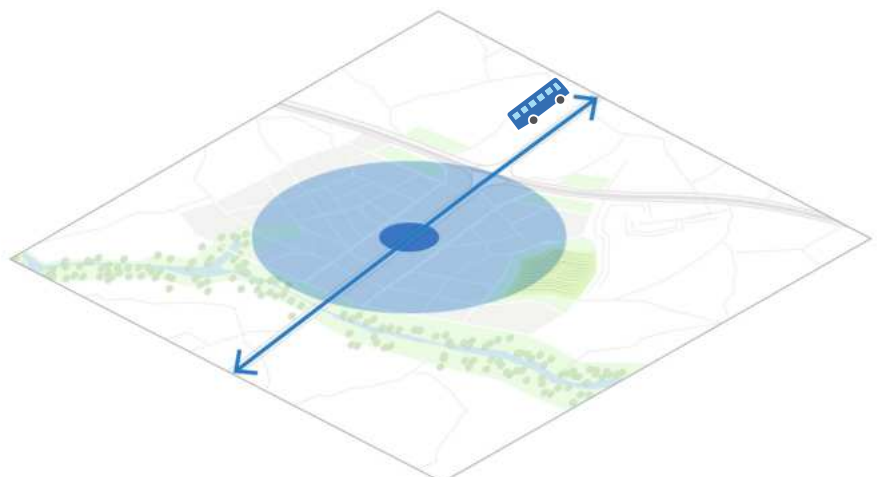


Figure 122 | 3- Map the possible future transit network

Consider different types of transit, routes and stops

- Balance locally specific needs with the overall function of transportation networks, recognizing that needs may not be the same along the entire length of a street corridor.
- Identify the types of street design elements (for eg. width and placement of carriageway, sidewalks, cycle tracks, medians etc.) that may be appropriate in a particular context, and with regard to the overall function of the network.
- Understand the need for intervention within the UGB's context, considering long distance and local trips.

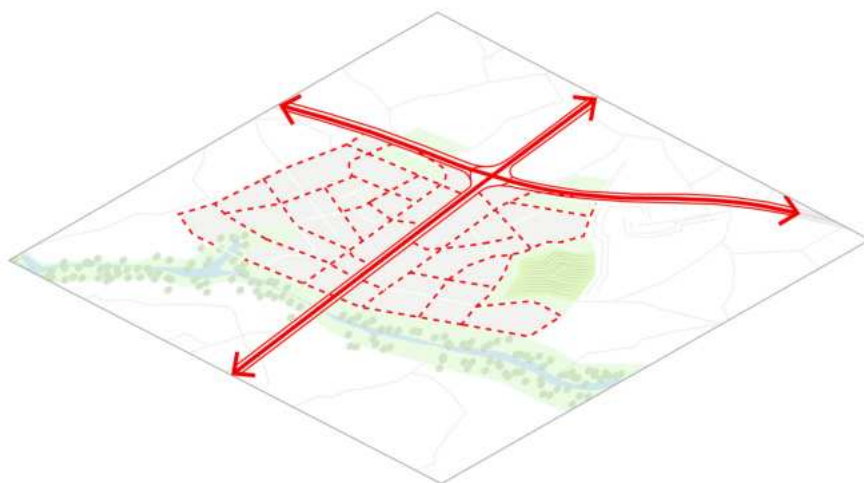


Figure 123 | 4- Map the car network

Balance user needs to reflect changing functions of the network and essential car trips



Figure 124 | 5- Map the truck routes

Delivery and servicing routes should be located away from primary open spaces

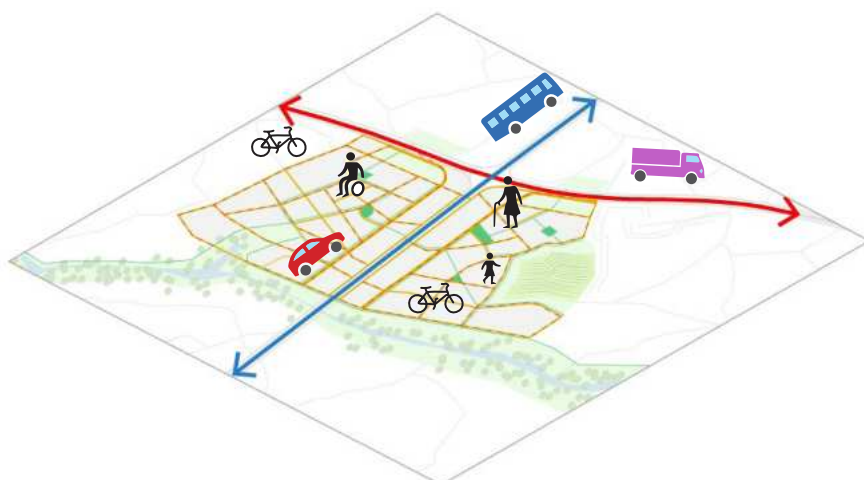


Figure 125 | 6- Create the layered network

Overlay all networks to identify modal priorities on specific streets or blocks

3.4 Complete Streets

Overview

The AUDC promotes Complete Streets – streets for everyone. Streets in the urban areas need to be designed and operated with the overall objective of enabling safe access for all users in the community. People of all ages and abilities should be able to move along and across streets in regardless of how they are traveling.

Objective

To promote a complete streets network, roads should provide a safe public space for people, accessibility for multi-modal movement for all users, environmental quality, economic benefit, enhancement of place, public health and overall quality of life. Moreover, street classification should correspond to the amount of public life expected in the public realm and enhance the relationship of the street with the landscape.

Guidance

- Create a safer city.
- Aesthetically pleasing with properly designed public realm for physical comfort.
- Ensure dedicated space for safe pedestrian movement.
- Ensure connectivity.
- Improve bicycle networks.
- Integrate transit networks.
- Effective truck and goods movement.
- Maintain vehicular mobility.
- Design for sustainable streets.
- Promote streets as public spaces.
- Promote context sensitive design and neighborhood character.

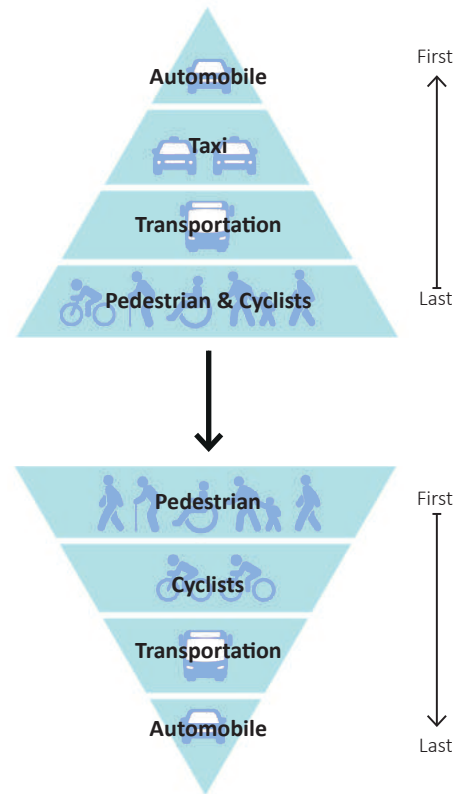


Figure 126 AUDC encourages reversing the pyramid of users priority in road design considerations

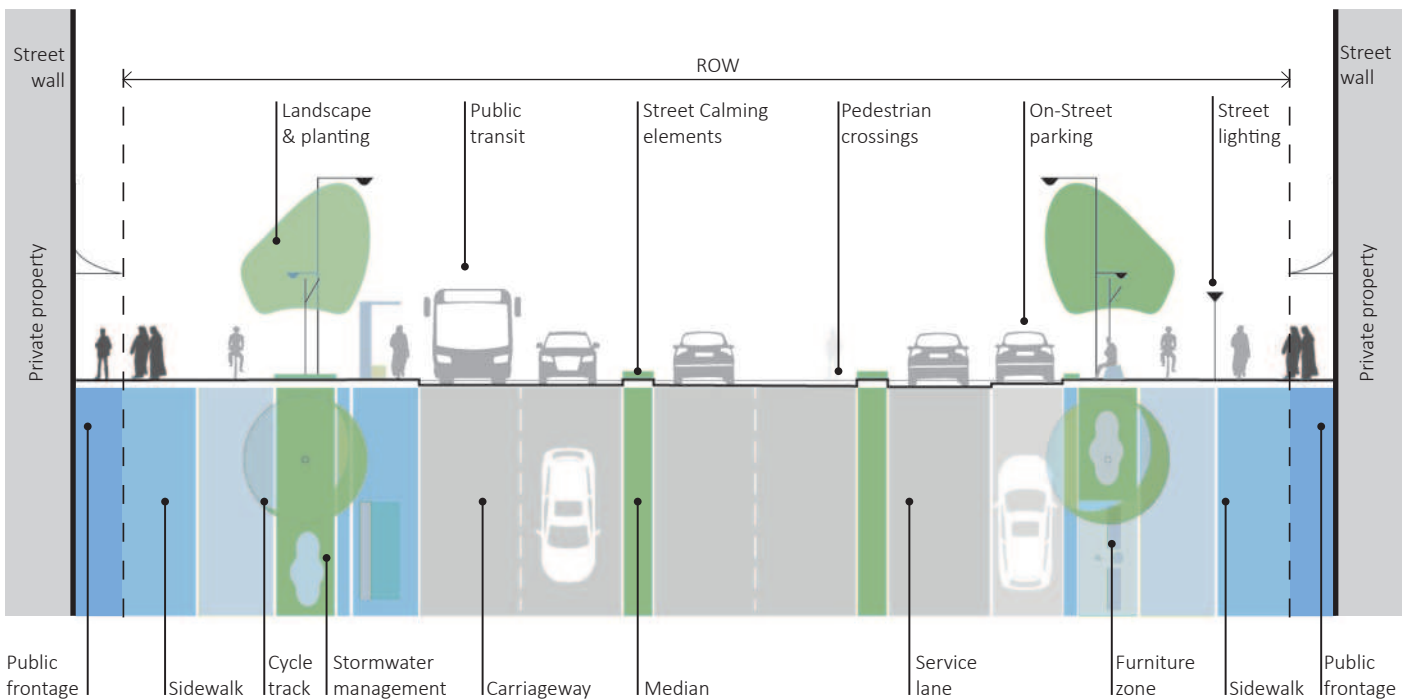


Figure 127 Typical design elements of a complete street

3.5 Street Design Templates

Main Access Corridors

- Widest city streets with regional significance that function as the entry gateways to the city. Designed to serve through-traffic, these streets form barriers to cross-street traffic. Crossing aids are needed to minimize segregation. Roadside activity should be properly buffered.

The AUDC identifies the following hierarchy of roads and streets within the Aseer urban growth boundaries and broad complete streets recommendations.



Figure 128 Recommended main access corridor organization

Arterial Road

- Connect different neighborhoods and allow access to key destinations and city services. Although they primarily promote faster mobility, they should accommodate for all users, supporting a higher volume of pedestrians and road side activity.



Figure 129 Recommended arterial road organization

Collector Road

- Neighborhood main streets which offer a series of walkable destinations and future transit stops. Traffic speeds should be limited to accommodate for the needs of multiple users, prioritizing key transit routes and cycle lanes where possible.

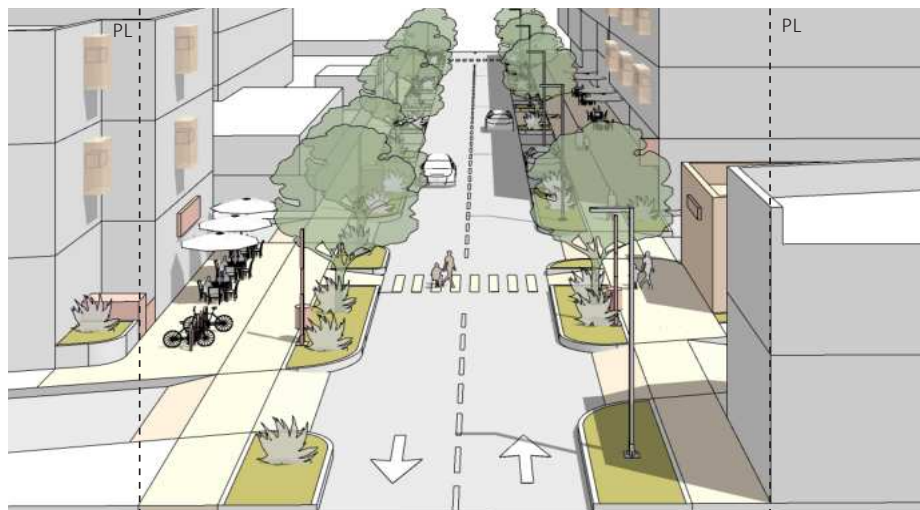


Figure 130 Recommended collector road organization

Local Road

- Provide access to residential units, schools and some local stores within neighborhoods. They could be utilized as places for play and leisure, requiring slower speeds and higher safety standards for pedestrians and cyclists.



Figure 131 Recommended local road organization

Shared Street

- The concept of the Living Street follows 'Shared Space' principles in order to reduce car speeds by not designating space exclusively for cars. Designated car lanes would be underutilized in these short residential streets and result in high speeds.
- The concept is practically suitable for local street arrangements in heritage districts and for new updated local street in residential development.



Figure 132 Recommended shared street organization



Figure 133 Recommended shared street organization for new developments

3.5.1 Main Access Corridors

Public Open Space / RoW Intent

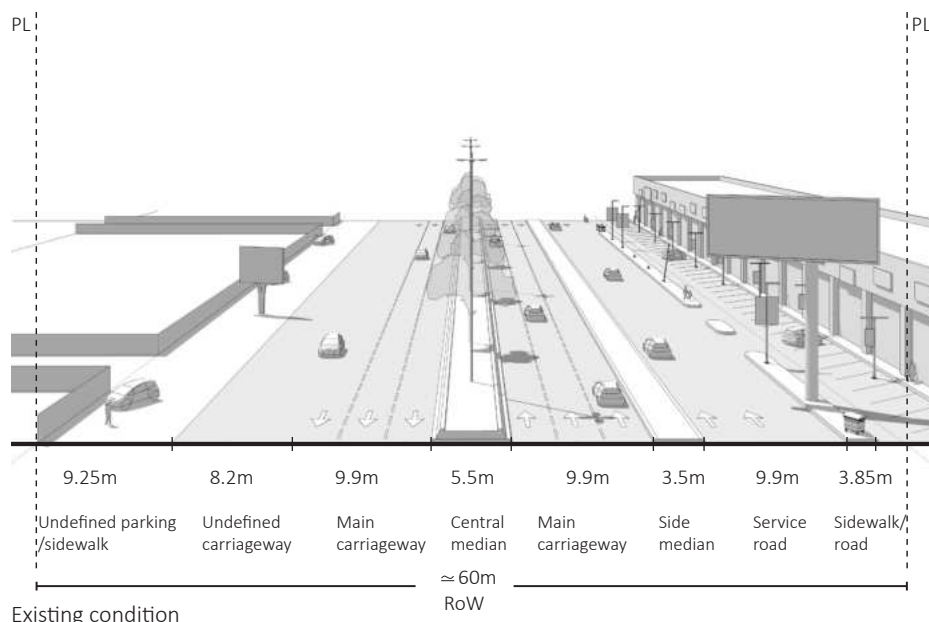
- Create a continuous, representative and unique landscape treatment.
- Define fast-moving and slow-moving zones.
- Provide an attractive and appropriate public realm at road edges.
- Provide for last-mile connectivity and comfortable, safe and visually pleasing pedestrian bridges.
- Define adequate signage size and location for fast-moving and slow-moving zones.
- Provide furniture zones with human-scale street lighting.
- Provide for parallel parking and bus bulbs when needed.

Private Plot / Setback Intent

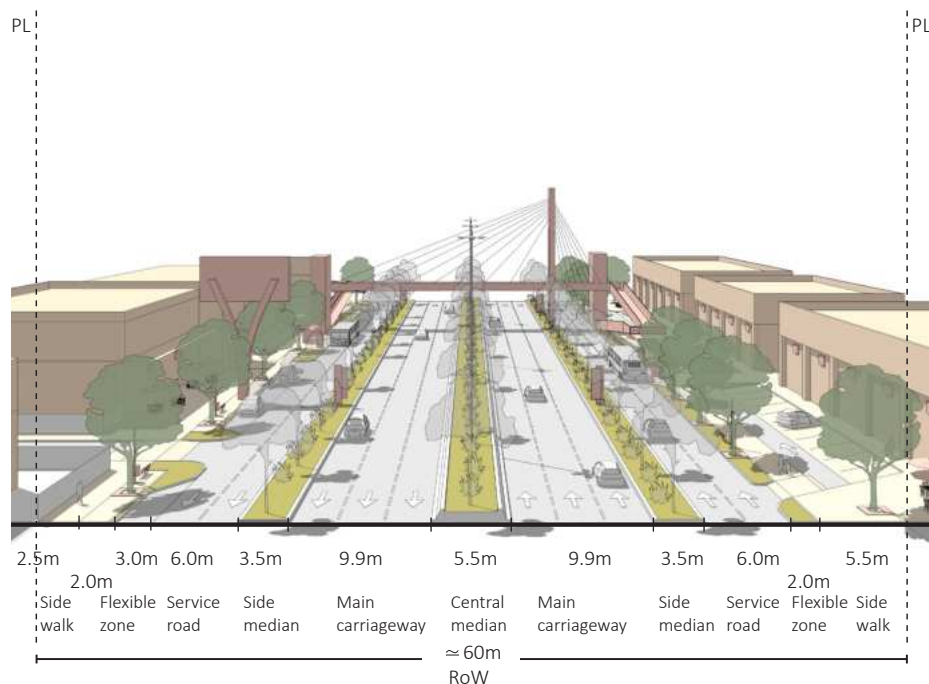
- Promote active edges and public/ semi-public pedestrian uses.
- At grade private parking preferably located at the back of the lot or underground.
- Exposed water tanks, satellite dishes and other to be screened from public view.
- Appropriate design of street walls and roof lines (first row buildings).
- Define adequate signage size and location.



Example of main access corridor in Abha city



Existing condition



Complete street organization

3.5.2 Arterial Road - Type A

Public Open Space / RoW

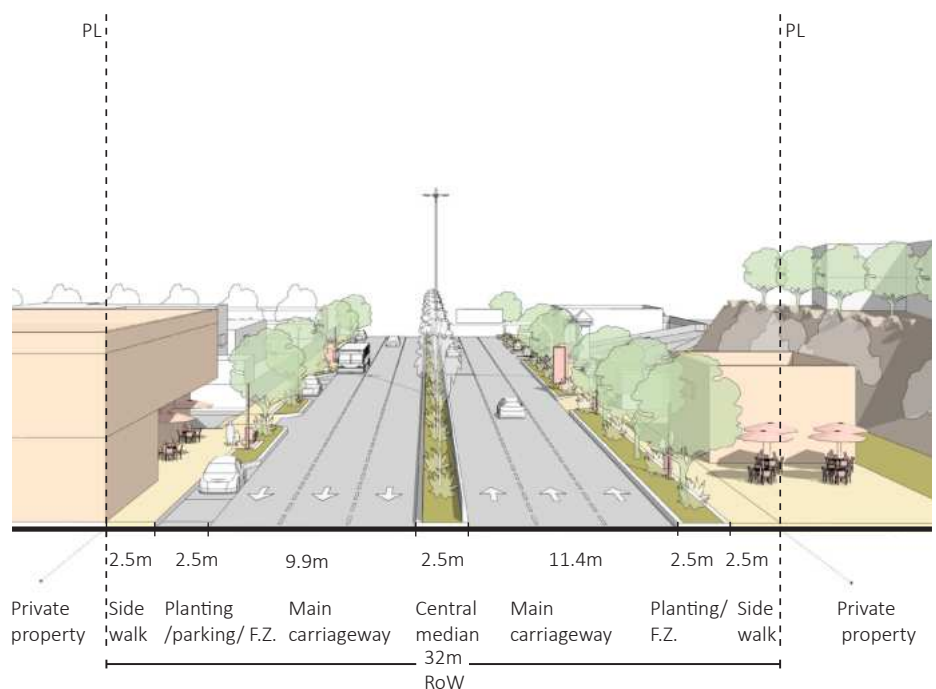
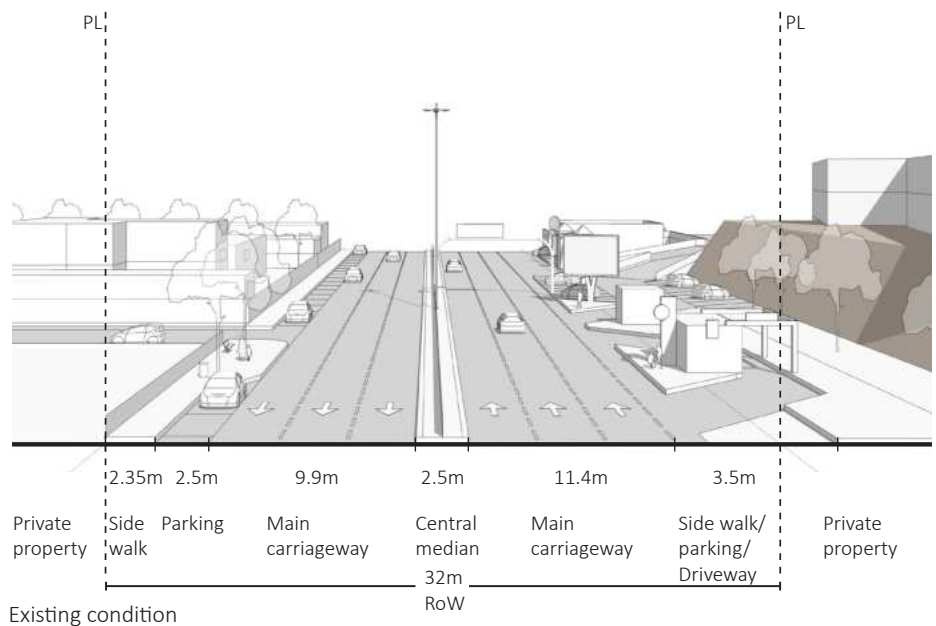
- Create a continuous, representative and unique landscape treatment.
- Provide an attractive and appropriate public realm at road edges.
- Provide for last-mile connectivity and comfortable and signaled at grade pedestrians crossings.
- Define adequate signage size and location.
- Provide furniture zones and locate street lighting and planting so not to disturb pedestrian movement.
- Provide for parallel parking and bus bulbs when needed.
- Possibility of having either one exclusive bus lane or a flexible central lane.

Private Plot / Setback

- Promote active edges and public / semi-public pedestrian uses.
- At grade private parking preferably located at the back of the lot or underground.
- Exposed water tanks, satellite dishes and other to be screened.
- Appropriate design of street walls and roof lines (first row buildings).
- Define adequate signage size and location.
- Drive-through uses should not be allowed.
- Screen sloped development with planting buffers



Ring road in Abha city



Complete street organization with minimum standards

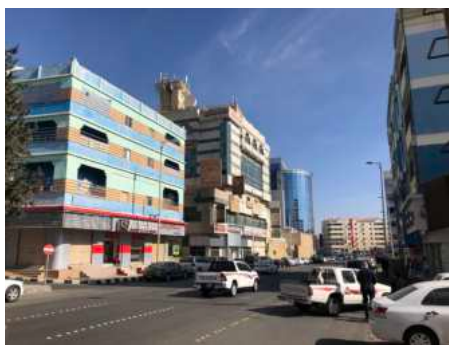
3.5.3 Arterial Road - Type B

Public Open Space / RoW Intent

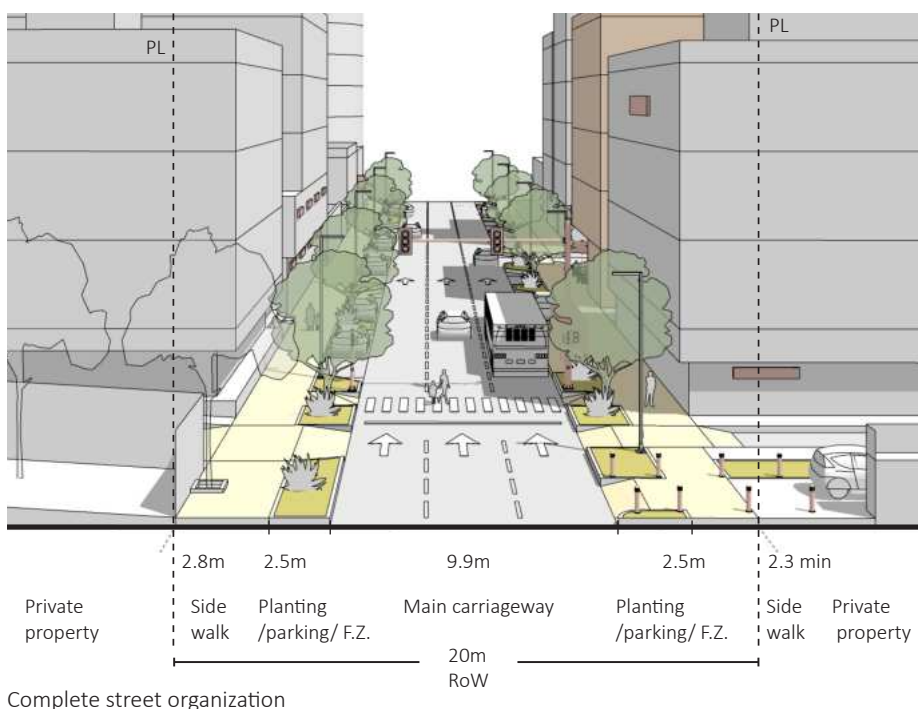
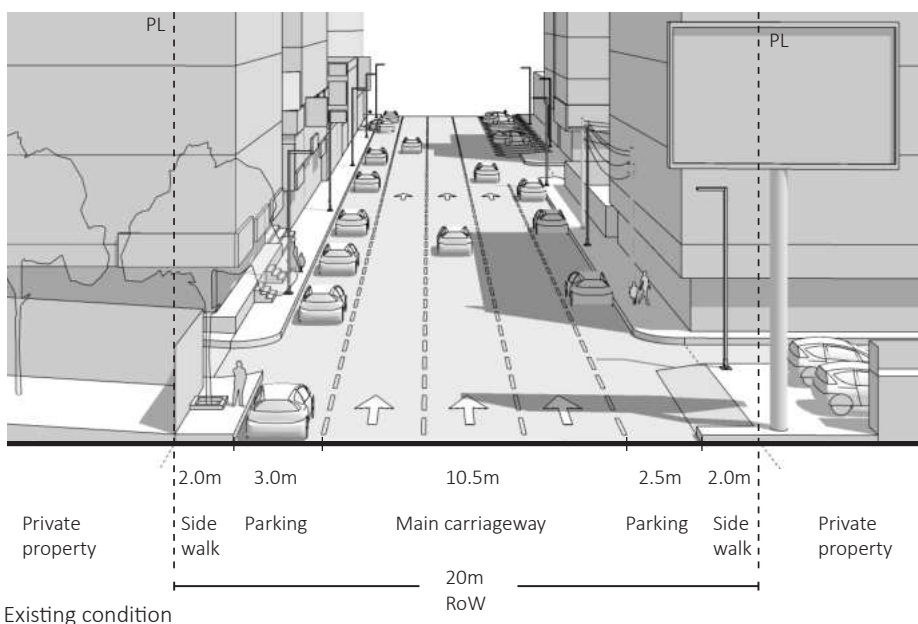
- Create a continuous, representative and unique landscape treatment.
- Provide an attractive and appropriate public realm at road edges.
- Provide for last-mile connectivity and comfortable and signaled at grade pedestrian crossings.
- Define adequate signage size and location.
- Provide furniture zones and locate street lighting and planting so not to disturb pedestrian movement.
- Provide for parallel parking and bus bulbs when needed.
- Possibility of having either one exclusive bus lane or a flexible central lane.

Private Plot / Setback Intent

- Promote active edges and public / semi-public pedestrian uses.
- At grade private parking preferably located at the back of the lot or underground.
- Exposed water tanks, satellite dishes and other to be screened.
- Appropriate design of street walls and roof lines (first row buildings).
- Define adequate signage size and location.



Example of arterial road in Abha city



3.5.4 Collector Road

Public Open Space / RoW Intent

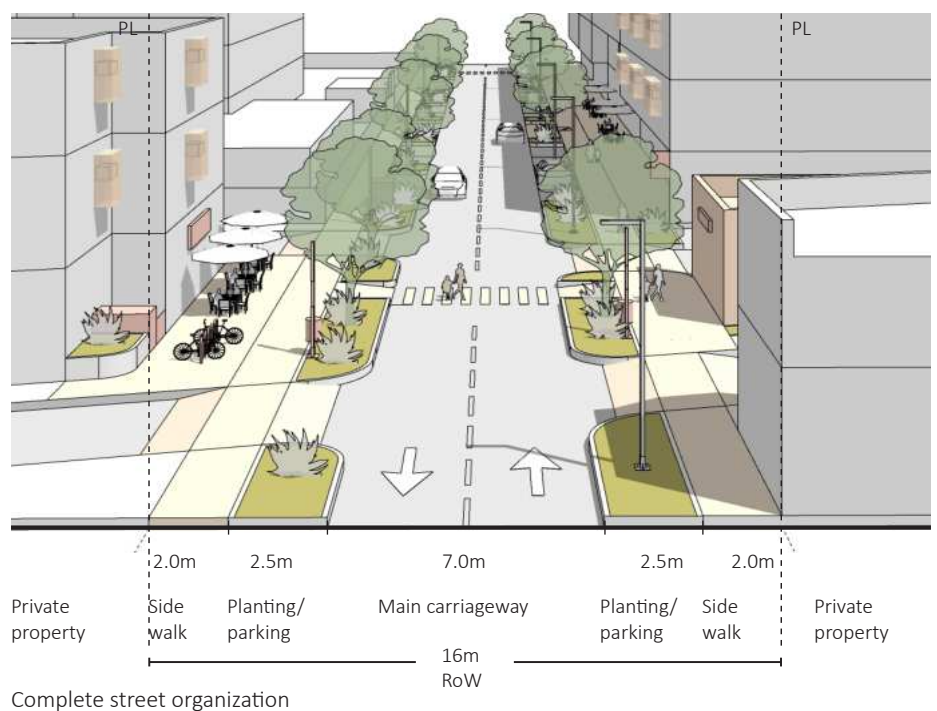
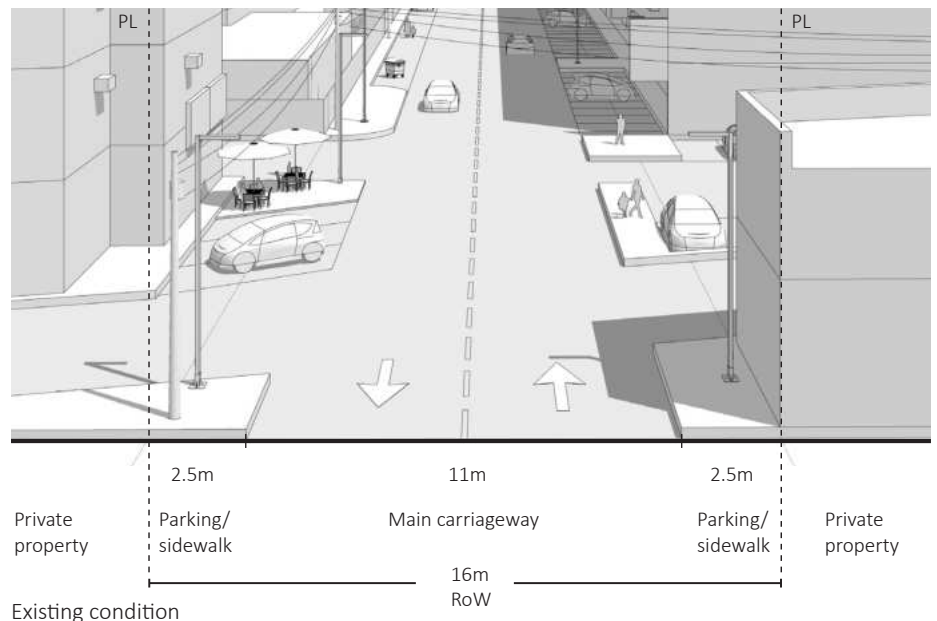
- Create a continuous landscape treatment.
- Provide an attractive and appropriate public realm at road edges.
- Provide for last-mile connectivity and comfortable at grade pedestrians crossings.
- Define adequate signage size and location.
- Provide furniture zones with human-scale street lighting.
- Provide for parallel parking when needed.

Private Plot / Setback Intent

- At grade private parking preferably located at the back of the lot or underground.
- Exposed water tanks, satellite dishes and other to be screened.
- Appropriate design of street walls and roof lines (first row buildings).
- Define adequate signage size and location.



Example of collector road in Abha city



3.5.5 Local Road

Public Open Space / RoW Intent

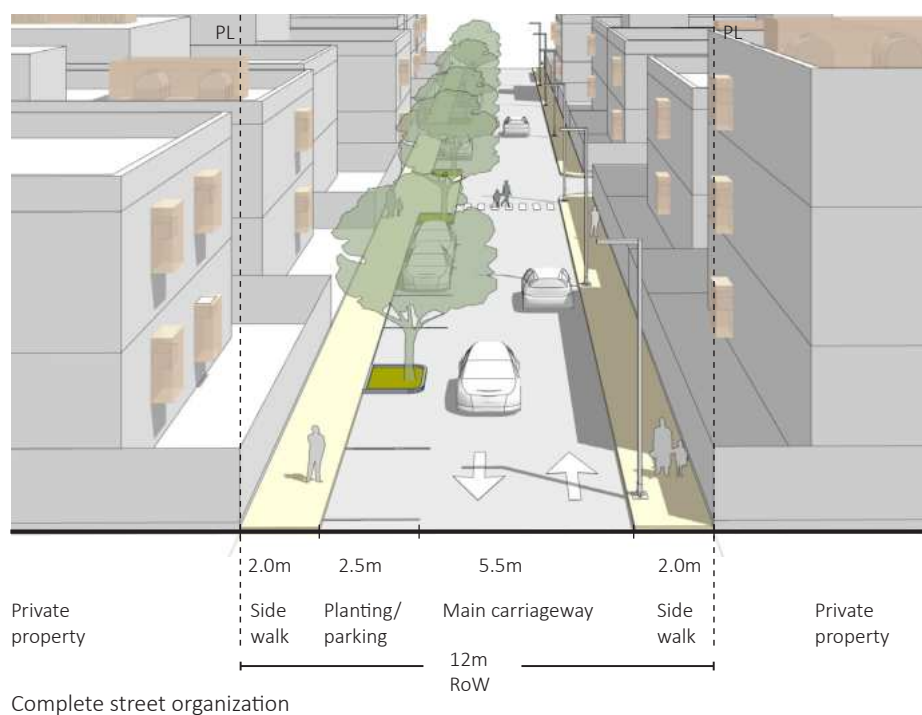
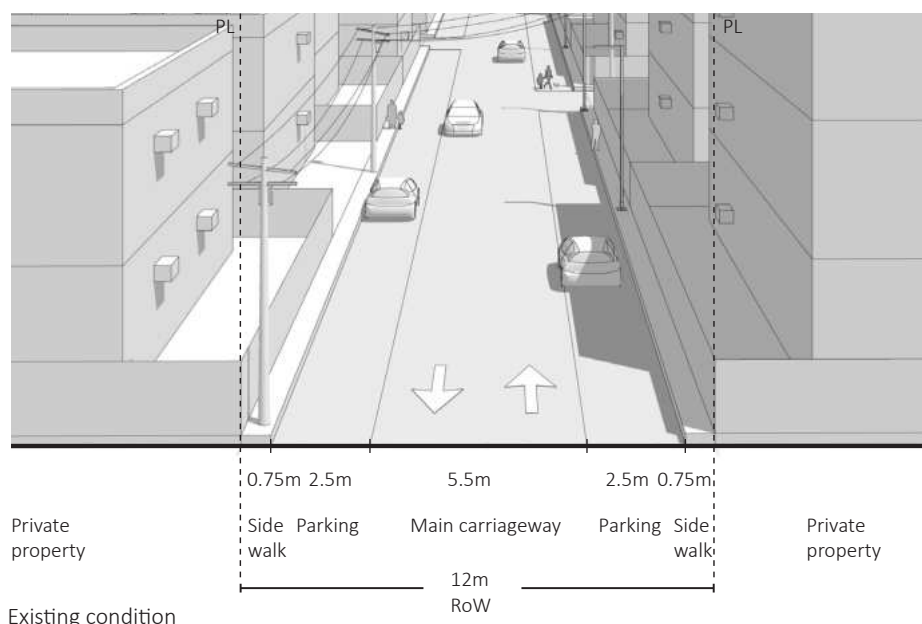
- Create a continuous landscape treatment.
- Provide an appropriate public realm at street edges.
- Provide for comfortable at grade pedestrian crossings.
- Provide for planting on one side of the road edge and street lighting on the other.
- Provide for parallel parking when needed on one side of the roads.

Private Plot / Setback Intent

- Exposed water tanks, satellite dishes and other equipments to be screened.
- Appropriate design of street walls and roof lines (first row buildings).



Example of local road in Abha city



3.5.6 Shared Street

Public Open Space / RoW Intent

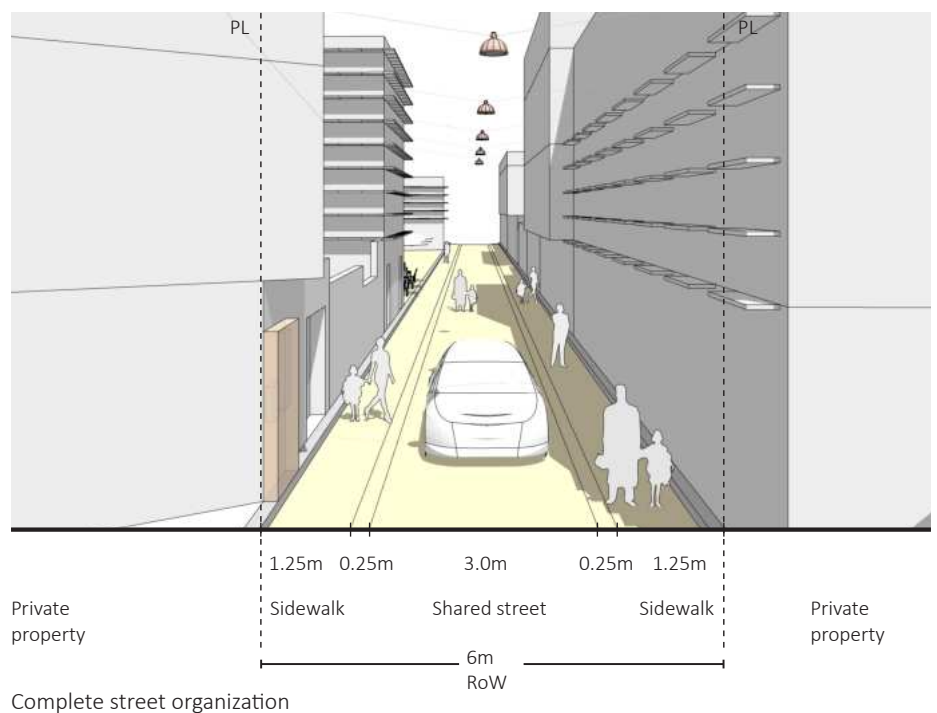
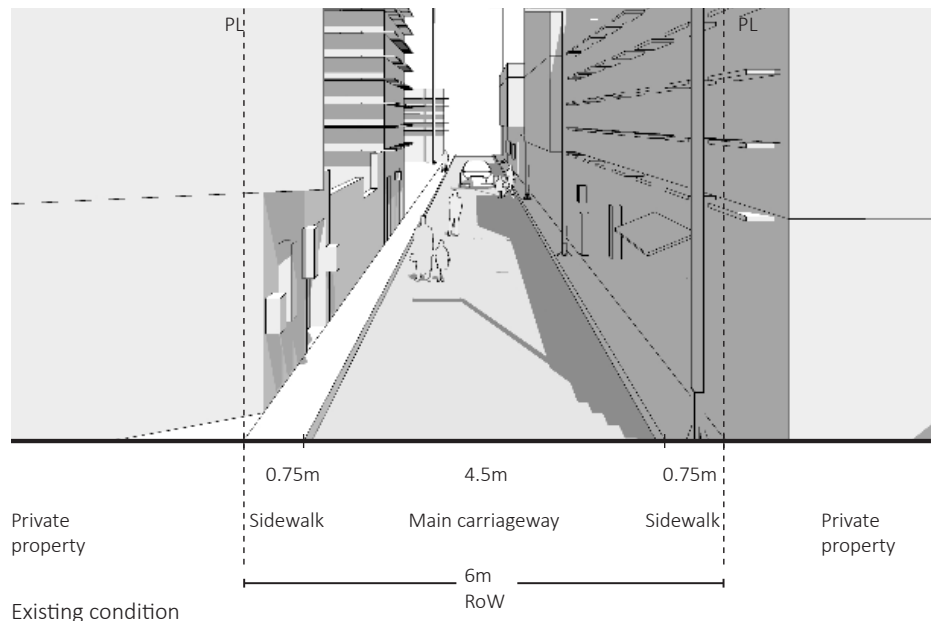
- Create a continuous landscape treatment.
- Provide an attractive and appropriate public realm at road edges.
- Define adequate signage size and location.
- Provide furniture zones with human-scale street lighting.
- Provide for parallel parking when needed.

Private Plot / Setback Intent

- At grade private parking preferably located at the back of the lot or underground.
- Exposed water tanks, satellite dishes and other to be screened.
- Appropriate design of street walls and roof lines (First row buildings).
- Define adequate signage size and location.



Example of local road in Abha city



3.5.7 Shared Street - New Residential Developments

Public Open Space / RoW Intent

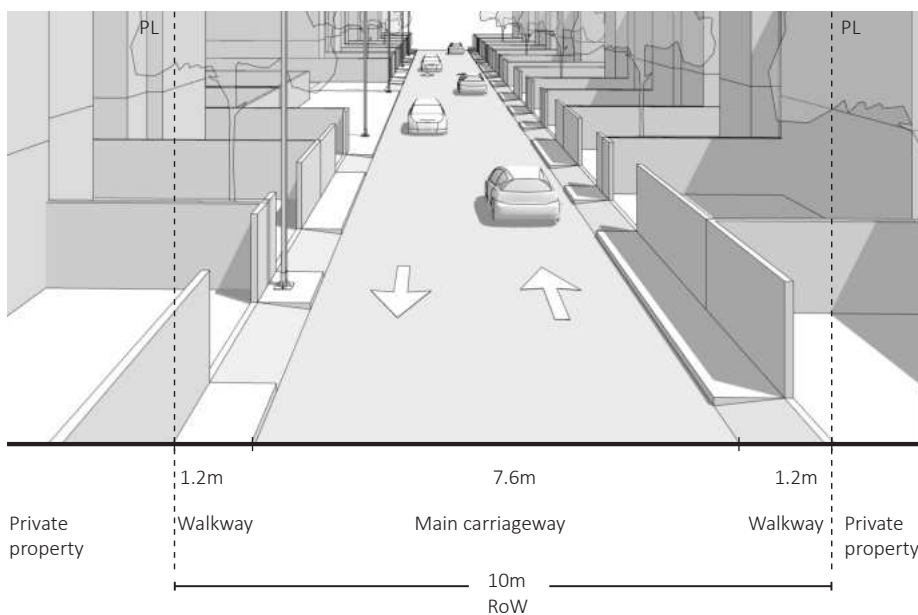
- Create a continuous landscape treatment.
- Provide an attractive and appropriate public realm at road edges.
- Define adequate signage size and location.
- Provide furniture zones with human-scale street lighting.

Private Plot / Setback Intent

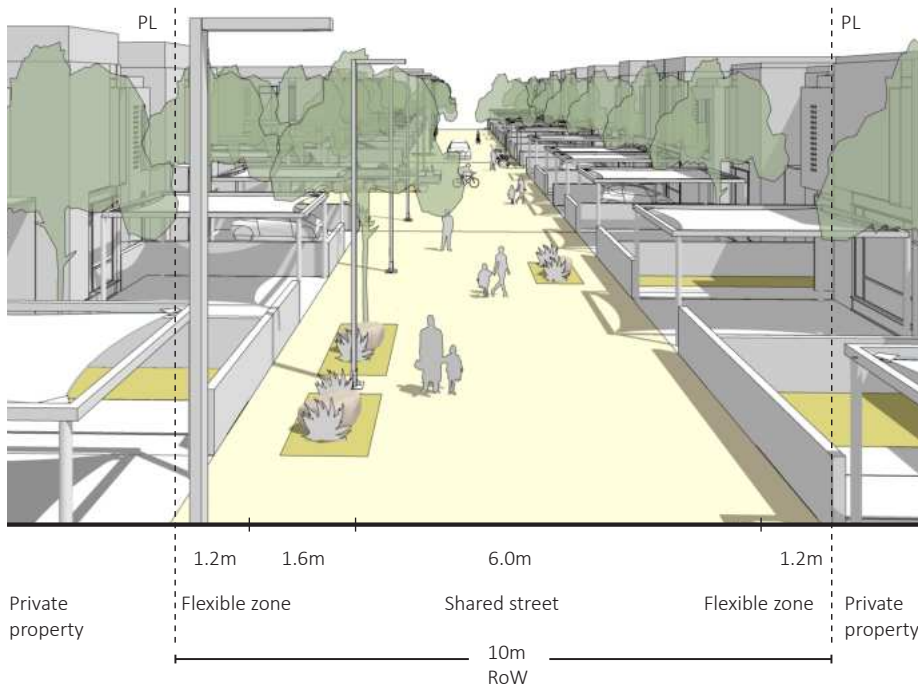
- At grade private parking preferably located at the back of the lot or underground or integrated within development.
- Exposed water tanks, satellite dishes and other to be screened.
- Appropriate design of street walls and roof lines (first row buildings).



Example of local / shared road in Abha city



Existing condition



Complete street organization

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3.5.8 Complete Street Design Templates: Al Birk - Coastal Plains

Recommended Public Open Space / RoW Intents

- Create a continuous, representative landscape treatment.
- Provide an attractive and appropriate public realm at road edges.
- Provide for last-mile connectivity and comfortable, safe and visually pleasing pedestrian bridges / at grade pedestrian crossings.
- Define adequate signage size and location for fast-moving and slow-moving zones.
- Provide furniture zones with human-scale street lighting.
- Provide for parallel parking and bus bulbs when needed.

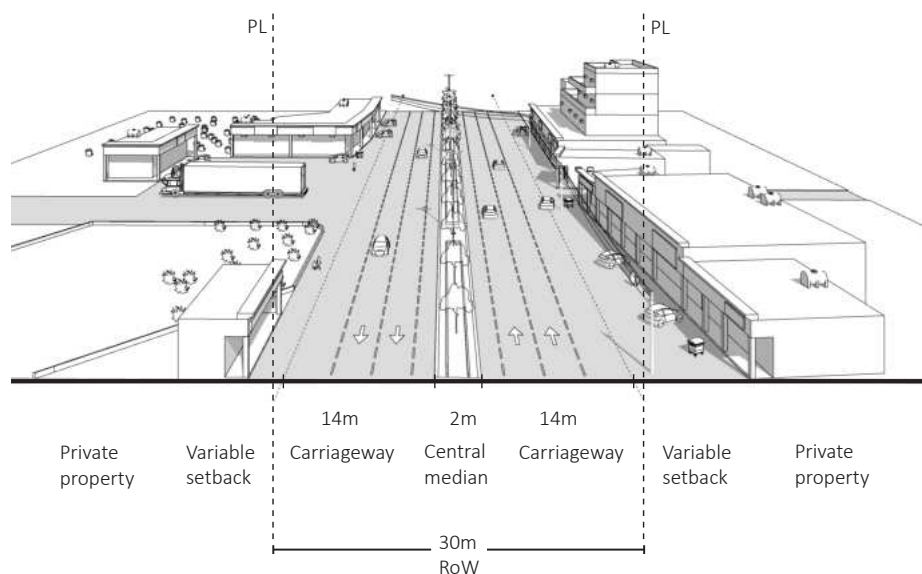
Recommended Private Plot / Setback Intents

- Promote active edges and public/ semi-public pedestrian uses.
- At grade private parking preferably located at the back of the lot or underground.
- Exposed water tanks, satellite dishes and other equipments should be screened from public view.
- Appropriate design of street walls and roof lines (First row buildings).
- Define adequate signage size and location.

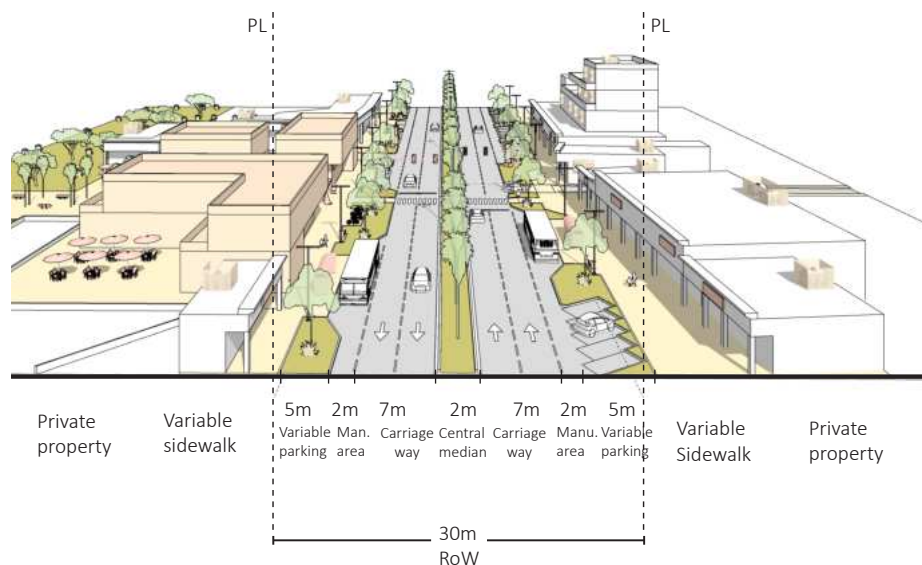
Main Access Corridor



Example of commercial access road in Al Birk



Existing condition



Complete street organization

Recommended Public Open Space / RoW Intents

- Create a continuous, representative and unique landscape treatment with landscape easement along the edges.
- Define fast-moving and slow-moving zones.
- Provide an attractive and appropriate public realm at road edges.
- Provide for last-mile connectivity and comfortable, safe and at grade pedestrian crossings.
- Define adequate signage size and location for fast-moving and slow-moving zones.
- Provide furniture zones with human-scale street lighting.

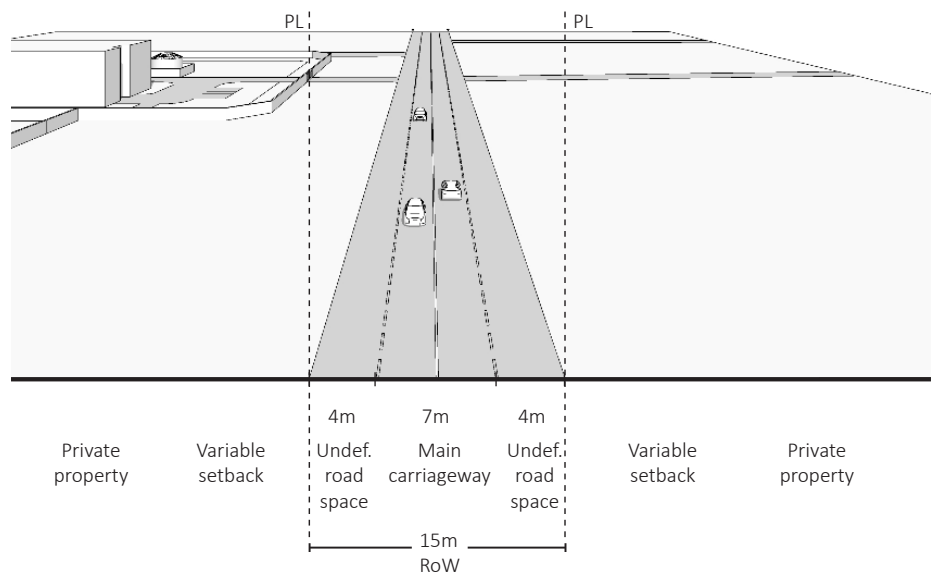
Recommended Private Plot / Setback Intents

- At grade private parking preferably located at the back of the lot or underground.
- Landscape easement should be provided along the road edges.
- Exposed water tanks, satellite dishes and other equipments should be screened from public view.
- Appropriate design of street walls and roof lines (First row buildings).
- Define adequate signage size and location.

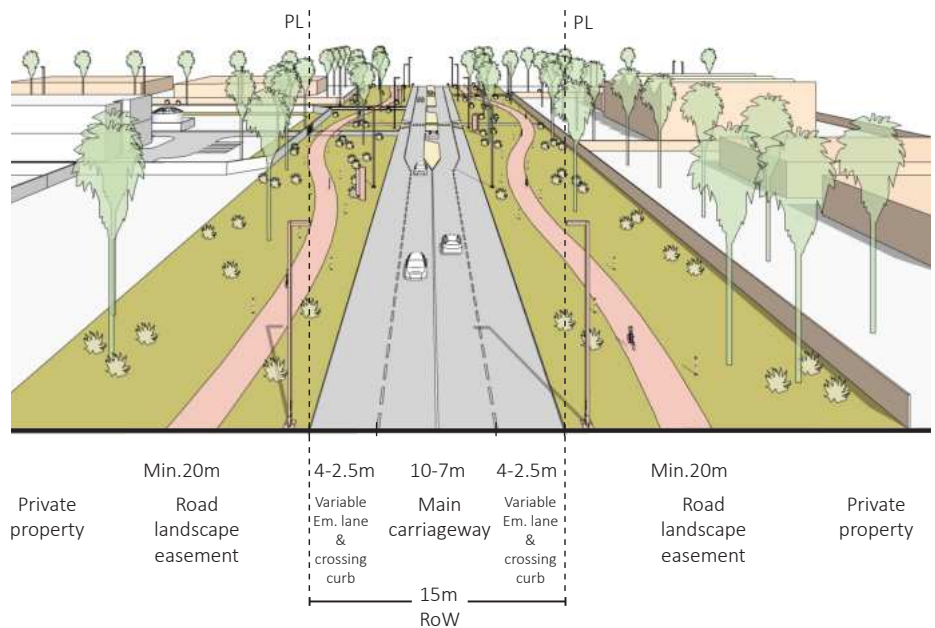
Suburban Collector Road



Example of suburban collector road in Al Birk



Existing condition



Complete street organization

Recommended Public Open Space / RoW Intents

- Create a scenic easement with local landscape character on both sides of the road.
- Define fast-moving and slow-moving zones.
- Provide an attractive and appropriate public realm at road edges.
- Provide for last-mile connectivity and comfortable, safe and visually pleasing pedestrian bridges.
- Define adequate signage size and location for fast-moving and slow-moving zones.
- Provide furniture zones with human-scale street lighting.
- Protect shoreline by limiting development and providing 80-100m shoreline buffer.
- Protect view corridors towards shoreline.

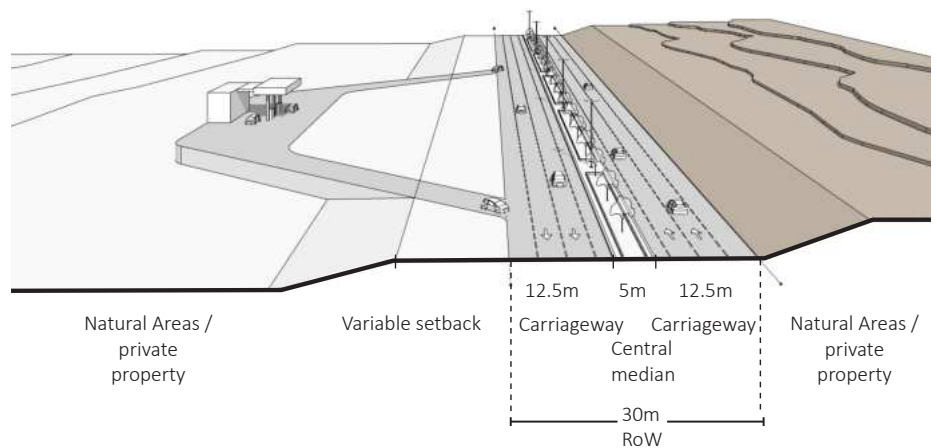
Recommended Private Plot / Setback Intents

- Limit development to allow for the preservation of a continuous natural corridor with views towards the coastline.
- Setback developments to allow for a scenic easement.
- At grade private parking preferably located at the back of the lot or underground.
- Exposed water tanks, satellite dishes and other equipments should be screened from public view.
- Appropriate design of street walls and roof lines (First row buildings).
- Define adequate signage size and location.

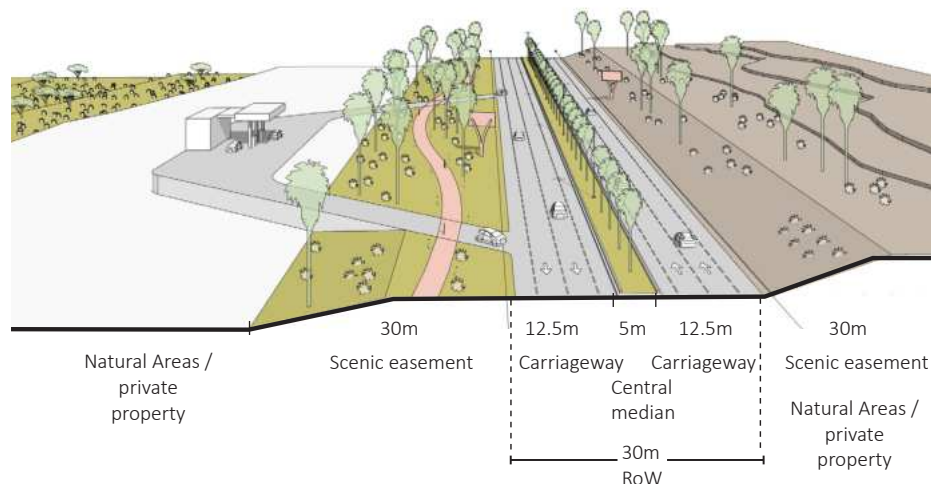
Scenic Main Access Road



Example of scenic main access road in Al Birk



Existing condition



Complete street organization

3.5.9 Complete Street Design Templates: Mahayel - Tuhama Plains

Recommended Public Open Space / RoW Intents

- Create a continuous, representative and unique landscape treatment in central medians, side medians and edges.
- Define fast-moving and slow-moving zones.
- Provide an attractive and appropriate public realm at road edges.
- Provide for last-mile connectivity and comfortable, safe and visually pleasing pedestrian bridges / at grade crossings.
- Define adequate signage size and location for fast-moving and slow-moving zones.
- Provide furniture zones with human-scale street lighting.
- Provide for parallel parking and bus bulbs when needed.

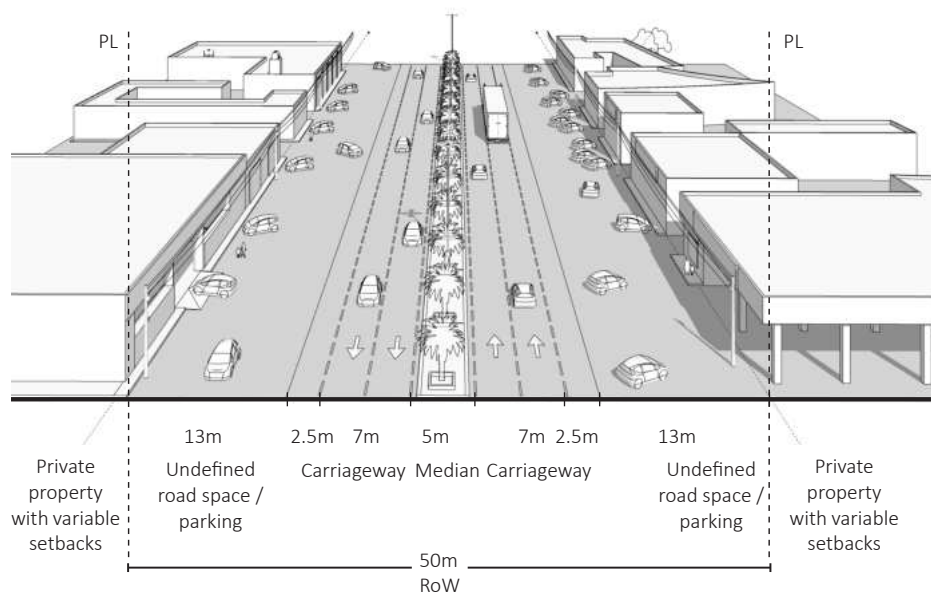
Recommended Private Plot / Setback Intents

- Promote active edges and public/ semi-public pedestrian uses.
- Limited parking / drop off provided along the service road.
- At grade private parking preferably located at the back of the lot or underground.
- Exposed water tanks, satellite dishes and other equipments should be screened from public view.
- Appropriate design of street walls and roof lines (First row buildings).
- Define adequate signage size and location.

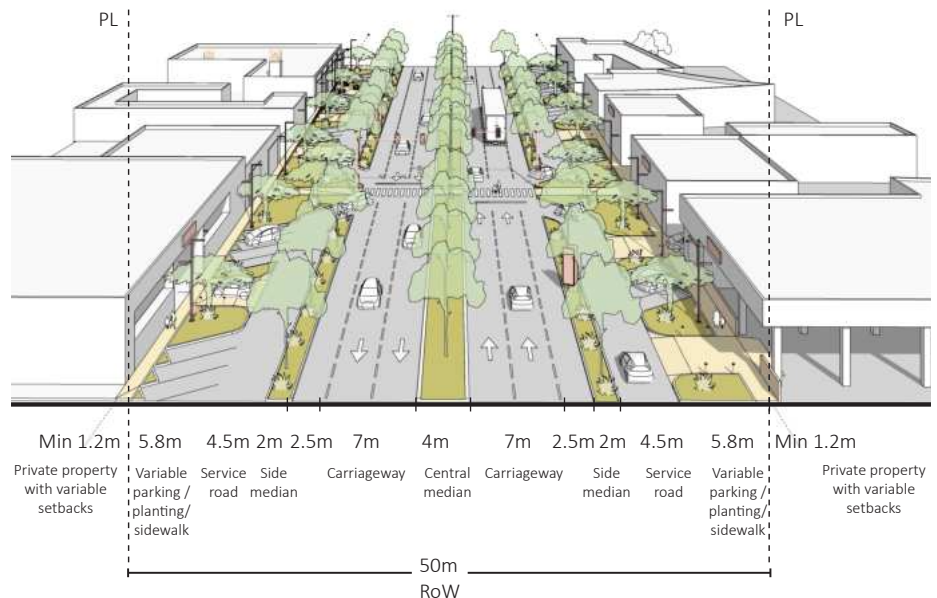
Main Access Corridor



Example of main access road in Mahayel



Existing condition



Complete street organization

3.5.10 Complete Street Design Templates: Rijal Alma - Escarpments

Public Open Space / RoW Intent

- Create a continuous, representative and unique landscape treatment.
- Define fast-moving and slow-moving zones.
- Provide an attractive and appropriate public realm at road edges.
- Provide for last-mile connectivity and comfortable, safe and visually pleasing pedestrian bridges.
- Define adequate signage size and location for fast-moving and slow-moving zones.
- Provide furniture zones with human-scale street lighting.
- Provide for parallel parking and bus bulbs when needed.
- Protect views of the escarpments.

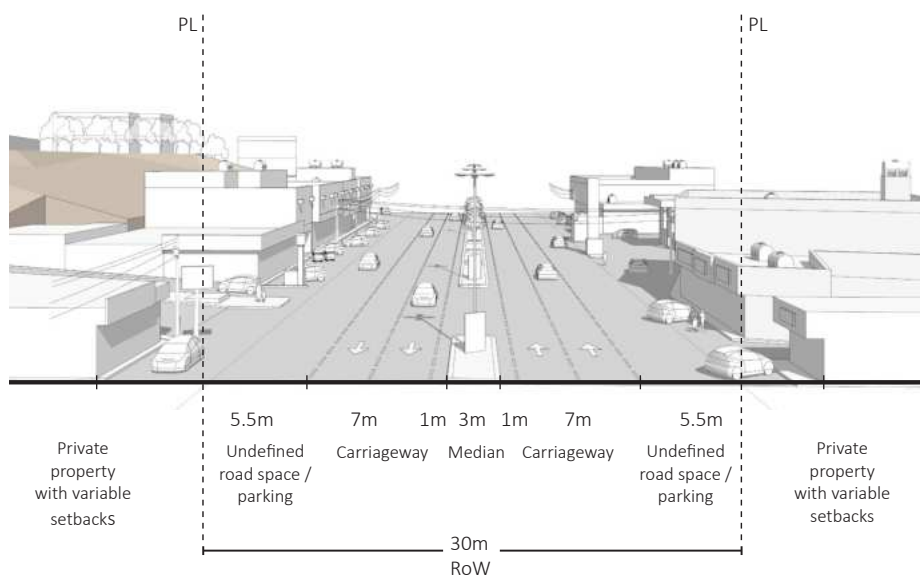
Private Plot / Setback Intent

- Promote active edges and public/ semi-public pedestrian uses.
- At grade private parking preferably located at the back of the lot or underground.
- Exposed water tanks, satellite dishes and other to be screened from public view.
- Appropriate design of street walls and roof lines (first row buildings).
- Define adequate signage size and location.

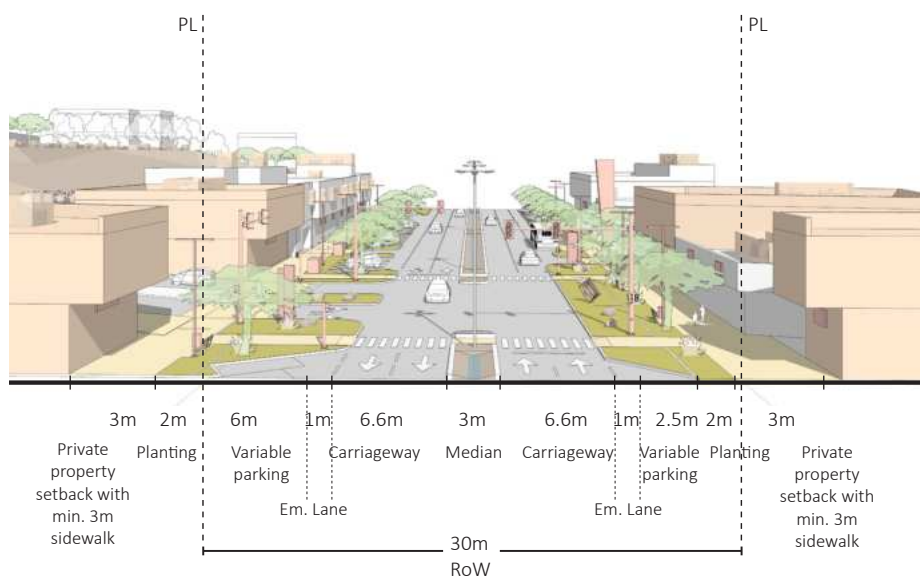
Main Commercial Arterial Road



Example of main access / main commercial arterial road in Rijal Alma



Existing condition



Complete street organization

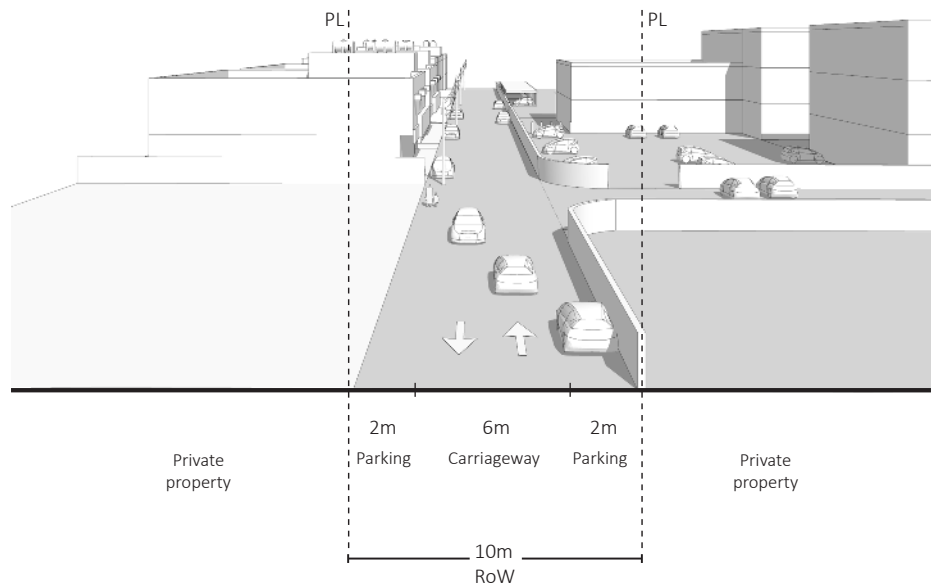
Public Open Space / RoW Intent

- Create a continuous landscape treatment.
- Provide an appropriate public realm at street edges.
- Provide for comfortable at grade pedestrian crossings.
- Provide for planting on one side of the road edge and street lighting on the other.
- Provide for parallel parking when needed on one side of the roads.

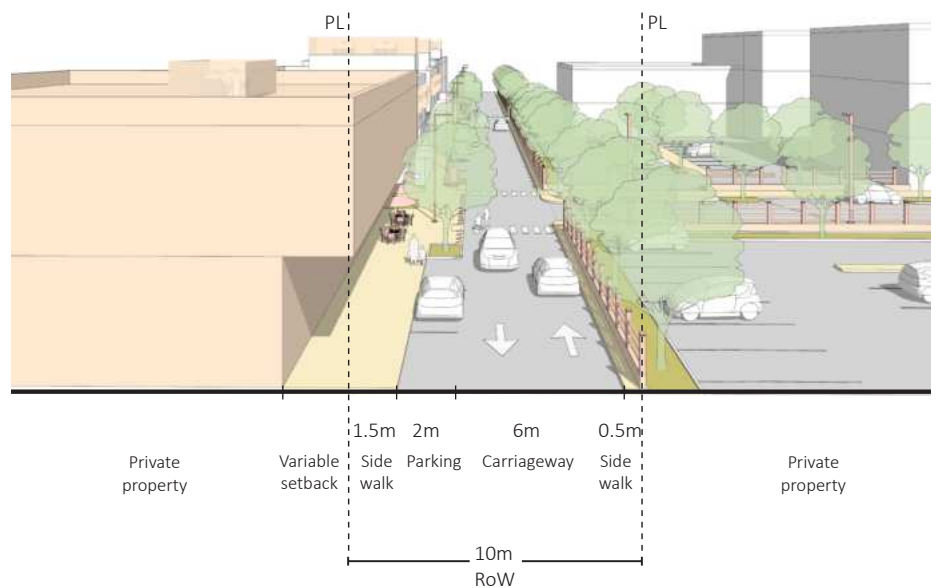
Private Plot / Setback Intent

- Exposed water tanks, satellite dishes and other equipments to be screened.
- Appropriate design of street walls and roof lines (first row buildings).

Local Road



Existing condition



Complete street organization

Public Open Space / RoW Intent

- Create a continuous and representative landscape treatment.
- Provide an attractive and appropriate public realm at road edges.
- Define adequate signage size and location.
- Provide furniture zones with human-scale street lighting.
- Provide for parallel parking when needed.

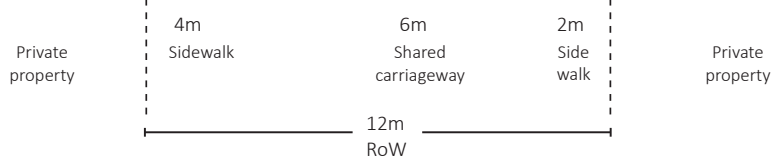
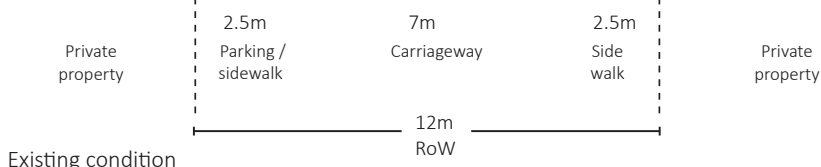
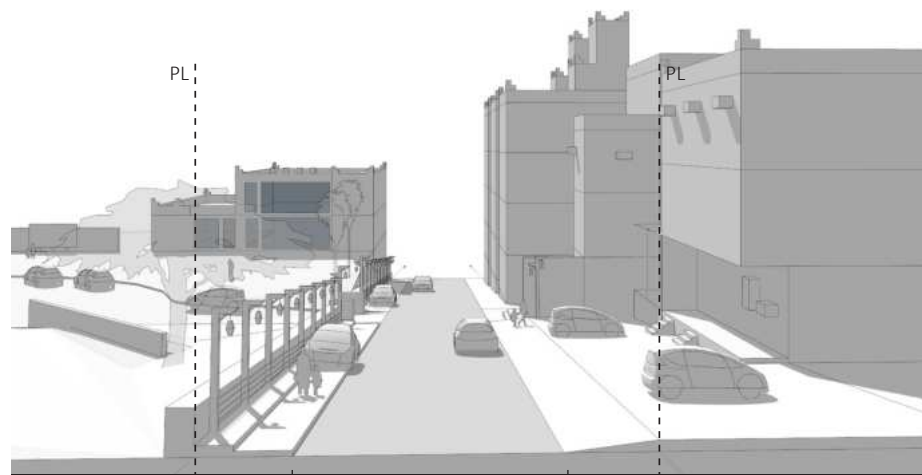
Private Plot / Setback Intent

- Built form, compound walls, hardscape material to complement the heritage character.
- At grade private parking preferably located at the back of the lot or underground.
- Exposed water tanks, satellite dishes and other to be screened.
- Appropriate design of street walls and roof lines (First row buildings).
- Define adequate signage size and location.

Heritage Shared Street



Example of Heritage street in Rijal Alma



3.5.11 Complete Street Design Templates: Khamis Mushait - High Mountains

Public Open Space / RoW Intent

- Create a continuous and representative landscape treatment.
- Provide an attractive and appropriate public realm at road edges.
- Provide for last-mile connectivity and comfortable and signaled at grade pedestrians crossings.
- Define adequate signage size and location.
- Provide furniture zones and locate street lighting and planting so not to disturb pedestrian movement.
- Provide for parallel / angular parking with landscape and bus bulbs when needed.
- Possibility of having either one exclusive bus lane or a flexible central lane.

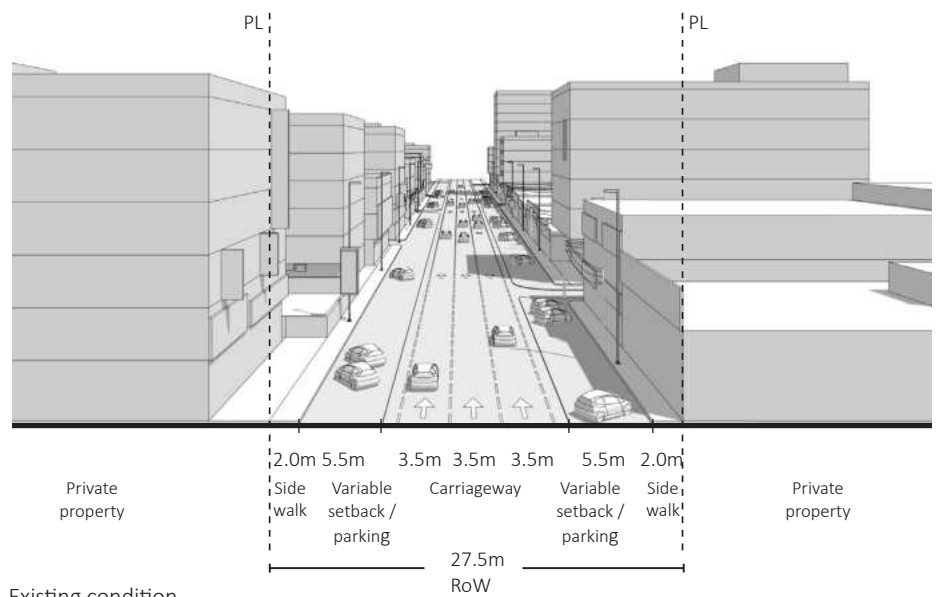
Private Plot / Setback Intent

- Promote active edges and public / semi-public pedestrian uses.
- At grade private parking preferably located at the back of the lot or underground.
- Exposed water tanks, satellite dishes and other to be screened.
- Appropriate design of street walls and roof lines (first row buildings).
- Define adequate signage size and location.

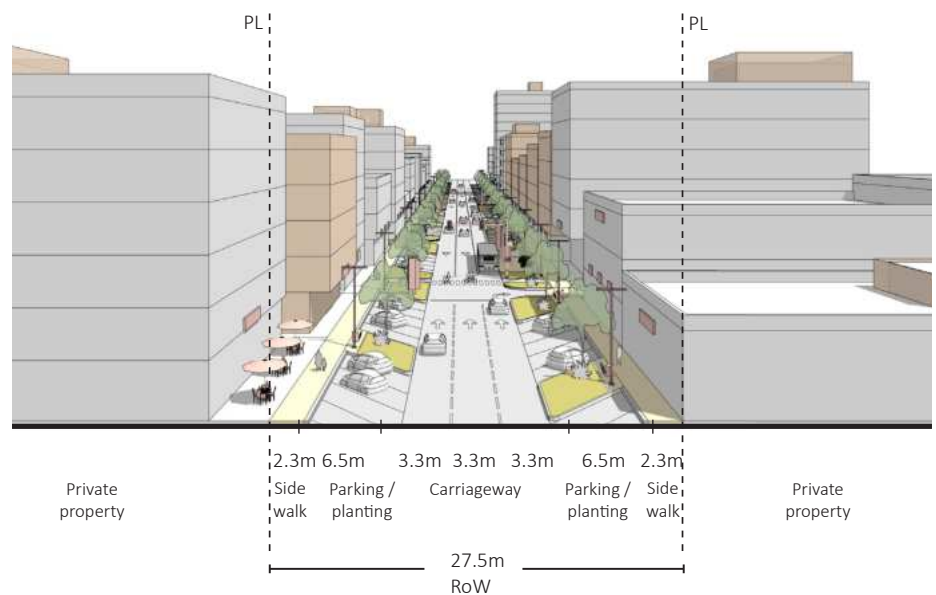
Main Commercial Arterial Road



Example of main commercial arterial road in Khamis Mushait



Existing condition



Complete street organization

Public Open Space / RoW Intent

- Create a continuous landscape treatment.
- Provide an attractive and appropriate public realm at road edges.
- Provide for last-mile connectivity and comfortable at grade pedestrians crossings.
- Define adequate signage size and location.
- Provide furniture zones with human-scale street lighting.
- Provide for parallel parking with landscape when needed.

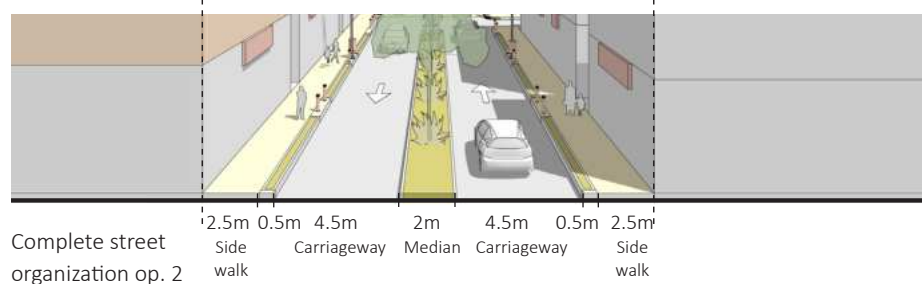
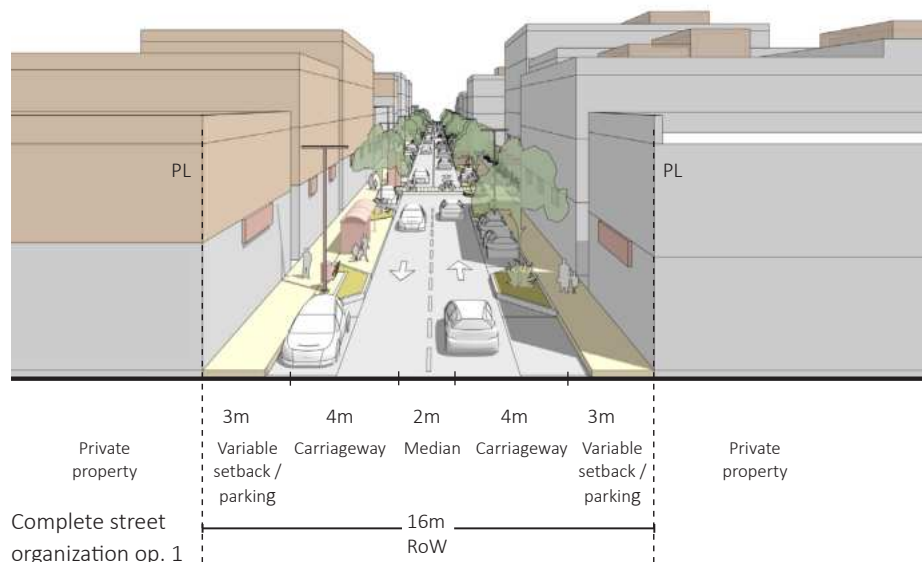
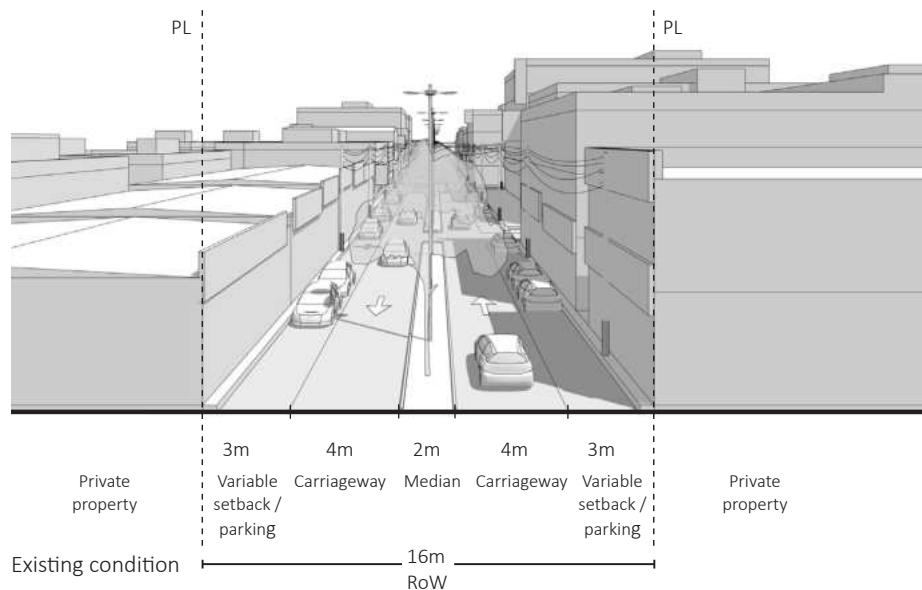
Private Plot / Setback Intent

- At grade private parking preferably located at the back of the lot or underground.
- Exposed water tanks, satellite dishes and other to be screened.
- Appropriate design of street walls and roof lines (first row buildings).
- Define adequate signage size and location.

Collector Road



Example of collector road in Khamis Mushait



3.5.12 Complete Street Design Templates: Beesha - Inland Deserts

Public Open Space / RoW Intent

- Create a continuous landscape treatment.
- Provide an attractive and appropriate public realm at road edges.
- Provide for last-mile connectivity and comfortable at grade pedestrians crossings.
- Define adequate signage size and location.
- Provide furniture zones with human-scale street lighting.
- Provide for parallel parking with landscape when needed.

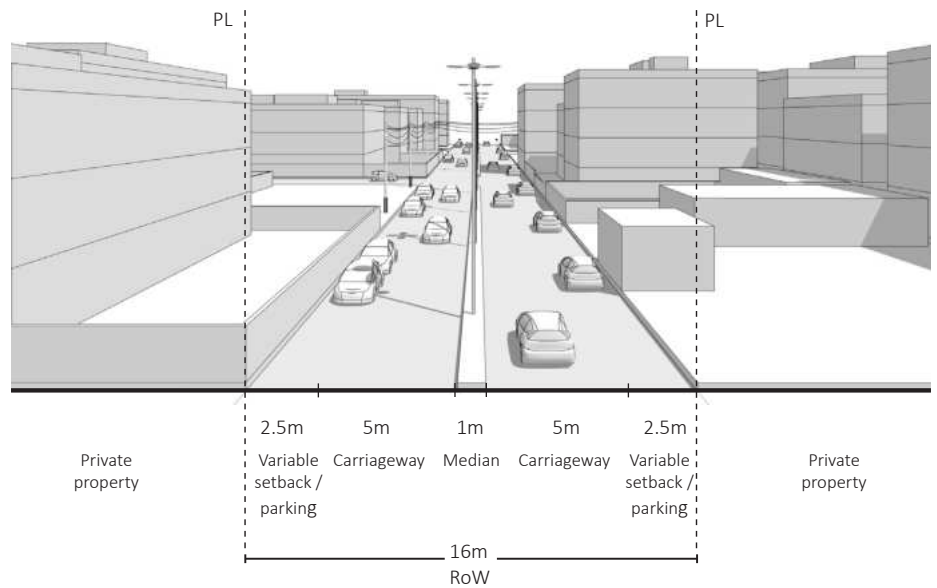
Private Plot / Setback Intent

- At grade private parking preferably located at the back of the lot or underground.
- Exposed water tanks, satellite dishes and other to be screened.
- Appropriate design of street walls and roof lines (first row buildings).
- Define adequate signage size and location.

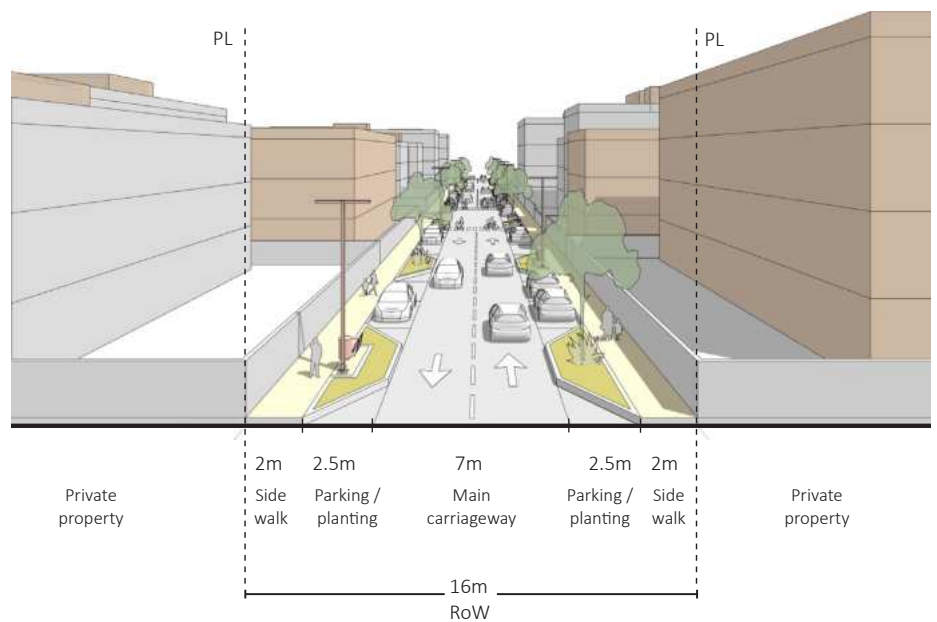
Collector Road



Example of collector road in Beesha



Existing condition



Complete street organization

3.6 Street Design Elements

3.6.1 Sidewalks

Objective

To provide sidewalks that encourage walking and accommodate pedestrians of all ages and all physical abilities. Sidewalk design impacts the ability for pedestrians to move about easily and safely. Too often within the urban areas of Aseer region, no consideration is given to sidewalk provisions, the result is sidewalks that are often too narrow, obstructed by poles and other elements, or simply non-existent.



Figure 134 Example of correct organization of pedestrian environment for a main access corridor

Guidance

- When thinking about the functionality of a sidewalk, considerations must be given to location and use. This includes the volume of people and the activities they undertake on the sidewalk (e.g. walking, jogging, waiting for transit or sitting outside a café).
- Sidewalks shall be considered in terms of different zones, which are described below:

Frontage Zone

- The frontage zone is the section of the sidewalk located immediately adjacent to the building frontage or property boundary. This zone effectively functions as an extension of the building and may spread into the public right-of-way, for example with entryways and doors where people come and go. In streets where buildings are set back from the sidewalk such as single family residential neighborhoods, or business park environments, the frontage zone is more typically landscape or surfacing which extends from the building to the property boundary, immediately adjoining the public right-of-way. In all cases it is important that the elements in the frontage zone do not impinge on the pedestrian through-zone.



Figure 135 Example of correct organization of pedestrian environment for a main access corridor



Example of correct organization of pedestrian environment along a main access corridor in Abha City

Pedestrian Through-Zone

- The pedestrian through-zone is the primary, accessible walking area that runs parallel to the street and must provide continuous connections from the public right-of-way to building and property entry points, parking areas, and transit stops. It is specifically reserved for pedestrians, should be well-lit and meet universal accessibility. It should also be free of any physical obstructions and provide a continuous, consistent surface.

Street Furniture/ Buffer Zone

- The street furniture/buffer zone is defined as the section of the sidewalk between the curb and the pedestrian through-zone that provides separation and protection from moving vehicular traffic. It provides space for the placement and organization of various street elements, such as landscaping, street furniture, and utilities (both above and below ground). Where parking adjoins this zone, it also creates space to allow clearance from vehicles, doors to be opened, and drivers to access the sidewalk. Typical elements that may be included in this zone are lamp posts, signposts, benches, newspaper kiosks, utility poles, trees, planters, parking meters, and bicycle parking.
- In lower density residential streets, street furniture is likely to be more limited (e.g. lamp posts and utilities) and the street furniture/buffer zone may have grass and planting instead.
- In commercial streets and downtown streets there are likely to be more items – as well as many more pedestrians - and therefore it is important to align them in this area and avoid encroaching on the through zone.
- In any case a minimum sidewalk or footpath on at least one side of street must be provided for any road within the metropolitan area to ensure continuity of movement and access to the pedestrian network.

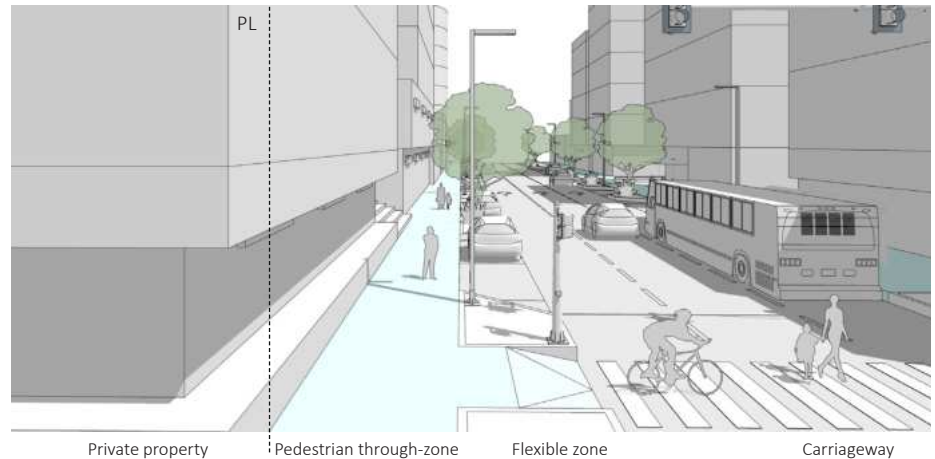


Figure 136 Example of correct organization of pedestrian environment for a collector road



Figure 137 Example of correct organization of pedestrian environment for a local street

In general, all pedestrian sidewalks shall have typical minimum dimensions of:

- **1.5m** wide in residential settings.
- **2m** wide within **500m** of school sites.
- **2.5m** wide within **500 m** of activity centers.
- **3m** wide in downtown and highly mixed-use commercial areas.

3.6.2 Pedestrian Crossing | Traffic Islands | Pedestrian Refuge Areas

Objective

To reinforce walkability and easy to cross streets. The level of protection desired by pedestrians increases as traffic speeds and volumes increases.

Guidance

- Where vehicle speeds and volumes are high, signalized crossings create a safer walking environment. Where anticipated pedestrian traffic is low or intermittent, or where vehicle volumes are lower and pedestrian crossings shorter, designers may consider the use of non-signalized crossing treatments.
- The design of crossings should respond to pedestrian behavior and demand, but can also influence it. The alignment, frequency, grade, and width of crossings all affect walkability and have the potential to increase numbers of people walking in a neighborhood.
- Marked crosswalks should be the norm at intersections.
- Pedestrian crossings should be at grade except in instances where they are crossing main access corridors. Raised crosswalks shall be provided at major intersections to ensure safety of pedestrians.
- All legs of intersections should have marked crosswalks unless pedestrians are prohibited from the roadway or section thereof.
- Signals should be phased to allow an adequate time for pedestrians to cross from one sidewalk to the other in a single cycle, making allowance for slower walking speeds of disabled users, seniors, or children.
- The alignment of the crosswalk should be as close as possible with the pedestrian through zone of the sidewalk to avoid inconvenient deviations from direction of travel. It should also correspond to the driver's field of vision so that pedestrians are clearly visible on the approach and when turning the corner.

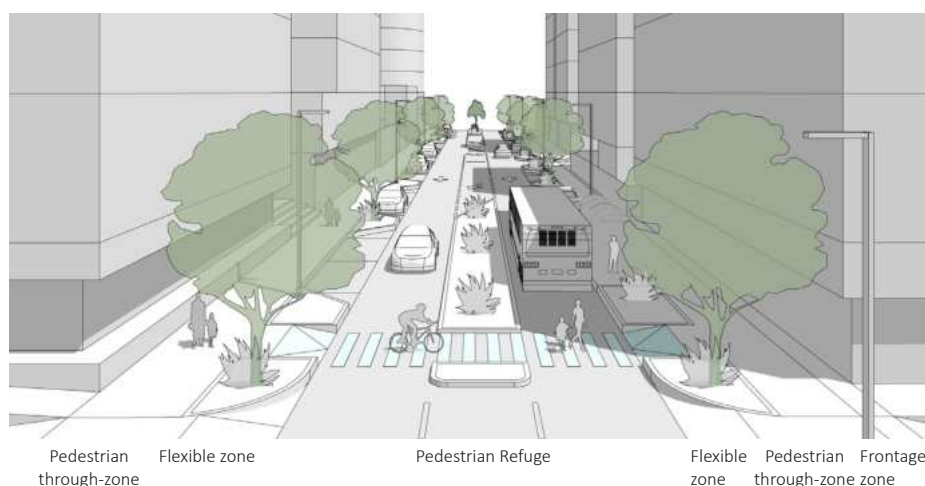


Figure 138 Example of appropriate configuration of pedestrian crossing for arterial road

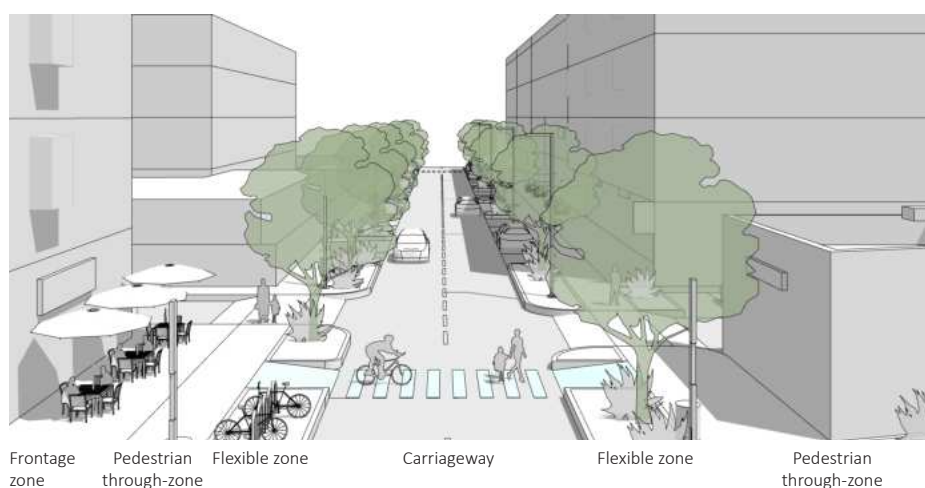


Figure 139 Example of appropriate configuration of pedestrian crossing for collector road



Example of correct pedestrian crossing and traffic islands/ pedestrian refuge areas

- Crossing distances should be kept as short as possible using a compact intersection geometry, tight corner radii, bulb-outs, and medians.
- Crossings should be at least as wide as the pedestrian through zone of the corresponding sidewalk, but no less than min **1.8m** wide. In areas of high pedestrian activity crosswalks may be wider to accommodate for the higher number of people.
- Medians should have breaks and be barrier free to allow crossing at dedicated pedestrian crossing.
- Pedestrian safety islands should be provided within medians/ traffic islands to enhance safety of pedestrians for **RoW >12m**. A pedestrian safety island reduces the exposure time experienced by a pedestrian in the intersection. They are generally applied at locations where speeds and volumes make crossings prohibitive, or where three or more lanes of traffic make pedestrians feel exposed or unsafe in the intersection. They are especially beneficial to less mobile pedestrians by providing them with a protected area to wait for the signals to change if they are unable to cross in a single cycle. Pedestrian safety islands should be at least **2m** wide.
- Crossings should be universally accessible to disabled with curb cuts, appropriately graded ramps, and detectable warning strips.
- Adjacent tree shading or specific shade structure shall be considered, especially where there are long cycle times at busy intersections.

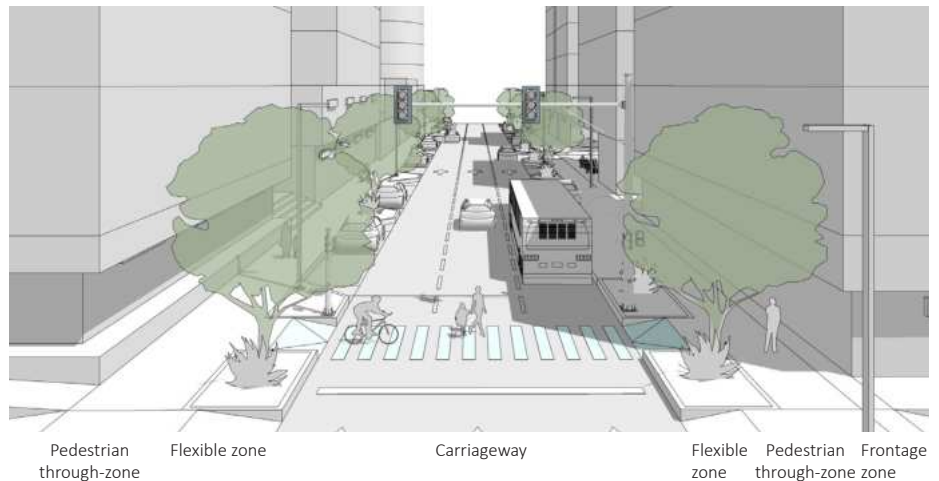


Figure 140 Example of appropriate configuration of pedestrian crossing for arterial road

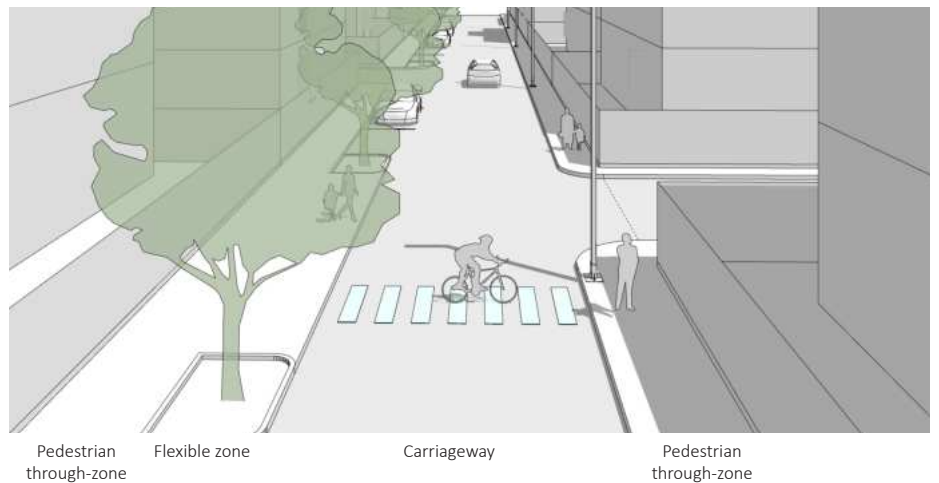


Figure 141 Example of appropriate configuration of pedestrian crossing for local road



Example of correct pedestrian crossing and traffic islands/ pedestrian refuge areas

3.6.3 Cycle Tracks

Objective

To promote cycling and the provision of supporting facilities and infrastructure in the design of complete streets. Cycle tracks must be considered not as standalone pieces of infrastructure, but as part of a complete bicycle network, including consideration of intersection facilities. This section provides an overview. For more detailed guidance refer to documents listed under additional references and best practices.

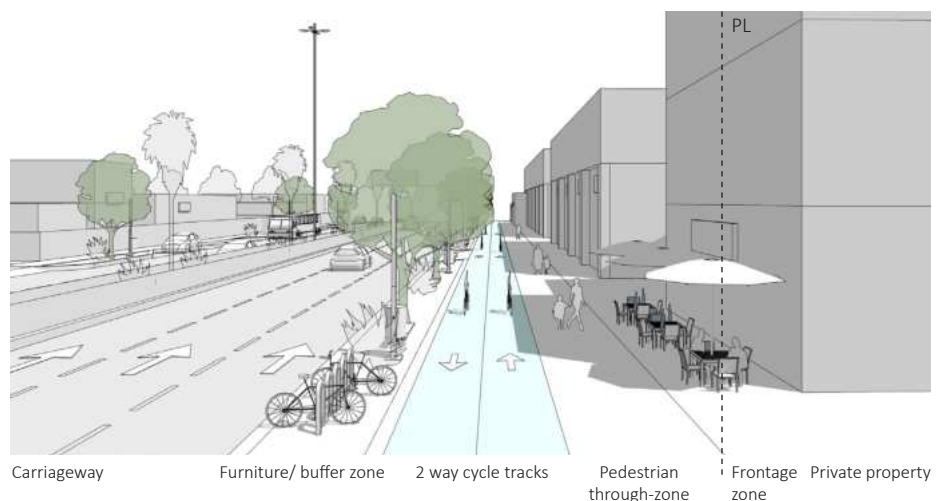


Figure 142 Example of two-way cycle track integrated in public realm treatment for arterial road at grade with pedestrian through-zone

Guidance

- In general, a bicycle system should achieve the functional recreational and commuting needs of employees, students, shoppers, and others in a safe and accommodating manner.
- Wherever possible cycle tracks should be physically separated from vehicular traffic with a buffer area for the safety of cyclists. If space allows, it should also be separated from the pedestrian through-zone.
- All cycle tracks to be a minimum of
- Recommended width of unidirectional cycle track: **1.5 - 2.0m**.
- Recommended width of shared NMT path: **4.0m**.
- Other bicycle infrastructure should be used to support a cohesive and safe network for bike users. Particular elements that should be included are:
- Intersection markings- in order to provide safer intersection crossing for bicyclists markings can be painted or installed on roadways.
- Bicycle signals - make crossing intersections safer for bicyclists by clarifying when to enter an intersection and by restricting conflicting vehicle movements.
- Bike Racks/storage- bicycles can be locked or stored in many different ways, including simple bicycle racks provided along the street, or more protective bike storage

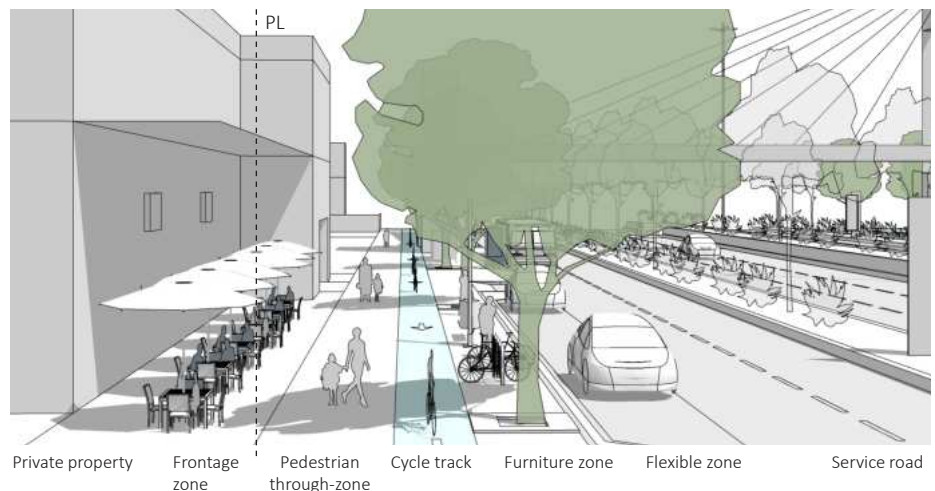


Figure 143 Example of one way cycle track integrated in public realm treatment for main access road

containers that fully enclose and lock up the bicycle while the user changes modes.

- Bicycle paths should offer opportunities not provided by the road system. They can provide recreational opportunities, or unimpeded, long distance routes if cross flow of vehicles and pedestrian conflicts are minimized.



Example of integration of cycle tracks

3.6.4 Universal Access

Objective

To set out requirements to provide convenient and universal access to disabled within the built environment throughout the urban areas of Aseer region. There are various design considerations that apply to promote an inclusive environment in addition to the sidewalk zone arrangements discussed. These factors apply not only to sidewalks, but also public spaces, intersections, and transit stops. Key elements to be considered are summarized below.

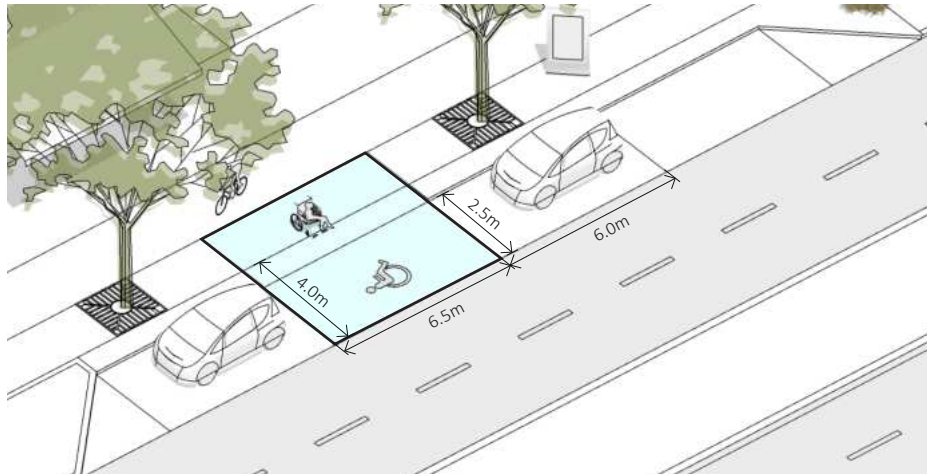


Figure 144 Example of integration on street parking for disabled in public realm treatment

Guidance

Detectable Warning Strips (Truncated Domes)

- The addition of non-slip or textured surfaces across curbs that are constructed or replaced at pedestrian crosswalks can provide warning or bring to attention a change in the pedestrian environment for the vision impaired.

Curb Ramps/Curb Cuts:

- On new construction, two curb ramps should be installed at each corner. Curb ramps should have a minimum width of **1.8m** and a maximum slope of **1:20** to make movement between streets easier for the mobility impaired. Transitions to the street that have a grade less than **5 percent** are also known as blended transitions.

Signal Activation:

- At new signalized pedestrian crossings, advanced pedestrian signals (APS) shall be provided and activated by a push button. A visual and audible signal shall clearly indicate which direction the walk interval is related to for the vision and hearing impaired. This may be achieved by an alternating audible signal, an audible signal and light from the opposite side of the crossing, or via a speech message.

Bulb-out (Curb Extension):

- This extension of the curb line in a bulb-like rounding radius is incorporated into curb ramps to shorten the crossing distance for pedestrians as they travel through an intersection.

Landing:

- A minimum sized landing, usually **1.2m** by **1.2m**, is required at the top of a ramp (with a **2 percent** maximum grade), so that wheelchair users can maintain stability while turning.



Figure 145 Example of integrated curb cuts



Example of integration curb cuts in public realm treatment

3.6.5 On-Street Parking

Objective

To achieve right balance between providing enough parking spaces for people to be able to easily access destinations and having too many parking spaces, often not utilized, that contribute to a poor quality of the environment. On-street parking design is affected by the width of the roadway and is an important component of a complete street.

Guidance

- In general, on-street parking shall be allocated only after adequate provision of space for pedestrian movement and landscape treatment is provided.
- Parallel parking shall be preferred to allow more space for sidewalks and public realm improvements.
- On street parking may be provided on service lanes for convenience.
- The standard parking bay dimensions are defined as **2.50m** wide and **5.50m** long (maximum **6.0m**).
- Curb height along **45°** parking bays will be limited to **10-12cm**. This allows almost all vehicles to park against the curb. Hence, additional wheel stoppers are not required, removing a potential tripping hazard and easing cleaning and maintenance.
- The defined curb zone of **0.50m** ensures that the curb overhang is kept free of obstructions.
- Along local streets (two-way **20m** streets) parallel parking, angled parking or perpendicular parking can be used as appropriate.
- Avoid continuous, uninterrupted strips of parking to minimize the risk of use as additional lane; introduce tree and shrub planting between parking bays every **3-6** parking bays according to typical designs of segments to provide tree-lined streets and additional shading for adjacent walkways and cycle paths.

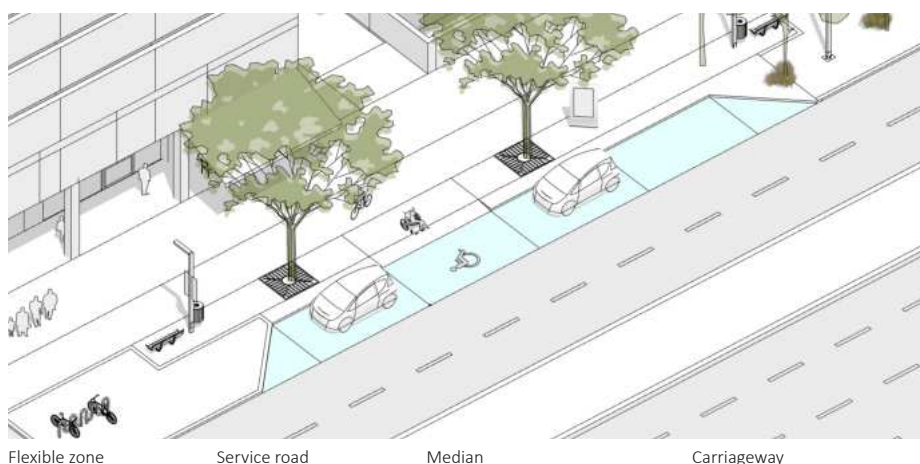


Figure 146 Example of parallel parking layout

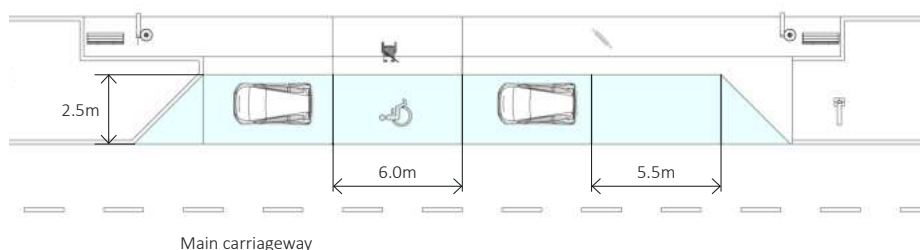


Figure 147 Standard dimensions of parallel parking

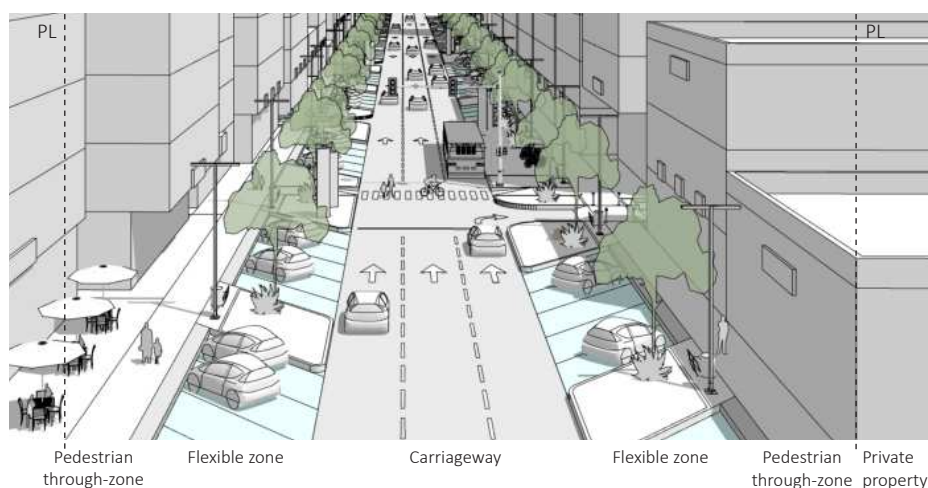


Figure 148 Example of on-street angled parking layout

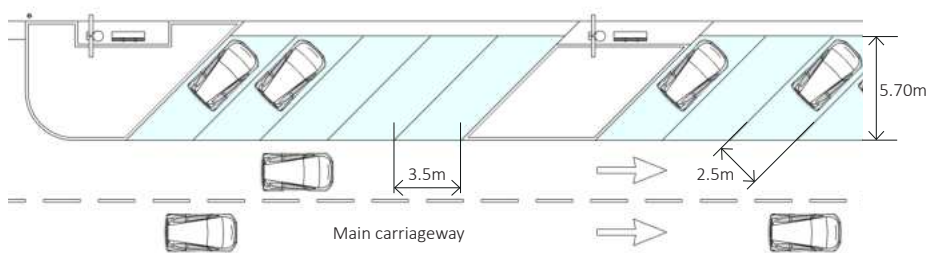


Figure 149 Standard dimensions of 45 degree parking

Parking layouts:

Recommended parking layout are:

- Parallel spaces- take less space.
- **45-degree angle parking** - angled parking increases parking supply and can help calm traffic, however creates poor visibility for drivers.
- Perpendicular parking on two-way streets with min of **20m** increases the pedestrian walkways on one side.

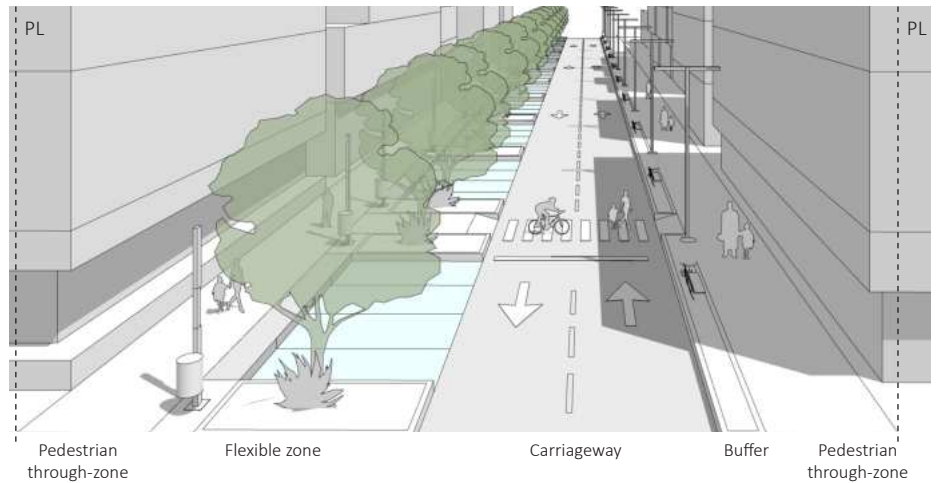


Figure 150 Example of on-street perpendicular parking layout for arterial roads

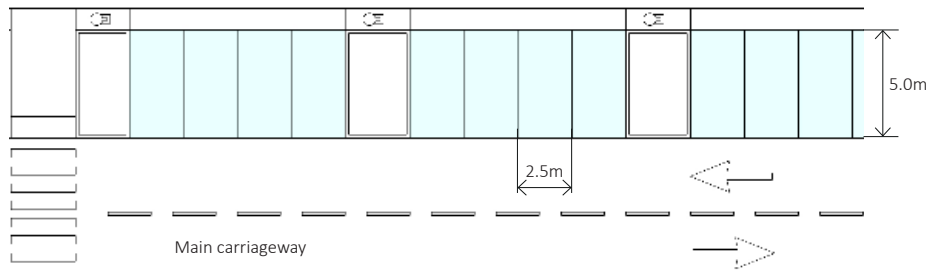


Figure 151 Standard dimension of perpendicular parking

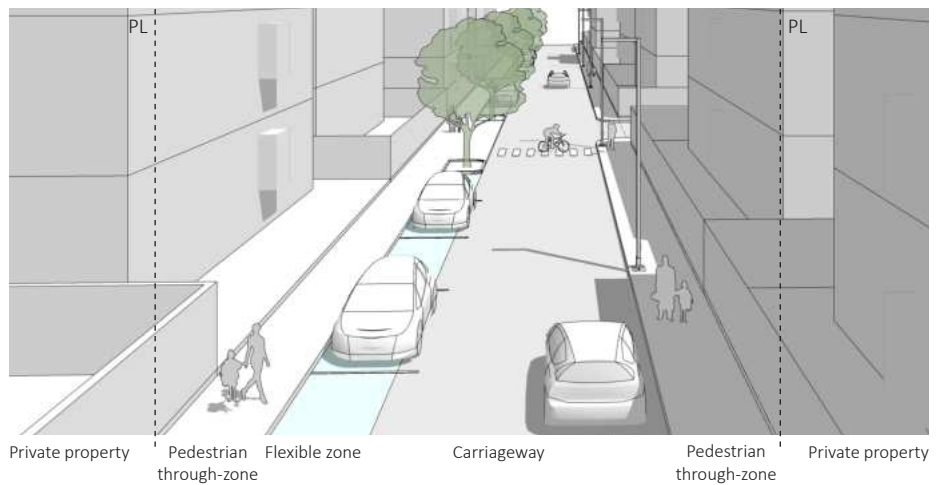


Figure 152 Example of on-street parallel parking layout for local roads



Example of integration of on-street parking

3.6.6 Service Lanes

Objective

To prevent overly designed service lanes and allow for functions of access lanes / drop off in through traffic / safety lanes only. Service lanes run parallel to the main carriageway and allow local traffic to gain access to private property. In case of major roads with commercial or residential frontage, service lanes are a safe way to allow vehicles to access these properties with little disruption to other traffic.

Guidance

- Width of the service lanes should slow down / discourage speeding traffic to ensure safety and safe access to private plots.
- Service lanes should be provided in consideration to the number and frequency of access and allowing continuous pedestrian traffic flow.
- Service lanes should allow continuous pedestrian and cycle movement by providing raised entry and exit points.
- Service roads should provide a maximum of **1** to **2** lanes, except at grade-separated junctions where service roads are combined with ramps and need to facilitate turning movements.
- The service road predominantly serves for access and service. This means that all main turning movements should be possible from the main carriageway at all at grade junctions. Turning via service roads should be limited to minor junctions.
- Service road should not be continues for longer section. Service road should be discontinuous at main junctions.

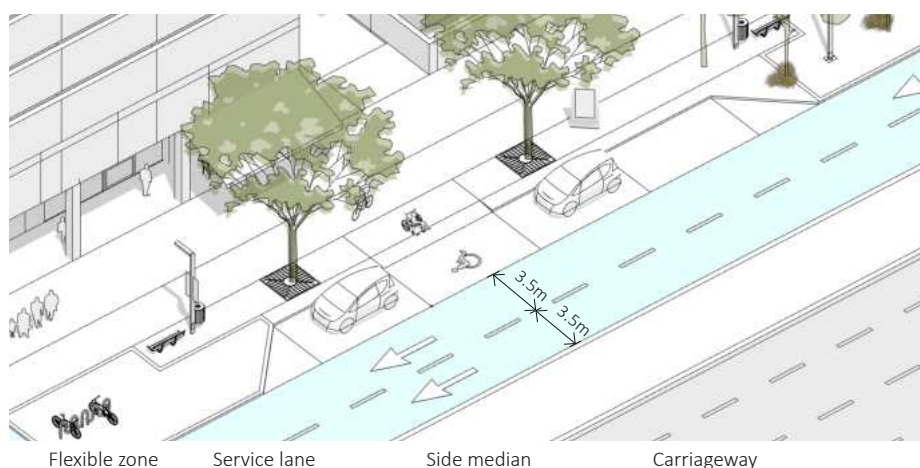


Figure 153 Example of appropriate configuration of double service lane for main access road

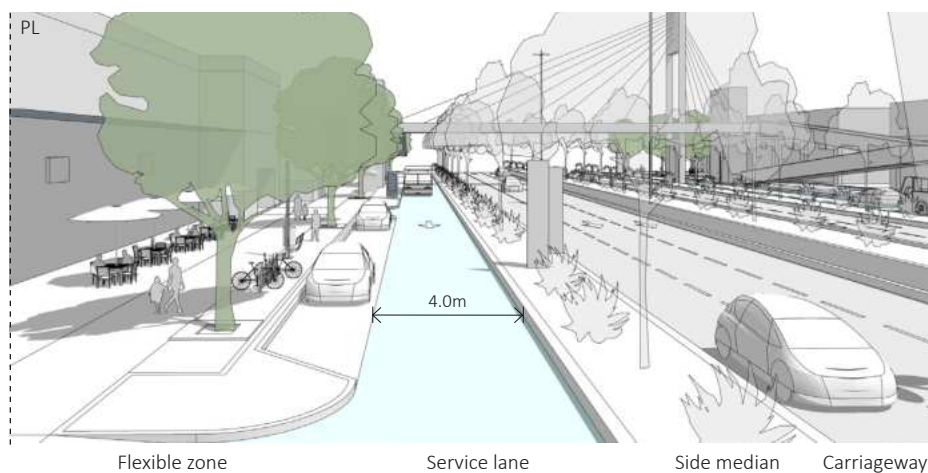


Figure 154 Example of appropriate configuration of single service lane for main access road

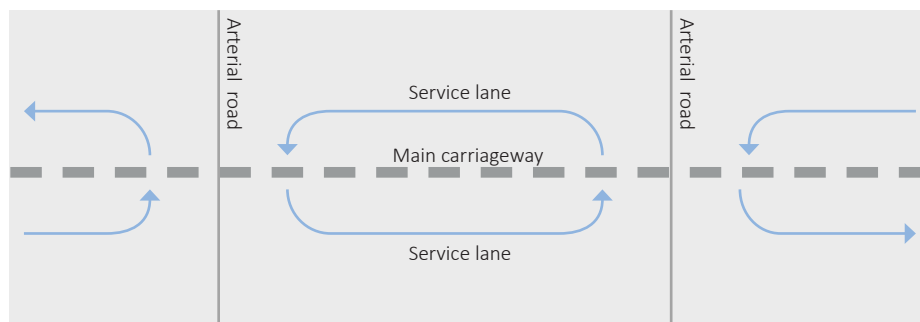


Figure 155 Example of integration of service lanes

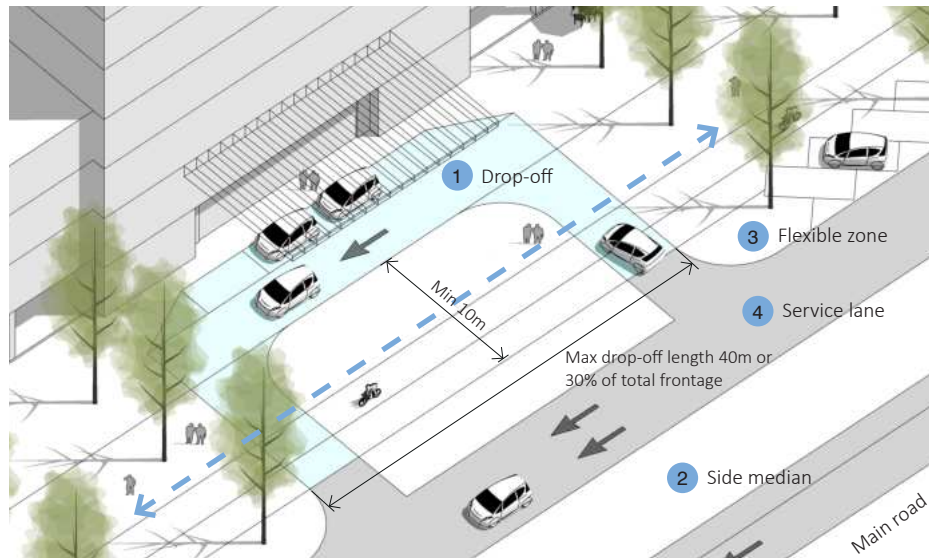
3.6.7 Drop-off

Objective

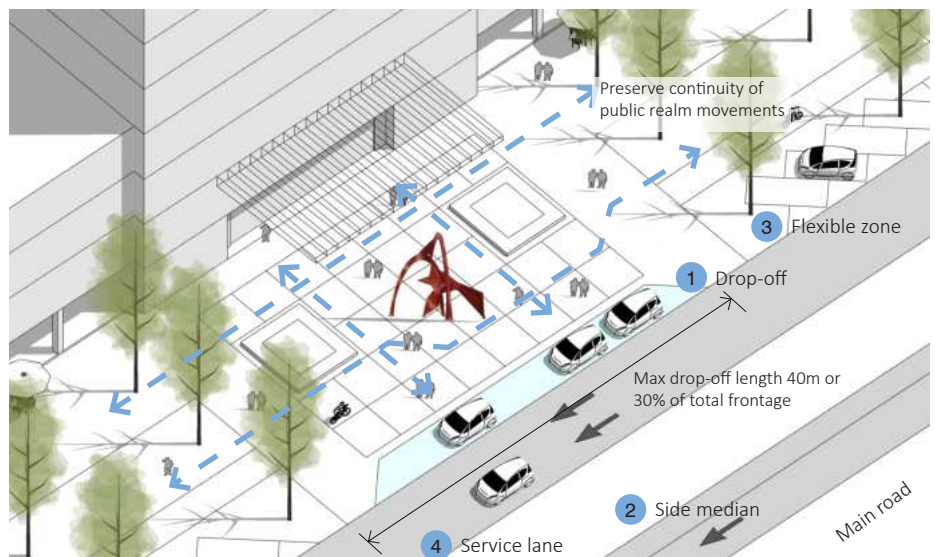
To integrate drop-offs to preserve the continuity of the public realm treatment and design intent. This is particularly important along the frontages of main access corridors.

Guidance

- Drive-ways crossing the path of pedestrians/cyclists should be aligned in a **90°** angle in order to ensure visibility of pedestrians/cyclists in both directions and reduce vehicular speed and clearly communicate pedestrian/cyclists priority.
- Vehicular drop-off length should be in any case limited to a maximum length of **40m** or **30%** maximum of the total length of the parcel frontage, whatever smaller.
- Its design must ensure the continuity of the public realm treatment and pedestrian and cycling movements along main access corridors.
- A maximum of **2** drop-off areas shall be allowed per development block along main access corridors. 1 shared drop-off area per building block shall be preferred.
- Drop-off and building access area could occasionally be redesigned to create a public plaza fronting the building with opportunities for water features and urban art, as shown in figure. This option is considered an exception to the general treatment of the public realm and should be allowed a maximum of every **800m** along the main access corridors.
- Preferably, taxi stands and drop-off areas should be located close to a station entrance.
- Basic dimensions for drop-off areas and taxi stands are as applied for parallel parking.
- Non-essential street furniture shall be avoided along edge zone to ease movement of passengers getting in and out (minimum of **1.2m** clearway).



Private property
Figure 156 Example of drop-off type 'a'



Private property
Figure 157 Example of drop-off type 'b'

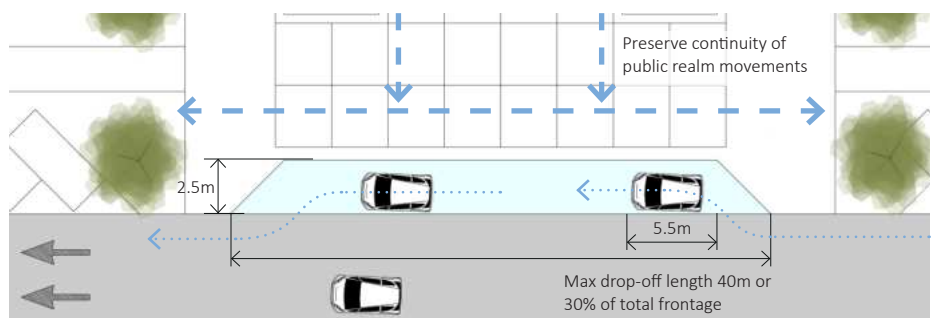


Figure 158 Example of drop-off/ taxi stand, edge zone

3.6.8 Street Furniture | Street Lighting | Public Transit

Overview

Street furniture encompasses a variety of street elements that can be used to enhance the functionality of a street, and its use as a public space.

Overview

To ensure a correct spatial organization and context-specific solutions of street furniture will improve the image and identity of the streetscapes throughout urban areas of Aseer region.

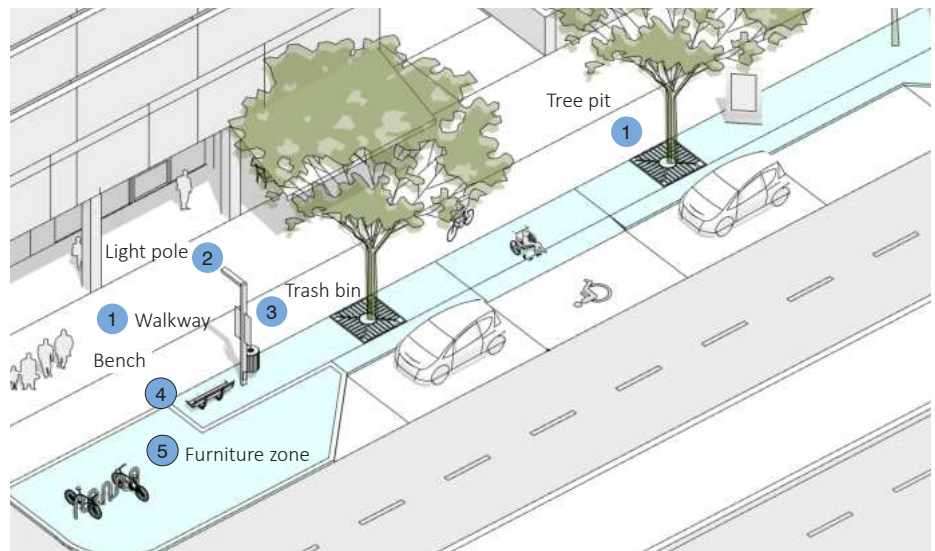


Figure 159 Example of a correct street furniture placement in furniture/buffer zones

Guidance

- Generally, street furniture shall be placed in the street furniture/buffer zone as described in the Sidewalks section.
- Street furniture design and placement should be consistent through a project and/or road corridor uniformity in the design and application of a street furniture palette can contribute to a sense of place and unique identity.
- The choice of street furniture items should relate to the uses and users of the particular street.
- Street furniture like benches, garbage bins, cycle stands shall be provided in adequate quantities as per requirement in chapter 1.
- For landscape guidance refer to chapter 1.

Seating

- Should be located where people are likely to congregate or wait, and also at regular intervals to provide rest points.
- The seat should be situated under shade, where people can comfortably rest.
- Should be oriented toward points of interest. This may be overlooking a vista or street activity.
- Should be ergonomically designed to be comfortable and accessible for all users. This includes the provision of back rests and arm rests on a percentage of benches.

Trash Cans and Recycling Bins

- Should be situated in the street furniture zone of a sidewalk in areas where there is high activity (e.g. street corners, transit stops, public/event spaces).
- They should be clearly visible and identifiable as trash cans/recycling bins.
- They should be provided at regular intervals to ensure use.
- They should be positioned such that pedestrians can easily reach them, but also be readily emptied by waste service providers.
- Capacity of the trash can/recycling bin will affect the number required along a street. There is a balance between providing enough trash cans to prevent littering and too many trash cans that create street clutter.
- Trash cans should be designed to prevent animals accessing contents.



Example of appropriate configuration of street furniture and street light

Street Lighting

- Lights should enhance the road markings (yellow strips, lane markings).
- Lighting design should ensure safety and lively activities at public plazas, crossings, intersections, transit stops, isolated areas, or high retaining walls.
- Regular maintenance shall be done for the working of streetlights.
- Refer to chapter 6 for light pollution guidance.

Public Transit

- Transit design should also be a component of roadway width design. Transit stops and right-of-way designations change how the street looks and functions.
- Future transit stops should be clearly marked with appropriate signage and furniture.
- Adequate space shall be given to pedestrians to have a continuous walkway behind the bus stop.
- Transit stops must be safe and accessible from pedestrian crossings.
- Transit bulbs should be provided when additional waiting area is required and to ease lane merging into traffic.
- In all cases they should be designed to provide adequate space for people who are waiting without crowding the pedestrian through-zone.
- Transit stops should also be welcoming, comfortable, and fully accessible.

Street type	Pole height (m)	Spacing (m)
Sidewalk or Cycle track (<5m width)	4.5- 6.0	12.0- 16.0
Local Street (<12m width)	8.0- 10.0	25.0- 27.0
Arterial or Collector Street (>12m width)	10.0- 12.0	30.0- 33.0

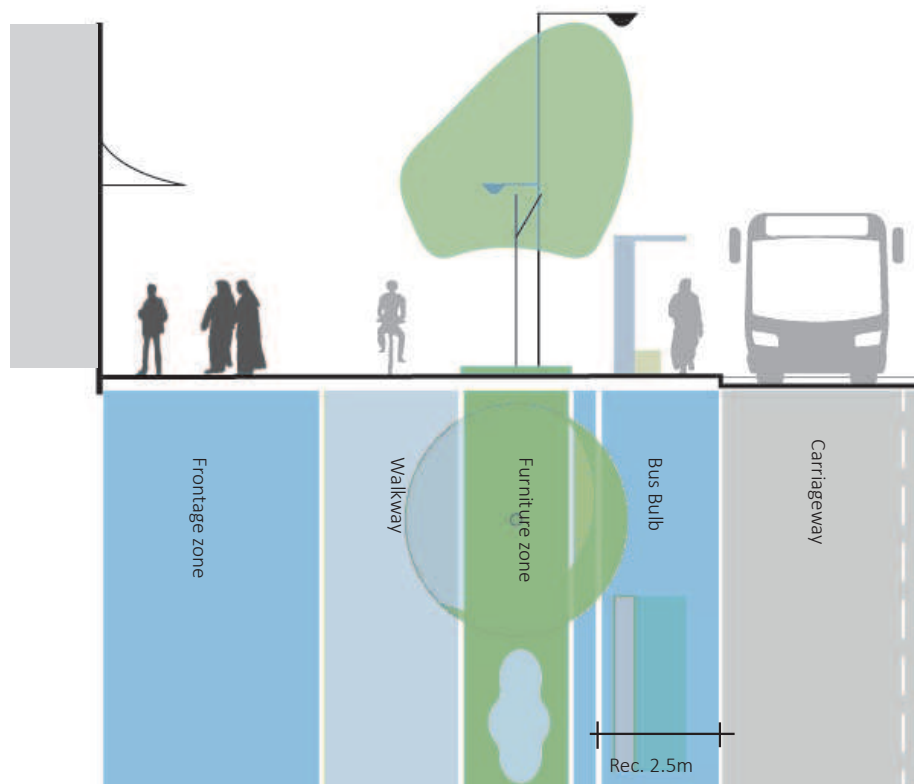


Figure 160 Plan and Section of recommended width of Bus bulb: 2.5m



Example of appropriate configuration of public transit

3.7 Public Realm Arrangement Templates

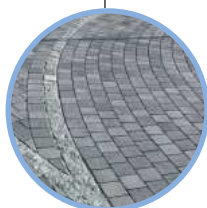
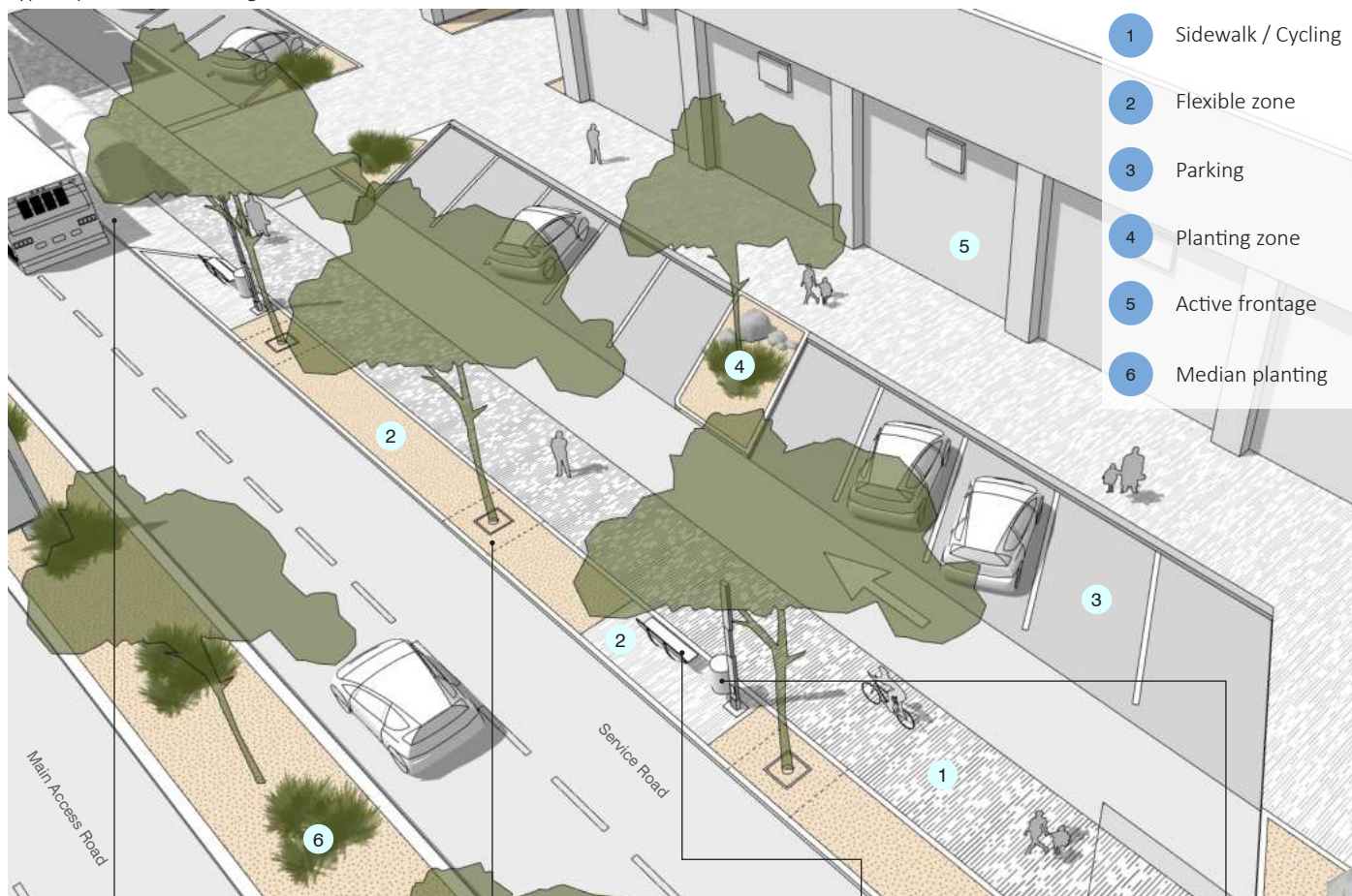
3.7.1 Main Access Corridors | Suggested Arrangement in Urban Areas

Roads in urban areas must prioritize comfort, enjoyment, and safety of pedestrians and cyclists, and contribute to an attractive urban frontage.

The service lanes enable access to the private property and are designed for slow mobility, allowing safe movement of pedestrians. Where active frontage is located, parking may be required.



Typical public realm arrangement



Example for paving formats: bond and finishes © metten stein+design, overath, germany



Typical tree planting example



Small bench without backrest design



Litter bin design © benkert

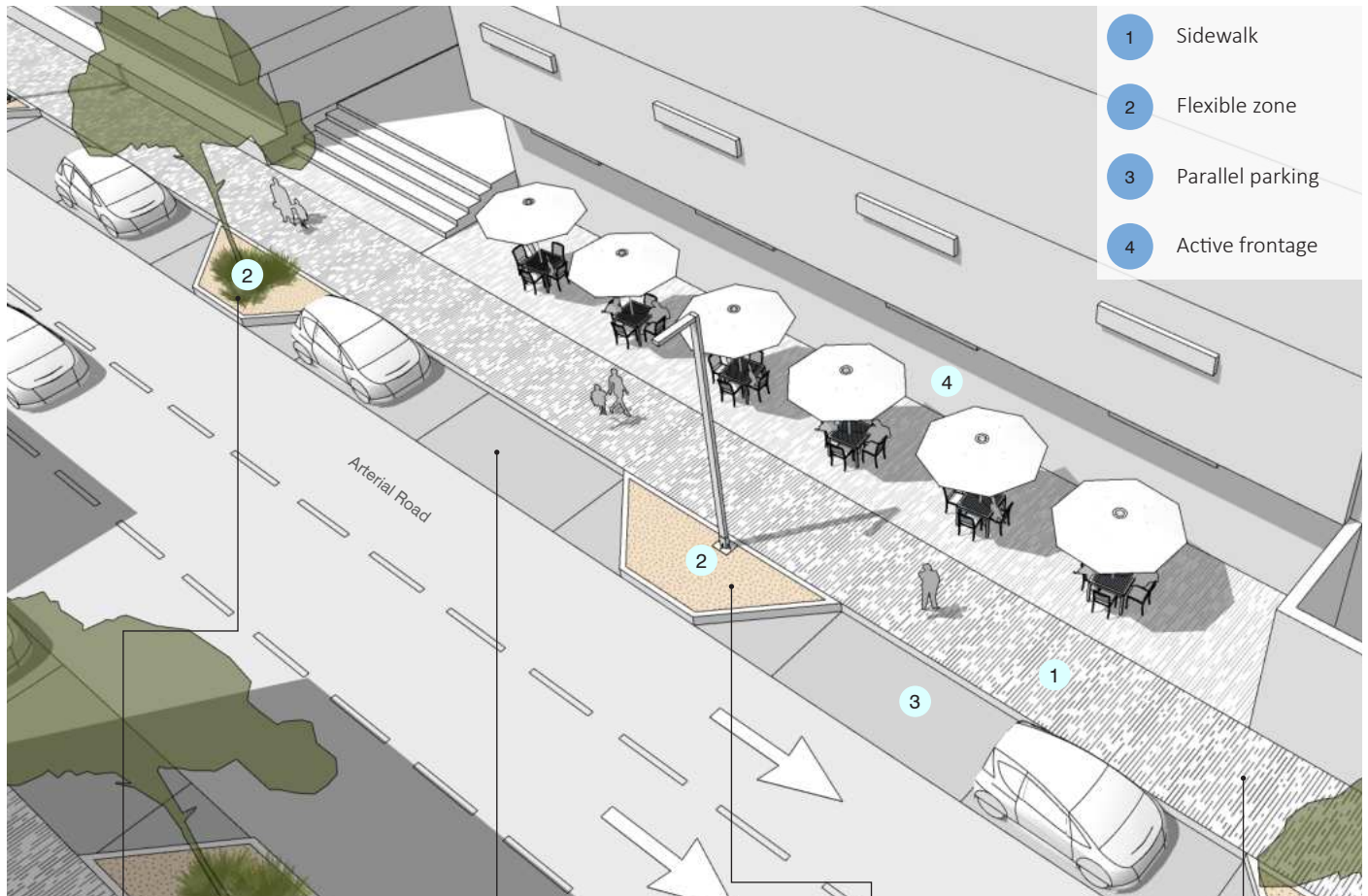
3.7.2 Arterial Road | Suggested Arrangement in Commercial Areas

The public realm along active frontage zones should be obstacle free (from fixed furniture or structures) to enable unobstructed pedestrian movement, ease of maintenance and cleaning.



Key map

Typical public realm arrangement



- 1 Sidewalk
- 2 Flexible zone
- 3 Parallel parking
- 4 Active frontage



Formal street lighting pole design



Example for integrated up-lights
© metten stein+design, overath, germany



Arid planting strip



Formal walkway lighting pole design
© hess+claudiadresysse

3.7.3 Collector Road I Suggested Arrangement in Commercial Areas

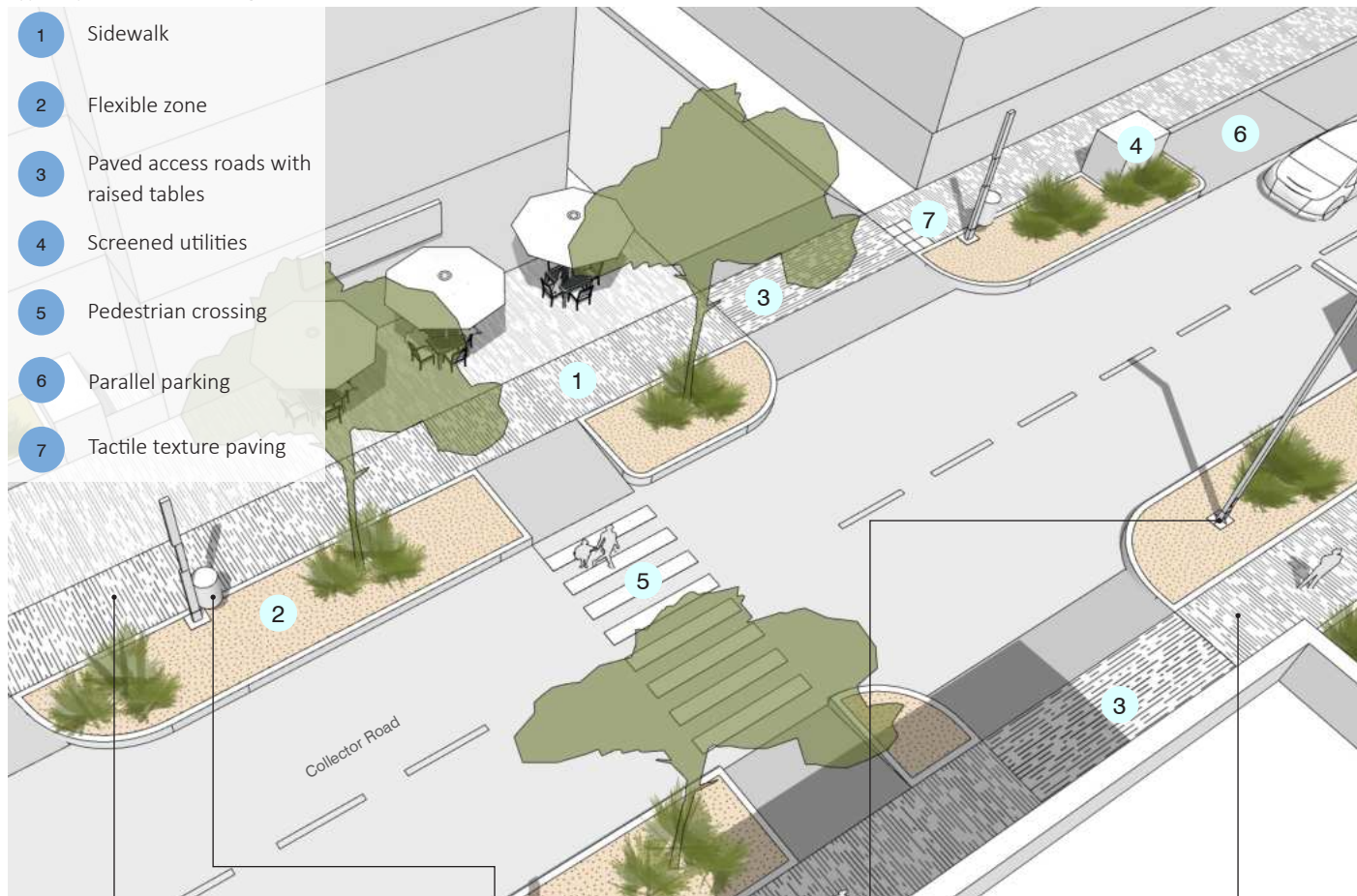
The public realm along collector roads should promote slower vehicular speed, and safe crossings for pedestrian at regular intervals. Located parking may be required.



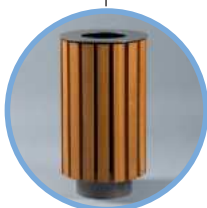
Key map

Typical public realm arrangement

- 1 Sidewalk
- 2 Flexible zone
- 3 Paved access roads with raised tables
- 4 Screened utilities
- 5 Pedestrian crossing
- 6 Parallel parking
- 7 Tactile texture paving



Paving color tones and linear alignment



Litter bin design ©Area



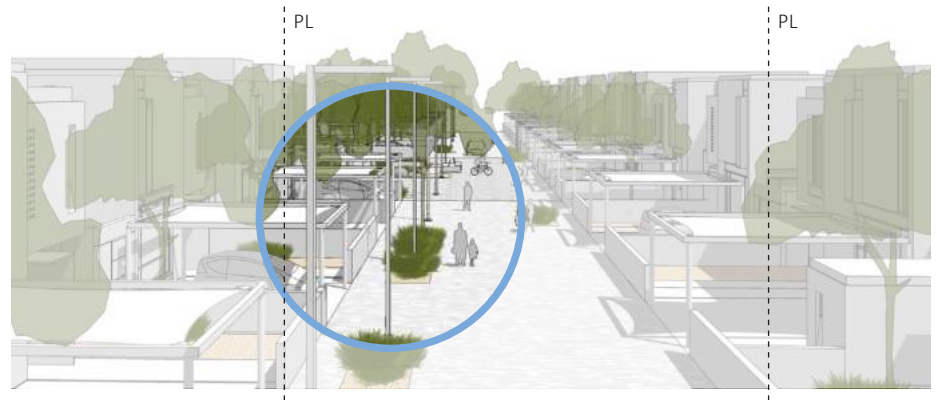
Formal driveway lighting pole design



Typical tree planting example

3.7.4 Shared Street | Suggested Arrangement in Residential Areas

The public realm along local roads should be designed to slow down vehicles and achieve a safer environment for pedestrians. The target maximum vehicular speed should be, 10 to 30km/h maximum. Reduced dimensions and shared street may also create human scale comfort, improves walkability and quality of life in urban areas.



Key map

Typical public realm arrangement



Example for paving formats: bond and finishes



Formal walkway lighting pole design



Typical tree planting example



Typical seating at the plaza



4 | PLACEMAKING & LAND SUBDIVISION

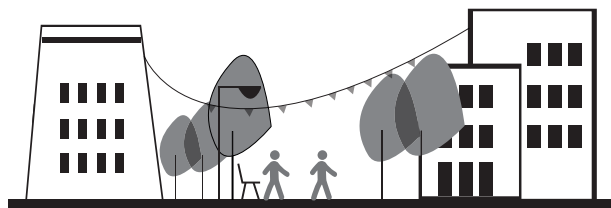


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4 Placemaking & Land Subdivision

4.1 Placemaking

4.1.1 Introduction

This chapter provides guidance for applying placemaking principles to urban areas through Aseer region as well as for the process of land subdivision. The AUDC promotes the idea of placemaking - building communities around places, to mitigate the most negative aspects of conventional zoning practices. The existing and emerging development trends within the Urban Growth Boundaries (UGBs) of Aseer region promote a low density sprawled, scattered and fragmented development. In addition, the built form and massing currently derived by general zoning laws lead to increasing automobile dependency and lack of visually attractive quality. Placemaking will reinforce the positive aspects of the Aseer region and its different environments that make it distinctive, attractive and functionally unique. New and upgraded land subdivisions with careful consideration of landform, ecology, movement, uses, scale and providing attractive and abundant public realm, will facilitate placemaking by creating destinations, generating a sense of place, identity and a higher quality of life.

4.1.2 General Guidance

- Create visually attractive and pleasing built form and public realm.
- Promote walkable neighborhoods reducing automobile dependency.
- Improve accessibility and promote multi-modal streets.
- Create sense of belonging through mix of land uses centered around activity center and social hubs.
- Promote transit-oriented development (TOD) in urban centers.
- Create holistic framework for neighborhoods promoting health and safety.



Figure 161 Placemaking principles for Aseer Region

4.1.3 Requirements Checklist

The following checklist of requirements is intended as an agile tool to be used by the evaluating Authority or by the Applicant. It should be used to ensure all important topics related to a new development have been addressed and highlight where there may be a need for additional studies.

Evaluating Authority - Land Subdivision Design Review Checklist		
Base Line Information	<p>Authorities should provide the following information to applicant where available:</p> <ol style="list-style-type: none"> 1. 30% protected slopes, protected natural areas, protected ridgelines 2. Wadi corridors, buffer zones, general hydrological plans 3. Flora and fauna studies 4. Protected cultural landscapes 5. Planned hierarchy of corridors and streets 6. General infrastructure plans 7. Existing land use and zoning plans showing areas of special character/uses/national parks/view corridors 8. Setbacks and public realm guidance 9. Open space guidance 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Pre-application Advice	<p>Provide an opportunity for developer/owner to receive guidance on the proposed development and on what type of information/study may be required to obtain permitting. Where base information is lacking, advice should be sought to clarify additional information and surveys that may be required as part of development application.</p>	

Applicant (Developer / Owner) - Land Subdivision Design Review Checklist

Required Information	<p>For review and approval as part of land subdivision permitting application:</p> <ol style="list-style-type: none"> 1. Location map of the subject - land subdivision area/development project/neighborhood development in relation to the urban area and contextual analysis. 2. Location of the site on the land use system of the urban area. 3. Site plan showing slope analysis, natural areas, buffers, developable zones. 4. Mobility plan showing vehicular, pedestrian, cycling and transit circulation, hierarchy and access. 5. Infrastructure and utilities plan including stormwater management plan. 6. Master plan with detail land uses/activities and its relationship with adjacent neighborhoods. 7. Open space network plan. 8. Public realm plan and proposed linkages with adjacent neighborhoods. 9. General architectural scale and massing as required to explain the urban design intent. 10. Environmental compliance and sustainability measures. 11. Details of landscape design and coordination of the general site, indicating specification of materials and treatments. 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
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Supporting Regulating Documents:

- MoMRA, (1426- 2005). A guide for planning neighborhood and centers.
- MoMRA, (1426- 2005). Guide for the preparation of cities master plan.
- MoMRA, (1426- 2005). Guide to planning standards for services.
- MoMRA, (1426- 2005). Souq planning handbook.
- MoMRA, (1426- 2005). Commercial services planning handbook.

Additional References

- Auckland Council. The Auckland Design Manual. <http://www.aucklanddesignmanual.co.nz/>
- MoMRA and UN Human Settlements Programme. (2019). Abha City Profile, Future Saudi Cities Programme City Profile Series.
- Project for Public Spaces. <https://www.pps.org/>

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4.1.4 Scale of Placemaking

Overview

The Aseer region comprises multiple urban centers with their defined Urban Grown Boundaries, and fragmented developments and villages in between these UGBs.

Objective

The primary placemaking objective for the AUDC is to promote a more attractive, compact, contextual and walkable development responding to the unique geographical and cultural features of the region.

Guidance

- Future development shall adopt strategic higher density, particularly along future transit, compact and context responsive urban form guided by placemaking principles to provide a high quality of life and create a vibrant and strong image of the city.
- The AUDC recommends a sustainable neighborhood planning for the urban areas within Aseer region with a typical **60 person/hectare** and new urban centralities along main transport corridors.
- Higher densities, existing and proposed urban centers mainly located along established mobility corridors and future transit routes.
- Clear hierarchy of movement network, places and gateways.
- Protection of natural and cultural assets
- Protection of agricultural land.

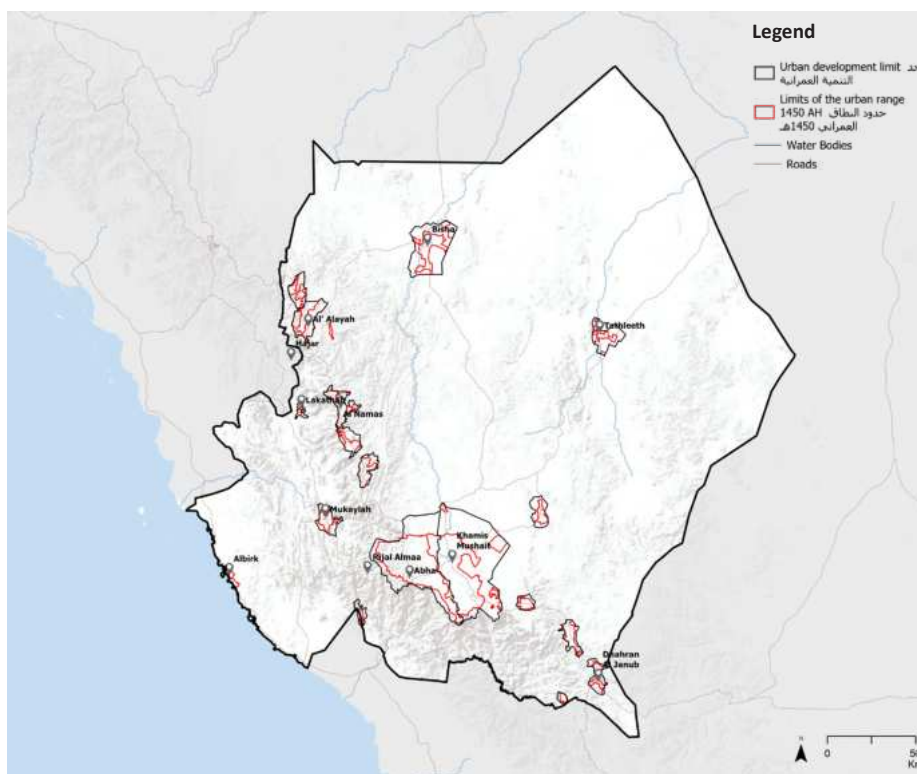


Figure 162 Urban Grown Boundaries and urban centralities within Aseer region

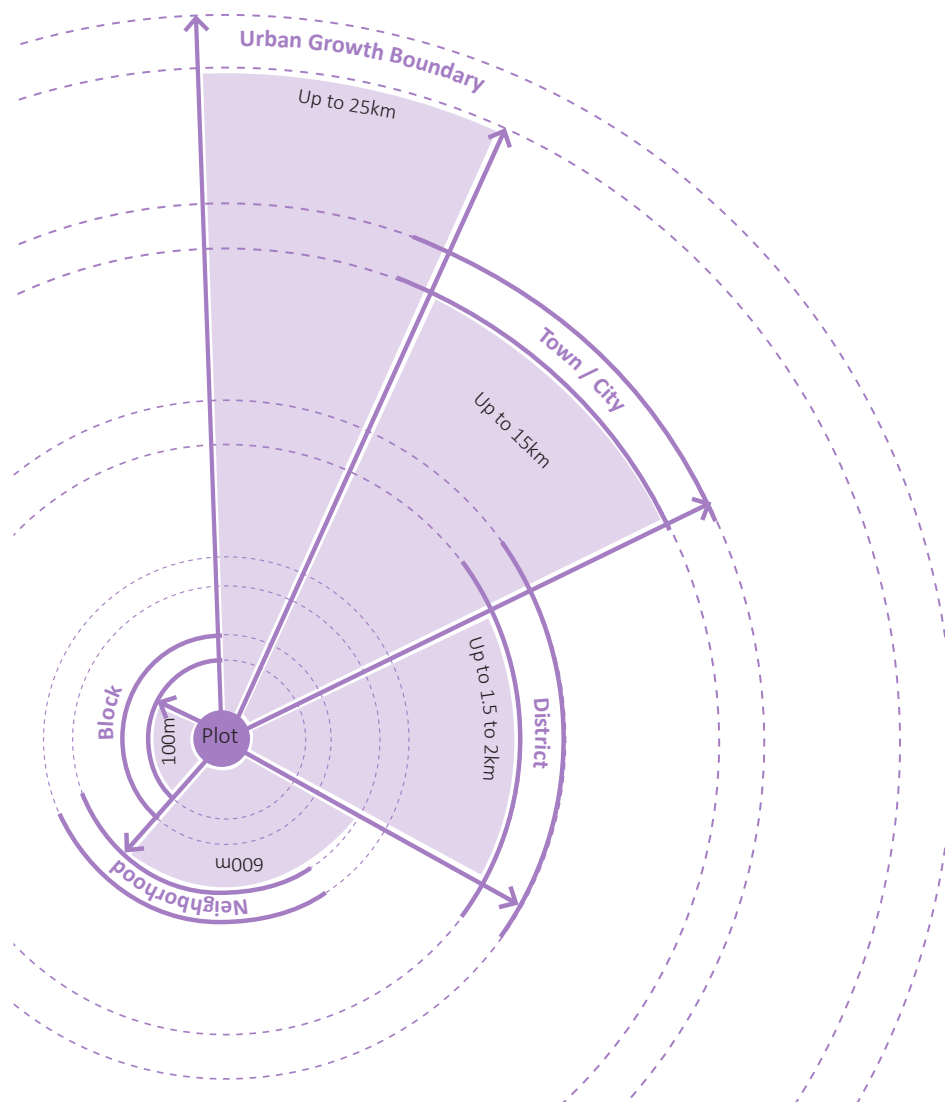


Figure 163 Placemaking at varying scales within Aseer region

Guidance

In the application of placemaking principles the AUDC identifies several scales of intervention within the Aseer region. These are:

- UGB's / Metropolitan Areas
- City/Urban Center
- District
- Neighborhood
- Urban Block

UGB's / Metropolitan Areas

Area defined in the map encompassing cities, urban centers, fragmented development and villages within the Urban Growth Boundaries within Aseer region (typical distance radius from the center up to **25km**).

City/Urban Center

The urban area defined under the UGB's for urban centers like Abha, Khamis Mushait, Ahad Rafidah, Al Birk, Bisha, Mahayel (typical distance radius from the center up to **15km**).

District

Area comprising of multiple neighborhoods clustered together, typically defined by natural physical boundaries and similar land uses (typical distance radius from the center up to **2km**).

Neighborhood

Area comprising of multiple urban blocks clustered together within a **10 minutes' walk** from the center, typically defined by natural physical boundaries and similar land uses with a prevalence of residential mixed-use (typical distance radius from the center up to **800m**).

Urban Block

Urban block is the space for buildings within the street pattern of a city and form the basic unit of a city's urban fabric. To promote walkability urban block size should have dimension not exceeding **100-120m** along any direction.

4.1.5 Mixed-Use Development

Objective

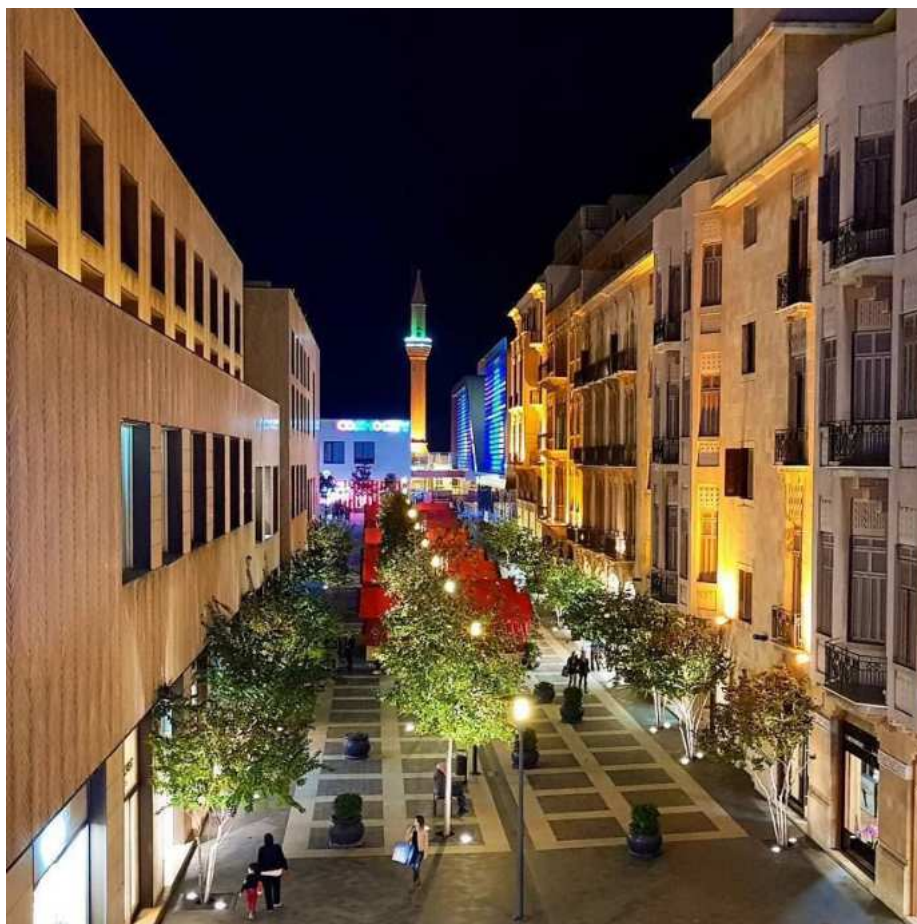
To prioritize mixed-use development clustered around social hubs / activity centers with high quality public realm and open spaces in urban centralities and along the main corridors to consolidate and uplift the urban fabric of Aseer region. Mixed-use development fosters placemaking by creating communities and development that promote and enhance health and safety, social cohesion, economy and sustainability.

Guidance

- Urban density should be maximized around mixed-use activity center and future transit stops in urban areas.
- Neighborhood design should ensure high accessibility to mixed-use activity centers / hubs and provide a vibrant environment.
- The framework and street layout should allow for a mix of uses and for different modes of transport including pedestrian and cycling to maximize access to a variety of services and facilities and minimize the need of car travel.
- Continuous active frontages should be encouraged.

Activity Centers

- Mixed-use activity centers may comprise of market activities like souq, public facilities, amenities, open space and commercial activities.
- Mixed-use activity centers should function as landmarks or destinations to provide a sense of identity and belonging to neighborhood and districts.
- The layout of mixed-use activity centers (linear, central, polycentric) within the neighborhood should be based on range and type of uses provided, location, population need and serving radius.
- A smooth transition of uses should be ensured by incorporating residential uses in developments adjacent to activity center uses.



Active ground floor use with high quality public realm and plazas



Activity center in city with high density, active ground floor usage and flexible open spaces



Activity center with shared streets and active frontage

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4.1.6 Urban Character Areas

Objective

New and existing development should be identified as urban character areas based on location, mix of uses and type of development, unique geographical features (i.e. water bodies, wadi network, cultural landscapes, surrounding hillsides and escarpments), connections, heritage and cultural features.

Guidance

The AUDC describe an urban character area as an area comprising of multiple neighborhoods clustered together, typically defined by natural physical boundaries and similar land uses. The typical distance radius from the center of a District should be up to **2km**.

5 typical district conditions may be recognized within the UGBs, namely:

- Urban Centers (downtowns).
- Old Districts (developed before the year 2000).
- New Districts (developed after the year 2000).
- New Hill Side and/or Rural Districts.
- Special Districts (e.g. Airport, Heritage, Military).

The adjoining table provides placemaking guidance for each of these district types under the following parameters:

- Building placement.
- Frontage type.
- Scale and massing.
- Public realm and landscape.

For additional guidance on Heritage Districts refer AUDC B.2.

Urban Character Types

**Urban Center
(Downtowns)**



Urban Centers are characterized by: high density; a variety of neighborhoods and uses; civic functions; mixed-use buildings accommodating residential, offices and retail; highly walkable urban grid well served by public transit; provide opportunities for infill development and re-development.

Old District



Old Districts were developed before the year 2000 and are characterized by: moderate density; primarily residential uses with some mix of uses; less dense urban grid with opportunities for infill development and re-development.

New District



New Districts were developed after the year 2000 or constitute new urban expansion within the UGB and are characterized by: medium to low densities; primarily residential uses with some clusters of commercial and mixed-uses; less dense and more-car driven urban grid with opportunities for green fill development.

**New Hill Side/
Rural District**



New Hill Side / Rural Districts were developed after the year 2000 and are characterized by: low density development in the outskirts of urban areas, typically on the hillsides; primarily residential uses with some clusters of commercial and mixed-uses; less dense and more-car driven organic grid with opportunities for green fill development.

Urban Character Type Guidelines

	Urban Center	Old District	New District	Rural District
Building Placement	<ul style="list-style-type: none"> Consistent/no setbacks with buildings oriented to street. Highly contextual and representative public realm and landscape treatment. 	<ul style="list-style-type: none"> Consistent/limited setbacks with buildings defining street wall. Attractive continuous public realm and landscape treatment along the setback. 	<ul style="list-style-type: none"> Shallow to medium consistent front and side setbacks. Landscape edge should define the street wall. 	<ul style="list-style-type: none"> Deep and variable front and side yard setbacks. Landscape edge and natural vegetation buffers should define the street wall.
Frontage type	<ul style="list-style-type: none"> Min. datum of 4 floors should be maintained. Active and attractive frontages with stores, shopfronts, galleries. Continuous public realm with highlighted entrances. Frontage break every 40m. 	<ul style="list-style-type: none"> Min. datum of 2-3 floors should be maintained. Active and attractive frontages with stores, shopfronts, galleries. Continuous public realm with highlighted entrances. Frontage break every 40m. 	<ul style="list-style-type: none"> Min. datum of 2 floors should be maintained with/without upper floors setback. Active ground floor use in mixed-use centers. Continuous public realm with porches, fences, front yards. Frontage break every 40m. 	<ul style="list-style-type: none"> Active ground floor use in mixed-use centers. Wide front yards and continuity of minimum public realm. Frontage break every 30m.
Layout and Massing	<ul style="list-style-type: none"> Massing of 2 to 5 stories should be maintained. Mid-block passage required for block longer than 60m. Tall buildings only as landmarks; not to block view corridors. Maintain and reinforce current development pattern with a mosaic of highly walkable organic grid. 	<ul style="list-style-type: none"> Massing of 2 to 5 stories should be maintained. Mid-block passage required for block longer than 60m. Tall buildings may be allowed in central activity hub as landmarks. Highly walkable neighborhoods and open space network responding to the existing development pattern. 	<ul style="list-style-type: none"> Massing of 2-3 stories should be maintained. Tall buildings may be allowed in central activity hub as landmarks. New development pattern responding to the landscape character, adjacent development and promoting walkability. 	<ul style="list-style-type: none"> Massing of 1-3 stories should be maintained. Tall structures not allowed. Proper treatment of slopes to be ensured. Organic development pattern to respond to natural features and landscape character.
Public Realm and Landscape	<ul style="list-style-type: none"> Continuous shading achieved within the district to support walkability and comfort with integration of landscape within streets and shading structures. Plazas and pocket parks provide active & passive options. Character defining elements: tree grates, hardscapes, plazas. 	<ul style="list-style-type: none"> Continuous shading achieved within the district to support walkability and comfort with integration of landscape within streets and shading structures. Plazas and pocket parks provide active & passive options. Character defining elements: tree grates, hardscapes, plazas. 	<ul style="list-style-type: none"> Sidewalks with large building setbacks and open spaces Shade trees lining street fronts. Character defining elements: large planting areas with swales, wadi landscape, riparian landscape for landscape character zone. 	<ul style="list-style-type: none"> Sidewalks with large building setbacks and open spaces. Character defining elements: Dense natural / riparian vegetation for the landscape character zone.

4.1.7 Corridors

Objective

To uplift the urban design quality of the fast-developing movement corridors of Aseer region as part of the placemaking exercise. Corridors connecting urban centers and urban areas throughout Aseer region, often lack a distinct identity and proper spatial qualities.

Guidance

Based on location, connectivity, and MoT designation, the AUDC defines the following types of movement corridors:

- Main Access Corridor
- Arterial
- Collector
- Local

Main Access Corridors may further be classified into:

1. Priority Access Corridors (High Density- future transit corridor)
2. Scenic Access Corridors

The following guidelines define the intended character and visual quality of these corridors and are over and above the guidelines and standards for complete streets prescribed in AUDC B.3.

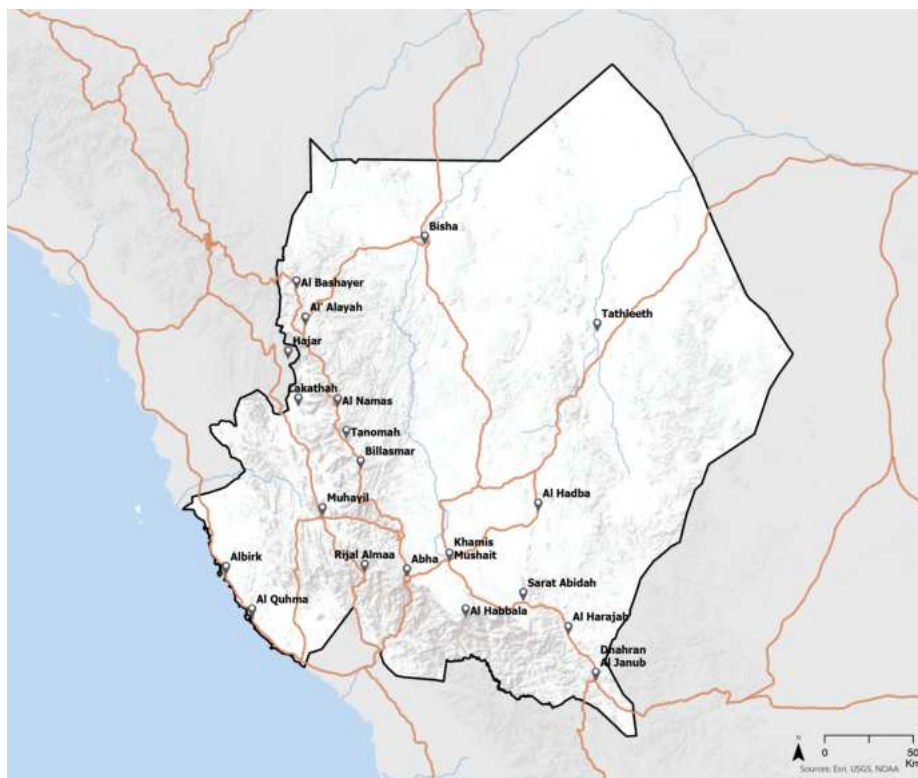


Figure 164 Existing major corridors within Aseer region

Legend

- Cities
- Roads
- Water Bodies

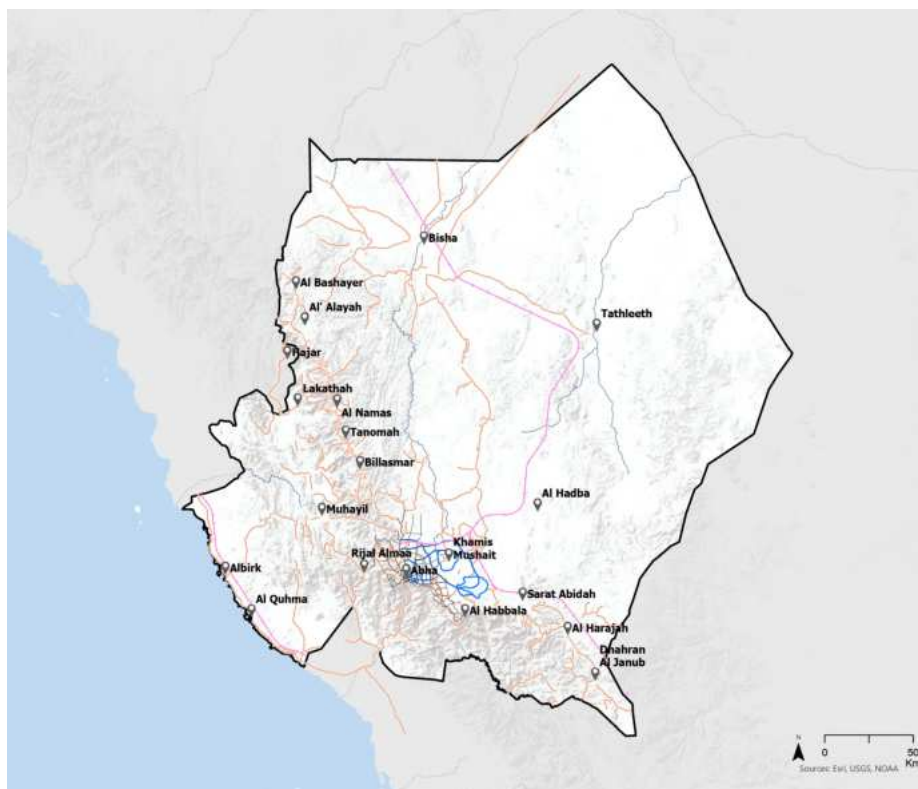


Figure 165 Planned corridors within Aseer region

Legend

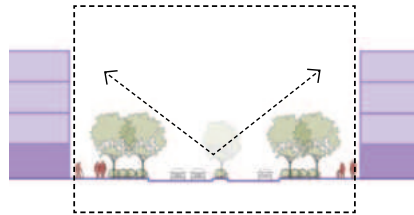
- Cities
- Roads from Structural Plan طرق المخطط الإنشائي
- Approved Roads طرق معتمدة من هيئة جيونيك
- Roads planned by the Ministry of Transport طرق وزارة النقل

Corridors are characterized based on the following parameters:

1. RoW streetscape & public realm
2. Landscape treatment
3. Land uses
4. Building considerations

Guidance is provided for these parameters for each type of corridor in the following page. Together these characteristics promote corridors as places with a well structured and efficient basis for development within Aseer region.

1. RoW Streetscape & Public Realm

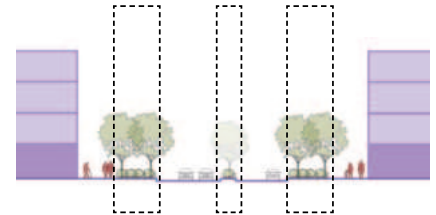


Streetscape to respond to the natural and built form context and influence the desired character of the public realm; attractive and contextual responsive public realm.



Example of representative streetscape for prime corridor

2. Landscape Treatment



High quality landscape treatment to mitigate visual impacts and complement adjacent land uses; to preserve/enhance natural setting.



Example of buffer linear park and median landscape

3. Land Uses

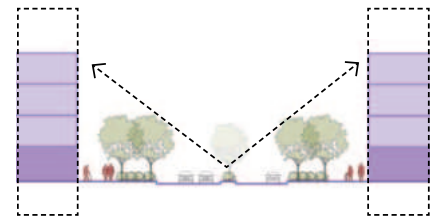


Corridor to provide responsive streetscape setting to adjacent land uses, depending on location and context.



Example of residential use and mixed-use integrated with streetscape

4. Building Considerations



Built form and massing along corridors to enhance and support current and planned contexts spatial enclosure and/or definition.

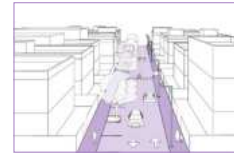
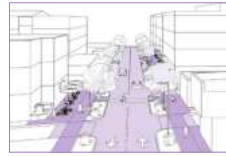
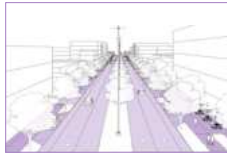


Example of building frontage providing spatial definition



Corridor Types

	Main Access Corridors	Main Access Corridor - Priority Corridor	Main Access Corridor - Scenic Corridors
Streetscape & Intersections	<ul style="list-style-type: none"> High quality public realm, landscape design and lighting. Street design elements to reflect the identity of urban center and create a welcoming environment. Highlight long views towards city edges and city landmarks. 	<ul style="list-style-type: none"> Street design elements to reflect city wide identity and to create a welcoming environment. Should function as future transit corridors. Highlight long views towards city edges. Protect views of escarpments and natural features. High quality public realm, landscape design and lighting. 	<ul style="list-style-type: none"> High quality public realm, landscape design and lighting. Street design elements to reflect the identity of the natural context and district. Protect views of escarpments and natural features.
Landscape Treatment	<ul style="list-style-type: none"> Urban Center / Old / New district: Min. 5m to 10m public realm on each side. Scenic areas: Min. 50m landscaped buffer area on each side is recommended. Buffers and medians to be designed with highly contextual and representative landscape treatment. Create continuous linear park along road edge within the buffer in suburban/urban areas. 	<ul style="list-style-type: none"> Urban Centers: Min. 5m public realm on each side. Suburban/Rural/Scenic areas: Min. 20m public realm on each side is recommended. Buffers and medians to be designed with highly contextual and representative landscape treatment. Create continuous linear park along road edge within the buffer in suburban/urban areas. 	<ul style="list-style-type: none"> Urban Centers: 20m landscaped area on each side where possible. Suburban/Rural/Scenic areas: Min. 50m landscaped buffer area on each side is recommended. Buffers and medians to be designed with highly contextual and representative landscape treatment. Create continuous linear park along road edge within the buffer in suburban/urban areas.
Land uses	<ul style="list-style-type: none"> High to Medium density mixed-use development / commercial with ground floor retail. Land subdivision should encourage walkability. Civic uses. 	<ul style="list-style-type: none"> High density, transit oriented mixed-use development with range of active ground floor uses in urban centers. Civic uses. Medium density mixed-use development in urban areas. Land subdivision should encourage walkability. 	<ul style="list-style-type: none"> Low density primarily residential development with intermediate medium density mixed-use nodes in urban areas.
Building Considerations	<ul style="list-style-type: none"> Form a consistent street wall edge with high density development. minimum 2 stories or 8m height frontage and consistent setback. Max. 20m height. Parking: Preferably at side/rear of plot or underground. Design for entrance canopies, awnings and shading structures for ground floor use should match the guidelines in AMAUDC B.5. 	<ul style="list-style-type: none"> Consistent street wall edge with medium density development / high density in urban centers. Minimum 2 stories or 8m height for street frontage. Max. 60m height (transit nodes). Parking: Preferably at side/rear of plot or underground. Max. 1 bay in front with landscape buffer. View corridor with continuous frontage and consistent setbacks. 	<ul style="list-style-type: none"> Allow pockets of development while preserving perception of natural setting. Provide adequate and consistent setbacks and street frontage within mixed-use nodes in urban centers. Parking: Preferably at side/rear of plot or underground.

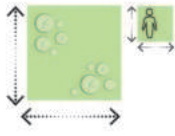

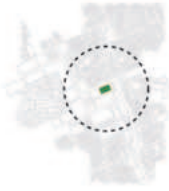



	Arterial Street	Collector Street	Local Street
Streetscape & Intersections	<ul style="list-style-type: none"> Street design elements to reflect city wide identity. Streetscape and high quality public realm, landscape design and lighting to support highly active ground floor with retail and commercial usage. Provide comfortable and signalized at grade pedestrians crossings. New Arterial streets should provide for future public transit. On-street parallel parking facilities and drop-off should be provided for street retail. 	<ul style="list-style-type: none"> Streetscape and high quality public realm, landscape design and lighting to support residential and mixed use ground floor with retail usage. Provide comfortable and signalized at grade pedestrian crossings. On-street parallel parking facilities and drop-off should be provided for street retail. 	<ul style="list-style-type: none"> On-street parallel parking facilities should be provided along one side of the road where necessary. Provide comfortable and signalized at grade pedestrian crossings. Streetscape and parking should support residential edge with multiple entries.
Landscape Treatment	<ul style="list-style-type: none"> Create a continuous, representative and unique landscape treatment along the sidewalks. The planted furniture zone should be provided along the sidewalk for street trees, bioswales, and pervious strips. Large canopy trees should be preferred along the arterial road. 	<ul style="list-style-type: none"> The planted furniture zone should be provided along the sidewalk on both sides for street trees, bioswales, and pervious strips. Medium to large canopy trees should be preferred along the collector road. 	<ul style="list-style-type: none"> Trees should be planted along one side of the street at regular intervals wherever space permits and street lighting on other. Trees may be planted on private property where space permits to add quality to the street edge. Appropriate design of fence and compound walls.
Land uses	<ul style="list-style-type: none"> Urban areas: Mixed use commercial development with high density in urban centers. Active ground floor uses with retail areas for shopping. Rural areas: Medium to low density mixed use development. 	<ul style="list-style-type: none"> Urban areas: Mixed use residential development with high density in urban centers. Active ground floor with retail areas. Retail includes small scale establishments for example convenience stores for daily needs. Rural areas: Medium to low density mixed use development. 	<ul style="list-style-type: none"> Urban areas: Medium density residential development with high density residential development in urban centers. Rural areas: Medium to low density residential development.
Building Considerations	<ul style="list-style-type: none"> Consistent street wall edge with high density in urban centers with highly active ground floor use. Minimum 2 stories or 8m height for street frontage. Max. 20m height. Design for awnings and shading structures for ground floor use should match the guidelines prescribed in AMAUDC B.5. 	<ul style="list-style-type: none"> Consistent street wall edge with high density in urban centers with residential / mixed use ground floor use. Minimum 2 stories or 8m height for street frontage. Max. 18m height. Design for entrance canopies, awnings and shading structures for ground floor use should match the guidelines in AMAUDC B.5. 	<ul style="list-style-type: none"> Exposed water tanks, satellite dishes and other equipments to be screened. Max. 18m height. Max. 10m height in rural areas with low density residential Building façade at grade should be consistent & built at a minimum distance of 2m from the property line to allow for space to provide privacy and landscape treatment for residential character.

4.1.8 Open Space Network

Objective

To develop a well-structured open space network incorporating active and passive uses and natural features for all; with a minimum amount of 9sqm of green open space per person within the urban areas of Aseer region.

Criteria				
Park Hierarchy	Size / M ² per person	Inhabitants	Service Distance / catchment area	Equipments / Furnishing / Users
Pocket Park	2,250m ² 1.5m ²	1,500	250m R	Pocket parks with shaded sitting areas, play points
Neighborhood Park	10,800m ² 1.8m ²	6,000	500m R	Passive recreation, playground, multi-purpose pitch, plaza
District Park	6.3 ha 0.7m ²	9, 000	2,500m R	Adventure playground, theme gardens, large plaza
City	40 ha 1m ²	40,0000 +	Varies	Specialty themed park, specialist sport, adventure playground, catering for residence and visitors from outside the city

Guidance

The following element shall be taken into consideration in the development of a well-structured open space system:

- MoMRA national standards shall be used to evaluate the existing green structure within a development area and support any decisions for the reorganization, improvement of open space and integration into a quality network of open space amenities.
- The criteria and aspects that shall be used to assess existing or proposed urban areas are: the open space area provision per resident, catchment area and equipment.
- Inclusion of natural and manmade features like topography, vegetation, agricultural and cultural landscapes.
- A network approach, interconnecting natural wadi corridors and buffer areas with planned open spaces like city parks, district and neighborhood parks and plazas.
- Evenly and well distributed throughout the neighborhoods through varying scales and accessible and cater to the recreational, sporting and place making needs of the community.
- Accessibility. The nearest open space

should be accessible and within walking distance of not more than **400m or 5 minutes'** walking distance to all plots.

- Variety. The open space network should offer a variety of safe and attractive spaces, active and passive recreational needs that help improve the physical and mental health of the residents.
- Identity. It should reflect the local character of the natural environment.

Wadi Corridors

Wadi corridors form an integral part of Aseer's natural environment and its ecology. They provide the linear binding component to build a continuous network of open spaces. The wadi corridors have the potential to connect the natural and cultural landscape with parks and other public open spaces, historic sites and neighborhoods into a network. Therefore development should:

- Preserve the wadi corridor as an integrated open space, creating a 'green infrastructure' to link people, places and provide opportunities to establish habitat corridors.

- Preserve the wadi corridors as 'blue infrastructure' for natural and efficient stormwater management system.
- Protected the natural environment.
- Enhance urban forms and aesthetic values to align with the natural wadi character enhancing sense of place.
- Provide active and passive recreation opportunities such as walking trails, picnic areas and bird watching.
- Prioritize and integrate pedestrian and non-motorized traffic access to the wadi corridor.
- Consider the generation of both direct and indirect economic benefits from enhanced recreation, increased property values and stimulated local business.
- Provide a transition between built form land uses and natural landscape areas.
- Informal riparian and endemic vegetation shall be specified.
- For further guidance on planning and material palette of open spaces and wadi corridors refer to AUDC B1.

Open Space Types

	Characteristics	Activities	Location	Service Radius and Area
Pocket Parks	<ul style="list-style-type: none"> • Small scale pocks serving immediate local community . • Provides small scale shaded social, meeting and play pockets. 	<ul style="list-style-type: none"> • Shaded seating areas for 2-6 people. • Play points (small free standing, low level play elements with limited safety issues such as balancing or rocking elements). 	<ul style="list-style-type: none"> • Local streets • Retail street junctions. • Adjacent to community facilities. 	<ul style="list-style-type: none"> • Residents from the block • Catchment radius • <0.25km • Typical area: 0.02 to 0.5ha
Squares and Plazas	<ul style="list-style-type: none"> • Serves as a primary open space and activity hub for the block / neighborhood. • Forms a retail and civic heart with gathering, seating and outdoor dining area for residents and tourists alike. 	<ul style="list-style-type: none"> • Seating areas. • Signage and way-finding. • Cafes. • Flexible event space, for example-weekly markets. 	<ul style="list-style-type: none"> • Retail street junctions. • Adjacent to community facilities. • Adjacent to government complex. • Heritage zones. 	<ul style="list-style-type: none"> • Residents from the block and tourists. • Typical area: 0.05 to 0.4ha
Neighborhood Parks	<ul style="list-style-type: none"> • Smaller scale parks incorporated throughout the neighborhood addressing the daily needs of residents. • Provide local residents for seating, play areas, picnic and recreation activities. 	<ul style="list-style-type: none"> • Areas for health and fitness like exercise parks, small play courts, well equipped playgrounds. • Multi purpose pitch • Universal recreation areas like: shaded seating, children’s play area. 	<ul style="list-style-type: none"> • Within one neighborhood comprising of multiple blocks with max. 400m walking radius from residents. 	<ul style="list-style-type: none"> • Residents from one neighborhood. • Catchment radius 0.5km • Typical area: 0.4 to 1.5ha
District Parks	<ul style="list-style-type: none"> • Provide sports and athletic opportunities for residents of multiple neighborhoods, campus and universities. • Mix of daily activities of health, recreation and play and occasional events. 	<ul style="list-style-type: none"> • Large sports ground and athletic fields. • Multi-functional spaces like performance areas, public art and exhibition space. • Formal and informal areas. • Public amenities. 	<ul style="list-style-type: none"> • Around developed population centers within the district. • Can be located with universities and schools. 	<ul style="list-style-type: none"> • Residents from multiple neighborhoods. • Catchment radius • 1-2.5km • Typical area: 6.3ha
City Parks	<ul style="list-style-type: none"> • Forming important civic spaces, also near mixed-use center with recreational fields as a gateway to the city / landmark of the city. • Celebration of historic / heritage assets. 	<ul style="list-style-type: none"> • Cultural event space. • Historic and civic landmarks. • Suitable for municipal / metropolitan area gatherings. • Special sport activities. • Performance areas & public art. • Botanical gardens. • Natural areas. • Public amenities. 	<ul style="list-style-type: none"> • Location of civic spaces. • Densely populated city areas. • Adjacent to historic and civic landmark, civic facilities, and museums. 	<ul style="list-style-type: none"> • Catering to city population and tourists. • Catchment radius 2-10km • Typical area: min 40ha

4.1.9 Land Use Guidelines and Development Standards

Objective

To promote strategic densification with compact urban structure and redevelopment of blighted sites to discourage sprawl, reduce urban footprint and control the expansion of development beyond efficient needs, protecting agriculture and natural land. Based on the placemaking principles, high-density, future transit oriented mixed-use development is encouraged in existing and future urban centralities and along main transport corridors.









AUDC classifies the land uses into 3 main categories based on the activities namely Dominant Uses or Activities, Mixed-Use and City Landscape. This section provides general placemaking guidelines for the land uses.

Guidance





In general, any subdivision land use plan shall promote:

- Protection of natural features and minimize environmental impact.
- Protection and conservation of agricultural land wherever possible.
- Adequate buffers and landscape treatment between different land uses.
- Compact, permeable, and walkable urban structure.
- High quality public realm.
- Mixed-use development and future Transit Oriented Development (TOD).
- The dominant categories of landuses are mainly the residential, commercial, industrial, civic, cultural, governmental, transportation, recreational and environmental. These are prominently seen within urban areas.
- The mixed use is further classified into four categories: mixed use commercial along transit oriented corridors to allow high densities and building heights, mixed use commercial along the corridors within the urban centers for daily work life needs, mixed use residential within urban centers with retail and amenities to promote walkable neighborhoods and mixed use heritage for promoting more active, walkable development within heritage districts.
- The third category is city landscape which suffices the daily health and leisure needs along with productive landscapes and agricultural lands.

Dominant Use or Activity Categories

	Residential Activities (Neighborhood)		Transportation / Travel or Movement Activities
	Low Density Residential Activities (Cluster in Landscape)		Recreational / Leisure Activities
	Commercial / Shopping, Business or Trade Activities		Environmental / Natural Resources related Activities
	Industrial / Light Industrial / Manufacturing Activities (Corridor)		
	Civic / Governmental / Social, institutional, or Infrastructure related Activities		

Mixed of Uses and Activities

	Mixed Use / Commercial (Transit Oriented Corridor)		Mixed Use / Residential (Corridor)
	Mixed Use / Commercial (Corridor)		Mixed Use / Residential in Heritage District (Neighborhood)

City Landscape: Mix of Uses and Activities for Open Spaces

	Public Park / Civic Space		Productive / Agricultural
	Open Space / Recreation / Productive		

Guidance for Dominant Uses and Activities

a. Residential

- Promote higher densities and a mix of typologies.
- Reduce single villa development typologies.
- Promote walkable clusters.
- Provide activity centers, socio cultural amenity hubs, and green space within walking distance.
- Integrate with living streets.

b. Low Density Residential

- Promote low density residential use in residential/productive landscape areas where there are infrastructure or environmental constraints that limit development.
- Promote locally serviced suburban neighborhoods that offer a high level of amenities, socio cultural amenity hubs, and green space within walking distance and a sense of openness.
- Promote development with high quality public realm and set amongst generous landscaping.
- Low rise blending with local character.
- Avoid land use conflict with adjacent ecologically sensitive zone, environmental zone and agricultural land by providing for adequate buffer areas.

c. Commercial

General Commercial

- High quality contextual design and development.
- Consistent and well landscaped setbacks to contribute to quality of street frontages.
- Promote multi modal access and walkability.

Office / Neighborhood Commercial

- Encourage the establishment of commercial business uses in mixed-use districts.
- High quality contextual design and development.
- Consistent and well landscaped setbacks to contribute to quality of street frontages.
- Promote multi modal access and walkability.

d. Industrial

Heavy Industrial

- Provide appropriate location for industrial uses generating heavy environmental and visual impact and render them compatible for adjacent land uses and natural environment.
- Provide adequate landscape buffer to protect adjacent land uses and environment to mitigate visual impact.

Light Industrial

- Provide for a range of generally small scale production development that can be integrated with any adjacent urban and rural areas.
- Provide adequate landscape buffer to protect adjacent land uses and environment to mitigate visual impact.
- Provide adequate public realm treatment to integrate development in neighborhoods.



e. Civic / Governmental

- Accommodate state or local government offices, public facilities like educational facilities, universities, schools, health care complexes, and any other type of public facilities.
- Allow public uses like cultural facilities, museums, libraries, art galleries, convention centers, commercial recreation like zoos, stadiums, golf course, clubhouses and any other type of cultural facilities enhancing the quality of life.
- High quality contextual design and development.
- Consistent and well landscaped setbacks to contribute to quality of street frontages.
- Promote multi modal access and walkability.

f. Transportation

- Provide adequate landscape buffer to protect adjacent land uses and environment.
- Mitigate visual impact.
- Provide ancillary activities like offices, convenience retail, training facilities besides the light industrial, transportation, utility and parking use for active public realm.
- Promote multi modal access and walkability.

g. Recreational and Leisure

- Provide open space for active and passive recreation.
- Develop a green network of open spaces, parks, natural landscapes and streets.
- Provide street furniture, way-finding and signage elements.
- Protect and conserve natural, historic and cultural resources.
- Protect and provide habitat for flora and fauna.
- Prevent development in environmentally sensitive locations (i.e. escarpments, wadis)
- Enhance natural beauty and provide buffer between nature and urban development.
- Protect and enhance the viewpoints and natural landscapes.

h. Natural Preserve / Environmental

- Conserve and protect sensitive natural features, ecology and habitat from development of any type.
- Create ecological corridors with surrounding ecologically sensitive areas.
- Enhance the natural landscape character zone to strengthen the image and identity of the region.
- Provide adequate protective buffer between the natural environment and urban land uses.
- Preserve the unique scenic conditions of natural landscapes.
- Provide movement trail network.
- Protect and enhance the view corridors.



Guidance for Mixed of Uses and Activities

a. Mixed Use / Commercial (Transit Oriented Corridor)

- Promote transit oriented development along King Fahd road.
- Promote commercial activities with vertical/horizontal mixed use programming.
- Encourage high density with high buildings, and mix of uses around activity centers along the corridor.
- Promote residential neighbourhoods within catchment areas with amenities and last mile connectivity.
- Reduce the need for vehicular trips and provide a pedestrian-friendly walkable development.
- Promote walkable clusters.
- Provide active ground floor and high quality public realm.

b. Mixed Use / Commercial (Corridor)

- Encourage high density and mix of uses around activity centers along the corridor.
- Promote commercial activities with vertical/horizontal mixed use programming.
- Promote high density residential neighborhoods with amenities and last mile connectivity to the mixed use corridors.
- Reduce the need for vehicular trips and provide a pedestrian-friendly walkable development.
- Promote walkable clusters.
- Provide active ground floor and high quality public realm.



c. Mixed Use / Residential

- Promote high density residential activities with ground floor retail / mixed use programming within the urban centers.
- Provide last mile connectivity to the mixed use corridors.
- Reduce the need for vehicular trips and provide a pedestrian-friendly walkable development.
- Promote walkable clusters.
- Provide active ground floor and high quality public realm.



d. Mixed Use / Residential in Heritage District

- Promote high density residential activities with ground floor retail / mixed use programming within the urban centers.
- Promote shared streets, retail, tourism related activities within the heritage district.
- Provide last mile connectivity to the mixed use corridors.
- Reduce the need for vehicular trips and provide a pedestrian-friendly walkable development.
- Promote walkable clusters.
- Provide active ground floor and high quality public realm.
- Provide high quality built form with architectural design in line with the heritage structures of Sarwat mountains.

Guidance for City Landscape: Mix of Uses and Activities for Open Spaces

a. Public Park / Civic Space

- Develop public parks and civic spaces that are accessible to the surrounding neighbourhoods both physically and visually.
- Maximize accessibility by providing safe, layered and legible movement network to the parks.
- Provide wide range of activity/program clusters and experiences catering to all the population.
- Design flexible spaces catering to different program and uses.
- Provide adequate street furniture, art features, shaded areas, way-finding and signage elements.
- Provide active street edge around civic spaces and parks.
- Enhance the natural environment to strengthen the image and identity of the region.
- Preserve the unique conditions of landscape character zones with resilient and sustainable design.



b. Open Space / Recreational

- Provide open space for active and passive recreation.
- Protect and conserve natural, historic and cultural resources,
- Protect and provide habitat for flora and fauna.
- Prevent development in environmentally sensitive locations (i.e. escarpments, wadis)
- Enhance natural beauty and provide buffer between nature and urban development.
- Develop a green network of open spaces, parks, natural landscapes and streets.
- Provide street furniture, way-finding and signage elements.
- Protect and enhance the viewpoints and natural landscapes.



c. Productive / Agricultural

- Conserve farmlands for agricultural purposes and food production in urban area.
- Preserve the unique scenic qualities of cultural landscapes.
- Add to the offer of publicly accessible open space.



Development Standards

Use: Residential (Neighborhood)

RESIDENTIAL ACTIVITIES
LOCATION (URBAN CHARACTER): Urban Center, Old District, New District
LOCATION (CORRIDOR): Arterial Corridor, Collector Corridor, Local Corridor
TYPICAL PLOT SIZE: 20x30m to 60x60m
ALLOWABLE TYPOLOGIES: Multifamily Midrise Apartments, Multifamily Lowrise Apartments, Attached and Detached Units

LANDSCAPE SETTINGS		REMARKS	AUDC SECTION
RIDGE LINE VIEW CORRIDOR	MIN. 50M OFFSET FROM RIDGE LINE WITH NO LARGE STRUCTURE OR BUILDING ESTABLISHED PUBLIC VIEWS TO BE PROTECTED	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.3, C.1.4
SLOPE	> 30% SLOPE NO LARGE STRUCTURE OR BUILDINGS	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.5
WADI ZONES	DEVELOPMENT ALLOWED ONLY IN WADI DEVELOPMENT ZONE		C.1.7
HERITAGE BOUNDARY	LIMITS OF THE PLOT BOUNDARY OF HERITAGE MONUMENT/BUILDING OR BUILDING GROUP, OR AN OFFSET OF A MIN. 20M FROM THE HERITAGE BUILDING FAÇADE	PREFERRED WITH NO DEVELOPMENT	C.2.2.C.2.4
ROW	20 TO 10M TYPICAL	CONTINUOUS AND ACCESSIBLE SIDEWALKS WITH TREE PLANTING; SHARED STREET PROMOTED IN LOCAL STREET	C.3.3
PUBLIC REALM	MIN. 1.5M SIDEWALK	CONTINUOUS AND ACCESSIBLE SIDEWALKS WITH TREE PLANTING; SHARED STREET PROMOTED IN LOCAL STREET	C.3.4
PERIMETER WALLS / FENCES	MAX 3M IN HEIGHT FROM PUBLIC STREET/GROUND LEVEL	WITH LEVELS OF TRANSPARENCY	C.5.3.6
OPEN SPACE	MIN 20% LANDSCAPED AREA	ORIENTED TOWARDS MAIN PUBLIC FRONTAGE	C.5.2.3
BUFFER	MIN. 30M LANDSCAPED BUFFER BETWEEN LANDUSE AND NATURAL AREAS	VACANT PLOT: VEGETATION BUFFER OR HOARDING REQUIRED	C.5.3.9

BUILDING ENVELOPE		REMARKS	AUDC SECTION
URBAN BLOCK	MAX. 120M ANY DIRECTION WITHOUT INTERRUPTION	LARGER BLOCK ALLOWED WITH MIDBLOCK PEDESTRIAN/VEHICULAR PASSAGE	C.5.2.2
ALLOWABLE USES	RESIDENTIAL / ANCILLARY RETAIL OR COMMERCIAL - MAX. 5% OF TOTAL DEVELOPMENT	UTILITARIAN USES TO BE LOCATED AT THE BACK OF THE PLOT AWAY FROM PUBLIC FRONTAGE	C.5.3.7
FLOORPLATE	MAX 30M LENGTH ANY SIDE WITHOUT BREAK ALONG PUBLIC FRONTAGES; MULTIPLE STRUCTURES OK	MIN. 1.5 M IN DEPTH AND 3 M IN WIDTH, FOR THE ENTIRE HEIGHT OF THE FAÇADE	C.5.2.5
STRUCTURE HEIGHT	MAX. 18M		
NUMBER OF FLOORS	MAX. 4.5 LEVELS; MIN. FLOOR TO FLOOR 3.0M		
LAC	MAX. 70%		
SET BACK			
FRONT	MIN. 4M		
LEFT AND RIGHT SIDES, SIDE STREETS	MIN. 2M , 1/5TH OF ROW WITH 2M MIN	NO MIN. SETBACK FOR ATTACHED UNITS REQUIRED	
BACK SIDE	MIN. 2M		
STREETWALL	N/A		
PARKING	1 SPACE PER DU ≤ 130 SQM; 2 SPACES PER DU > 130 SQM	INTEGRATED IN DEVELOPMENT, UNDERGROUND, LOCATED AT BACK OF THE PLOT NOT ALONG PUBLIC FRONTAGE; PARKING LOT MAX. 70% OF OPEN SPACE	C.5.2.4
ACCESS	MAX. 1 VEHICULAR ENTRY FOR PLOT UP TO 30M WIDE; FOR LARGER PLOTS, MAX. 1 VEHICLE ENTRY FOR EVERY 50M OF MAIN ROAD FRONTAGE		C.5.2.4

ARCHITECTURE		REMARKS	AUDC SECTION
FAÇADE	MAX. 30M LENGTH WITHOUT BREAK ALONG PUBLIC FRONTAGES; MIN. 50% OF FAÇADE TREATMENT WITH ONE CONSISTENT MATERIAL	INTEGRAL TO ALL PUBLIC FAÇADES	C.5.3.1
OPENINGS	OPENINGS SHOULD HAVE A SHARE OF MAXIMUM 30 TO 50% OF THE OVERALL FAÇADE SURFACE	% ACCORDING TO THEIR ORIENTATION TO MINIMIZE SOLAR IMPACT. BALCONIES AND OPENINGS SHOULD BE LOCATED TO MINIMIZE THE IMPACT ON PRIVACY	C.5.3.2
ROOFTOP	MIN. 0.9M PARAPET; SET BACK FOR MECHANICAL EQUIPMENT MIN. 4M	SCREENING OF ALL UTILITIES VISIBLE FROM PUBLIC ROADS	C.5.3.8
MATERIALS / COLORS	70% RANGE OF LIGHT GRADATIONS OF EARTH TONES; NO CURTAIN WALL; NO METAL CLADDING	SYMPATHETIC TO LOCAL LANDSCAPE AND CULTURAL HERITAGE	C.5.3.3, C.5.3.4
SIGNAGE	SIGNAGE WELL INTEGRATED WITHIN OVERALL ARCHITECTURAL COMPOSITION	SIGNAGE SHALL AVOID CONFLICTS WITH ADJACENT RESIDENTIAL USES AND PUBLIC REALM TREE CANOPIES	C.6.10

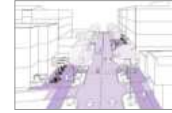
*Note: AUDC here refers to Aseer Urban Design Code for Private Development

Sample location

New district



Collector corridor



Local corridor



Figure 166 Block plan: residential neighborhood



Figure 167 Block isometric: residential neighborhood

Sample location

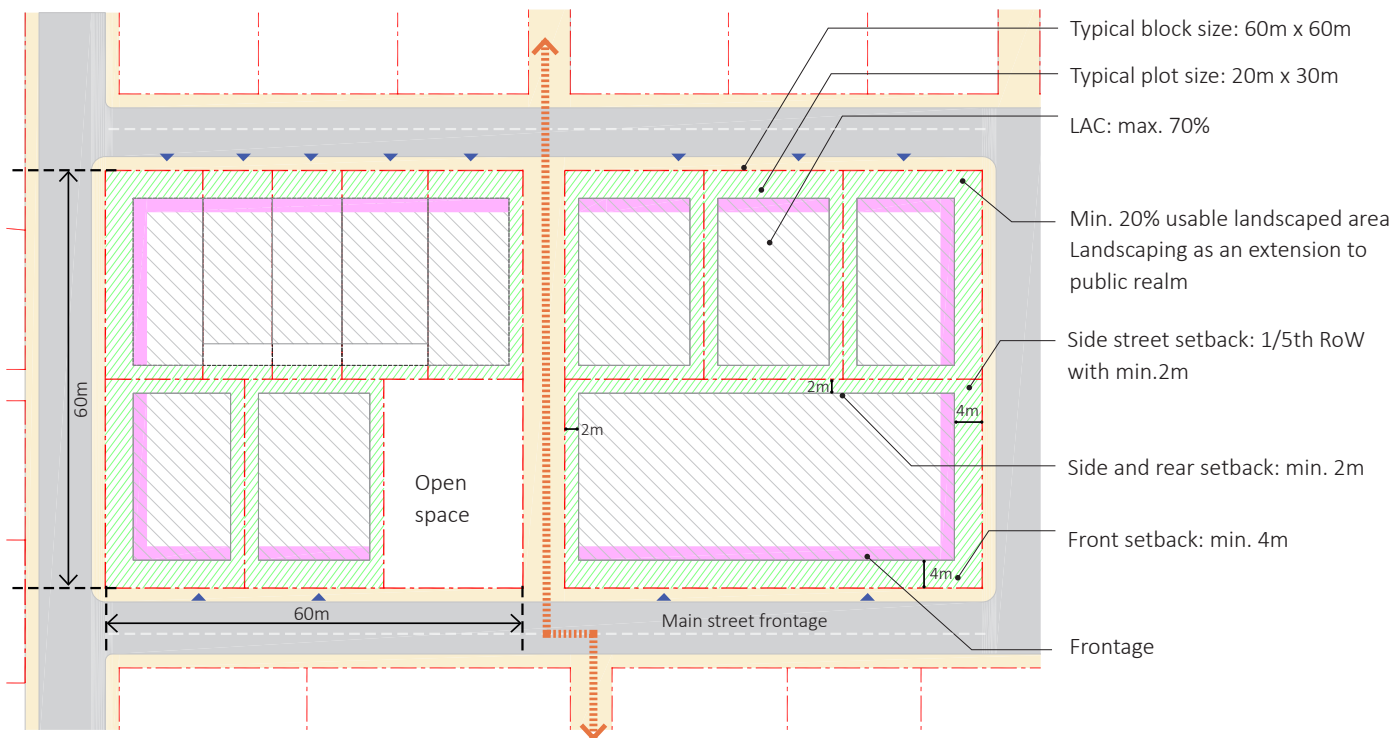


Figure 168 Typical block plan: residential

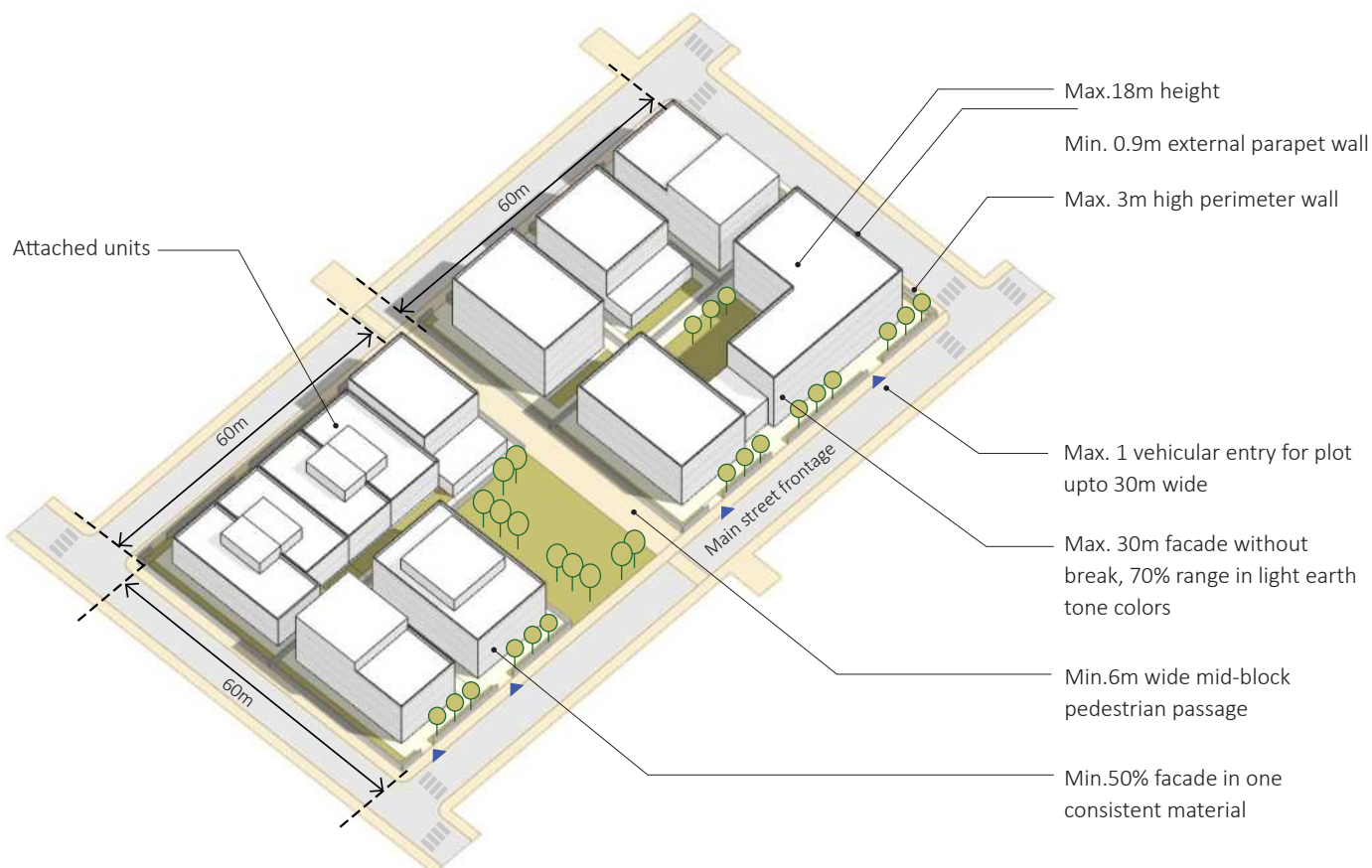


Figure 169 Block isometric: residential

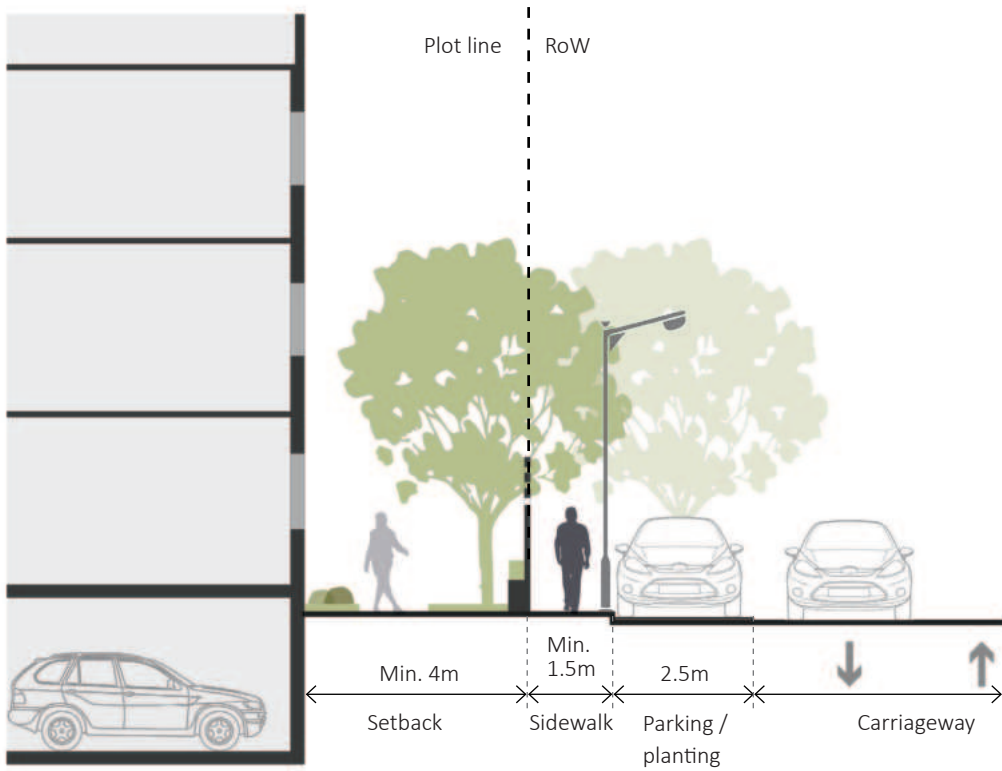


Figure 170 Residential use street edge treatment

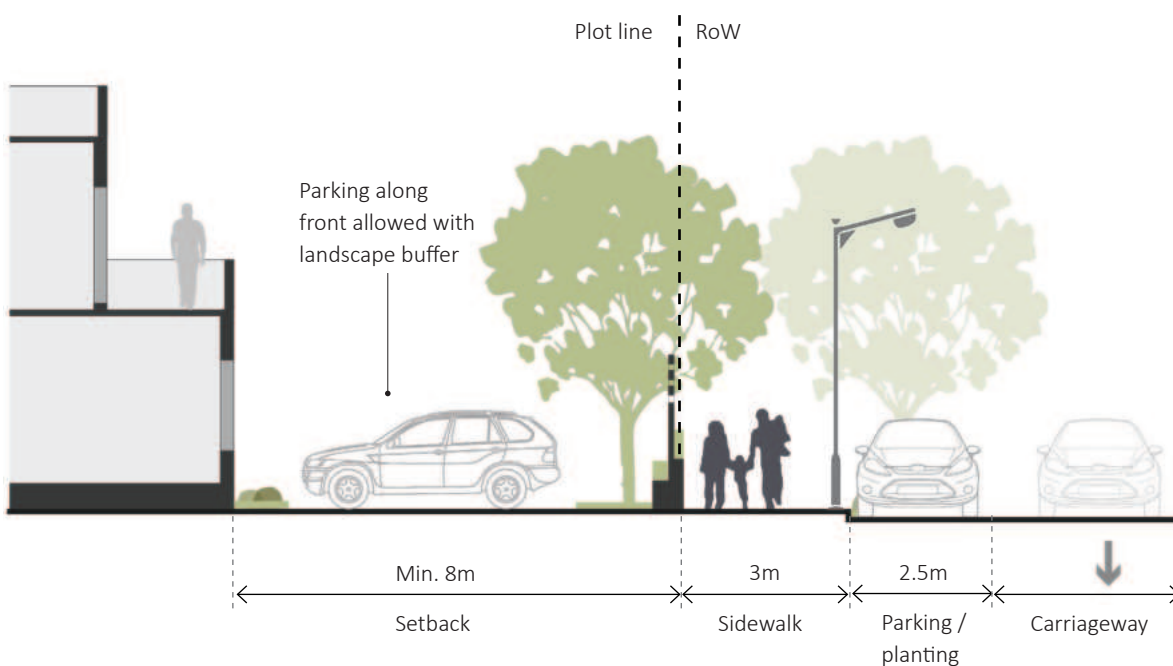


Figure 171 Low density residential use street edge treatment

Use: Low Density Residential (Neighborhood)

LOW DENSITY RESIDENTIAL ACTIVITIES
LOCATION (URBAN CHARACTER): New District, Rural / Hillside District
LOCATION (CORRIDOR): Collector Corridor, Local Corridor
TYPICAL PLOT SIZE: 20x30m to 0.5 Hectare, Large plots: 1 Hectare
ALLOWABLE TYPOLOGIES: Villa, Single Family Detached, Multi-family Lowrise Apartments

LANDSCAPE SETTINGS	REMARKS	AUDC SECTION
RIDGE LINE VIEW CORRIDOR	MIN. 200M OFFSET FROM RIDGE LINE WITH NO LARGE STRUCTURE OR BUILDING ESTABLISHED PUBLIC VIEWS TO BE PROTECTED	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION C.1.3, C.1.4
SLOPE	> 30% SLOPE NO LARGE STRUCTURE OR BUILDINGS	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION C.1.5
WADI ZONES	DEVELOPMENT ALLOWED ONLY IN WADI DEVELOPMENT ZONE	C.1.7
HERITAGE BOUNDARY	LIMITS OF THE PLOT BOUNDARY OF HERITAGE MONUMENT/BUILDING OR BUILDING GROUP, OR AN OFFSET OF A MIN. 20M FROM THE HERITAGE BUILDING FAÇADE	PREFERRED WITH NO DEVELOPMENT C.2.2,C.2.4
ROW	20 TO 10M TYPICAL	CONTINUOUS AND ACCESSIBLE SIDEWALKS WITH TREE PLANTING; SHARED STREET PROMOTED IN LOCAL STREET C.3.3
PUBLIC REALM	MIN: 1.5M SIDEWALK	CONTINUOUS AND ACCESSIBLE SIDEWALKS WITH TREE PLANTING C.3.4
PERIMETER WALLS / FENCES	MAX 3M IN HEIGHT FROM PUBLIC STREET/GROUND LEVEL	WITH LEVELS OF TRANSPARENCY C.5.3.6
OPEN SPACE	MIN 20% LANDSCAPED AREA	ORIENTED TOWARDS MAIN PUBLIC FRONTAGE C.5.2.3
BUFFER	MIN. 30M LANDSCAPED BUFFER BETWEEN LANDUSE AND NATURAL AREAS	VACANT PLOT: VEGETATION BUFFER OR HOARDING REQUIRED C.5.3.9

BUILDING ENVELOPE	REMARKS	AUDC SECTION
URBAN BLOCK	MAX. 120M ANY DIRECTION WITHOUT INTERRUPTION	LARGER BLOCK ALLOWED WITH MIBLOCK PEDESTRIAN/VEHICULAR PASSAGE; LAYOUT OF BLOCKS SHOULD RESPOND TO NATURAL SETTING C.5.2.2
ALLOWABLE USES	RESIDENTIAL WITH ANCILLARY / WORKSHOP / EDUCATIONAL / TRAINING / PRODUCTIVE / NEIGHBOURHOOD RETAIL OR COMMERCIAL - MAX. 5% OF TOTAL DEVELOPMENT, HOMESTAY / BOUTIQUE HOSPITALITY	UTILITARIAN USES TO BE LOCATED AT THE BACK OF THE LOT AWAY FROM PUBLIC FRONTAGE C.5.3.7
FLOORPLATE	MAX 30M LENGTH ALONG MAIN FRONTAGE; MULTIPLE STRUCTURES OK	MIN. 1.5 M IN DEPTH AND 3 M IN WIDTH, FOR THE ENTIRE HEIGHT OF THE FAÇADE C.5.2.5
STRUCTURE HEIGHT	MIN. 3.5M, MAX. 10M	
NUMBER OF FLOORS	MAX. 2.5 LEVELS; MIN. FLOOR TO FLOOR 3.0M	
LAC	MAX. 40%	
SET BACK		
FRONT	MIN. 8M	
LEFT AND RIGHT SIDES, SIDE STREETS	MIN. 3M, 1/5TH OF ROW WITH 3M MIN	
BACK SIDE	MIN. 5M	
STREETWALL	N/A	
PARKING	VILLA: 1 SPACE PER PLOT ≤ 550 SQM; 2 SPACES PER DU > 550 SQM , MULTIFAMILY: 1 SPACE PER DU ≤ 130 SQM; 2 SPACES PER DU > 130 SQM	INTEGRATED IN DEVELOPMENT; MIN. 3M LANDSCAPED BUFFER FROM PUBLIC ROADS; PARKING LOT MAX. 70% OF TOTAL OPEN SPACE
ACCESS	MAX. 1 VEHICULAR ENTRY FOR PLOT UP TO 30M WIDE. FOR LARGER PLOTS, MAX. 1 VEHICLE ENTRY FOR EVERY 50M OF MAIN ROAD FRONTAGE	C.5.2.4

ARCHITECTURE	REMARKS	AUDC SECTION
FAÇADE	MAX 30M LENGTH ALONG MAIN FRONTAGE, MIN. 50% OF FAÇADE TREATMENT WITH ONE CONSISTENT MATERIAL	INTEGRAL TO ALL PUBLIC FAÇADES C.5.3.1
OPENINGS	OPENINGS IN GENERAL; SHOULD HAVE A SHARE OF MAXIMUM 30 TO 50% OF THE OVERALL FAÇADE SURFACE	% ACCORDING TO THEIR ORIENTATION TO MINIMIZE SOLAR IMPACT. BALCONIES AND OPENINGS SHOULD BE LOCATED TO MINIMIZE THE IMPACT ON PRIVACY C.5.3.2
ROOFTOP	MIN. 0.9M PARAPET; SET BACK FOR MECHANICAL EQUIPMENT MIN. 4M	SCREENING OF ALL UTILITIES VISIBLE FROM PUBLIC ROADS C.5.3.8
MATERIALS / COLORS	70% RANGE OF LIGHT GRADATIONS OF EARTH TONES; NO CURTAIN WALL; NO METAL CLADDING	SYMPATHETIC TO LOCAL LANDSCAPE AND CULTURAL HERITAGE C.5.3.3, C.5.3.4
SIGNAGE	SIGNAGE INTEGRATED WITHIN OVERALL ARCHITECTURAL COMPOSITION	SIGNAGE SHALL AVOID CONFLICTS WITH ADJACENT RESIDENTIAL USES AND PUBLIC REALM TREE CANOPIES C.6.10

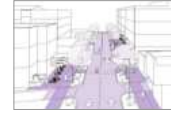
*Note: AUDC here refers to Aseer Urban Design Code for Private Development

Sample location

New district



Collector corridor



Local corridor

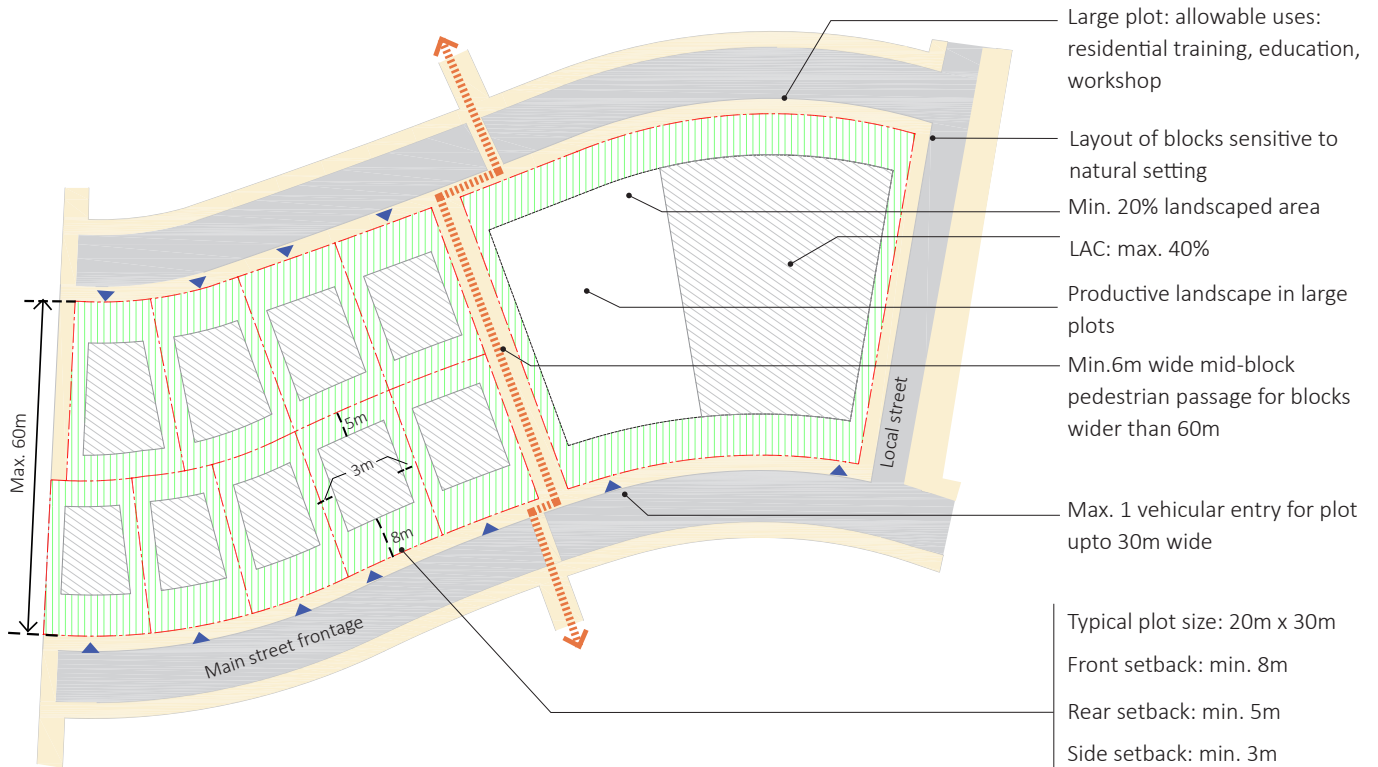


Figure 172 Block plan: low density residential



Figure 173 Block Isometric: low density residential

Use: Commercial (Corridor)

COMMERCIAL / SHOPPING, BUSINESS OR TRADE ACTIVITIES
LOCATION (URBAN CHARACTER): Urban Center, Old District, New District
LOCATION (CORRIDOR): Main Access Corridor, Arterial Corridor, Collector Corridor
TYPICAL PLOT SIZE: Varies
ALLOWABLE TYPOLOGIES: Varies

LANDSCAPE SETTINGS		REMARKS	AUDC SECTION
RIDGE LINE VIEW CORRIDOR	MIN. 50M OFFSET FROM RIDGE LINE WITH NO LARGE STRUCTURE OR BUILDING ESTABLISHED PUBLIC VIEWS TO BE PROTECTED	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.3, C.1.4
SLOPE	> 30% SLOPE NO LARGE STRUCTURE OR BUILDINGS	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.5
WADI ZONES	DEVELOPMENT ALLOWED ONLY IN WADI DEVELOPMENT ZONE		C.1.7
HERITAGE BOUNDARY	LIMITS OF THE PLOT BOUNDARY OF HERITAGE MONUMENT/BUILDING OR BUILDING GROUP, OR AN OFFSET OF A MIN. 20M FROM THE HERITAGE BUILDING FAÇADE	PREFERRED WITH NO DEVELOPMENT	C.2.2,C.2.4
ROW	60M TYPICAL, 32M, 20M, 16M	CONTINUOUS AND ACCESSIBLE SIDEWALKS WITH LANDSCAPED AREA AND FLEX. ZONE	C.3.3
PUBLIC REALM	MIN. 5M SIDEWALK WITH LANDSCAPE FLEX. ZONE	ACTIVE FRONTAGES AT GROUND FLOOR PROMOTED	C.3.4
PERIMETER WALLS / FENCES	MAX 1.5M IN HEIGHT FROM PUBLIC STREET/GROUND LEVEL	MAX 50% PERIMETER WALL ALONG MAIN PUBLIC FRONTAGE	C.5.3.6
OPEN SPACE	MIN 20% LANDSCAPED AREA	TREATED AS AN EXTENSION TO PUBLIC REALM, TO FORM AN ATTRACTIVE STREET FRONT	C.5.2.3
BUFFER	MIN. 30M BUFFER BETWEEN LANDUSE AND NATURAL AREAS	VACANT PLOT: VEGETATION BUFFER OR HOARDING REQUIRED	C.5.3.9

BUILDING ENVELOPE		REMARKS	AUDC SECTION
URBAN BLOCK	MAX. 120M ANY DIRECTION WITHOUT INTERRUPTION	LARGER BLOCK ALLOWED WITH MIDBLOCK PEDESTRIAN/VEHICULAR PASSAGE	C.5.2.2
ALLOWABLE USES	RETAIL / OFFICE / COMMERCIAL / HOSPITALITY - VERTICAL AND HORIZONTAL MIX	UTILITARIAN USES TO BE LOCATED AT THE BACK OF THE LOT AWAY FROM PUBLIC FRONTAGE	C.5.3.7
FLOORPLATE	MAX. 40M LENGTH WITHOUT BREAK ALONG PUBLIC FRONTAGES	BREAKS MIN. 1.5 M IN DEPTH AND 3 M IN WIDTH, FOR THE ENTIRE HEIGHT OF THE FAÇADE	C.5.2.5
STRUCTURE HEIGHT	MAX. 20M		
NUMBER OF FLOORS	MAX. 4.5 LEVELS; MIN. GROUND FLOOR HEIGHT 5M; MIN. FLOOR TO FLOOR 3.2M		
LAC	MAX. 70%		
SET BACK			
FRONT	MIN. 5M	LANDSCAPED; INTEGRATED WITH PUBLIC REALM; UNIVERSALLY ACCESSIBLE	
LEFT AND RIGHT SIDES, SIDE STREETS	MIN. 3M, 1/5TH OF ROW WITH 3M MIN		
BACK SIDE	MIN. 3M		
STREETWALL	MAIN FRONTAGE: MIN. 70% ALONG 20M SETBACK LINE; FOR PLOTS > 5000 SQM - MIN. 30% ALONG 20M SETBACK LINE	WITH ACTIVE FRONTAGE; ARCADES	C.5.2.5
PARKING	RETAIL, OFFICE AND ALL OTHER USES: 1 SPACE EACH 75 SQM OF GFA; RESTAURANT (DRIVE-THROUGH) 2 SPACES EACH 100 SQM OF GFA; HOSPITALITY 1 SPACE-ROOM	INTEGRATED IN DEVELOPMENT, UNDERGROUND, LOCATED AT BACK OF THE PLOT NOT ALONG PUBLIC FRONTAGE; FRONT OF THE LOT LIMITED TO 1 BAY LANDSCAPED (ONLY ALONG MAIN ACCESS CORRIDORS); PARKING LOT MAX. 70% OF OPEN SPACE	C.5.2.4
ACCESS	MAX. 1 VEHICULAR ENTRY FOR PLOTS UP TO 30M WIDE, FOR LARGER PLOTS, MAX. 1 VEHICLE ENTRY FOR EVERY 50M OF MAIN ROAD FRONTAGE		C.5.2.4

ARCHITECTURE		REMARKS	AUDC SECTION
FAÇADE	MAX. 40M LENGTH WITHOUT BREAK ALONG PUBLIC FRONTAGES. MIN. 50% OF FAÇADE TREATMENT WITH ONE CONSISTENT MATERIAL	INTEGRAL TO ALL PUBLIC FAÇADES; BREAKS MIN. 1.5 M IN DEPTH AND 3 M IN WIDTH, FOR THE ENTIRE HEIGHT OF THE FAÇADE; GROUND LEVEL FAÇADE MAY HAVE A DISTINCT LOOK FROM THE UPPER FLOOR FAÇADES	C.5.3.1
OPENINGS	OPENINGS IN GENERAL; SHOULD HAVE A SHARE OF MAXIMUM 30 TO 50% OF THE OVERALL FAÇADE SURFACE	% ACCORDING TO THEIR ORIENTATION TO MINIMIZE SOLAR IMPACT. OPENINGS SHOULD BE LOCATED TO MINIMIZE THE IMPACT ON PRIVACY FOR NEIGHBORING PLOTS	C.5.3.2
ROOFTOP	MIN. 0.9M PARAPET; SET BACK FOR MECHANICAL EQUIPMENT MIN. 4M	SCREENING OF ALL UTILITIES VISIBLE FROM PUBLIC ROADS	C.5.3.8
MATERIALS / COLORS	70% RANGE OF LIGHT GRADATIONS OF EARTH TONES; MAX. 10% OF METAL CLADDING AND CURTAIN WALL	SYMPATHETIC TO LOCAL LANDSCAPE AND CULTURAL HERITAGE	C.5.3.3, C.5.3.4
SIGNAGE	SIGNAGE MUST BE WELL INTEGRATED WITHIN THE OVERALL ARCHITECTURAL COMPOSITION	SIGNAGE SHALL AVOID CONFLICTS WITH ADJACENT RESIDENTIAL USES AND PUBLIC REALM TREE CANOPIES	C.6.10

*Note: AUDC here refers to Aseer Urban Design Code for Private Development

Sample location

Old district



Main access corridor

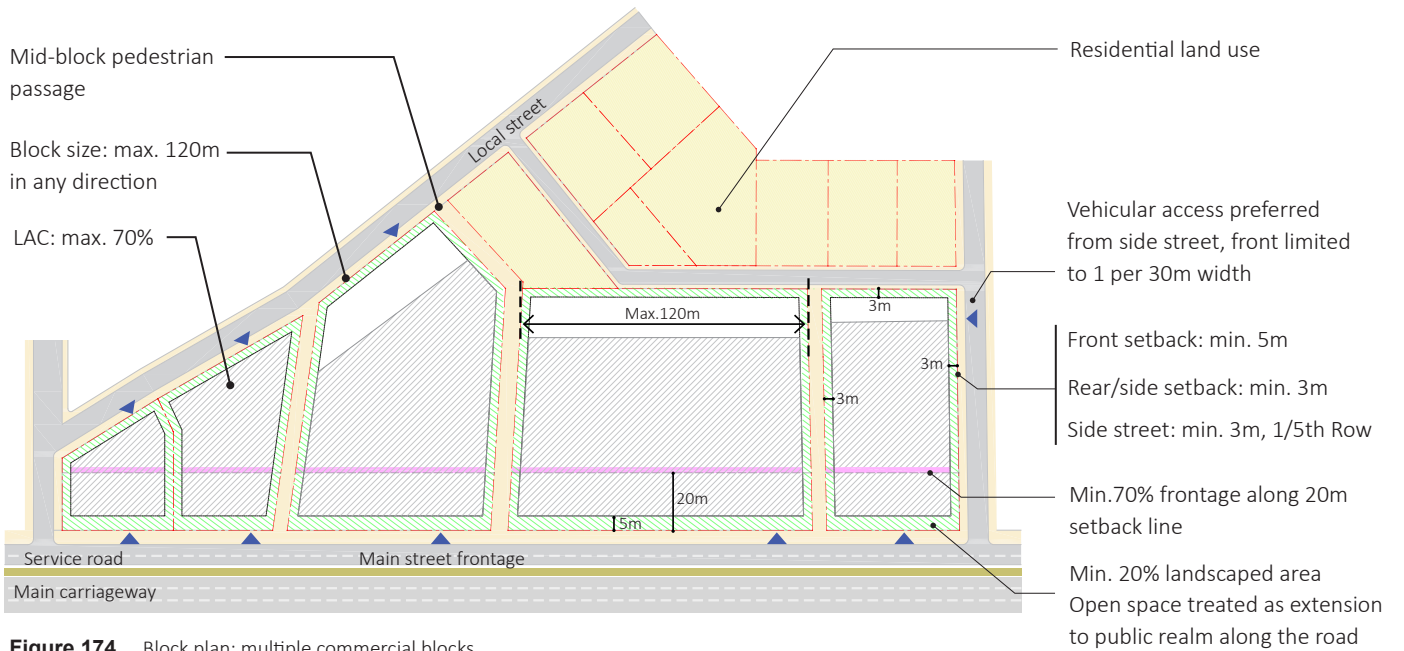


Figure 174 Block plan: multiple commercial blocks

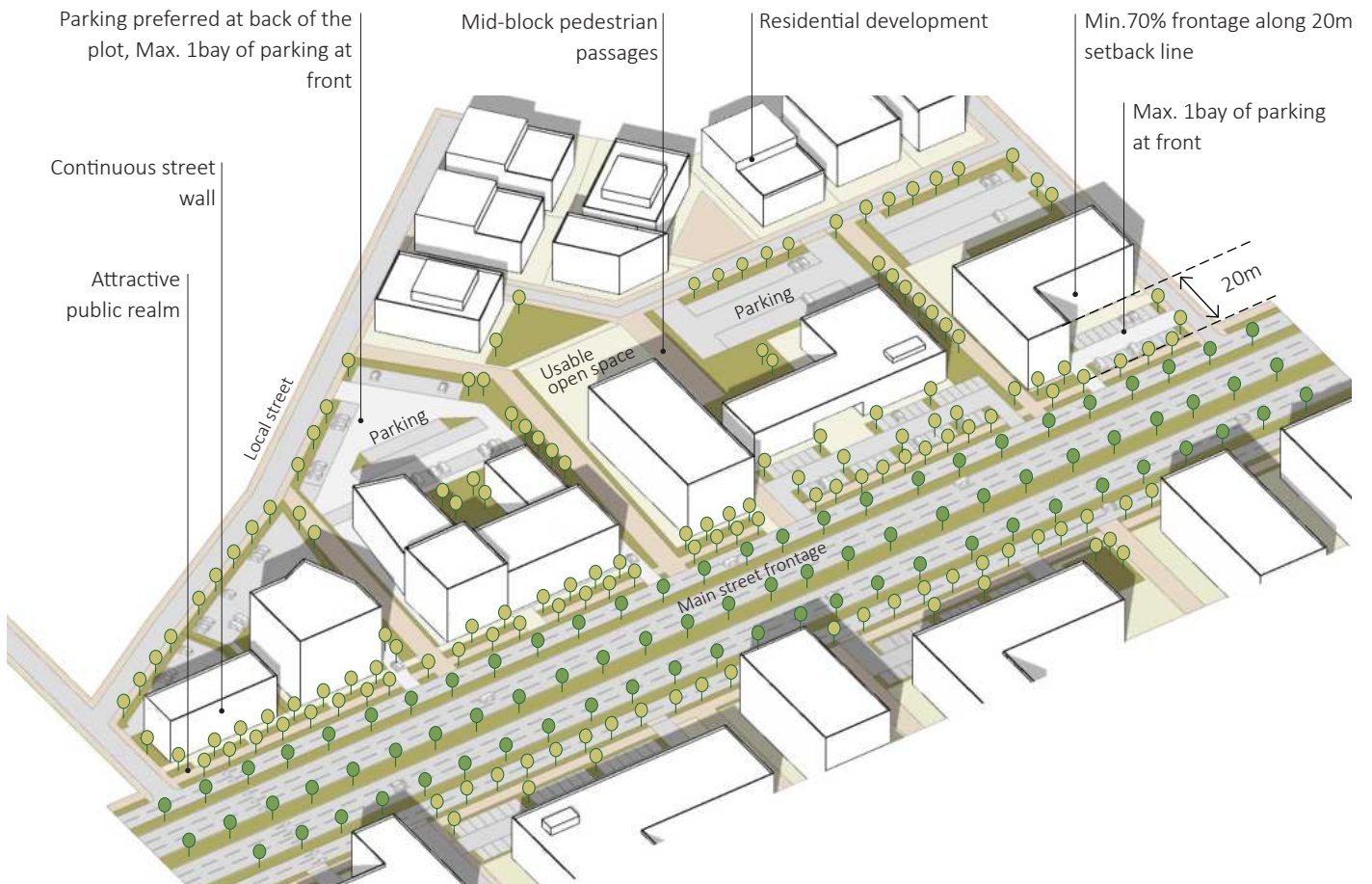


Figure 175 Block isometric: multiple commercial blocks

Sample location

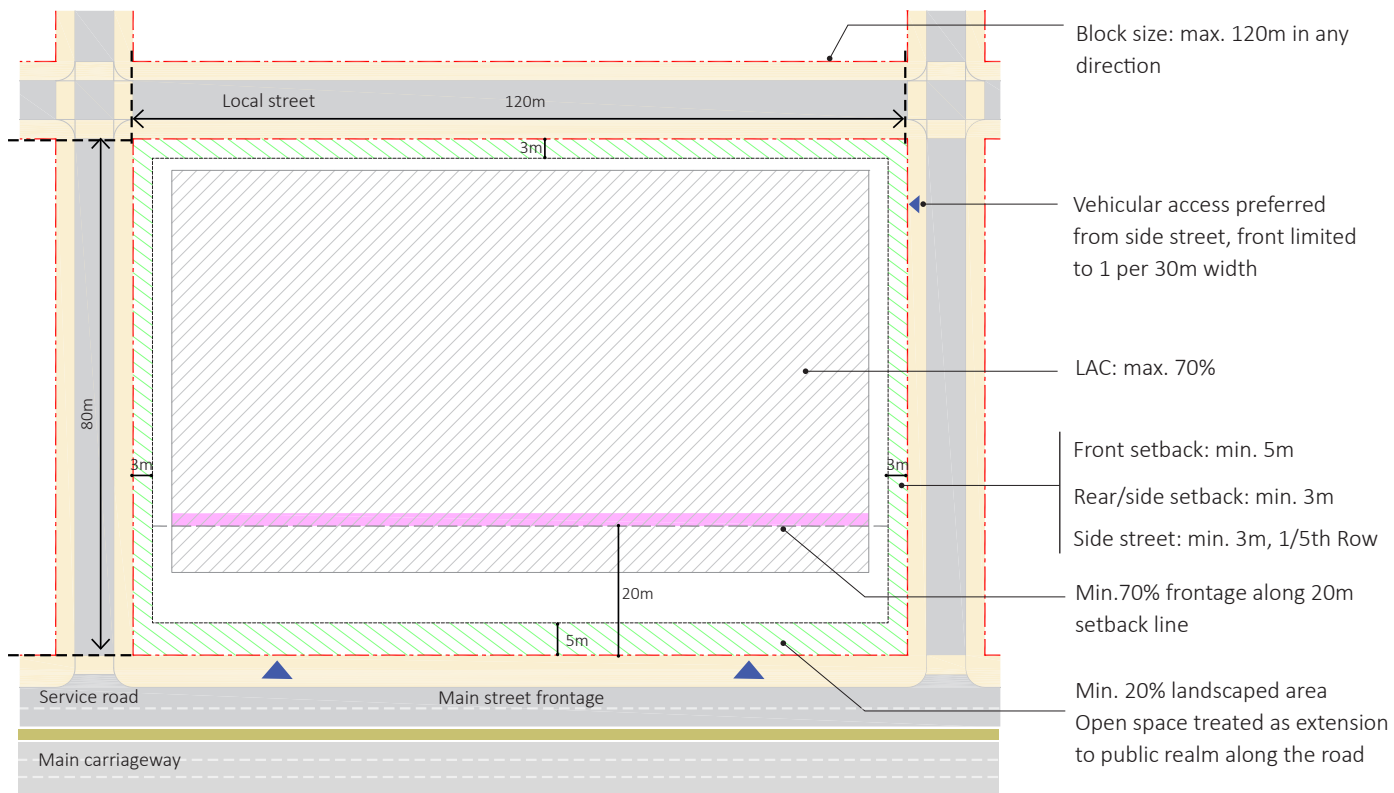


Figure 176 Typical block plan: commercial

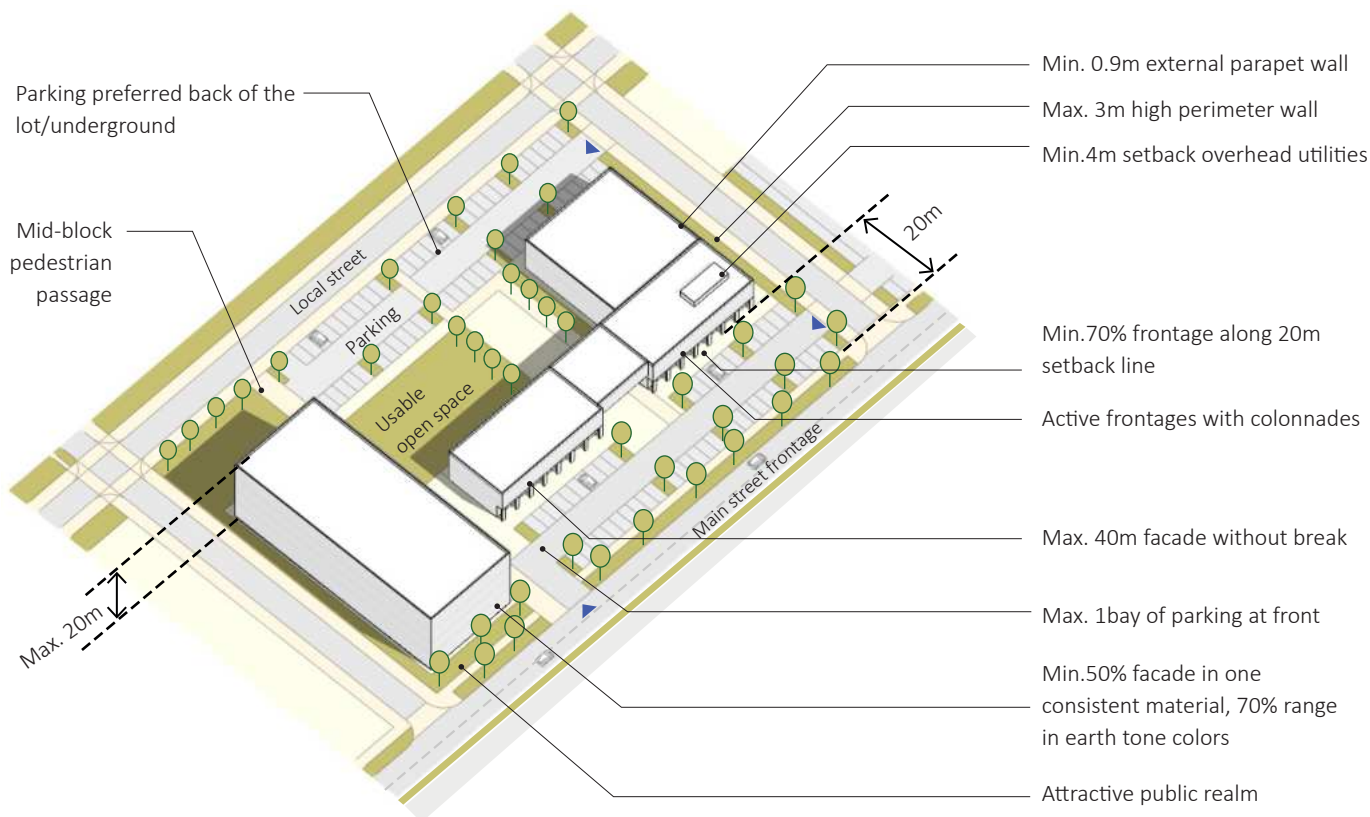


Figure 177 Block isometric: commercial

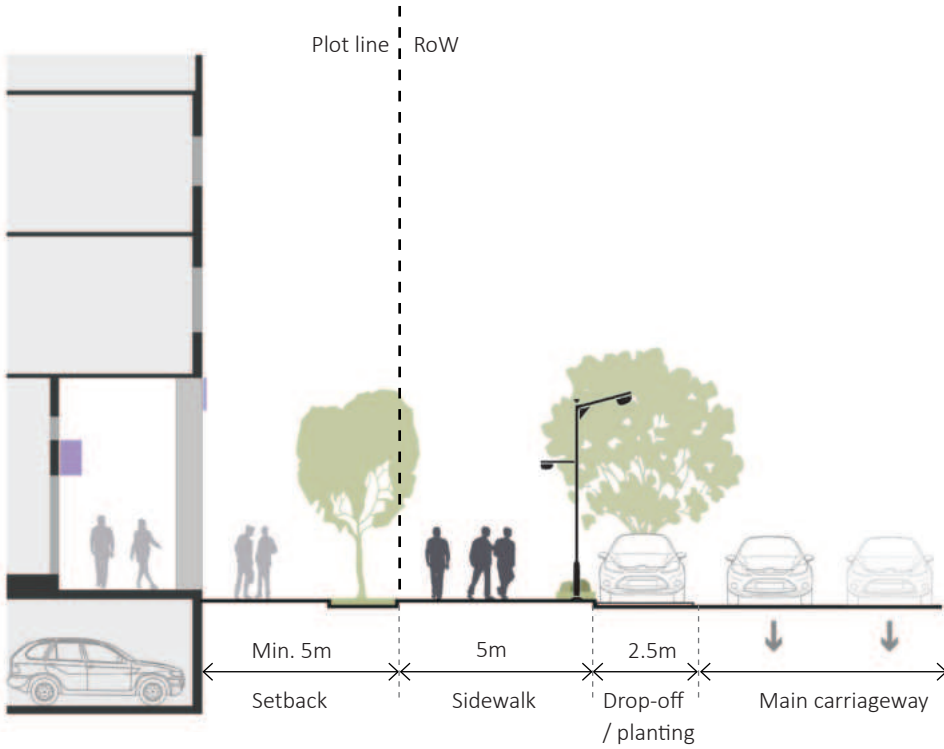


Figure 178 Commercial use edge treatment along arterial/collector corridor

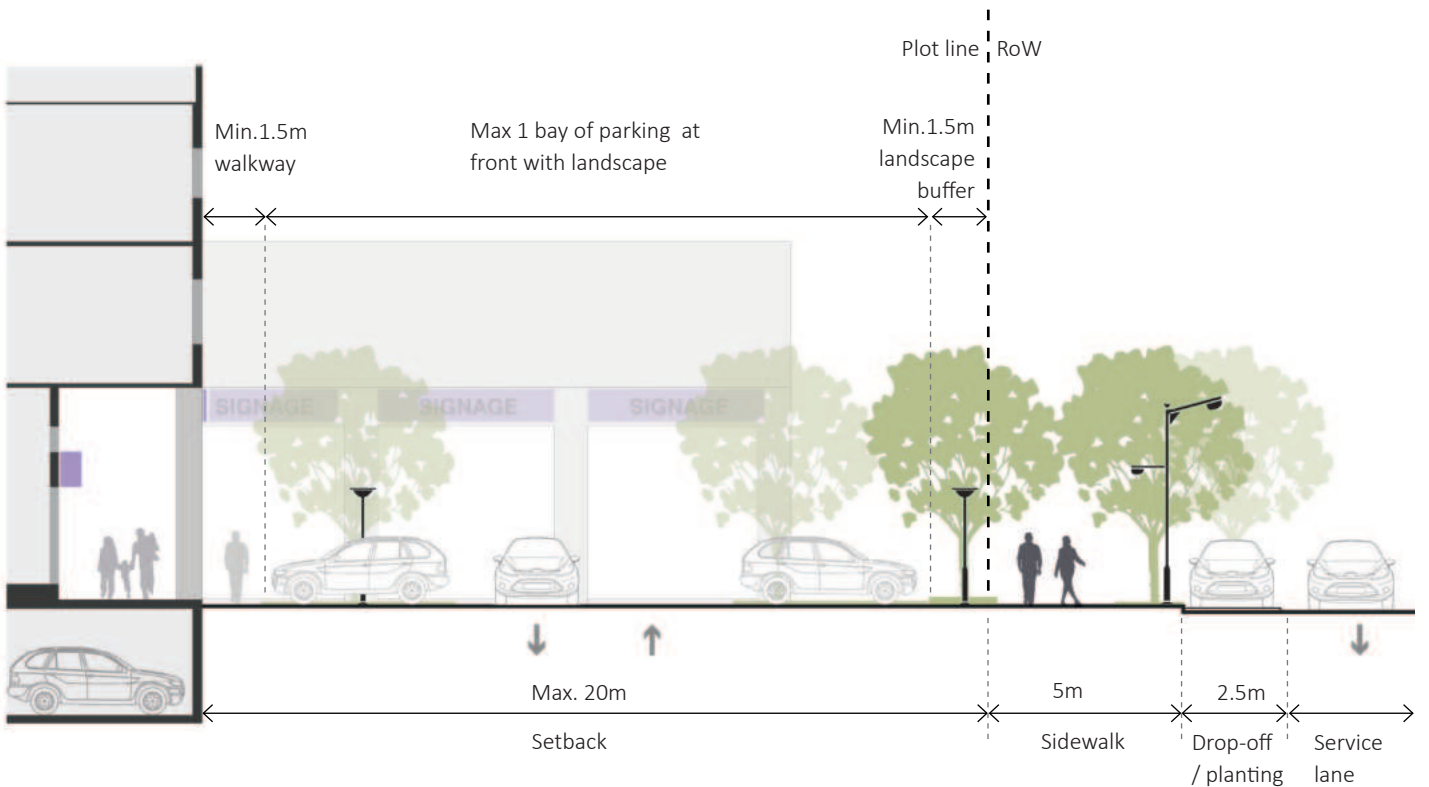


Figure 179 Commercial use edge treatment along main access corridor

Use: Industrial (Corridor)

INDUSTRIAL / LIGHT INDUSTRIAL / MANUFACTURING
LOCATION (URBAN CHARACTER): Old District, New District
LOCATION (CORRIDOR): Main Access Corridor, Arterial Corridor
TYPICAL PLOT SIZE: Varies
ALLOWABLE TYPOLOGIES: Varies

LANDSCAPE SETTINGS		REMARKS	AUDC SECTION
RIDGE LINE	MIN. 200M OFFSET FROM RIDGE LINE WITH NO LARGE STRUCTURE OR BUILDING	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.3, C.1.4
VIEW CORRIDOR	ESTABLISHED PUBLIC VIEWS TO BE PROTECTED		
SLOPE	>15% SLOPE NO LARGE STRUCTURE OR BUILDINGS	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.5
WADI ZONES	DEVELOPMENT NOT ALLOWED	MIN. 100M LANDSCAPE BUFFER TO BE PROVIDED FOR MAIN WADIS, 25M LANDSCAPE BUFFER TO BE PROVIDED FOR SUBWADIS AND NATURAL STORMWATER DRAINS.	C.1.7
HERITAGE BOUNDARY	LIMITS OF THE PLOT BOUNDARY OF HERITAGE MONUMENT/BUILDING OR BUILDING GROUP, OR AN OFFSET OF A MIN. 20M FROM THE HERITAGE BUILDING FAÇADE	INDUSTRIAL USE NOT ALLOWED WITHIN HERITAGE BOUNDARY. INDUSTRIAL USE NOT RECOMMENDED WITHIN 200M HERITAGE BUFFER / TRANSITION ZONES.	C.2.2,C.2.4, C.2.5
ROW	60M TO 20M TYPICAL	CONTINUOUS AND ACCESSIBLE SIDEWALKS WITH LANDSCAPED AREA AND FLEX. ZONE	C.3.3
PUBLIC REALM	MIN. 5M SIDEWALK WITH MIN. 2.5M LANDSCAPED FLEX. ZONE AND LANDSCAPE BUFFER		C.3.4
PERIMETER WALLS / FENCES	TYPICALLY 3M IN HEIGHT FROM PUBLIC STREET/GROUND LEVEL	MIN. 3M WIDE LANDSCAPED BUFFER ALONG PERIMETER WALL ALONG PUBLIC FRONTAGES	C.5.3.6
OPEN SPACE	MIN 10% LANDSCAPED AREA	TREATED AS AN EXTENSION TO PUBLIC REALM, TO FORM AN ATTRACTIVE STREET FRONT	C.5.2.3
BUFFER	MIN. 100M LANDSCAPED BUFFER BETWEEN L HEAVY INDUSTRIAL USE AND NATURAL AREAS; MIN. 30M BUFFER BETWEEN LIGHT INDUSTRIAL AND NATURAL AREAS	VACANT PLOT: VEGETATION BUFFER OR HOARDING REQUIRED	C.5.3.9

BUILDING ENVELOPE		REMARKS	AUDC SECTION
URBAN BLOCK	MAX. 120M ANY DIRECTION WITHOUT INTERRUPTION	LARGER BLOCK ALLOWED WITH MIDBLOCK PEDESTRIAN/VEHICULAR PASSAGE WHEN POSSIBLE	C.5.2.2
ALLOWABLE USES	INDUSTRIAL / LIGHT INDUSTRIAL / MANUFACTURING	UTILITARIAN USES TO BE LOCATED AT THE BACK OF THE LOT AWAY FROM PUBLIC FRONTAGE AND VIEWS	C.5.3.7
FLOORPLATE	N/A		
STRUCTURE HEIGHT	N/A		
NUMBER OF FLOORS	MAX. 3 LEVELS; MIN. FLOOR TO FLOOR 3.2M		
LAC	MAX. 50%		
SET BACK			
FRONT	MIN. 10M	LANDSCAPED; INTEGRATED WITH PUBLIC REALM; UNIVERSALLY ACCESSIBLE	
LEFT AND RIGHT SIDES, SIDE STREETS	MIN. 5M	MIN. 3M LANDSCAPED BUFFER	
BACK SIDE	MIN. 5M	MIN. 3M LANDSCAPED BUFFER	
STREETWALL	MAIN FRONTAGE: MIN. 50% ALONG 20M SETBACK LINE; FOR PLOTS > 5000 SQM - MIN. 30% ALONG 20M SETBACK LINE		C.5.2.5
PARKING	2 SPACES EACH 100 SQM OF GFA	INTEGRATED IN DEVELOPMENT OR AT THE BACK OF THE PLOT; FRONT OF THE PLOT LIMITED TO 1 BAY LANDSCAPED,PARKING LOT MAX. 70% OF OPEN SPACE	C.5.2.4
ACCESS	MAX. 1 VEHICULAR ENTRY FOR PLOTS UP TO 30M WIDE, FOR LARGER PLOTS, MAX. 1 VEHICLE ENTRY FOR EVERY 50M OF MAIN ROAD FRONTAGE		C.5.2.4

ARCHITECTURE		REMARKS	AUDC SECTION
FAÇADE	MAX. 60M LENGTH WITHOUT BREAK ALONG PUBLIC FRONTAGES. MIN. 50% OF FAÇADE TREATMENT WITH ONE CONSISTENT MATERIAL	INTEGRAL TO ALL PUBLIC FAÇADES; BREAKS: MIN.1.5 M IN DEPTH AND 3 M IN WIDTH, FOR THE ENTIRE HEIGHT OF THE FAÇADE; PURELY UTILITARIAN FAÇADES SHALL BE AVOIDED ALONG MAIN FRONTAGE	C.5.3.1
OPENINGS	IN GENERAL, SHOULD HAVE A SHARE OF MAXIMUM 30 TO 50% OF THE OVERALL FAÇADE SURFACE	% ACCORDING TO THEIR ORIENTATION TO MINIMIZE SOLAR IMPACT. OPENINGS SHOULD BE LOCATED TO MINIMIZE THE IMPACT ON PRIVACY FOR NEIGHBORING PLOTS	C.5.3.2
ROOFTOP	MIN. 0,9M PARAPET; SET BACK FOR MECHANICAL EQUIPMENT MIN. 4M	SCREENING OF ALL UTILITIES VISIBLE FROM PUBLIC ROADS	C.5.3.8
MATERIALS / COLORS	70% RANGE OF LIGHT GRADATIONS OF EARTH TONES; MAX. 10% FAÇADE SURFACE OF METAL CLADDING AND CURTAIN WALL	SYMPATHETIC TO LANDSCAPE AND CULTURAL HERITAGE	C.5.3.3, C.5.3.4
SIGNAGE	SIGNAGE MUST BE WELL INTEGRATED WITHIN THE OVERALL ARCHITECTURAL COMPOSITION	SIGNAGE SHALL AVOID CONFLICTS WITH ADJACENT RESIDENTIAL USES AND PUBLIC REALM TREE CANOPIES	C.6.10

*Note: AUDC here refers to Aseer Urban Design Code for Private Development

Sample location

New district



Main access corridor



Arterial corridor

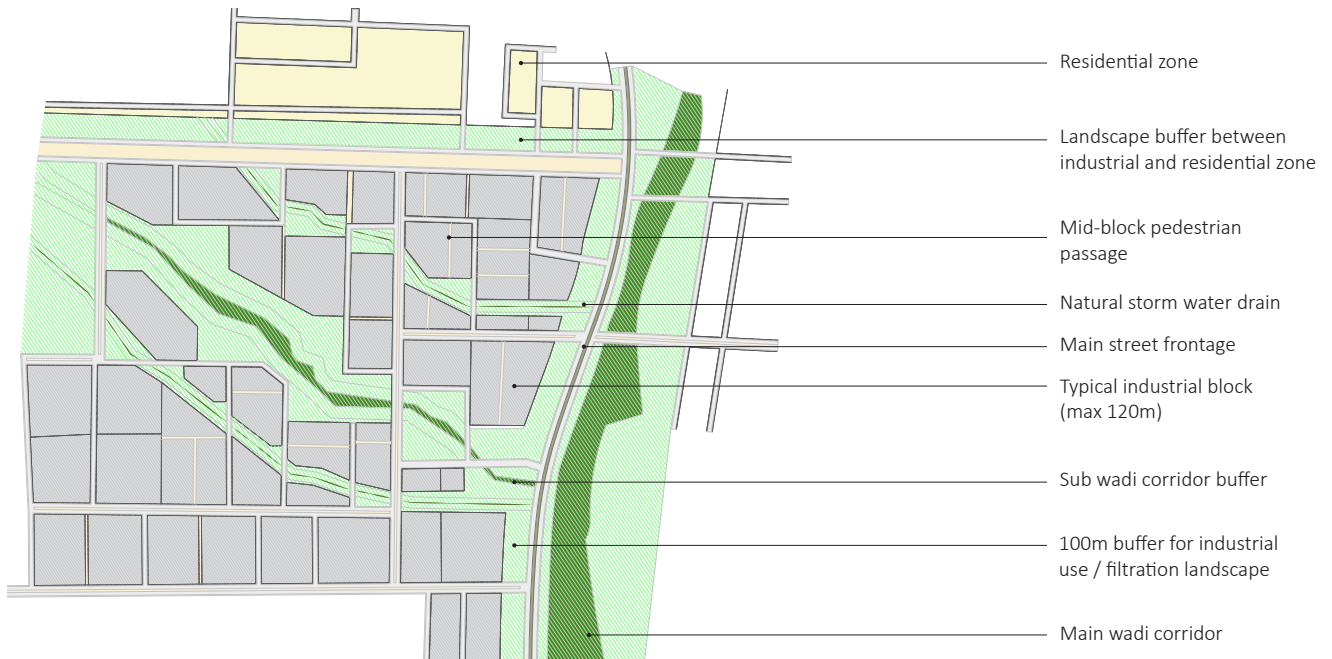
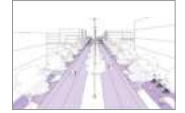
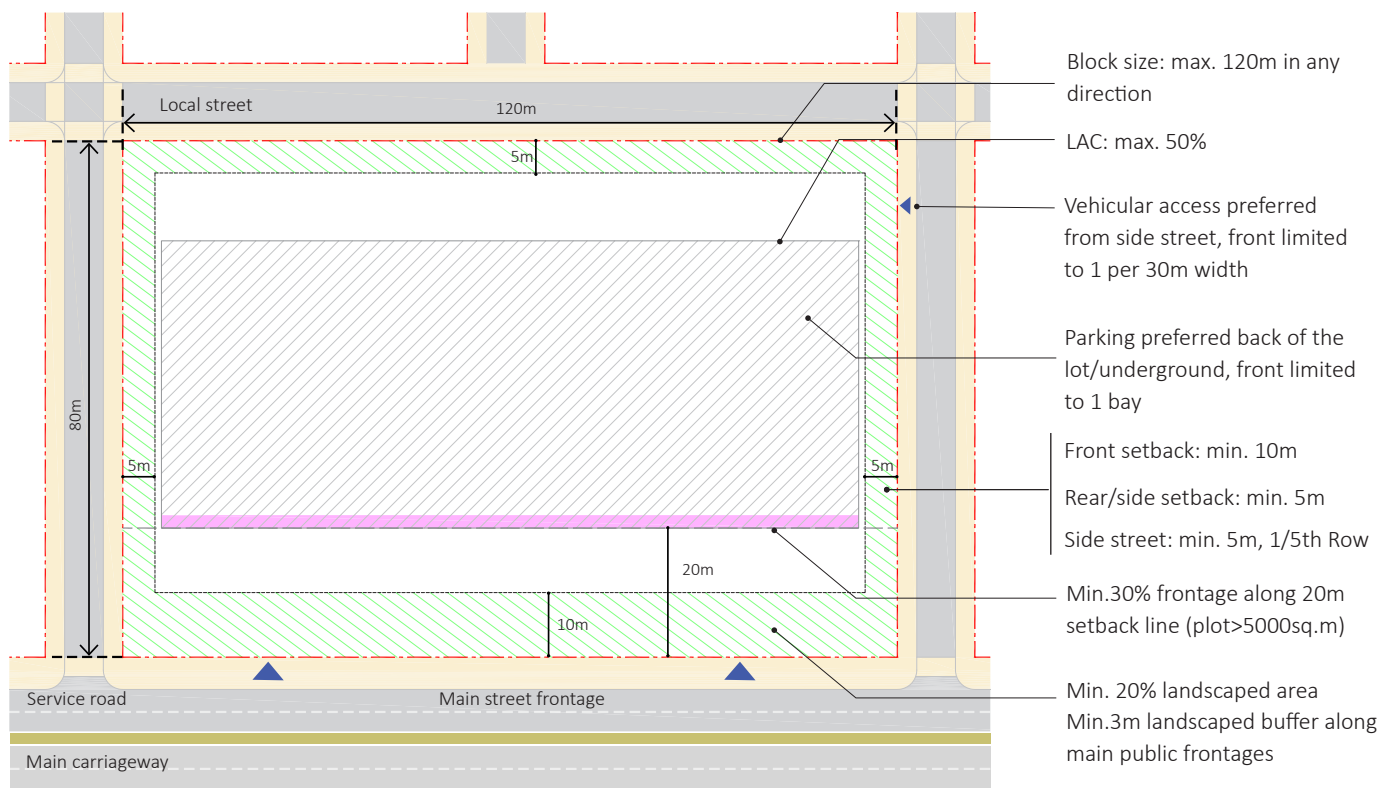
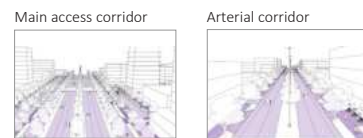


Figure 180 Block plan: light industrial / manufacturing zone



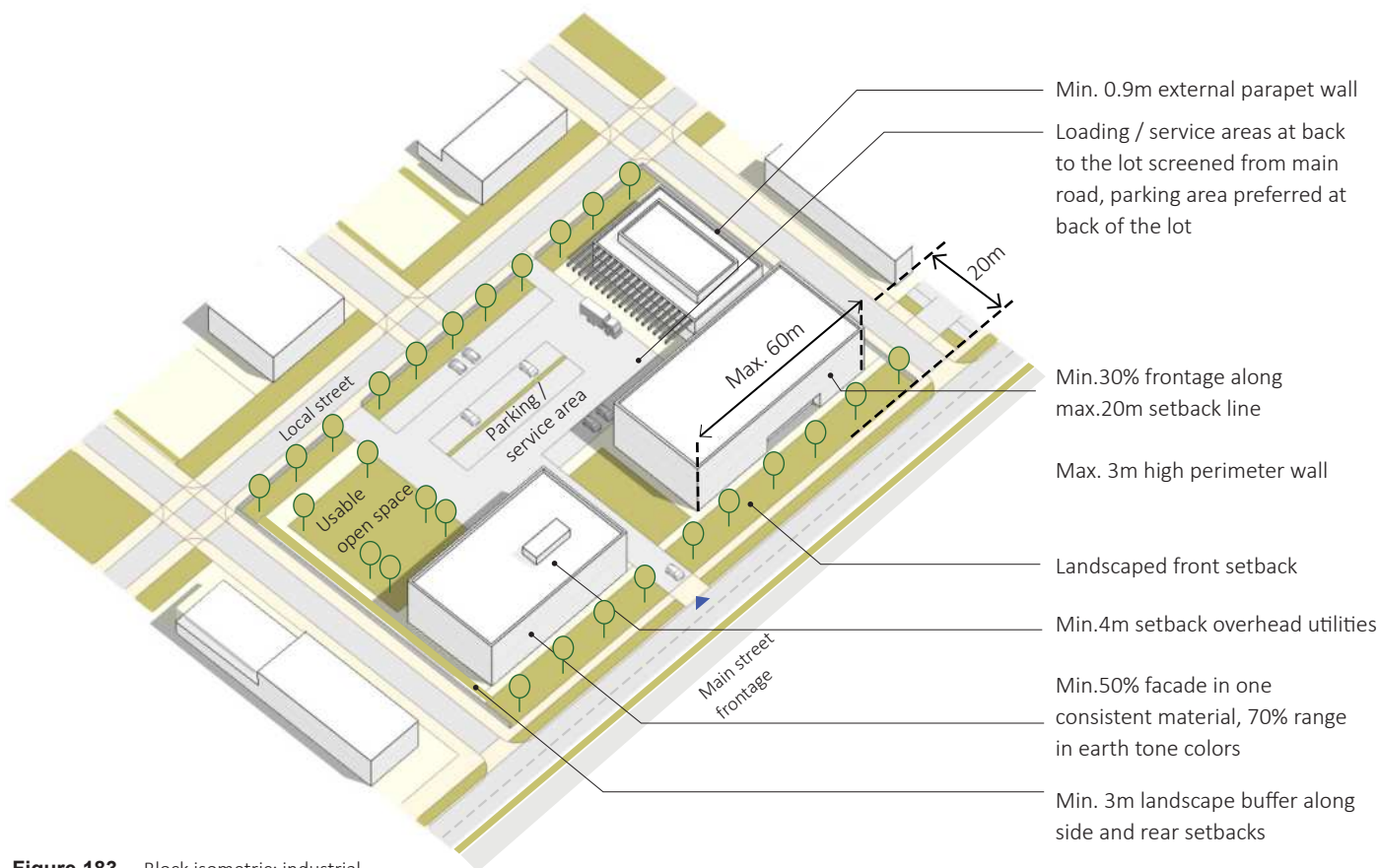
Figure 181 Block isometric: light industrial / manufacturing zone

Sample location



- Block size: max. 120m in any direction
- LAC: max. 50%
- Vehicular access preferred from side street, front limited to 1 per 30m width
- Parking preferred back of the lot/underground, front limited to 1 bay
- Front setback: min. 10m
- Rear/side setback: min. 5m
- Side street: min. 5m, 1/5th Row
- Min.30% frontage along 20m setback line (plot>5000sq.m)
- Min. 20% landscaped area
- Min.3m landscaped buffer along main public frontages

Figure 182 Typical block plan: industrial



- Min. 0.9m external parapet wall
- Loading / service areas at back to the lot screened from main road, parking area preferred at back of the lot
- Min.30% frontage along max.20m setback line
- Max. 3m high perimeter wall
- Landscaped front setback
- Min.4m setback overhead utilities
- Min.50% facade in one consistent material, 70% range in earth tone colors
- Min. 3m landscape buffer along side and rear setbacks

Figure 183 Block isometric: industrial

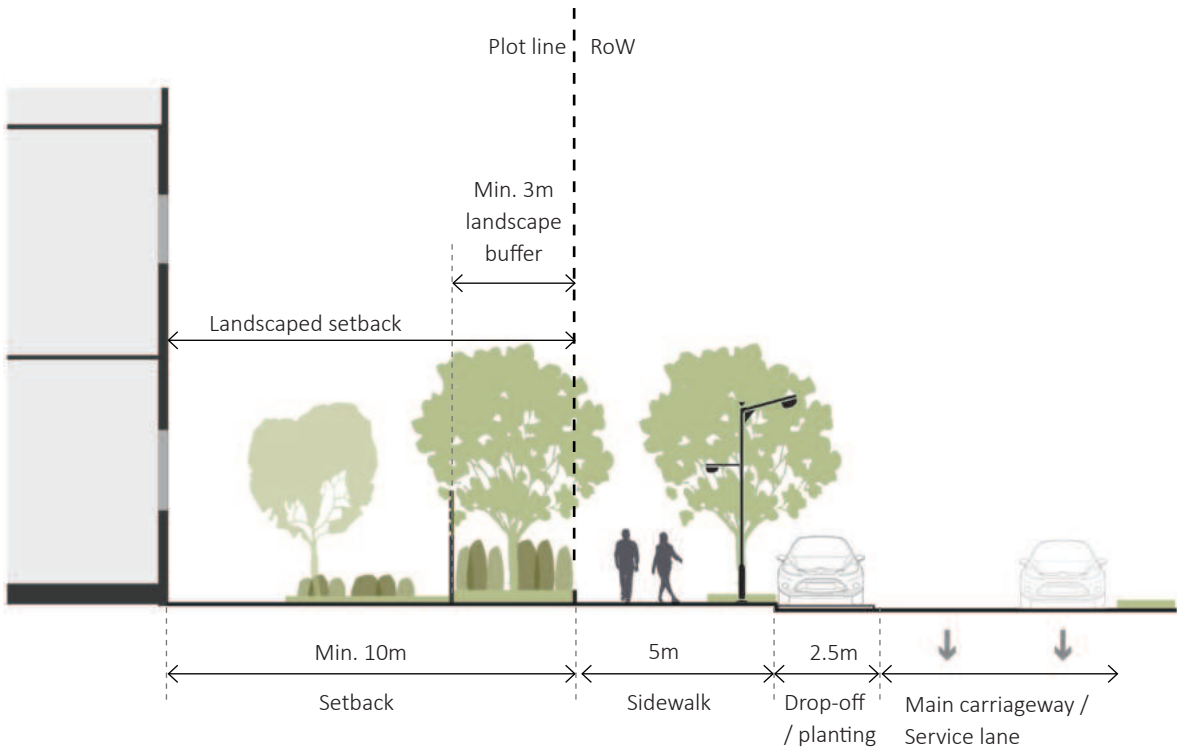


Figure 184 Industrial use street edge treatment

Use: Civic (Urban Center)

CIVIC / GOVERNMENTAL / SOCIAL / INSTITUTIONAL / INFRASTRUCTURE-RELATED ACTIVITIES
LOCATION (URBAN CHARACTER): <i>Varies</i>
LOCATION (CORRIDOR): <i>Varies</i>
TYPICAL PLOT SIZE: <i>Varies</i>
ALLOWABLE TYPOLOGIES: <i>Varies</i>

LANDSCAPE SETTINGS		REMARKS	AUDC SECTION
RIDGE LINE VIEW CORRIDOR	MIN. 50M OFFSET FROM RIDGE LINE WITH NO LARGE STRUCTURE OR BUILDING ESTABLISHED PUBLIC VIEWS TO BE PROTECTED	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.3, C.1.4
SLOPE	> 30% SLOPE NO LARGE STRUCTURE OR BUILDINGS	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.5
WADI ZONES	DEVELOPMENT ALLOWED ONLY IN WADI DEVELOPMENT ZONE		C.1.7
HERITAGE BOUNDARY	LIMITS OF THE PLOT BOUNDARY OF HERITAGE MONUMENT/BUILDING OR BUILDING GROUP, OR AN OFFSET OF A MIN. 20M FROM THE HERITAGE BUILDING FAÇADE	PREFERRED WITH NO DEVELOPMENT	C.2.2,C.2.4
ROW	VARIABLES	CONTINUOUS AND ACCESSIBLE SIDEWALKS WITH LANDSCAPED AREA AND FLEX. ZONE	C.3.3
PUBLIC REALM	MIN. 5M SIDEWALK WITH LANDSCAPED FLEX. ZONE	ACTIVE FRONTAGES AT GROUND FLOOR PROMOTED	C.3.4
PERIMETER WALLS / FENCES	MAX 1.5M IN HEIGHT FROM PUBLIC STREET/GROUND LEVEL	MAX 50% PERIMETER WALL ALONG MAIN FRONTAGE	C.5.3.6
OPEN SPACE	MIN 20% LANDSCAPED AREA	TREATED AS AN EXTENSION TO PUBLIC REALM, TO FORM AN ATTRACTIVE STREET FRONT ALONG MAIN FRONTAGE	C.5.2.3
BUFFER	MIN. 30M BUFFER BETWEEN LANDUSE AND NATURAL AREAS	VACANT PLOT: VEGETATION BUFFER OR HOARDING REQUIRED	C.5.3.9

BUILDING ENVELOPE		REMARKS	AUDC SECTION
URBAN BLOCK	MAX. 120M ANY DIRECTION	LARGER BLOCK ALLOWED WITH MIDBLOCK PEDESTRIAN/VEHICULAR PASSAGE	C.5.2.2
ALLOWABLE USES	CIVIC / GOVERNMENTAL / SOCIAL / INSTITUTIONAL	UTILITARIAN USES TO BE LOCATED AT THE BACK OF THE LOT AWAY FROM PUBLIC FRONTAGE	C.5.3.7
FLOORPLATE	MAX. 40M LENGTH WITHOUT BREAK ALONG PUBLIC FRONTAGES; MULTIPLE STRUCTURES OK	BREAKS: MIN. 1.5 M IN DEPTH AND 3 M IN WIDTH, FOR THE ENTIRE HEIGHT OF THE FAÇADE	C.5.2.5
STRUCTURE HEIGHT	MAX. 18M	TALL BUILDINGS OK ONLY AS LANDMARKS AND WITH ADDITIONAL DESIGN SCRUTINY; PODIUM + TOWER ZONES APPLY	
NUMBER OF FLOORS	MAX. 4.5 LEVELS; MIN. FLOOR TO FLOOR 3.2M		
LAC	MAX. 70%		
SET BACK			
FRONT	MIN. 10M FOR MAIN ACCESS CORRIDORS AND ARTERIAL STREET, PREVAILING CONSISTENT SETBACK /MIN. 3M FOR COLLECTOR AND LOCAL STREET	LANDSCAPED; INTEGRATED WITH PUBLIC REALM; UNIVERSALLY ACCESSIBLE	
LEFT AND RIGHT SIDES, SIDE STREETS	MIN. 3M , 1/5TH OF ROW WITH 3M MIN		
BACK SIDE	MIN. 3M		
STREETWALL	MIN. 70% ALONG MAIN FRONTAGE; MIN. 30% FOR PLOTS >5000SQ.M	WITH ACTIVE FRONTAGE; COLONADES	C.5.2.5
PARKING	MAX. 1 SPACE EACH 75 SQM OF GFA	INTEGRATED IN DEVELOPMENT, UNDERGROUND, NO FRONT OF THE PLOT; ADDITIONAL SHARED DISTRICT PARKING OK; MAX. 70% OF OPEN SPACE	C.5.2.4
ACCESS	MAX. 1 VEHICULAR ENTRY FOR PLOTS UP TO 30M WIDE, FOR LARGER PLOTS, MAX. 1 VEHICLE ENTRY FOR EVERY 50M OF MAIN ROAD FRONTAGE		C.5.2.4

ARCHITECTURE		REMARKS	AUDC SECTION
FAÇADE	MAX. 40M LENGTH WITHOUT BREAK ALONG PUBLIC FRONTAGES. MIN. 50% OF FAÇADE TREATMENT WITH ONE CONSISTENT MATERIAL	INTEGRAL TO ALL PUBLIC FAÇADES; BREAKS: MIN. 1.5 M IN DEPTH AND 3 M IN WIDTH, FOR THE ENTIRE HEIGHT OF THE FAÇADE	C.5.3.1
OPENINGS	IN GENERAL, SHOULD HAVE A SHARE OF MAXIMUM 30 TO 50% OF THE OVERALL FAÇADE SURFACE	% ACCORDING TO THEIR ORIENTATION TO MINIMIZE SOLAR IMPACT. OPENINGS SHOULD BE LOCATED TO MINIMIZE THE IMPACT ON PRIVACY FOR NEIGHBORING PLOTS	C.5.3.2
ROOFTOP	MIN. 0,9M PARAPET; SET BACK FOR MECHANICAL EQUIPMENT MIN. 4M	SCREENING OF ALL UTILITIES VISIBLE FROM PUBLIC ROADS	C.5.3.8
MATERIALS / COLORS	70% RANGE OF LIGHT GRADATIONS OF EARTH TONES; MAX. 10% OF METAL CLADDING AND CURTAIN WALL OF FAÇADE SURFACE	SYMPATHETIC TO LANDSCAPE AND CULTURAL HERITAGE; MUST ADHERE TO ASEER CONTEXTUAL ARCHITECTURE GUIDELINE PRINCIPLES	C.5.3.3, C.5.3.4
SIGNAGE	SIGNAGE MUST BE WELL INTEGRATED WITHIN OVERALL ARCHITECTURAL COMPOSITION	SIGNAGE SHALL AVOID CONFLICTS WITH ADJACENT RESIDENTIAL USES AND PUBLIC REALM TREE CANOPIES	C.6.10

*Note: AUDC here refers to Aseer Urban Design Code for Private Development

Sample location

Urban Center



Arterial corridor



Collector corridor

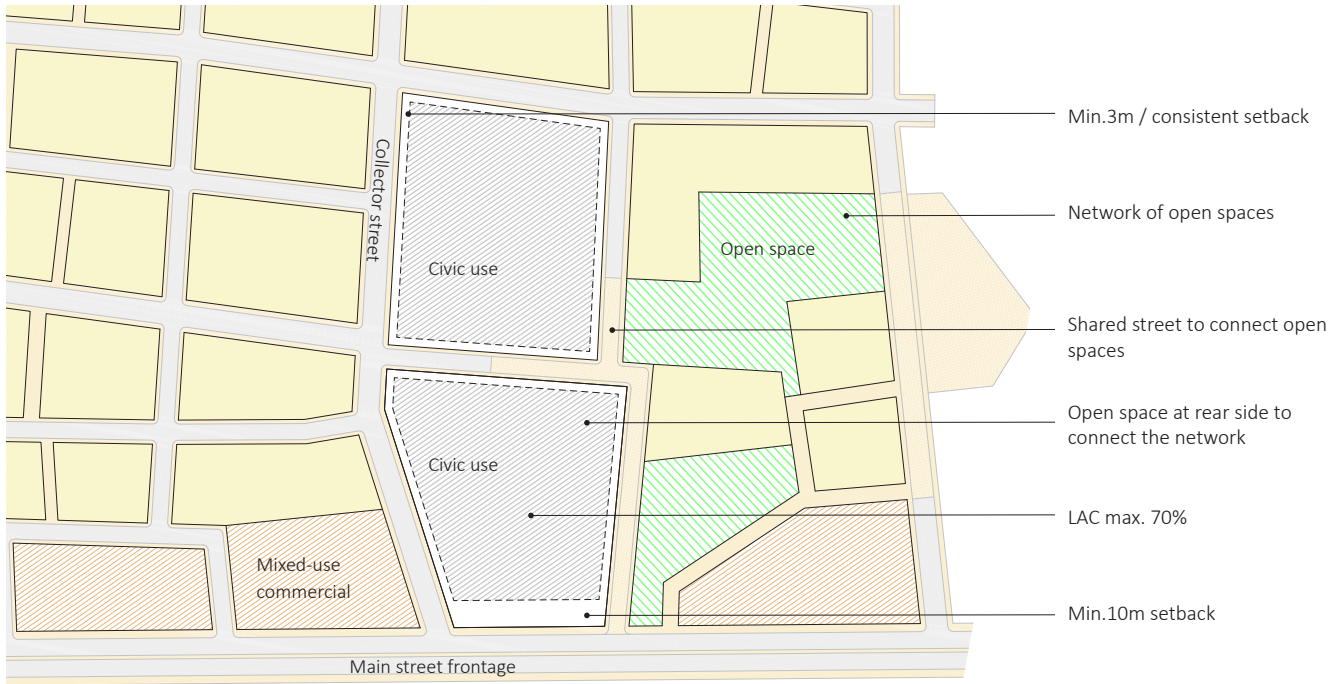


Figure 185 Block plan: civic use along arterial corridor and residential neighborhood

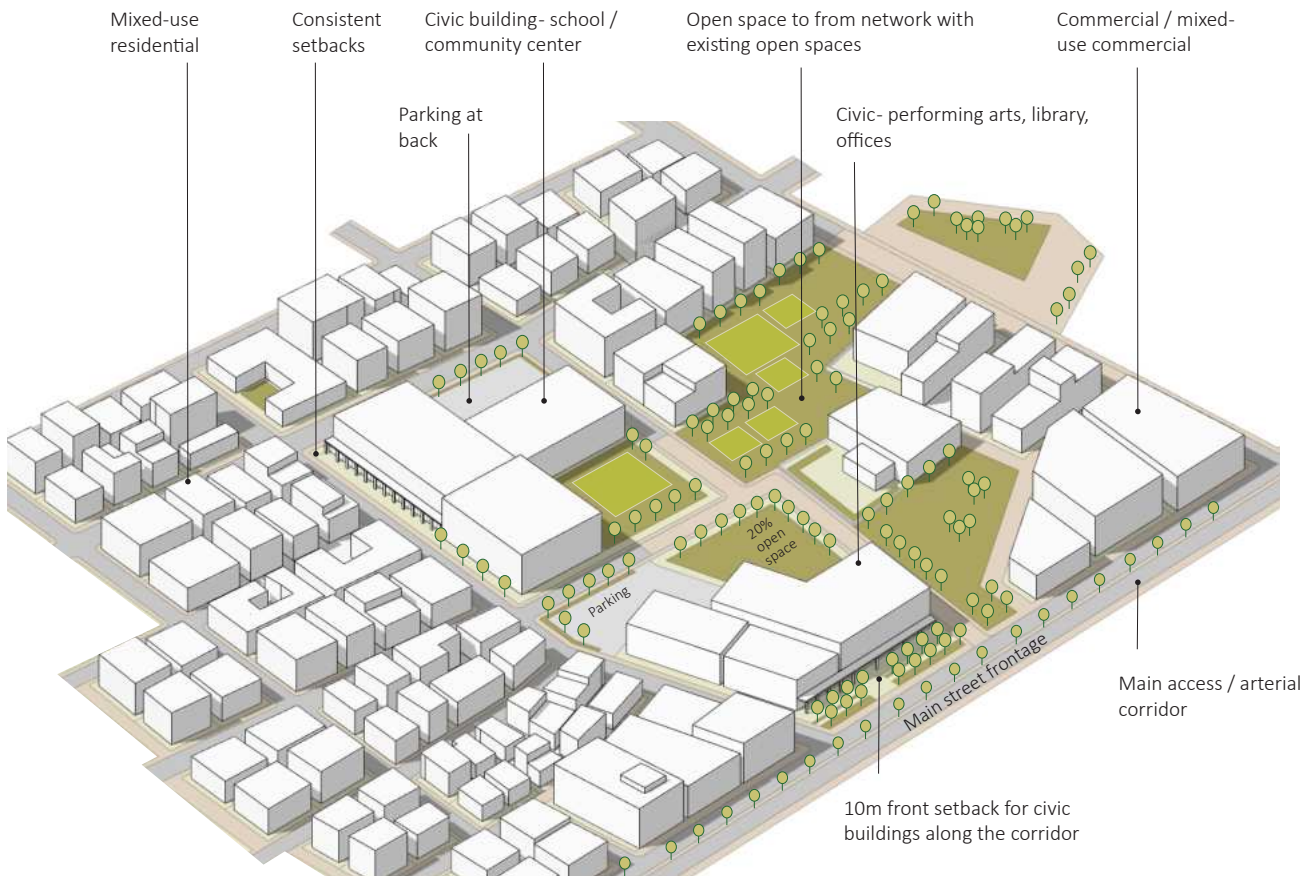
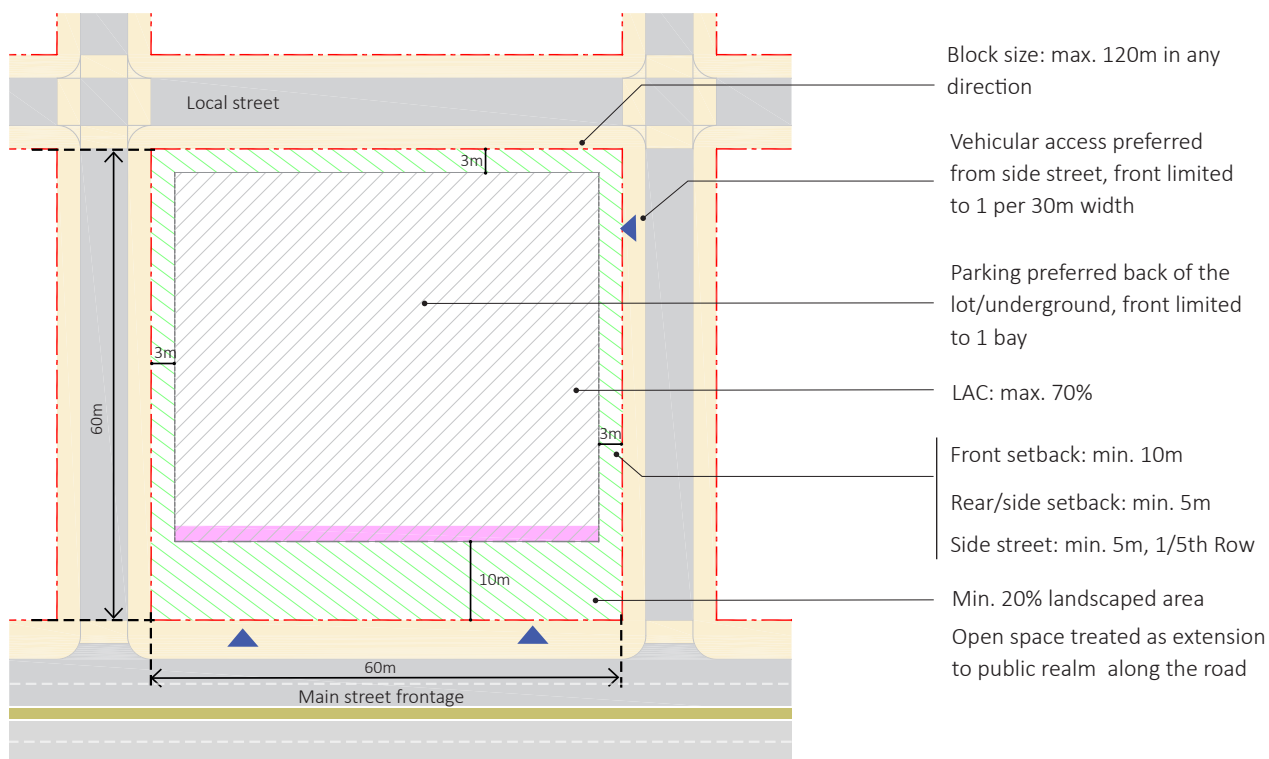
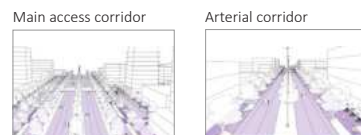


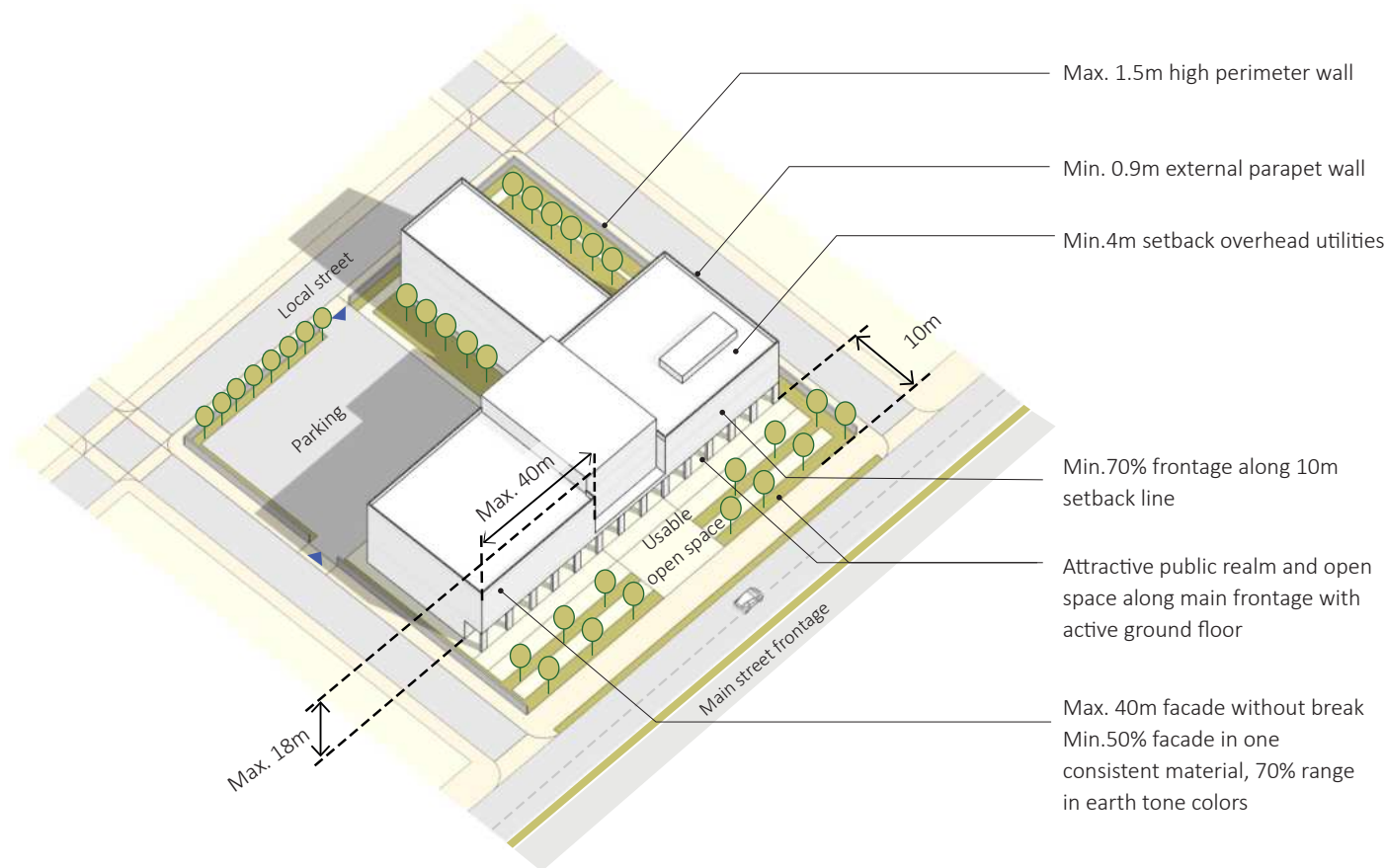
Figure 186 Block isometric: civic use along arterial corridor and residential neighborhood

Sample location



- Block size: max. 120m in any direction
- Vehicular access preferred from side street, front limited to 1 per 30m width
- Parking preferred back of the lot/underground, front limited to 1 bay
- LAC: max. 70%
- Front setback: min. 10m
- Rear/side setback: min. 5m
- Side street: min. 5m, 1/5th Row
- Min. 20% landscaped area
- Open space treated as extension to public realm along the road

Figure 187 Block plan: civic use



- Max. 1.5m high perimeter wall
- Min. 0.9m external parapet wall
- Min. 4m setback overhead utilities
- Min. 70% frontage along 10m setback line
- Attractive public realm and open space along main frontage with active ground floor
- Max. 40m facade without break
- Min. 50% facade in one consistent material, 70% range in earth tone colors

Figure 188 Block isometric: civic use

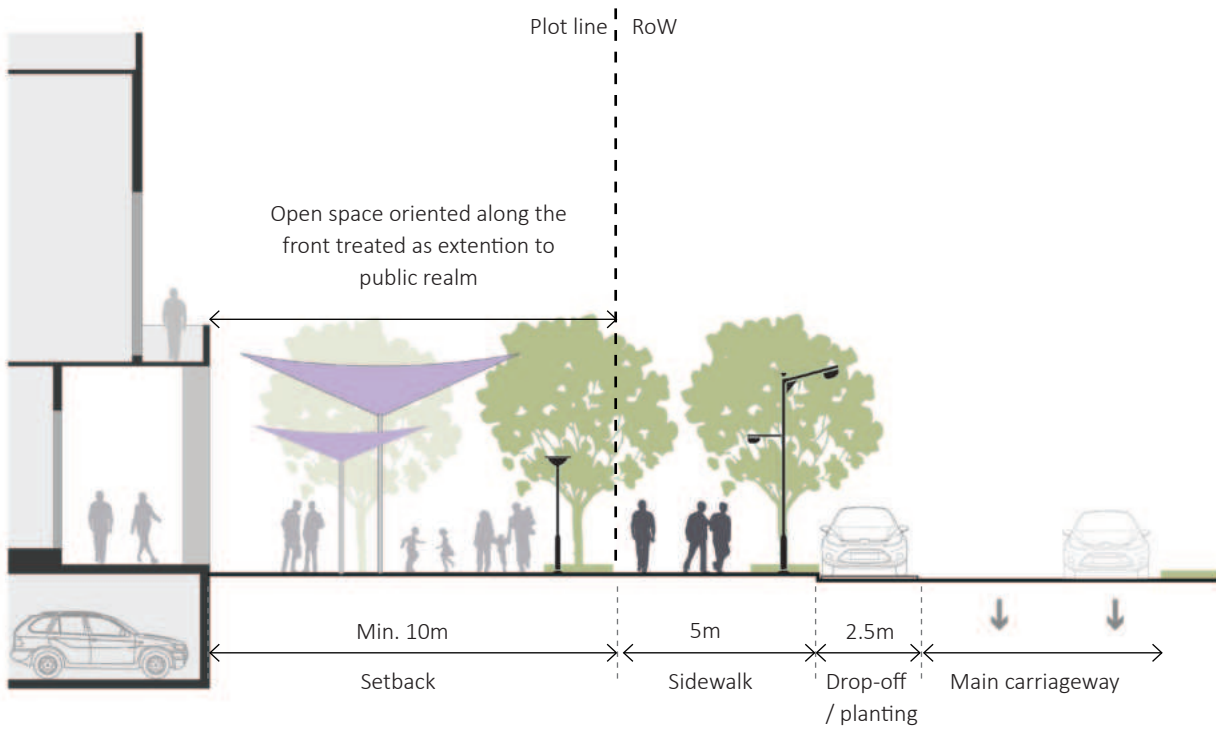


Figure 189 Civic use street edge treatment

Use: Recreational

RECREATIONAL / LEISURE ACTIVITIES
LOCATION (URBAN CHARACTER): <i>Varies</i>
LOCATION (CORRIDOR): <i>Varies</i>
TYPICAL PLOT SIZE: <i>Varies</i>
ALLOWABLE TYPOLOGIES: <i>N/A</i>

LANDSCAPE SETTINGS	REMARKS	AUDC SECTION	
RIDGE LINE	MIN. 200M OFFSET FROM RIDGE LINE WITH NO LARGE STRUCTURE OR BUILDING	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.3, C.1.4
VIEW CORRIDOR	ESTABLISHED PUBLIC VIEWS TO BE PROTECTED		
SLOPE	> 15% SLOPE NO LARGE STRUCTURE OR BUILDINGS	OTHER OPEN SPACE USES MAY BE LOCATED ON SLOPES <30%	C.1.5
WADI ZONES	DEVELOPMENT ALLOWED ONLY IN WADI DEVELOPMENT ZONE	OTHER OPEN SPACE USES MAY BE ACCEPTED WITHIN WADI CORRIDOR	C.1.7
HERITAGE BOUNDARY	200M TYPICAL, LIMITS OF THE PLOT BOUNDARY OF HERITAGE MONUMENT/BUILDING OR BUILDING GROUP, OR AN OFFSET OF A MIN. 20M FROM THE HERITAGE BUILDING FAÇADE	PREFERRED WITH NO DEVELOPMENT	C.2.2, C.2.4
ROW	VARIES	CONTINUOUS AND ACCESSIBLE PED/BIKE PATH; SHARED PATH PROMOTED	C.3.3
PUBLIC REALM	MIN. 1.5M SIDEWALK	CONTINUOUS AND ACCESSIBLE PED/BIKE PATH; CONTEXTUAL MATERIAL AND COLOR PALETTE; LAYOUT AND FUNCTIONS TO RESPOND TO FORMS AND TOPOGRAPHY OF LOCAL NATURAL AND CULTURAL LANDSCAPE	C.3.4
PERIMETER WALLS / FENCES	MAX 1.5M IN HEIGHT FROM PUBLIC STREET/GROUND LEVEL	MAX 50% PERIMETER WALL ALONG MAIN FRONTAGE	C.5.3.6
OPEN SPACE	MIN 20% LANDSCAPED AREA		C.5.2.3
BUFFER	MIN. 30M BUFFER BETWEEN LANDUSE AND NATURAL AREAS	VACANT PLOT: VEGETATION BUFFER REQUIRED	C.5.3.9

BUILDING ENVELOPE	REMARKS	AUDC SECTION	
URBAN BLOCK	IF ANY, MAX. 120M ANY DIRECTION WITHOUT INTERRUPTION	ORGANIC SHAPES RESPONDING TO NATURAL AND CULTURAL LANDSCAPE SHALL BE PROMOTED; LARGER BLOCK ALLOWED WITH MIDBLOCK PEDESTRIAN/VEHICULAR PASSAGE	C.5.2.2
ALLOWABLE USES	ANCILLARY TO OPEN SPACE, SPORTS FACILITIES AND RECREATIONAL ACTIVITIES	UTILITARIAN USES TO BE LOCATED AT THE BACK OF THE PLOT AWAY FROM PUBLIC FRONTAGE AND PUBLIC VIEWS	C.5.3.7
FLOORPLATE	MAX. 30M LENGTH ANY SIDE; MULTIPLE STRUCTURES OK	ORGANIC SHAPES RESPONDING TO NATURAL E CULTURAL LANDSCAPE SHALL BE PROMOTED	C.5.2.5
STRUCTURE HEIGHT	MAX. 10M		
NUMBER OF FLOORS	MAX. 2 LEVELS		
LAC	MAX. 30%		
SET BACK			
FRONT	MIN. 10 M FROM MAIN FRONTAGE	LANDSCAPED; INTEGRATED WITH PUBLIC REALM; UNIVERSALLY ACCESSIBLE	
LEFT AND RIGHT SIDES	MIN. 5M	MIN. 3M LANDSCAPED BUFFER	
BACK	MIN. 5M	MIN. 3M LANDSCAPED BUFFER	
STREETWALL	N/A		
PARKING	MIN. 3M LANDSCAPED BUFFER FROM PUBLIC ROADS; MAX. 30% OF TOTAL PLOT AREA	PERMEABLE SURFACE TREATMENT	C.5.2.4
ACCESS	MAX. 1 VEHICULAR ENTRY FOR PLOTS UP TO 30M WIDE, FOR LARGER PLOTS, MAX. 1 VEHICLE ENTRY FOR EVERY 50M OF MAIN ROAD FRONTAGE		C.5.2.4

ARCHITECTURE	REMARKS	AUDC SECTION	
FAÇADE	MIN. 50% OF FAÇADE TREATMENT WITH ONE CONSISTENT MATERIAL	INTEGRAL TO ALL PUBLIC FAÇADES	C.5.3.1
OPENINGS	IN GENERAL, SHOULD HAVE A SHARE OF MAXIMUM 30 TO 50% OF THE OVERALL FAÇADE SURFACE	% ACCORDING TO THEIR ORIENTATION TO MINIMIZE SOLAR IMPACT. OPENINGS SHOULD BE LOCATED TO MINIMIZE THE IMPACT ON PRIVACY FOR NEIGHBORING PLOTS	C.5.3.2
ROOFTOP	MIN. 0.9M PARAPET; SET BACK FOR MECHANICAL EQUIPMENT MIN. 4M	SCREENING OF ALL UTILITIES VISIBLE FROM PUBLIC ROADS	C.5.3.8
MATERIALS / COLORS	70% RANGE OF LIGHT GRADATIONS OF LOCAL LANDSCAPE TONES; NO CURTAIN WALL; NO METAL CLADDING	SYMPATHETIC TO LANDSCAPE AND CULTURAL HERITAGE; MUST ADHERE TO ASEER CONTEXTUAL ARCHITECTURE GUIDELINE PRINCIPLES	C.5.3.3, C.5.3.4
SIGNAGE	SIGNAGE MUST BE WELL INTEGRATED WITHIN OVERALL ARCHITECTURAL COMPOSITION	SIGNAGE SHALL AVOID CONFLICTS WITH ADJACENT RESIDENTIAL USES AND PUBLIC REALM TREE CANOPIES	C.6.10

*Note: AUDC here refers to Aseer Urban Design Code for Private Development

Sample location

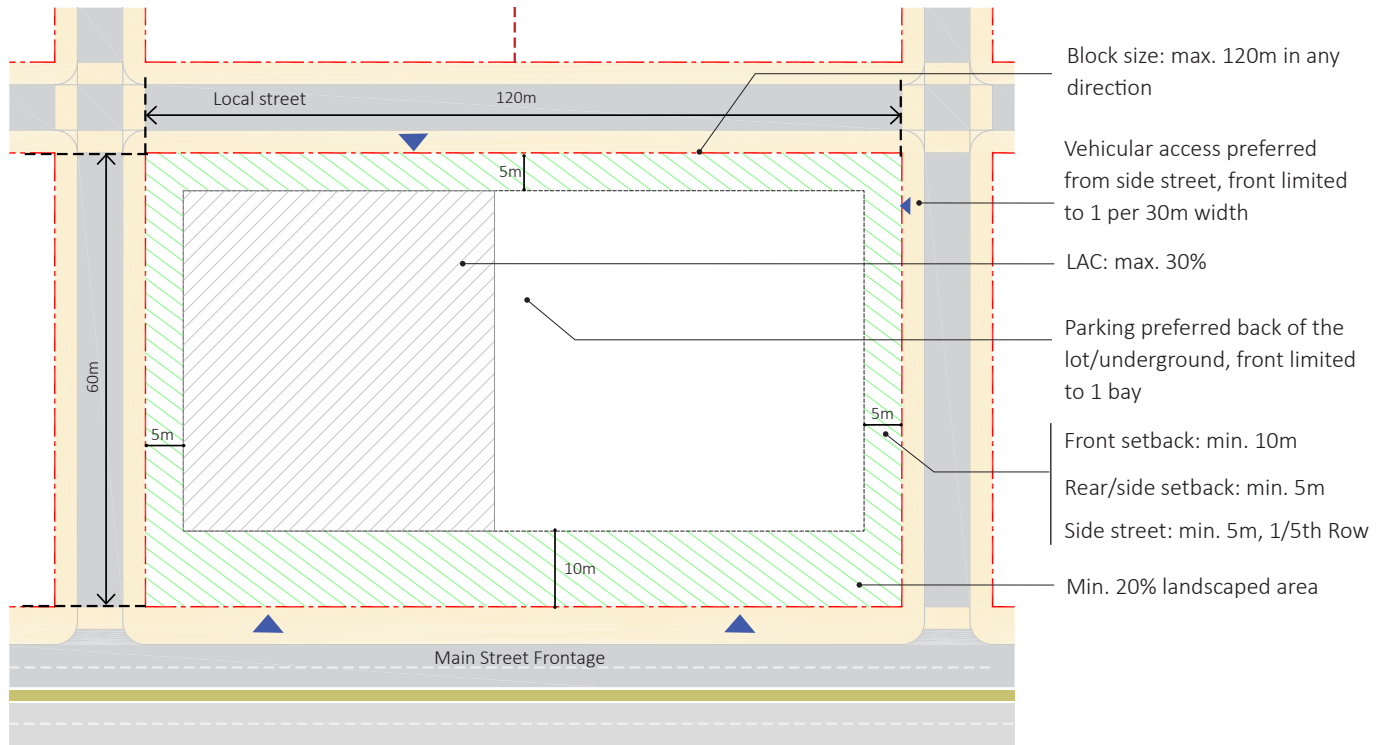
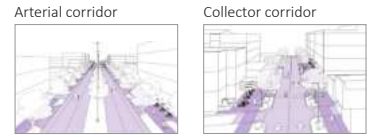


Figure 190 Block plan: recreational / leisure use

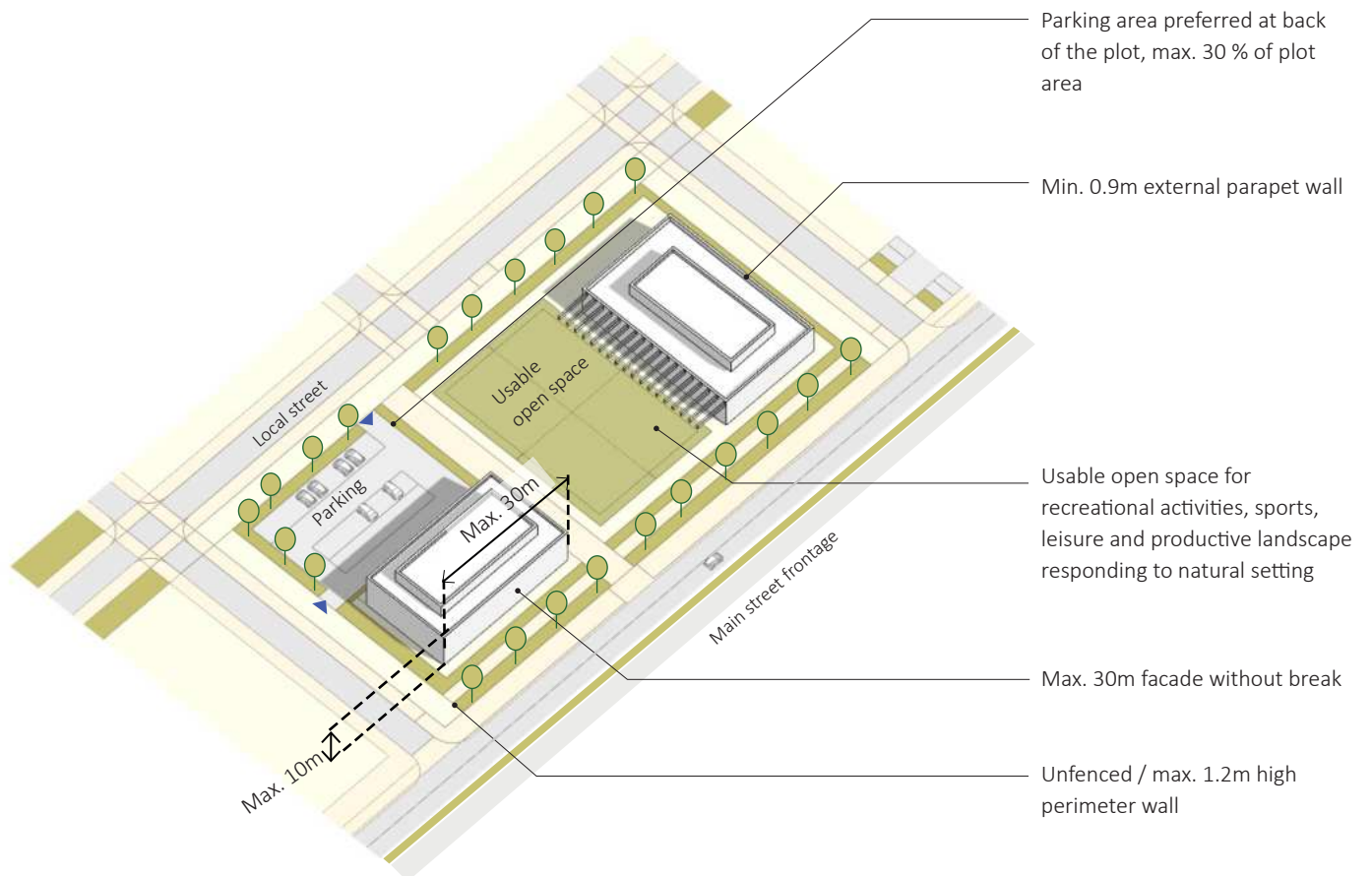


Figure 191 Block isometric: recreational / leisure use

Use: Environmental

ENVIRONMENTAL / NATURAL RESOURCES, RELATED ACTIVITIES	
LOCATION (URBAN CHARACTER): Varies	
LOCATION (CORRIDOR): Varies	
TYPICAL PLOT SIZE: Varies	
ALLOWABLE TYPOLOGIES: N/A	

LANDSCAPE SETTINGS		REMARKS	AUDC SECTION
RIDGE LINE	MIN. 200M OFFSET FROM RIDGE LINE WITH NO LARGE STRUCTURE OR BUILDING	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION. OTHER OPEN SPACE USES MAY BE LOCATED WITHIN THE OFFSET.	C.1.3, C.1.4
VIEW CORRIDOR	ESTABLISHED PUBLIC VIEWS TO BE PROTECTED		
SLOPE	> 15% SLOPE NO LARGE STRUCTURE OR BUILDINGS	OTHER OPEN SPACE USES MAY BE LOCATED ON SLOPES <30%	C.1.5
WADI ZONES	NO STRUCTURE OR BUILDING	OTHER OPEN SPACE USES MAY BE ACCEPTED WITHIN WADI CORRIDOR	C.1.7
HERITAGE BOUNDARY	LIMITS OF THE PLOT BOUNDARY OF HERITAGE MONUMENT/BUILDING OR BUILDING GROUP, OR AN OFFSET OF A MIN. 20M FROM THE HERITAGE BUILDING FAÇADE	PREFERRED WITH NO DEVELOPMENT	C.2.2,C.2.4
ROW	VARIES	CONTINUOUS AND ACCESSIBLE PED/BIKE PATH; SHARED PATH PROMOTED	C.3.3
PUBLIC REALM	MIN. 1.5M SIDEWALK	CONTINUOUS AND ACCESSIBLE PED/BIKE PATH; CONTEXTUAL MATERIAL AND COLOR PALETTE; LAYOUT AND FUNCTIONS TO RESPOND TO FORMS AND TOPOGRAPHY OF LOCAL NATURAL AND CULTURAL LANDSCAPE	C.3.4
PERIMETER WALLS / FENCES	UNFENCED		C.5.3.6
OPEN SPACE	MIN 70% LANDSCAPED AREA		C.5.2.3
BUFFER	N/A	N/A	C.5.3.9

BUILDING ENVELOPE		REMARKS	AUDC SECTION
URBAN BLOCK	IF ANY, MAX. 120M ANY DIRECTION WITHOUT INTERRUPTION	ORGANIC SHAPES RESPONDING TO NATURAL AND CULTURAL LANDSCAPE SHALL BE PROMOTED; LARGER BLOCK ALLOWED WITH MIDBLOCK PEDESTRIAN/VEHICULAR PASSAGE	C.5.2.2
ALLOWABLE USES	ANCILLARY TO OPEN SPACE AND RECREATIONAL ACTIVITIES	UTILITARIAN USES TO BE LOCATED AT THE BACK OF THE LOT AWAY FROM PUBLIC FRONTAGE AND VIEWS	C.5.3.7
FLOORPLATE	MAX. 30M LENGTH ANY SIDE; MULTIPLE STRUCTURES OK	ORGANIC SHAPES RESPONDING TO NATURAL E CULTURAL LANDSCAPE SHALL BE PROMOTED	C.5.2.5
STRUCTURE HEIGHT	MAX. 10M		
NUMBER OF FLOORS	MAX. 2 LEVELS		
LAC	MAX. 5%		
SET BACK			
FRONT	MIN. 10 M FROM MAIN FRONTAGE	LANDSCAPED; INTEGRATED WITH PUBLIC REALM; UNIVERSALLY ACCESSIBLE	
LEFT AND RIGHT SIDES	MIN. 5M	MIN. 3M LANDSCAPED BUFFER	
BACK	MIN. 5M	MIN. 3M LANDSCAPED BUFFER	
STREETWALL	N/A		
PARKING	MIN. 3M LANDSCAPED BUFFER FROM PUBLIC ROADS; MAX. 30% OF TOTA LOT AREA	PERMEABLE SURFACE TREATMENT	C.5.2.4
ACCESS	MAX. 1 VEHICLE ENTRY FOR EVERY 50M OF MAIN ROAD FRONTAGE		C.5.2.4

ARCHITECTURE		REMARKS	AUDC SECTION
FAÇADE	MIN. 50% OF FAÇADE TREATMENT WITH ONE CONSISTENT MATERIAL	INTEGRAL TO ALL PUBLIC FAÇADES	C.5.3.1
OPENINGS	IN GENERAL, SHOULD HAVE A SHARE OF MAXIMUM 30 TO 50% OF THE OVERALL FAÇADE SURFACE	% ACCORDING TO THEIR ORIENTATION TO MINIMIZE SOLAR IMPACT. OPENINGS SHOULD BE LOCATED TO MINIMIZE THE IMPACT ON PRIVACY FOR NEIGHBORING PLOTS	C.5.3.2
ROOFTOP	MIN. 0,9M PARAPET; SET BACK FOR MECHANICAL EQUIPMENT MIN. 4M	SCREENING OF ALL UTILITIES VISIBLE FROM PUBLIC ROADS	C.5.3.8
MATERIALS / COLORS	70% RANGE OF LIGHT GRADATIONS OF LOCAL LANDSCAPE TONES; NO CURTAIN WALL; NO METAL CLADDING	SYMPATHETIC TO LANDSCAPE AND CULTURAL HERITAGE; MUST ADHERE TO ASEER CONTEXTUAL ARCHITECTURE GUIDELINE PRINCIPLES	C.5.3.3, C.5.3.4
SIGNAGE	SIGNAGE MUST BE WELL INTEGRATED WITHIN OVERALL ARCHITECTURAL COMPOSITION	SIGNAGE SHALL BE CLEARLY VISIBLE AND AVOID CONFLICTS WITH PUBLIC REALM TREE CANOPIES	C.6.10

*Note: AUDC here refers to Aseer Urban Design Code for Private Development

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Use: Mixed Use / Commercial - High Density

MIXED-USE / COMMERCIAL ACTIVITIES - HIGH DENSITY	
LOCATION (URBAN CHARACTER): Urban Center, Old District, New District	
LOCATION (CORRIDOR): Main Access Corridor, Arterial Corridor	
TYPICAL PLOT SIZE: Varies	
ALLOWABLE TYPOLOGIES: Varies	

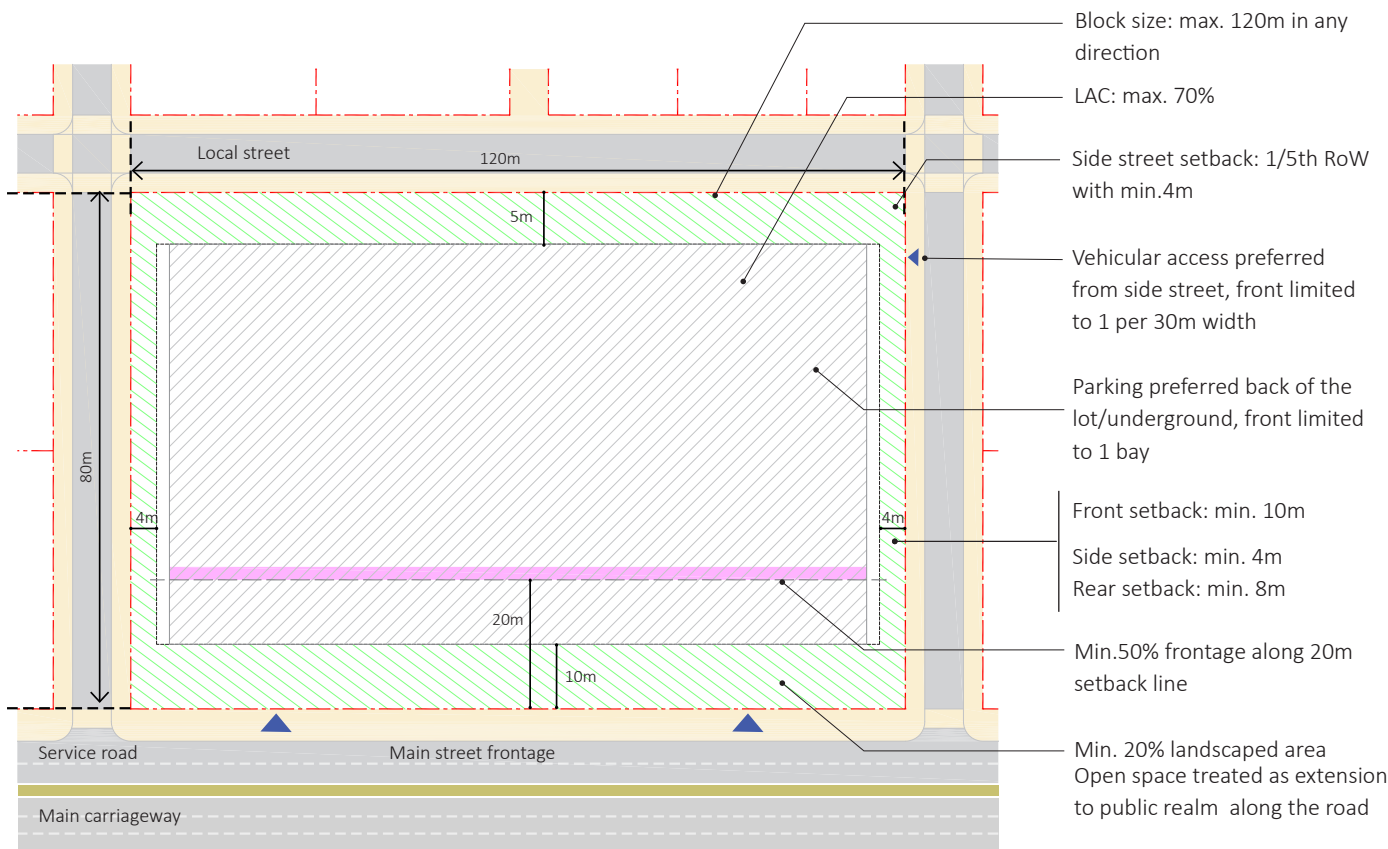
LANDSCAPE SETTINGS		REMARKS	AUDC SECTION
RIDGE LINE VIEW CORRIDOR	MIN. 50M OFFSET FROM RIDGE LINE WITH NO LARGE STRUCTURE OR BUILDING ESTABLISHED PUBLIC VIEWS TO BE PROTECTED	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.3, C.1.4
SLOPE	> 30% SLOPE NO LARGE STRUCTURE OR BUILDINGS	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.5
WADI ZONES	DEVELOPMENT ALLOWED ONLY IN WADI DEVELOPMENT ZONE		C.1.7
HERITAGE BOUNDARY	LIMITS OF THE PLOT BOUNDARY OF HERITAGE MONUMENT/BUILDING OR BUILDING GROUP, OR AN OFFSET OF A MIN. 20M FROM THE HERITAGE BUILDING FAÇADE	PREFERRED WITH NO DEVELOPMENT	C.2.2,C.2.4
ROW	60M TYPICAL, 32M, 20M	MIN 2M CONTINUOUS AND ACCESSIBLE SIDEWALKS WITH MIN 3M LANDSCAPED AREA BUFFER	C.3.3
PUBLIC REALM	MIN. 5M SIDEWALK WITH LANDSCAPED FLEX. ZONE	ACTIVE FRONTAGES AT GROUND FLOOR PROMOTED	C.3.4
PERIMETER WALLS / FENCES	MAX 1.5M IN HEIGHT FROM PUBLIC STREET/GROUND LEVEL	MAX 50% PERIMETER WALL ALONG MAIN CORRIDOR	C.5.3.6
OPEN SPACE	MIN 20% LANDSCAPED AREA	TREATED AS AN EXTENSION TO PUBLIC REALM TO FORM AN ATTRACTIVE FRONTAGE ALONG MAIN CORRIDOR	C.5.2.3
BUFFER	MIN. 30M BUFFER BETWEEN LANDUSE AND NATURAL AREAS	VACANT PLOT: VEGETATION BUFFER OR HOARDING REQUIRED	C.5.3.9

BUILDING ENVELOPE		REMARKS	AUDC SECTION
URBAN BLOCK	MAX. 120M ANY DIRECTION WITHOUT INTERRUPTION	LARGER BLOCK ALLOWED WITH MIDBLOCK PEDESTRIAN/VEHICULAR PASSAGE	C.5.2.2
ALLOWABLE USES	RETAIL / COMMERCIAL / RESIDENTIAL / CIVIC & GOVERNMENT / HOSPITALITY / VERTICAL AND HORIZONTAL MIX	UTILITARIAN AND SERVICE TYPE OF USES TO BE LOCATED AT THE BACK OF THE LOT AWAY FROM PUBLIC FRONTAGE. NOT ALLOWED: RESIDENTIAL VILLAS / LIGHT INDUSTRIAL; DRIVE-THROUGH TO BE LOCATED AT THE BACK OF THE LOT OR INTEGRATED IN DEVELOPMENT.	C.5.3.7
FLOORPLATE	MAX. 60M LENGTH WITHOUT BREAK ALONG PUBLIC FRONTAGES. 30M MAX FRONTAGE ALONG MAIN CORRIDOR FOR TOWER	TALL BUILDINGS - OVER 9 LEVELS TO BE DESIGN WITH PODIUM AND TOWER ZONES	C.5.2.5
STRUCTURE HEIGHT	MIN. 8M - MAX. 60M		
NUMBER OF FLOORS	MAX. 12 LEVELS; MIN. FLOOR TO FLOOR 3.2M		
LAC	MAX. 70%	PODIUM ZONE: MAX. 70%, TOWER ZONE: MAX. 35%	C.5.4.1
SET BACK			
FRONT	MIN. 10M	LANDSCAPED; INTEGRATED WITH PUBLIC REALM; UNIVERSALLY ACCESSIBLE	
LEFT AND RIGHT SIDES, SIDE STREETS	MIN. 4M		
BACK SIDE	MIN. 8M	WITH MIN. 5M LANDSCAPED BUFFER	
STREETWALL	MIN. 70% ALONG MAIN FRONTAGE ALONG 20M SETBACK LINE; MIN:30% FOR PLOTS >5000 SQ.M	WITH ACTIVE FRONTAGE ALONG MAIN CORRIDOR; ARCADES	C.5.2.5
PARKING	RETAIL, OFFICE AND ALL OTHER USES: 1 SPACE EACH 75 SQM OF GFA; RESTAURANT (DRIVE-THROUGH) 2 SPACES EACH 100 SQM OF GFA; HOSPITALITY 1 SPACE-ROOM 1 SPACE PER DU ≤ 130 SQM; 2 SPACES PER DU > 130 SQM PARKING LOT MAX. 70% OF OPEN SPACE; MAX.30% OF OPEN SPACE FOR PLOTS >5000 SQ.M	INTEGRATED IN DEVELOPMENT, UNDERGROUND, LOCATED AT BACK OF THE PLOT NOT ALONG PUBLIC FRONTAGE; FRONT OF THE LOT LIMITED TO 1 BAY LANDSCAPED; ADDITIONAL SHARED DISTRICT PARKING OK; WHEN TRANSIT IS OPERATIONAL; MAX. PARKING STANDARDS MAY APPLY AS: RESIDENTIAL: MAX. 1 SPACE PER DU; OFFICE: MAX. 1 SPACE EACH 80 SQM OF GFA; RETAIL: MAX. 1 SPACE EACH 100 SQM OF GLA	C.5.2.4
ACCESS	MAX. 1 VEHICULAR ENTRY FOR PLOTS UP TO 60M WIDE; MAX. 2 ENTRY PER URBAN BLOCK FRONTAGE		C.5.2.4

ARCHITECTURE		REMARKS	AUDC SECTION
FAÇADE	MAX. 60M LENGTH WITHOUT BREAK ALONG PUBLIC FRONTAGES. MIN. 50% OF FAÇADE TREATMENT WITH ONE CONSISTENT MATERIAL	INTEGRAL TO ALL PUBLIC FAÇADES; HIGH QUALITY ALONG MIAN CORRIDOR; BREAK: MIN.1.5 M IN DEPTH AND 3 M IN WIDTH, FOR THE ENTIRE HEIGHT OF THE FAÇADE; GROUND LEVEL FAÇADE MAY HAVE A DISTINCT LOOK FROM THE UPPER FLOOR FAÇADES	C.5.3.1
OPENINGS	IN GENERAL, SHOULD HAVE A SHARE OF MAXIMUM 30 TO 50% OF THE OVERALL FAÇADE SURFACE	% ACCORDING TO THEIR ORIENTATION TO MINIMIZE SOLAR IMPACT. OPENINGS SHOULD BE LOCATED TO MINIMIZE THE IMPACT ON PRIVACY FOR NEIGHBORING PLOTS	C.5.3.2
ROOFTOP	MIN. 0.9M PARAPET; SET BACK FOR MECHANICAL EQUIPMENT MIN. 4M	SCREENING OF ALL UTILITIES VISIBLE FROM PUBLIC ROADS	C.5.3.8
MATERIALS / COLORS	70% RANGE OF LIGHT GRADATIONS OF LOCAL LANDSCAPE TONES; MAX 10% CURTAIN WALL; MAX 10% METAL CLADDING	SYMPATHETIC TO LOCAL LANDSCAPE AND CULTURAL HERITAGE	C.5.3.3, C.5.3.4
SIGNAGE	SIGNAGE MUST BE WELL INTEGRATED WITHIN OVERALL ARCHITECTURAL COMPOSITION	SIGNAGE SHALL AVOID CONFLICTS WITH ADJACENT RESIDENTIAL USES AND PUBLIC REALM TREE CANOPIES	C.6.10

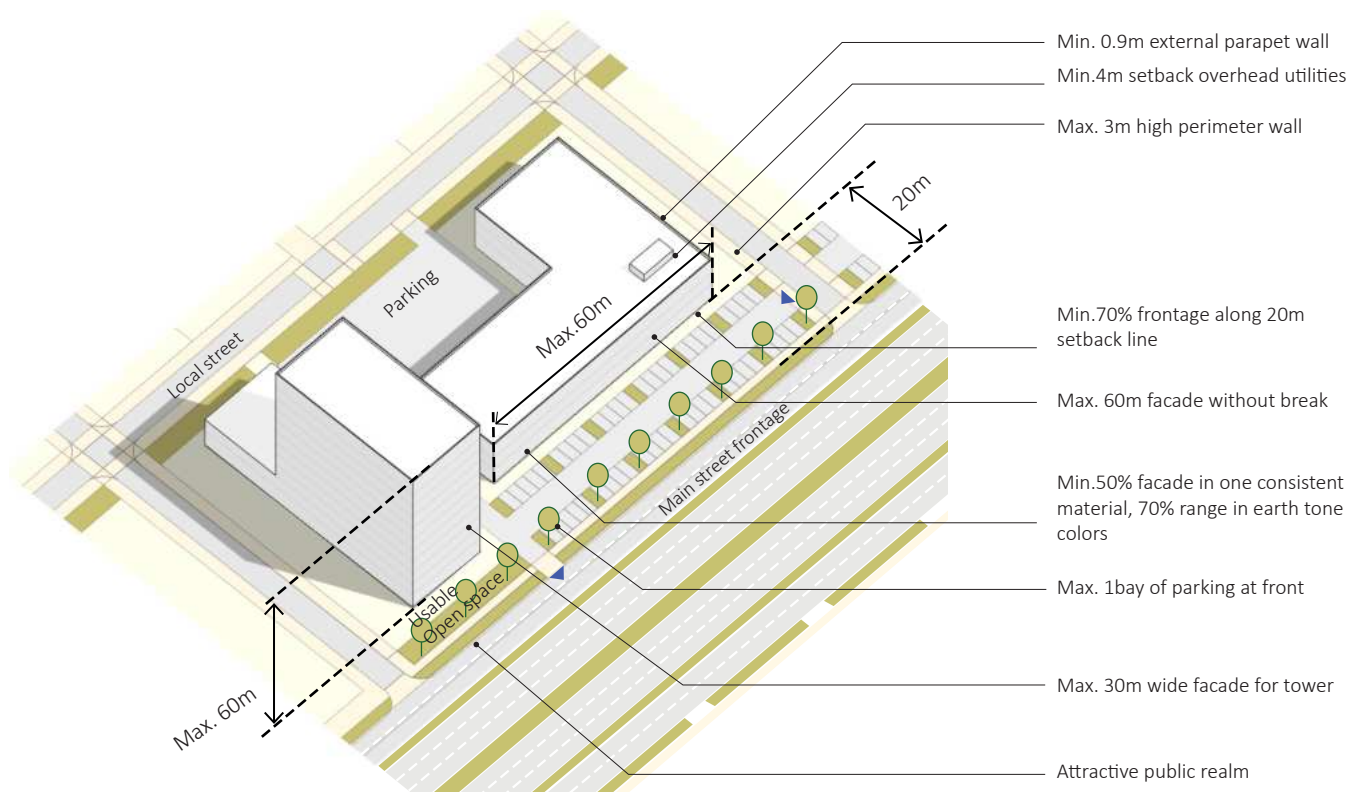
*Note: AUDC here refers to Aseer Urban Design Code for Private Development

Sample location



- Block size: max. 120m in any direction
- LAC: max. 70%
- Side street setback: 1/5th RoW with min.4m
- Vehicular access preferred from side street, front limited to 1 per 30m width
- Parking preferred back of the lot/underground, front limited to 1 bay
- Front setback: min. 10m
- Side setback: min. 4m
- Rear setback: min. 8m
- Min.50% frontage along 20m setback line
- Min. 20% landscaped area
Open space treated as extension to public realm along the road

Figure 192 Block plan: mixed use commercial (high density)



- Min. 0.9m external parapet wall
- Min. 4m setback overhead utilities
- Max. 3m high perimeter wall
- Min. 70% frontage along 20m setback line
- Max. 60m facade without break
- Min. 50% facade in one consistent material, 70% range in earth tone colors
- Max. 1bay of parking at front
- Max. 30m wide facade for tower
- Attractive public realm

Figure 193 Block isometric: mixed use commercial (high density)

Use: Mixed Use / Commercial

MIXED-USE / COMMERCIAL ACTIVITIES
LOCATION (URBAN CHARACTER): Urban Center, Old District, New District, Rural District
LOCATION (CORRIDOR): Main Access Corridor, Arterial Corridor, Collector Corridor
TYPICAL PLOT SIZE: Varies
ALLOWABLE TYPOLOGIES: Varies

LANDSCAPE SETTINGS	REMARKS	AUDC SECTION
RIDGE LINE VIEW CORRIDOR	MIN. 50M OFFSET FROM RIDGE LINE WITH NO LARGE STRUCTURE OR BUILDING ESTABLISHED PUBLIC VIEWS TO BE PROTECTED	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTIO C.1.3, C.1.4
SLOPE	> 30% SLOPE NO LARGE STRUCTURE OR BUILDINGS	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION C.1.5
WADI ZONES	DEVELOPMENT ALLOWED ONLY IN WADI DEVELOPMENT ZONE	C.1.7
HERITAGE BOUNDARY	LIMITS OF THE PLOT BOUNDARY OF HERITAGE MONUMENT/BUILDING OR BUILDING GROUP, OR AN OFFSET OF A MIN. 20M FROM THE HERITAGE BUILDING FAÇADE	PREFERRED WITH NO DEVELOPMENT C.2.2.C.2.4
ROW	32M TYPICAL, 60M, 20M, 16M	CONTINUOUS AND ACCESSIBLE SIDEWALKS WITH LANDSCAPED AREA AND FLEX. ZONE C.3.3
PUBLIC REALM	MIN. 5M SIDEWALK WITH LANDSCAPED FLEX. ZONE	ACTIVE FRONTAGES AT GROUND FLOOR PROMOTED C.3.4
PERIMETER WALLS / FENCES	MAX 1.5M IN HEIGHT FROM PUBLIC STREET/GROUND LEVEL	MAX 50% PERIMETER WALL ALONG MAIN PUBLIC FRONTAGE C.5.3.6
OPEN SPACE	MIN 20% LANDSCAPED AREA	TREATED AS AN EXTENSION TO PUBLIC REALM, TO FORM AN ATTRACTIVE STREET FRONT C.5.2.3
BUFFER	MIN. 30M BUFFER BETWEEN LANDUSE AND NATURAL AREAS	VACANT PLOT: VEGETATION BUFFER OR HOARDING REQUIRED C.5.3.9

BUILDING ENVELOPE	REMARKS	AUDC SECTION
URBAN BLOCK	MAX. 120M ANY DIRECTION WITHOUT INTERRUPTION	LARGER BLOCK ALLOWED WITH MIDBLOCK PEDESTRIAN/VEHICULAR PASSAGE C.5.2.2
ALLOWABLE USES	RETAIL / COMMERCIAL / RESIDENTIAL - VERTICAL AND HORIZONTAL MIX	UTILITARIAN USES TO BE LOCATED AT THE BACK OF THE LOT AWAY FROM PUBLIC FRONTAGE C.5.3.7
FLOORPLATE	MAX. 40M LENGTH WITHOUT BREAK ALONG PUBLIC FRONTAGES	BREAKS MIN. 1.5 M IN DEPTH AND 3 M IN WIDTH, FOR THE ENTIRE HEIGHT OF THE FAÇADE C.5.2.5
STRUCTURE HEIGHT	MIN. 8M - MAX. 20M	
NUMBER OF FLOORS	MAX. 5.5 LEVELS; MIN. FLOOR TO FLOOR 3.2M	
LAC	MAX. 70%	
SET BACK		
FRONT	BUILT-TO 5M SETBACK LINE	LANDSCAPED; INTEGRATED WITH PUBLIC REALM; UNIVERSALLY ACCESSIBLE
LEFT AND RIGHT SIDES, SIDE STREETS	MIN. 3M	
BACK SIDE	MIN. 3M	
STREETWALL	MIN. 70% ALONG MAIN FRONTAGE	WITH ACTIVE FRONTAGE; COLONNADES C.5.2.5
PARKING	RESIDENTIAL: MAX. 1 SPACE PER DU; OFFICE: MAX. 1 SPACE EACH 80 SQM OF GFA; RETAIL: MAX. 1 SPACE EACH 100 SQM OF GLA	INTEGRATED IN DEVELOPMENT, UNDERGROUND, LOCATED AT BACK OF THE PLOT NOT ALONG PUBLIC FRONTAGE; MAX. 70% OF OPEN SPACE; ADDITIONAL SHARED DISTRICT PARKING OK C.5.2.4
ACCESS	MAX. 1 VEHICULAR ENTRY FOR PLOTS UP TO 30M WIDE, FOR LARGER PLOTS, MAX. 1 VEHICLE ENTRY FOR EVERY 50M OF MAIN ROAD FRONTAGE	C.5.2.4

ARCHITECTURE	REMARKS	AUDC SECTION
FAÇADE	MAX. 40M LENGTH WITHOUT BREAK ALONG PUBLIC FRONTAGES. MIN. 50% OF FAÇADE TREATMENT WITH ONE CONSISTENT MATERIAL	INTEGRAL TO ALL PUBLIC FAÇADES; BREAKS MIN. 1.5 M IN DEPTH AND 3 M IN WIDTH, FOR THE ENTIRE HEIGHT OF THE FAÇADE; GROUND LEVEL FAÇADE MAY HAVE A DISTINCT LOOK FROM THE UPPER FLOOR FAÇADES C.5.3.1
OPENINGS	IN GENERAL, SHOULD HAVE A SHARE OF MAXIMUM 30 TO 50% OF THE OVERALL FAÇADE SURFACE	% ACCORDING TO THEIR ORIENTATION TO MINIMIZE SOLAR IMPACT. OPENINGS SHOULD BE LOCATED TO MINIMIZE THE IMPACT ON PRIVACY FOR NEIGHBORING PLOTS C.5.3.2
ROOFTOP	MIN. 0.9M PARAPET; SET BACK FOR MECHANICAL EQUIPMENT MIN. 4M	SCREENING OF ALL UTILITIES VISIBLE FROM PUBLIC ROADS C.5.3.8
MATERIALS / COLORS	70% RANGE OF LIGHT GRADATIONS OF EARTH TONES; MAX. 10% CURTAIN WALL, MAX. 10% METAL CLADDING OF FAÇADE SURFACE	SYMPATHETIC TO LOCAL LANDSCAPE AND CULTURAL HERITAGE C.5.3.3, C.5.3.4
SIGNAGE	SIGNAGE MUST BE WELL INTEGRATED WITHIN OVERALL ARCHITECTURAL COMPOSITION	SIGNAGE SHALL AVOID CONFLICTS WITH ADJACENT RESIDENTIAL USES AND PUBLIC REALM TREE CANOPIES C.6.10

*Note: AUDC here refers to Aseer Urban Design Code for Private Development

Sample location

Urban Center



Arterial corridor



Collector corridor

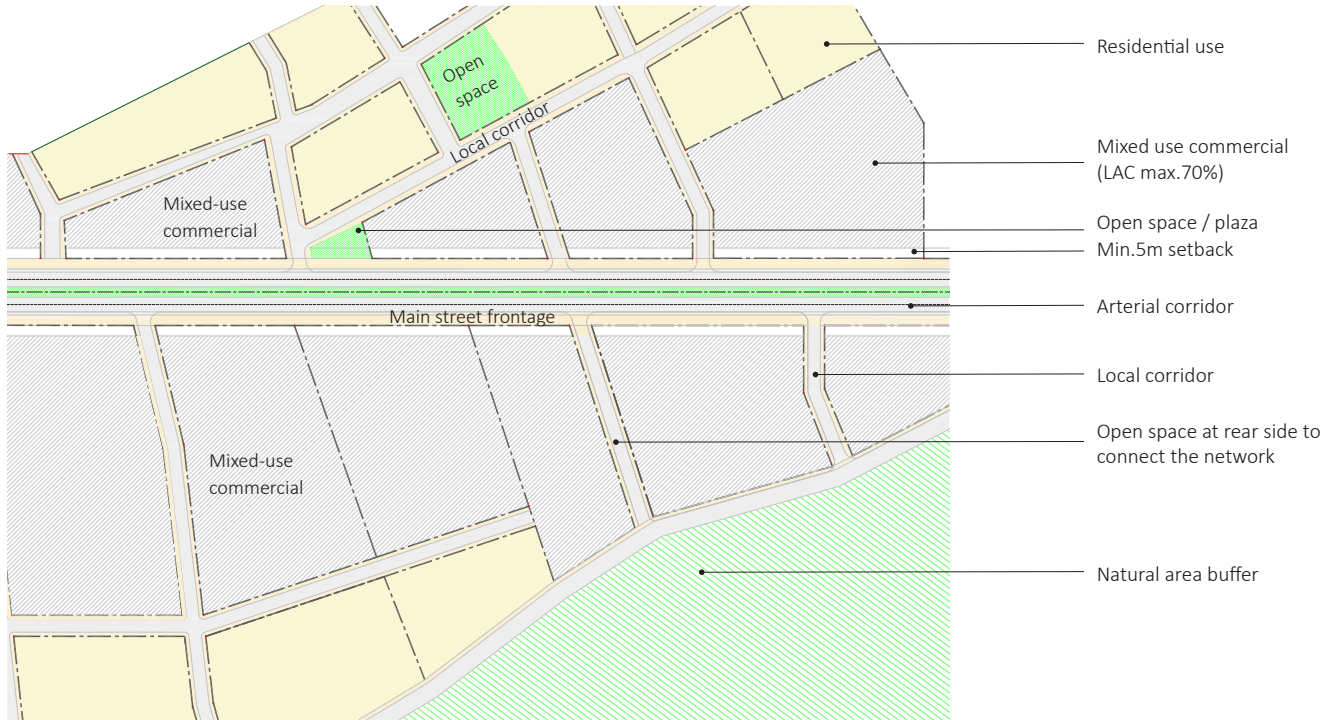
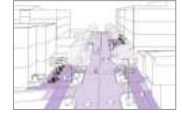
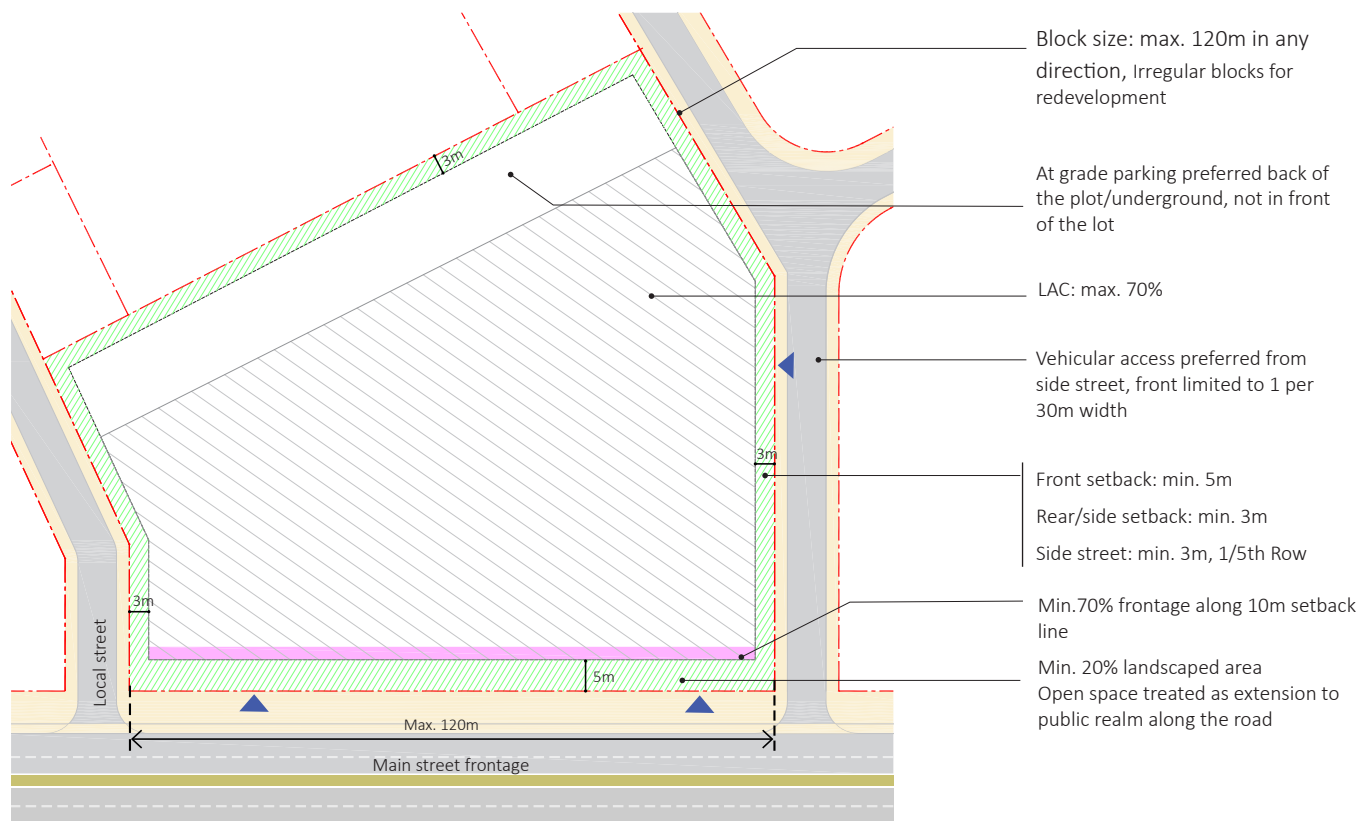
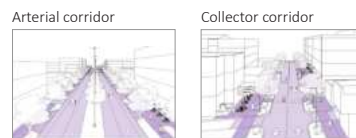


Figure 194 Block plan: mixed use commercial aggregate



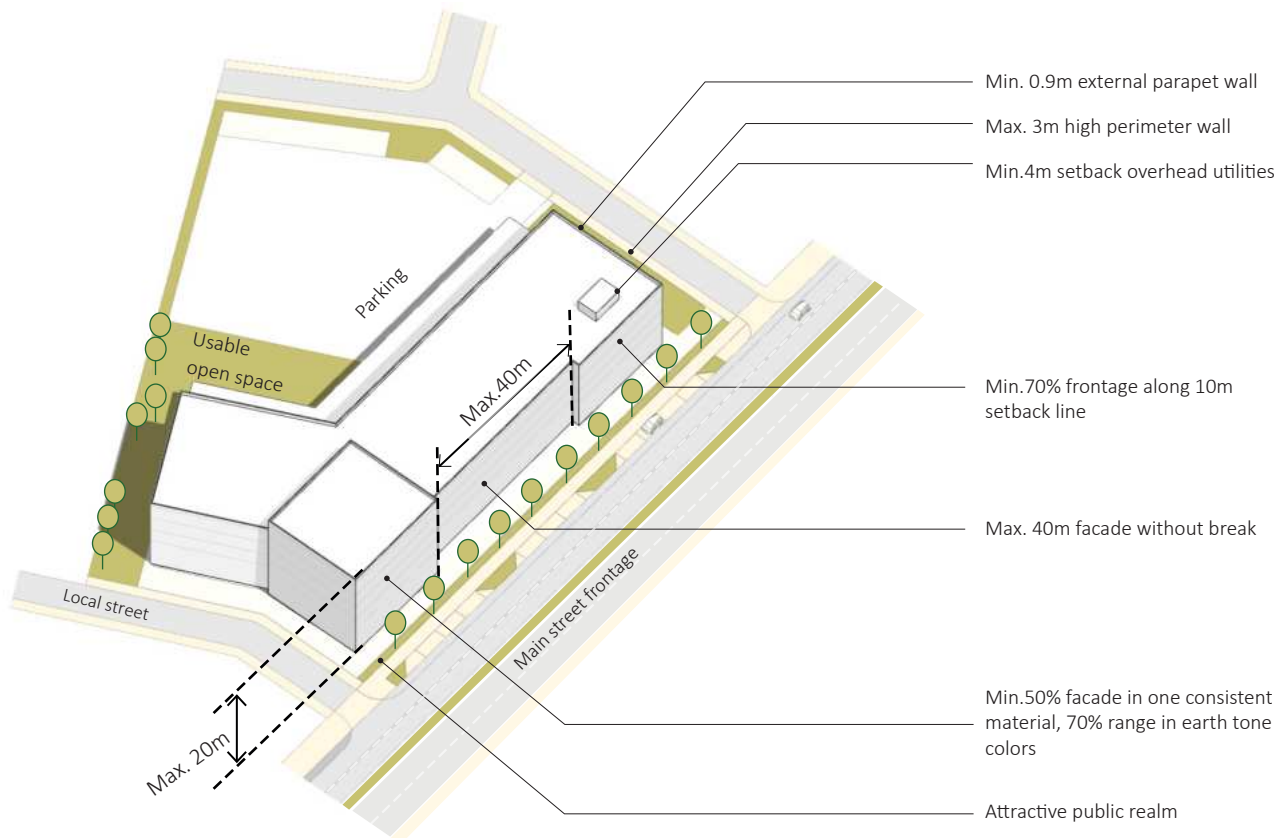
Figure 195 Block isometric: mixed use commercial aggregate

Applicable locations



- Block size: max. 120m in any direction, Irregular blocks for redevelopment
- At grade parking preferred back of the plot/underground, not in front of the lot
- LAC: max. 70%
- Vehicular access preferred from side street, front limited to 1 per 30m width
- Front setback: min. 5m
- Rear/side setback: min. 3m
- Side street: min. 3m, 1/5th Row
- Min. 70% frontage along 10m setback line
- Min. 20% landscaped area
- Open space treated as extension to public realm along the road

Figure 196 Block plan: mixed use commercial



- Min. 0.9m external parapet wall
- Max. 3m high perimeter wall
- Min. 4m setback overhead utilities
- Min. 70% frontage along 10m setback line
- Max. 40m facade without break
- Min. 50% facade in one consistent material, 70% range in earth tone colors
- Attractive public realm

Figure 197 Block isometric: mixed use commercial

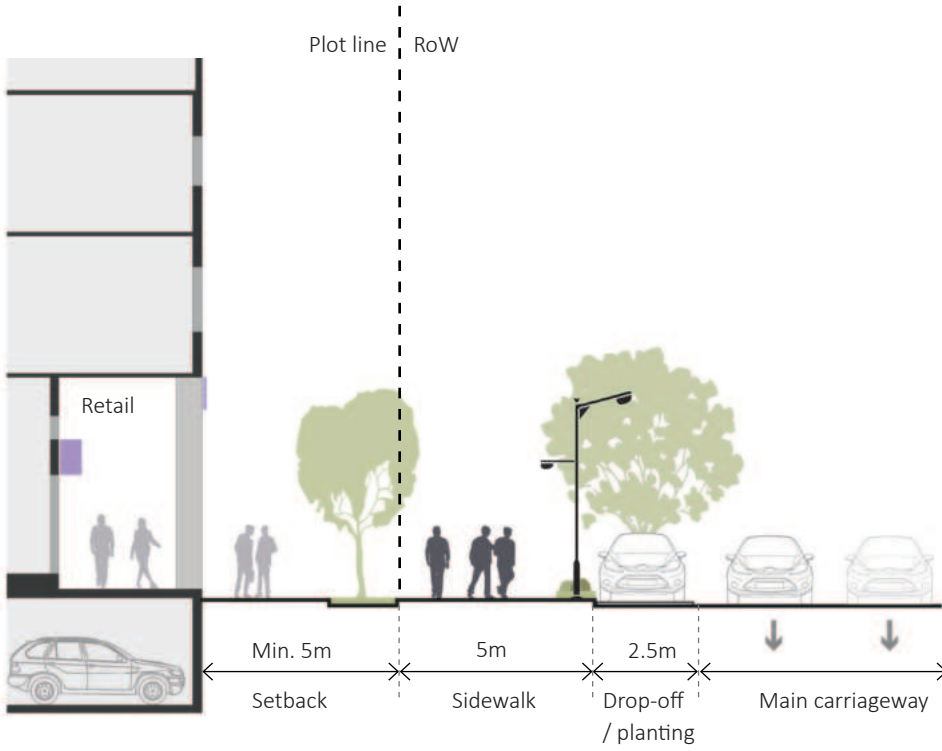


Figure 198 Mixed-use commercial use street edge treatment

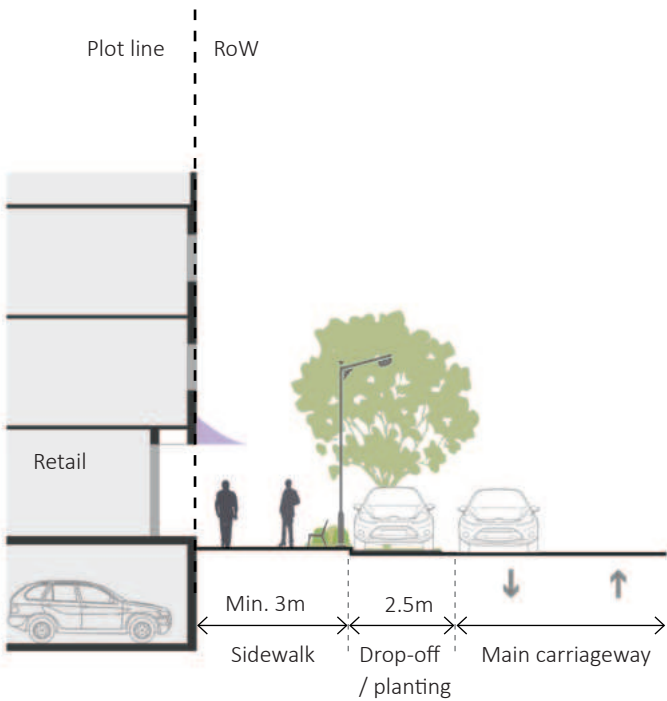


Figure 199 Mixed-use residential use street edge treatment

Use: Mixed Use / Residential

MIXED-USE / RESIDENTIAL ACTIVITIES
LOCATION (URBAN CHARACTER): Urban Center, Old District, New District
LOCATION (CORRIDOR): Arterial Corridor, Collector Corridor, Local Corridor
TYPICAL PLOT SIZE: 20x30m to 60x60m
ALLOWABLE TYPOLOGIES: Multifamily Midrise Apartments, Multifamily Lowrise Apartments, Others

LANDSCAPE SETTINGS		REMARKS	AUDC SECTION
RIDGE LINE VIEW CORRIDOR	MIN. 50M OFFSET FROM RIDGE LINE WITH NO LARGE STRUCTURE OR BUILDING ESTABLISHED PUBLIC VIEWS TO BE PROTECTED	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.3, C.1.4
SLOPE	> 30% SLOPE NO LARGE STRUCTURE OR BUILDINGS	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.5
WADI ZONES	DEVELOPMENT ALLOWED ONLY IN WADI DEVELOPMENT ZONE		C.1.7
HERITAGE BOUNDARY	LIMITS OF THE PLOT BOUNDARY OF HERITAGE MONUMENT/BUILDING OR BUILDING GROUP, OR AN OFFSET OF A MIN. 20M FROM THE HERITAGE BUILDING FAÇADE	PREFERRED WITH NO DEVELOPMENT	C.2.2,C.2.4
ROW	20 TO 10M TYPICAL	CONTINUOUS AND ACCESSIBLE SIDEWALKS WITH TREE PLANTING; SHARED STREET PROMOTED IN LOCAL STREET	C.3.3
PUBLIC REALM	MIN 1.5M SIDEWALK	CONTINUOUS AND ACCESSIBLE SIDEWALKS WITH TREE PLANTING, ACCESSIBLE PARKS WITHIN RECOMMENDED CATCHMENT AREA	C.3.4
PERIMETER WALLS / FENCES	MAX 3M IN HEIGHT FROM PUBLIC STREET/GROUND LEVEL		C.5.3.6
OPEN SPACE	MIN 20% LANDSCAPED AREA	ORIENTED TOWARDS MAIN PUBLIC FRONTAGE	C.5.2.3
BUFFER	MIN. 30M LANDSCAPED BUFFER BETWEEN LANDUSE AND NATURAL AREAS	VACANT PLOT: VEGETATION BUFFER OR HOARDING REQUIRED	C.5.3.9

BUILDING ENVELOPE		REMARKS	AUDC SECTION
URBAN BLOCK	MAX. 80M ANY DIRECTION WITHOUT INTERRUPTION	LARGER BLOCK ALLOWED WITH MIDBLOCK PEDESTRIAN/VEHICULAR PASSAGE	C.5.2.2
ALLOWABLE USES	RETAIL / SMALL COMMERCIAL / OFFICE / RESIDENTIAL / WORKSHOP / EDUCATIONAL / TRAINING - VERTICAL AND HORIZONTAL MIX	UTILITARIAN USES TO BE LOCATED AT THE BACK OF THE LOT AWAY FROM PUBLIC FRONTAGE	C.5.3.7
FLOORPLATE	MAX 30M LENGTH ANY SIDE WITHOUT BREAK ALONG PUBLIC FRONTAGES; MULTIPLE STRUCTURES OK		C.5.2.5
STRUCTURE HEIGHT	MAX. 18M		
NUMBER OF FLOORS	MAX. 4.5 LEVELS; MIN. FLOOR TO FLOOR 3.0M		
LAC	MAX. 70%		
SET BACK			
FRONT	BUILT-TO 5M SETBACK LINE	BUILT-TO PROPERTY LINE OKAY	
LEFT AND RIGHT SIDES, LOCAL SIDE STREETS	MAX. 2M		
BACK SIDE	MIN. 2M		
STREETWALL	MIN. 70% ALONG MAIN FRONTAGE		C.5.2.5
PARKING	RESIDENTIAL: MAX. 1 SPACE PER DU; OFFICE: MAX. 1 SPACE EACH 80 SQM OF GFA; RETAIL: MAX. 1 SPACE EACH 100 SQM OF GLA	INTEGRATED IN DEVELOPMENT, UNDERGROUND, LOCATED AT BACK OF THE PLOT NOT ALONG PUBLIC FRONTAGE; MAX. 70% OF OPEN SPACE; ADDITIONAL SHARED DISTRICT PARKING OK	C.5.2.4
ACCESS	MAX. 1 VEHICULAR ENTRY FOR PLOT UP TO 30M WIDE. FOR LARGER PLOTS, MAX. 1 VEHICLE ENTRY FOR EVERY 50M OF MAIN ROAD FRONTAGE		C.5.2.4

ARCHITECTURE		REMARKS	AUDC SECTION
FAÇADE	MAX. 40M LENGTH WITHOUT BREAK ALONG PUBLIC FRONTAGES; MIN. 50% OF FAÇADE TREATMENT WITH ONE CONSISTENT MATERIAL	INTEGRAL TO ALL PUBLIC FAÇADES; BREAKS: MIN.1.5 M IN DEPTH AND 3 M IN WIDTH, FOR THE ENTIRE HEIGHT OF THE FAÇADE	C.5.3.1
OPENINGS	IN GENERAL, SHOULD HAVE A SHARE OF MAXIMUM 30 TO 50% OF THE OVERALL FAÇADE SURFACE	% ACCORDING TO THEIR ORIENTATION TO MINIMIZE SOLAR IMPACT. BALCONIES AND OPENINGS SHOULD BE LOCATED TO MINIMIZE THE IMPACT ON PRIVACY	C.5.3.2
ROOFTOP	MIN. 0.9M PARAPET; SET BACK FOR MECHANICAL EQUIPMENT MIN. 4M	SCREENING OF ALL UTILITIES VISIBLE FROM PUBLIC ROADS	C.5.3.8
MATERIALS / COLORS	70% RANGE OF LIGHT GRADATIONS OF EARTH TONES; MAX 10% CURTAIN WALL; MAX 10% METAL CLADDING	SYMPATHETIC TO LOCAL LANDSCAPE AND CULTURAL HERITAGE	C.5.3.3, C.5.3.4
SIGNAGE	SIGNAGE MUST BE WELL INTEGRATED WITHIN OVERALL ARCHITECTURAL COMPOSITION	SIGNAGE SHALL AVOID CONFLICTS WITH ADJACENT RESIDENTIAL USES AND PUBLIC REALM TREE CANOPIES	C.6.10

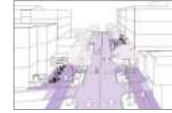
*Note: AUDC here refers to Aseer Urban Design Code for Private Development

Sample location

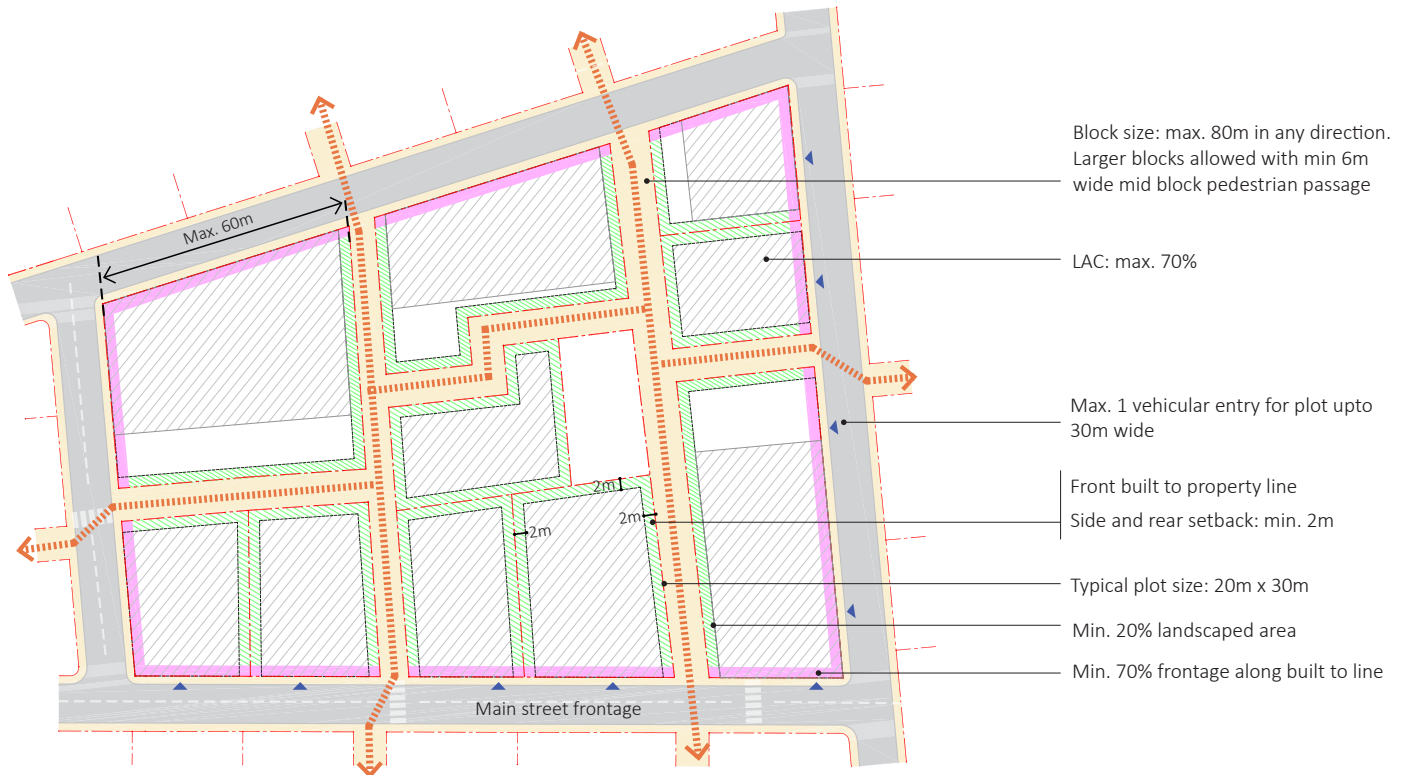
Old district



Collector corridor



Local corridor



Block size: max. 80m in any direction.
Larger blocks allowed with min 6m wide mid block pedestrian passage

LAC: max. 70%

Max. 1 vehicular entry for plot upto 30m wide

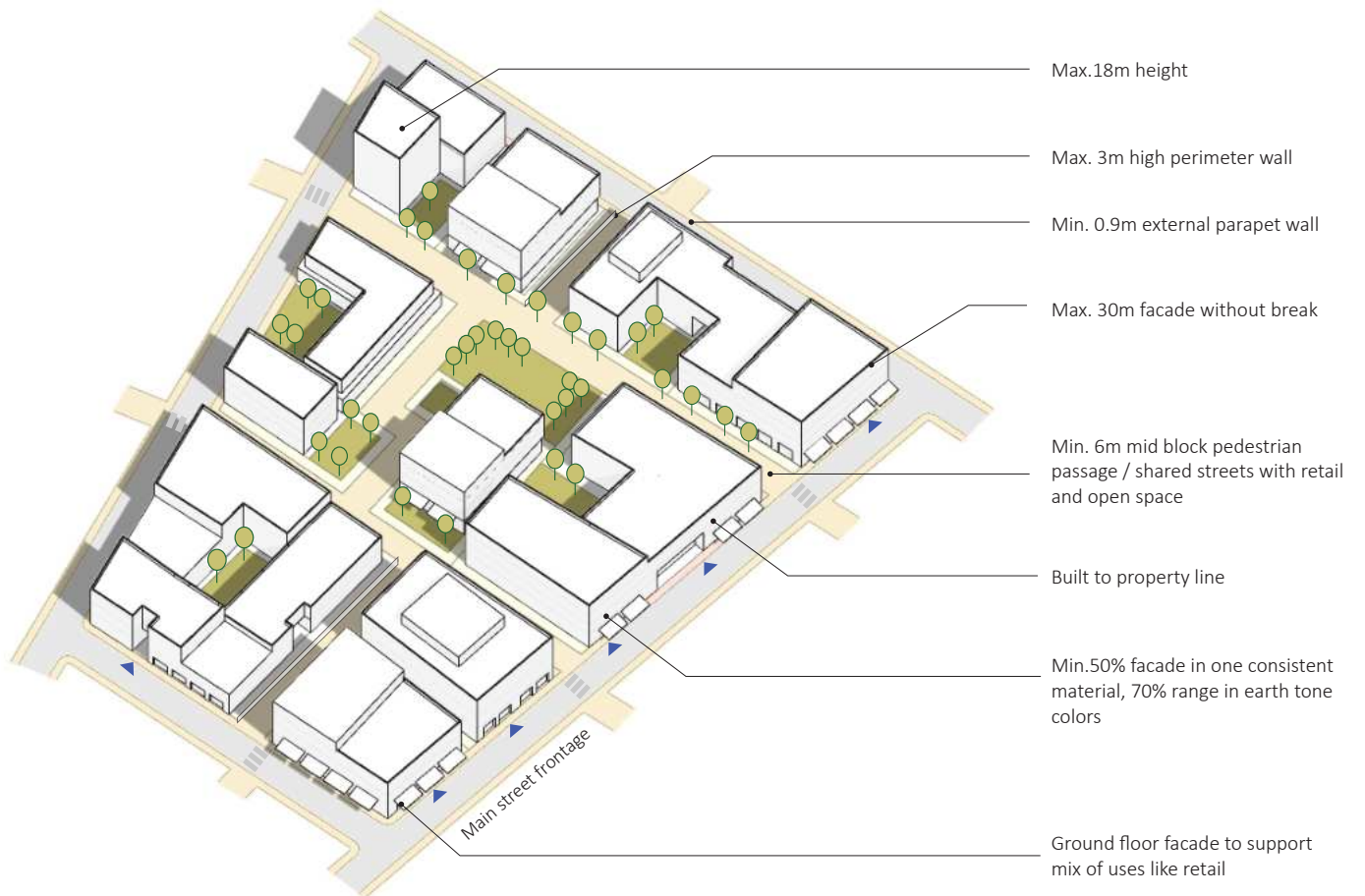
Front built to property line
Side and rear setback: min. 2m

Typical plot size: 20m x 30m

Min. 20% landscaped area

Min. 70% frontage along built to line

Figure 200 Block plan: mixed use residential



Max. 18m height

Max. 3m high perimeter wall

Min. 0.9m external parapet wall

Max. 30m facade without break

Min. 6m mid block pedestrian passage / shared streets with retail and open space

Built to property line

Min. 50% facade in one consistent material, 70% range in earth tone colors

Ground floor facade to support mix of uses like retail

Figure 201 Block isometric: mixed use residential

Use: Mixed Use / Residential in Heritage Buffer District

MIXED-USE / RESIDENTIAL ACTIVITIES IN HERITAGE BUFFER DISTRICT
LOCATION (URBAN CHARACTER): Urban Center, Old District, New District
LOCATION (CORRIDOR): Collector Corridor, Local Corridor
TYPICAL PLOT SIZE: 20x30m to 60x60m
ALLOWABLE TYPOLOGIES: Multifamily Midrise Apartments, Multifamily Lowrise Apartments/ Attached Typologies

LANDSCAPE SETTINGS		REMARKS	AUDC SECTION
RIDGE LINE VIEW CORRIDOR	MIN. 50M OFFSET FROM RIDGE LINE WITH NO LARGE STRUCTURE OR BUILDING ESTABLISHED PUBLIC VIEWS TO BE PROTECTED	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.3, C.1.4
SLOPE	> 30% SLOPE NO LARGE STRUCTURE OR BUILDINGS	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION	C.1.5
WADI ZONES	DEVELOPMENT ALLOWED ONLY IN WADI DEVELOPMENT ZONE		C.1.7
HERITAGE BOUNDARY	LIMITS OF THE PLOT BOUNDARY OF HERITAGE MONUMENT/BUILDING OR BUILDING GROUP, OR AN OFFSET OF A MIN. 20M FROM THE HERITAGE BUILDING FAÇADE	PREFERRED WITH NO DEVELOPMENT	C.2.2,C.2.4
ROW	20 TO 10M TYPICAL	CONTINUOUS AND ACCESSIBLE SIDEWALKS WITH TREE PLANTING; SHARED STREET PROMOTED IN LOCAL STREET	C.3.3
PUBLIC REALM	MIN. 1.5M SIDEWALK	CONTINUOUS AND ACCESSIBLE SIDEWALKS WITH TREE PLANTING; CONTEXTUAL MATERIAL AND COLOR PALETTE, ACCESSIBLE PARKS WITHIN RECOMMENDED CATCHMENT AREA	C.3.4
PERIMETER WALLS / FENCES	MAX 3M IN HEIGHT FROM PUBLIC STREET/GROUND LEVEL		C.5.3.6
OPEN SPACE	MIN 20% LANDSCAPED AREA	ORIENTED TOWARDS MAIN PUBLIC FRONTAGE	C.5.2.3
BUFFER	MIN. 30M LANDSCAPED BUFFER BETWEEN LANDUSE AND NATURAL AREAS	VACANT PLOT: VEGETATION BUFFER OR HOARDING REQUIRED	C.5.3.9

BUILDING ENVELOPE		REMARKS	AUDC SECTION
URBAN BLOCK	MAX. 60M ANY DIRECTION WITHOUT INTERRUPTION	LARGER BLOCK ALLOWED WITH MIDBLOCK PEDESTRIAN/VEHICULAR PASSAGE; BLOCK PATTERN TO REFLECT ORGANIC/HERITAGE GRID	C.5.2.2
ALLOWABLE USES	RETAIL / COMMERCIAL / HOSPITALITY / RESIDENTIAL / WORKSHOP / EDUCATIONAL / TRAINING - VERTICAL AND HORIZONTAL MIX	UTILITARIAN USES TO BE LOCATED AT THE BACK OF THE LOT AWAY FROM PUBLIC FRONTAGE	C.5.3.7
FLOORPLATE	MAX 30M LENGTH ANY SIDE WITHOUT BREAK ALONG PUBLIC FRONTAGES; MULTIPLE STRUCTURES OK		C.5.2.5
STRUCTURE HEIGHT	MAX. 18M	STRUCTURE SHOULD NOT NEGATIVELY IMPACT / OVERWHELM THE HERITAGE PROPERTY, PRESERVE VIEW CORRIDORS	
NUMBER OF FLOORS	MAX. 4.5 LEVELS; MIN. FLOOR TO FLOOR 3.0M		
SET BACK			
FRONT	BUILT-TO PROPERTY LINE		
LEFT AND RIGHT SIDES, LOCAL SIDE STREETS	MAX. 2M	BUILT TO PROPEERTY LINE OKAY	
BACK SIDE	MIN. 2M		
STREETWALL	MIN. 80% ALONG MAIN FRONTAGE		C.5.2.5
PARKING	MAX. RESIDENTIAL: 1 SPACE PER DU; OFFICE: 1 SPACE EACH 80 SQM OF GFA; RETAIL: 1 SPACE EACH 100 SQM OF GLA	INTEGRATED IN DEVELOPMENT, UNDERGROUND, LOCATED AT BACK OF THE PLOT NOT ALONG PUBLIC FRONTAGE; MAX. 70% OF OPEN SPACE; ADDITIONAL SHARED DISTRICT PARKING OK	C.5.2.4
ACCESS	MAX. 1 VEHICULAR ENTRY FOR PLOTS UP TO 30M WIDE. FOR LARGER PLOTS, MAX. 1 VEHICLE ENTRY FOR EVERY 50M OF MAIN ROAD FRONTAGE.		C.5.2.4

ARCHITECTURE		REMARKS	AUDC SECTION
FAÇADE	MAX. 30M LENGTH WITHOUT BREAK ALONG PUBLIC FRONTAGES; MIN. 50% OF FAÇADE TREATMENT WITH ONE CONSISTENT MATERIAL	INTEGRAL TO ALL PUBLIC FAÇADES; BREAKS: MIN. 1.5 M IN DEPTH AND 3 M IN WIDTH, FOR THE ENTIRE HEIGHT OF THE FAÇADE; FAÇADE DESIGN SHOULD RESPOND TO HERITAGE ASSET IN TERMS OF OPENING PROPORTIONS, RECESSES, ROOF LINES, FAÇADE BREAKS, DECORATIVE DETAILING, MATERIALS AND COLORS	C.5.3.1
OPENINGS	IN GENERAL, SHOULD HAVE A SHARE OF MAXIMUM 30 TO 50% OF THE OVERALL FAÇADE SURFACE	% ACCORDING TO THEIR ORIENTATION TO MINIMIZE SOLAR IMPACT. BALCONIES AND OPENINGS SHOULD BE LOCATED TO MINIMIZE THE IMPACT ON PRIVACY	C.5.3.2
ROOFTOP	MIN. 0.9M PARAPET; SET BACK FOR MECHANICAL EQUIPMENT MIN. 4M	SCREENING OF ALL UTILITIES VISIBLE FROM PUBLIC ROADS	C.5.3.8
MATERIALS / COLORS	70% RANGE OF LIGHT GRADATIONS OF LOCAL LANDSCAPE TONES; MAX 10% CURTAIN WALL; MAX 10% METAL CLADDING OF FAÇADE SURFACE	MATERIALS TO BE IN THE SAME COLOR RANGE OR VALUE AS THOSE OF THE HERITAGE ASSET - HARMONIOUS TO CONTEMPORARY ADAPTATION OF LOCAL TYPICAL BUILDING TECHNIQUES AND MATERIALS ENCOURAGED; LOCAL ART REFERENCE INSERT UP TO 10% OF TOTAL SURFACE.	C.5.3.3, C.5.3.4
SIGNAGE	SIGNAGE MUST BE WELL INTEGRATED WITHIN OVERALL ARCHITECTURAL COMPOSITION	SIGNAGE SHALL AVOID CONFLICTS WITH ADJACENT RESIDENTIAL USES AND PUBLIC REALM TREE CANOPIES	C.6.10

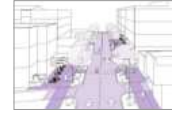
*Note: AUDC here refers to Aseer Urban Design Code for Private Development

Sample location

Urban Center



Collector corridor



Local corridor

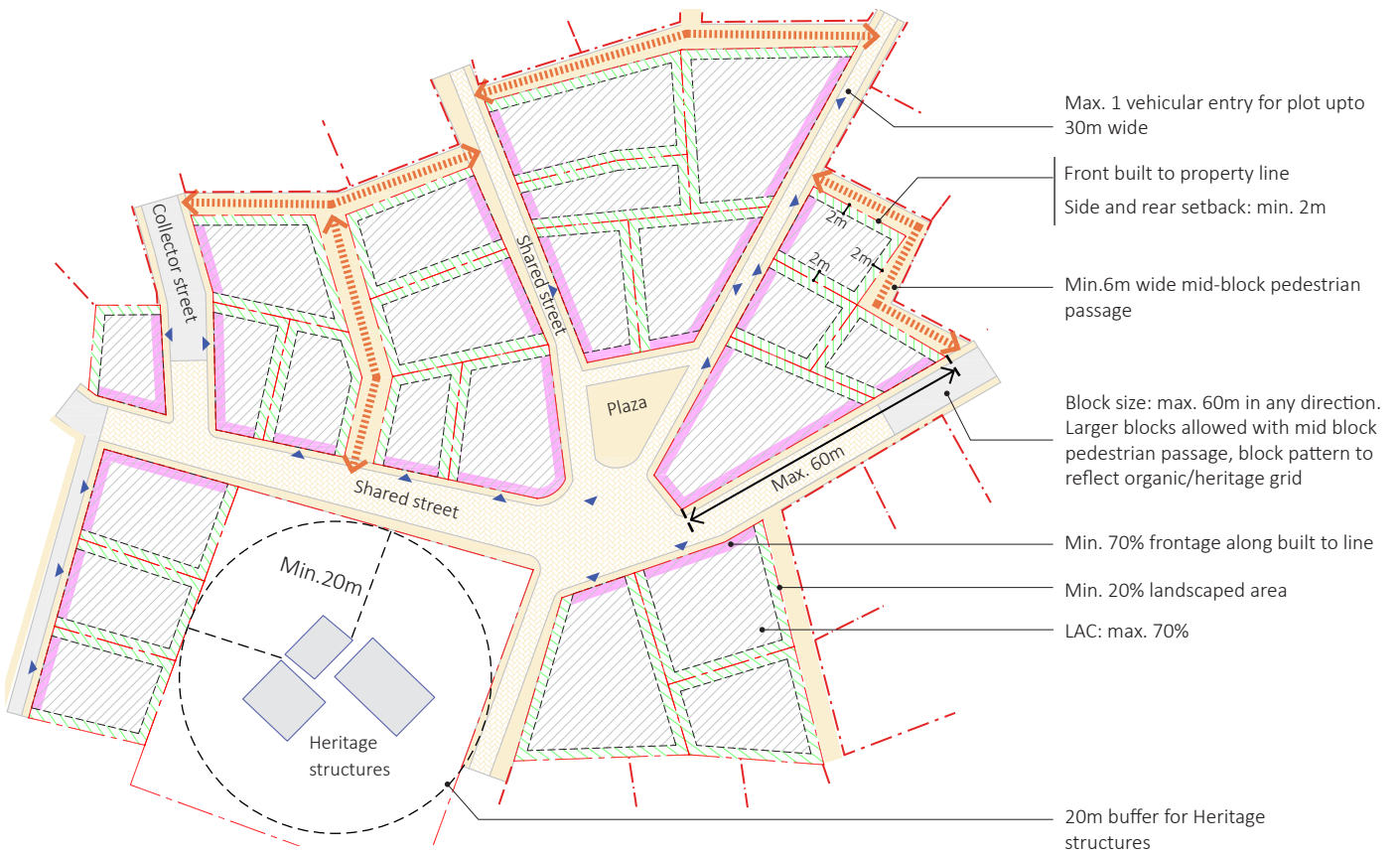


Figure 202 Block plan: mixed use residential in heritage district

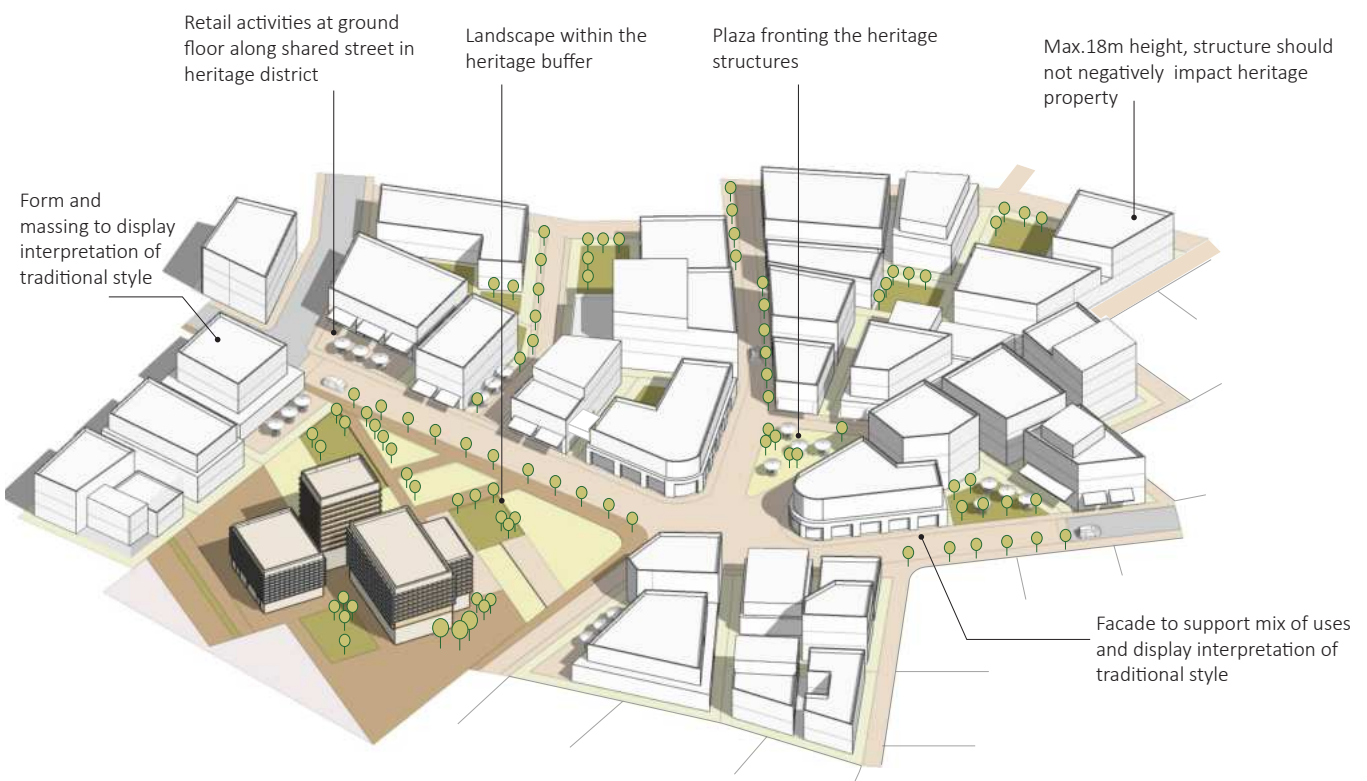


Figure 203 Block isometric: mixed use residential in heritage district

Use: City Landscape: Public Park / Civic Space

CITY LANDSCAPE: PUBLIC PARK / CIVIC SPACE	
LOCATION (URBAN CHARACTER): <i>Varies</i>	
LOCATION (CORRIDOR): <i>Varies</i>	
TYPICAL PLOT SIZE: <i>Varies</i>	
ALLOWABLE TYPOLOGIES: <i>N/A</i>	

LANDSCAPE SETTINGS		REMARKS	AUDC SECTION
RIDGE LINE	MIN. 200M OFFSET FROM RIDGE LINE WITH NO LARGE STRUCTURE OR BUILDING	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION. OTHER OPEN SPACE USES MAY BE LOCATED WITHIN THE OFFSET.	C.1.3, C.1.4
VIEW CORRIDOR	ESTABLISHED PUBLIC VIEWS TO BE PROTECTED		
SLOPE	> 15% SLOPE NO LARGE STRUCTURE OR BUILDINGS	OTHER OPEN SPACE USES MAY BE LOCATED ON SLOPES <30%	C.1.5
WADI ZONES	LARGE STRUCTURE OR BUILDINGS ARE LIMITED TO WADI DEVELOPMENT ZONE ONLY	OTHER OPEN SPACE USES MAY BE ACCEPTED WITHIN WADI CORRIDOR	C.1.7
HERITAGE BOUNDARY	LIMITS OF THE PLOT BOUNDARY OF HERITAGE MONUMENT/BUILDING OR BUILDING GROUP, OR AN OFFSET OF A MIN. 20M FROM THE HERITAGE BUILDING FAÇADE	PREFERRED WITH NO DEVELOPMENT	C.2.2
ROW	VARIES	CONTINUOUS AND ACCESSIBLE PED/BIKE PATH; SHARED PATH PROMOTED	C.3.3
PUBLIC REALM	MIN. 3M SIDEWALK	CONTINUOUS AND ACCESSIBLE PED/BIKE PATH; CONTEXTUAL MATERIAL AND COLOR PALETTE; LAYOUT AND FUNCTIONS TO RESPOND TO FORMS AND TOPOGRAPHY OF THE NATURAL AND CULTURAL LANDSCAPE	C.3.4
PERIMETER WALLS / FENCES	UNFENCED / LANDSCAPE BUFFER / MAX. 1.2M HEIGHT PERIMETER WALL	PREFERABLY UNFENCED	C.5.3.6
OPEN SPACE	MIN 20% LANDSCAPED AREA		C.5.2.3
BUFFER	MIN. 30M BUFFER BETWEEN LANDUSE AND NATURAL AREAS		C.5.3.9

BUILDING ENVELOPE		REMARKS	AUDC SECTION
URBAN BLOCK	IF ANY, MAX. 120M ANY DIRECTION WITHOUT INTERRUPTION	ORGANIC SHAPES RESPONDING TO NATURAL AND CULTURAL LANDSCAPE SHALL BE PROMOTED; LARGER BLOCK ALLOWED WITH MIBLOCK PEDESTRIAN/VEHICULAR PASSAGE	C.5.2.2
ALLOWABLE USES	ANCILLARY TO OPEN SPACE AND RECREATIONAL ACTIVITIES / CIVIC FUNCTIONS / GOVERNMENT / REPRESENTATIVE / PRODUCTIVE LANDSCAPE	UTILITARIAN USES TO BE LOCATED AT THE BACK OF THE LOT AWAY FROM PUBLIC FRONTAGE	C.5.3.7
FLOORPLATE	MAX. 30M LENGTH ANY SIDE; MULTIPLE STRUCTURES OK	ORGANIC SHAPES RESPONDING TO NATURAL E CULTURAL LANDSCAPE SHALL BE PROMOTED	C.5.2.5
STRUCTURE HEIGHT	MAX. 15M		
NUMBER OF FLOORS	MAX. 2.5 LEVELS	TALL LANDMARKS ELEMENTS OK WITH ADDITIONAL DESIGN SCRUTINY; PODIUM + TOWER ZONES APPLY	
LAC	MAX. 10%		
SET BACK			
FRONT	MIN. 10 M FROM MAIN FRONTAGE	LANDSCAPED	
LEFT AND RIGHT SIDES	MIN. 5M	MIN. 3M LANDSCAPED BUFFER	
BACK	MIN. 5M	MIN. 3M LANDSCAPED BUFFER	
STREETWALL	N/A		
PARKING	MIN. 3M LANDSCAPED BUFFER FROM PUBLIC ROADS; MAX. 30% OF TOTAL LOT AREA	PERMEABLE SURFACE TREATMENT	C.5.2.4
ACCESS	MAX. 1 VEHICULAR ENTRY FOR PLOTS UP TO 30M WIDE. FOR LARGER PLOTS, MAX. 1 VEHICLE ENTRY FOR EVERY 50M OF MAIN ROAD FRONTAGE		C.5.2.4

ARCHITECTURE		REMARKS	AUDC SECTION
FACADE	MIN. 50% OF FACADE TREATMENT WITH ONE CONSISTENT MATERIAL	INTEGRAL TO ALL PUBLIC FACADES	C.5.3.1
OPENINGS	IN GENERAL, SHOULD HAVE A SHARE OF MAXIMUM 30 TO 50% OF THE OVERALL FACADE SURFACE	% ACCORDING TO THEIR ORIENTATION TO MINIMIZE SOLAR IMPACT. OPENINGS SHOULD BE LOCATED TO MINIMIZE THE IMPACT ON PRIVACY FOR NEIGHBORING PLOTS	C.5.3.2
ROOFTOP	MIN. 0,9M PARAPET; SET BACK FOR MECHANICAL EQUIPMENT MIN. 4M	SCREENING OF ALL UTILITIES VISIBLE FROM PUBLIC ROADS	C.5.3.8
MATERIALS / COLORS	70% RANGE OF LIGHT GRADATIONS OF LOCAL LANDSCAPE TONES; MAX 10% CURTAIN WALL; MAX 10% METAL CLADDING	SYMPATHETIC TO LANDSCAPE AND CULTURAL HERITAGE; MUST ADHERE TO ASEER CONTEXTUAL ARCHITECTURE GUIDELINE PRINCIPLES	C.5.3.3, C.5.3.4
SIGNAGE	SIGNAGE MUST BE WELL INTEGRATED WITHIN OVERALL ARCHITECTURAL COMPOSITION	SIGNAGE SHALL AVOID CONFLICTS WITH ADJACENT RESIDENTIAL USES AND PUBLIC REALM TREE CANOPIES	C.6.10

*Note: AUDC here refers to Aseer Urban Design Code for Private Development

Sample location

Urban Center



Arterial corridor



Local corridor

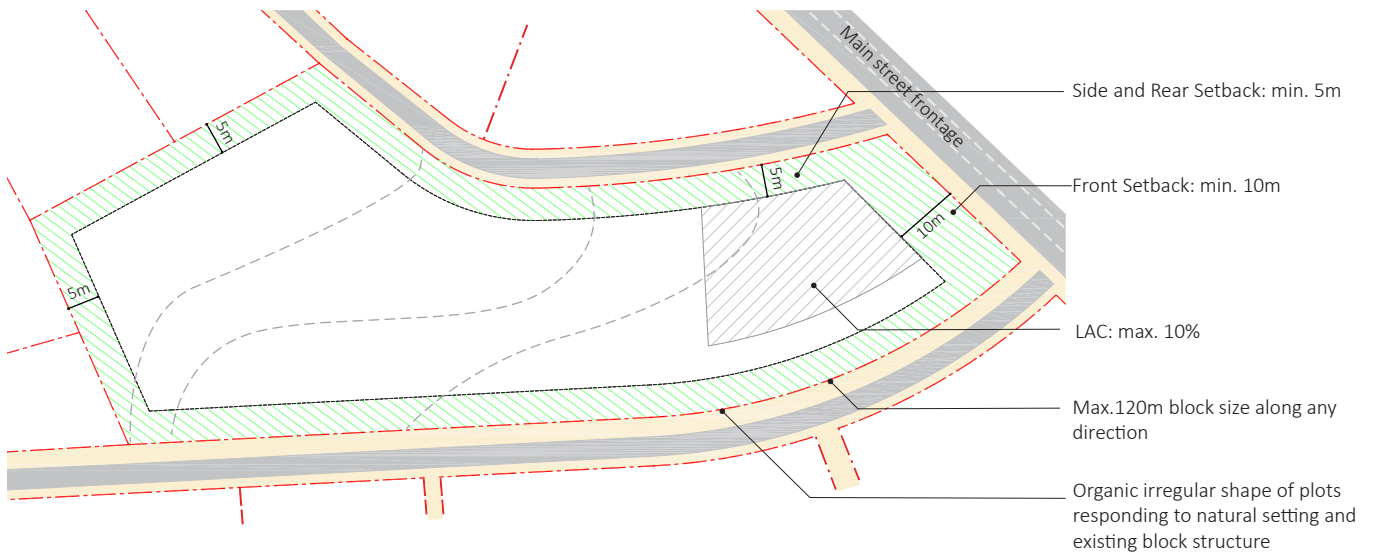


Figure 204 Block plan: public park / civic space



Figure 205 Block isometric: public park / civic space

Use: City Landscape: Open Space / Recreation / Productive

CITY LANDSCAPE: OPEN SPACE / RECREATION / PRODUCTIVE	
LOCATION (URBAN CHARACTER): <i>Varies</i>	
LOCATION (CORRIDOR): <i>Varies</i>	
TYPICAL PLOT SIZE: <i>Varies</i>	
ALLOWABLE TYPOLOGIES: <i>N/A</i>	

LANDSCAPE SETTINGS		REMARKS	AUDC SECTION
RIDGE LINE VIEW CORRIDOR	MIN. 200M OFFSET FROM RIDGE LINE WITH NO LARGE STRUCTURE OR BUILDING ESTABLISHED PUBLIC VIEWS TO BE PROTECTED	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION. OTHER OPEN SPACE USES MAY BE LOCATED WITHIN THE OFFSET.	C.1.3, C.1.4
SLOPE	> 15% SLOPE NO LARGE STRUCTURE OR BUILDINGS	AGRICULTURAL AND PRODUCTIVE USES ARE ALLOWED	C.1.5
WADI ZONES	LARGE STRUCTURE OR BUILDINGS ARE LIMITED TO WADI DEVELOPMENT ZONE ONLY	AGRICULTURAL AND PRODUCTIVE USES ARE ALLOWED WITHIN THE WADI CORRIDOR	C.1.7
HERITAGE BOUNDARY	LIMITS OF THE PLOT BOUNDARY OF HERITAGE MONUMENT/BUILDING OR BUILDING GROUP, OR AN OFFSET OF A MIN. 20M FROM THE HERITAGE BUILDING FAÇADE	PREFERRED WITH NO DEVELOPMENT	C.2.2,C.2.4
ROW	VARIES	CONTINUOUS AND ACCESSIBLE PED/BIKE PATH; SHARED PATH PROMOTED	C.3.3
PUBLIC REALM	N/A	CONTINUOUS AND ACCESSIBLE PED/BIKE PATH; CONTEXTUAL MATERIAL AND COLOR PALETTE; LAYOUT AND FUNCTIONS TO RESPOND TO FORMS AND TOPOGRAPHY OF THE NATURAL AND CULTURAL LANDSCAPE	C.3.4
PERIMETER WALLS / FENCES	UNFENCED / LANDSCAPE BUFFER / MAX. 1.2M HEIGHT PERIMETER WALL	PREFERABLY UNFENCED	C.5.3.6
OPEN SPACE	N/A		C.5.2.3
BUFFER	MIN. 30M BUFFER BETWEEN LANDUSE AND NATURAL AREAS	AGRICULTURAL AND PRODUCTIVE USES ARE ALLOWED	C.5.3.9

BUILDING ENVELOPE		REMARKS	AUDC SECTION
URBAN BLOCK	IF ANY, MAX. 120M ANY DIRECTION WITHOUT INTERRUPTION	ORGANIC SHAPES RESPONDING TO NATURAL AND CULTURAL LANDSCAPE SHALL BE PROMOTED	C.5.2.2
ALLOWABLE USES	PRODUCTIVE LANDSCAPE / PRODUCTIVE ACTIVITIES / ANCILLARY TO PRODUCTIVE ACTIVITIES / RECREATIONAL / RESIDENTIAL / WORKSHOP / EDUCATIONAL / TRAINING / HOMESTAY / BOUTIQUE HOSPITALITY	UTILITARIAN USES TO BE LOCATED AT THE BACK OF THE LOT AWAY FROM PUBLIC FRONTAGE	C.5.3.7
FLOORPLATE	MAX. 30M LENGTH ANY SIDE; MULTIPLE STRUCTURES OK		C.5.2.5
STRUCTURE HEIGHT	MAX. 10M		
NUMBER OF FLOORS	MAX. 2 LEVELS		
LAC	MAX. 10%		
SET BACK			
FRONT	MIN. 10 M FROM MAIN FRONTAGE	LANDSCAPED	
LEFT AND RIGHT SIDES	MIN. 5M	MIN. 3M LANDSCAPED BUFFER	
BACK	MIN. 5M	MIN. 3M LANDSCAPED BUFFER	
STREETWALL	N/A		
PARKING	MIN. 3M LANDSCAPED BUFFER FROM PUBLIC ROADS; MAX. 30% OF TOTAL LOT AREA	PERMEABLE SURFACE TREATMENT	C.5.2.4
ACCESS	MAX. 1 VEHICULAR ENTRY FOR PLOTS UP TO 30M WIDE, FOR LARGER PLOTS, MAX. 1 VEHICLE ENTRY FOR EVERY 50M OF MAIN ROAD FRONTAGE		C.5.2.4

ARCHITECTURE		REMARKS	AUDC SECTION
FACADE	MIN. 50% OF FACADE TREATMENT WITH ONE CONSISTENT MATERIAL	INTEGRAL TO ALL PUBLIC FACADES	C.5.3.1
OPENINGS	IN GENERAL, SHOULD HAVE A SHARE OF MAXIMUM 30 TO 50% OF THE OVERALL FACADE SURFACE	% ACCORDING TO THEIR ORIENTATION TO MINIMIZE SOLAR IMPACT. OPENINGS SHOULD BE LOCATED TO MINIMIZE THE IMPACT ON PRIVACY FOR NEIGHBORING PLOTS	C.5.3.2
ROOFTOP	MIN. 0,9M PARAPET; SET BACK FOR MECHANICAL EQUIPMENT MIN. 4M	SCREENING OF ALL UTILITIES VISIBLE FROM PUBLIC ROADS	C.5.3.8
MATERIALS/ COLORS	70% RANGE OF LIGHT GRADATIONS OF LOCAL LANDSCAPE TONES; NO CURTAIN WALL, NO METAL CLADDING	SYMPATHETIC TO LOCAL LANDSCAPE AND CULTURAL HERITAGE	C.5.3.3, C.5.3.4
SIGNAGE	SIGNAGE MUST BE WELL INTEGRATED WITHIN OVERALL ARCHITECTURAL COMPOSITION	SIGNAGE SHALL AVOID CONFLICTS WITH ADJACENT RESIDENTIAL USES AND PUBLIC REALM TREE CANOPIES	C.6.10

*Note: AUDC here refers to Aseer Urban Design Code for Private Development

Sample locations

Urban Center



Arterial corridor



Collector corridor

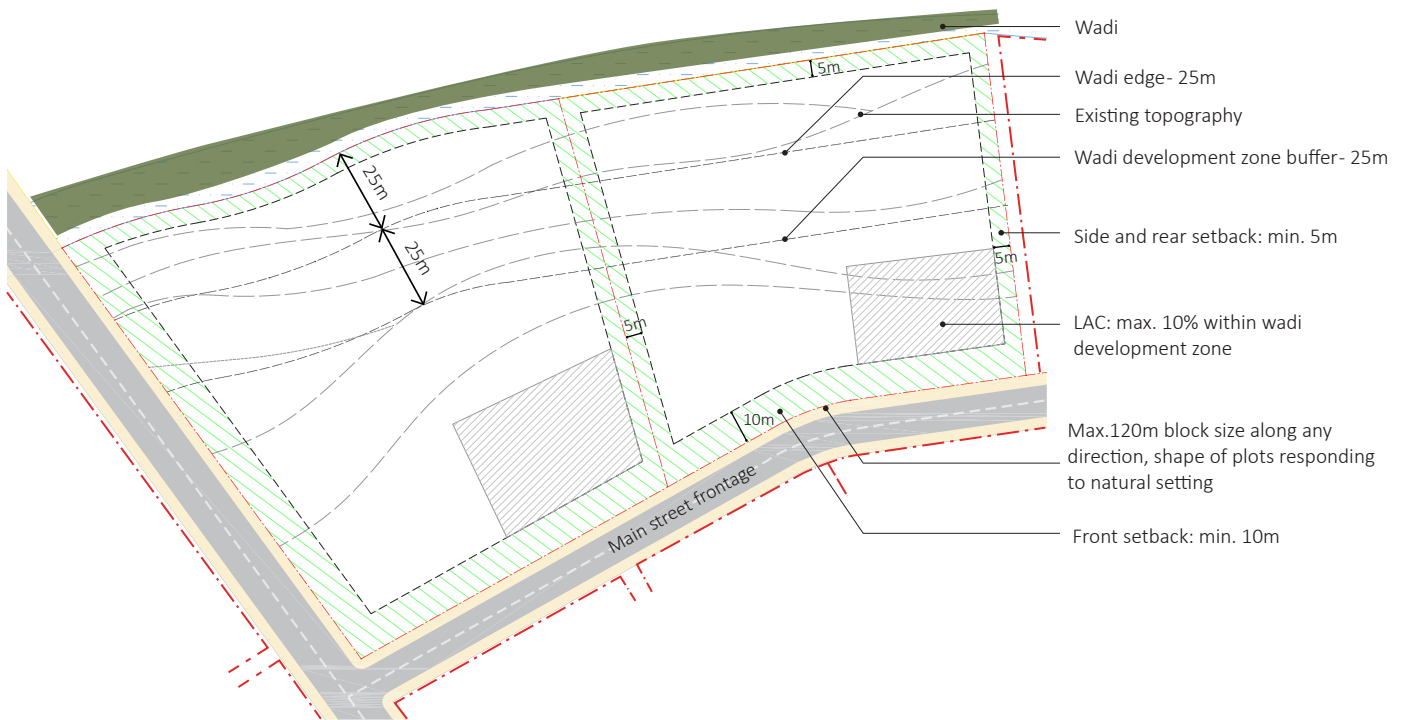


Figure 206 Block plan: open space / recreation / productive



Figure 207 Block isometric: open space / recreation / productive

Use: City Landscape: Open Space / Productive / Agricultural

CITY LANDSCB4:E42APE: OPEN SPACE / PRODUCTIVE / AGRICULTURAL		
LOCATION (URBAN CHARACTER): <i>Varies</i>		
LOCATION (CORRIDOR): <i>Varies</i>		
TYPICAL PLOT SIZE: <i>Varies</i>		
ALLOWABLE TYPOLOGIES: <i>N/A</i>		

LANDSCAPE SETTINGS		REMARKS	AUDC SECTION
RIDGE LINE VIEW CORRIDOR	MIN. 200M OFFSET FROM RIDGE LINE WITH NO LARGE STRUCTURE OR BUILDING ESTABLISHED PUBLIC VIEWS TO BE PROTECTED	LARGE STRUCTURE IF EXCEEDING 3M IN DIMENSION IN ANY DIRECTION. OTHER OPEN SPACE USES MAY BE LOCATED WITHIN THE OFFSET.	C.1.3, C.1.4
SLOPE	> 15% SLOPE NO LARGE STRUCTURE OR BUILDINGS	AGRICULTURAL AND PRODUCTIVE USES ARE ALLOWED	C.1.5
WADI ZONES	LARGE STRUCTURE OR BUILDINGS ARE LIMITED TO WADI DEVELOPMENT ZONE ONLY	AGRICULTURAL AND PRODUCTIVE USES ARE ALLOWED WITHIN THE WADI CORRIDOR	C.1.7
HERITAGE BOUNDARY	LIMITS OF THE PLOT BOUNDARY OF HERITAGE MONUMENT/BUILDING OR BUILDING GROUP, OR AN OFFSET OF A MIN. 20M FROM THE HERITAGE BUILDING FAÇADE	PREFERRED WITH NO DEVELOPMENT	C.2.2,C.2.4
ROW	VARIES	CONTINUOUS AND ACCESSIBLE PED/BIKE PATH; SHARED PATH PROMOTED	C.3.3
PUBLIC REALM	N/A	CONTINUOUS AND ACCESSIBLE PED/BIKE PATH; CONTEXTUAL MATERIAL AND COLOR PALETTE; LAYOUT AND FUNCTIONS TO RESPOND TO FORMS AND TOPOGRAPHY OF THE NATURAL AND CULTURAL LANDSCAPE	C.3.4
PERIMETER WALLS / FENCES	UNFENCED / LANDSCAPE BUFFER / MAX. 1.2M HEIGHT PERIMETER WALL	PREFERABLY UNFENCED	C.5.3.6
OPEN SPACE	N/A		C.5.2.3
BUFFER	MIN. 30M BUFFER BETWEEN LANDUSE AND NATURAL AREAS	AGRICULTURAL AND PRODUCTIVE USES ARE ALLOWED	C.5.3.9

BUILDING ENVELOPE		REMARKS	AUDC SECTION
URBAN BLOCK	IF ANY, MAX. 120M ANY DIRECTION WITHOUT INTERRUPTION	ORGANIC SHAPES RESPONDING TO NATURAL AND CULTURAL LANDSCAPE SHALL BE PROMOTED	C.5.2.2
ALLOWABLE USES	AGRICULTURE / PRODUCTIVE LANDSCAPE / ANCILLARY TO PRODUCTIVE ACTIVITIES / RESIDENTIAL	UTILITARIAN USES TO BE LOCATED AT THE BACK OF THE LOT AWAY FROM PUBLIC FRONTAGE	C.5.3.7
FLOORPLATE	MAX. 30M LENGTH ANY SIDE; MULTIPLE STRUCTURES OK		C.5.2.5
STRUCTURE HEIGHT	MAX. 10M		
NUMBER OF FLOORS	MAX. 2 LEVELS		
LAC	MAX. 10%		
SET BACK			
FRONT	MIN. 10 M FROM MAIN FRONTAGE	LANDSCAPED	
LEFT AND RIGHT SIDES	MIN. 5M	MIN. 3M LANDSCAPED BUFFER	
BACK	MIN. 5M	MIN. 3M LANDSCAPED BUFFER	
STREETWALL	N/A		
PARKING	MIN. 3M LANDSCAPED BUFFER FROM PUBLIC ROADS; MAX. 30% OF TOTAL LOT AREA	PERMEABLE SURFACE TREATMENT	C.5.2.4
ACCESS	MAX. 1 VEHICULAR ENTRY FOR PLOTS UP TO 30M WIDE, FOR LARGER PLOTS, MAX. 1 VEHICLE ENTRY FOR EVERY 50M OF MAIN ROAD FRONTAGE		C.5.2.4

ARCHITECTURE		REMARKS	AUDC SECTION
FACADE	MIN. 50% OF FACADE TREATMENT WITH ONE CONSISTENT MATERIAL	INTEGRAL TO ALL PUBLIC FACADES	C.5.3.1
OPENINGS	IN GENERAL, SHOULD HAVE A SHARE OF MAXIMUM 30 TO 50% OF THE OVERALL FACADE SURFACE	% ACCORDING TO THEIR ORIENTATION TO MINIMIZE SOLAR IMPACT. OPENINGS SHOULD BE LOCATED TO MINIMIZE THE IMPACT ON PRIVACY FOR NEIGHBORING PLOTS	C.5.3.2
ROOFTOP	MIN. 0.9M PARAPET; SET BACK FOR MECHANICAL EQUIPMENT MIN. 4M	SCREENING OF ALL UTILITIES VISIBLE FROM PUBLIC ROADS	C.5.3.8
MATERIALS/ COLORS	70% RANGE OF LIGHT GRADATIONS OF LOCAL LANDSCAPE TONES; NO CURTAIN WALL, NO METAL CLADDING	SYMPATHETIC TO LOCAL LANDSCAPE AND CULTURAL HERITAGE	C.5.3.3, C.5.3.4
SIGNAGE	SIGNAGE MUST BE WELL INTEGRATED WITHIN OVERALL ARCHITECTURAL COMPOSITION	SIGNAGE SHALL AVOID CONFLICTS WITH ADJACENT RESIDENTIAL USES AND PUBLIC REALM TREE CANOPIES	C.6.10

*Note: AUDC here refers to Aseer Urban Design Code for Private Development

Sample location

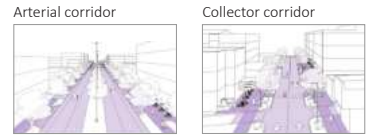


Figure 208 Block plan: open space / productive / agriculture



Figure 209 Block isometric: open space / productive / agriculture

4.2 Typical Situations: Conceptual Application of Land Use Development Standards, Districts and Corridors Character

Overview

This section presents 5 Typical Situations for testbeds representing the 5 natural environments to illustrate possible development outcomes for identified districts and corridors. The Typical Situations seek to illustrate at a conceptual level the aspired urban design, public realm and built-form quality and, importantly, their interrelation for the most common urban conditions throughout Aseer.

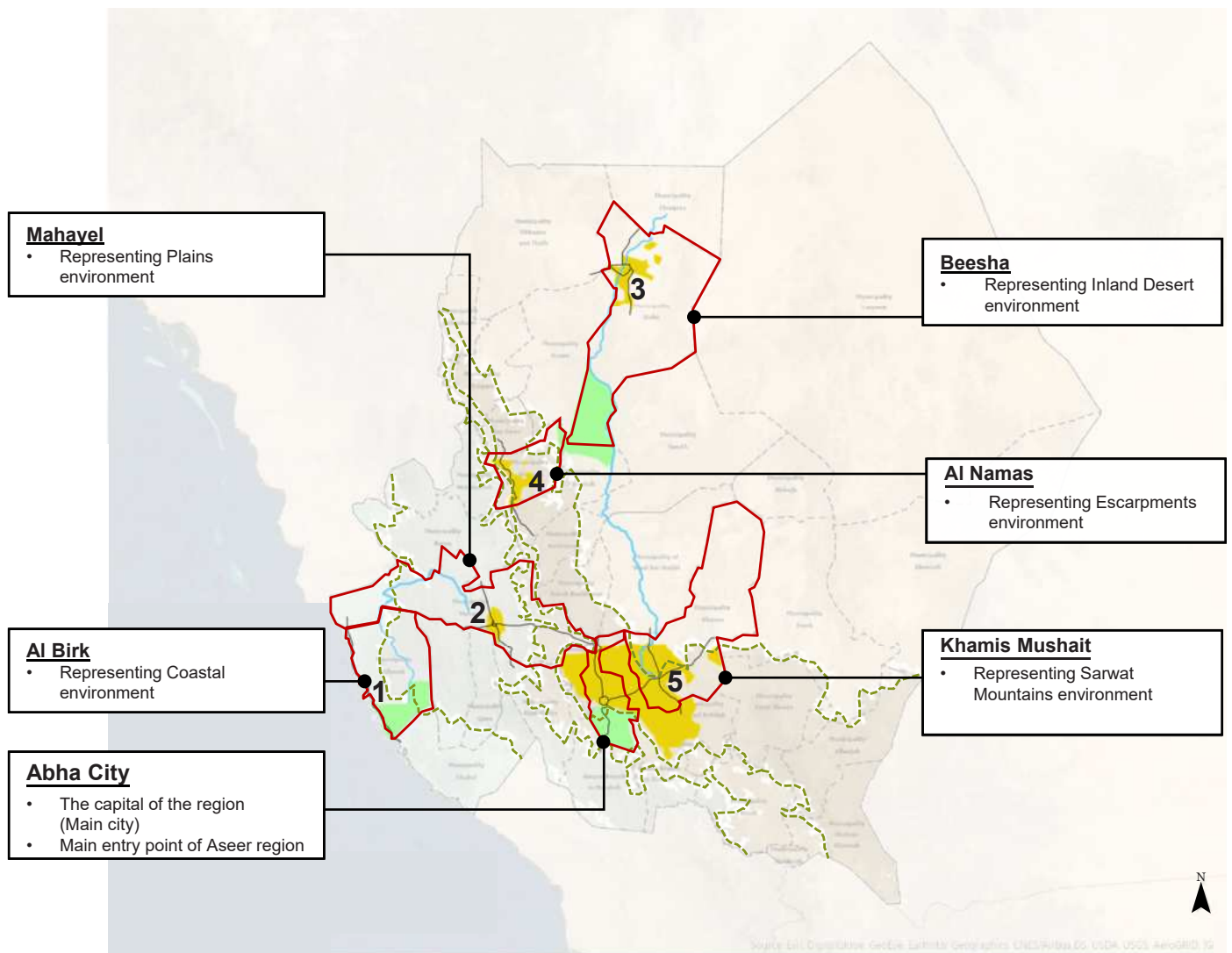


Figure 210 Testbeds representing five natural environments in Aseer

1. Al Birk - Coastal Plains



4. Al Namas - Escarpment



2. Mahayel - Tuhama Plains



5. Khamis Mushait - Sarwat Mountains



3. Beesha - Inland Deserts



4.2.1 Al Birk: Urban Center + Priority Access Corridor (Coastal Road 55)

Objective

Create a distinct and unique identity for Al Birk urban center, encouraging mixed-use and walkable neighborhoods, a continuous and high-quality landscape network creating connected civic spaces and public realm. Coastal Road 55 is envisioned as a highly representative scenic corridor along the coastline.

Guidance

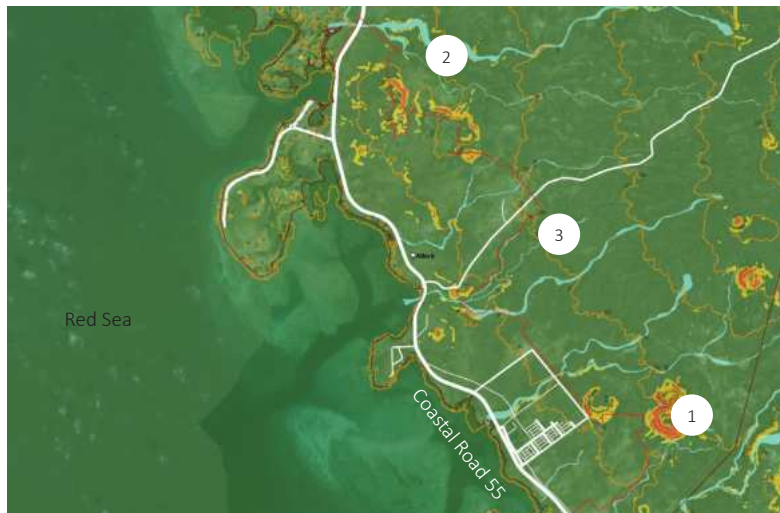
Identify open space network

- 1 Areas with 15%-30% slope: new development shall be subject to additional development controls.
- 1 Areas with >30% slope: new development shall not be permitted.
Protect wadi areas:
 - 2 50m from wadi edge on both sides for main wadis.
 - 3 25m from wadi edge on both sides for sub-wadis.
 - 4 Continuous coastline
 - 5 Mapping of road network.
 - 6 Mapping of existing open spaces, urban blocks, land uses and densities.

Apply placemaking concepts

- Shoreline as linear civic open space and green network. Movement corridor to connect open space system to natural preserve - min. 50m wide natural buffer in urban areas; min. 100m wide for habitat.
- Area inside urban core as walkable mixed-use district.
- Inner civic + heritage core district with special contextual architecture requirements and landmark buildings. Opportunities for infill and redevelopment.
- Coastal Road 55 with commercial / mixed-use and enhanced public realm to reinforce corridor's image within the city, walkability and to slow down traffic.
- Slow movement parkways along civic parks to redefine edges.
- Future civic uses along open space network to reinforce representative functions.
- Connected open space network + slow mobility + productive landscape system.

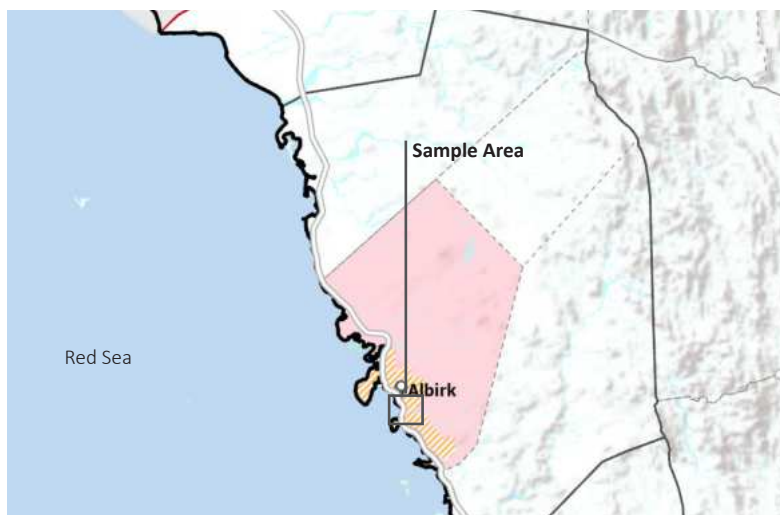
Sample Area - Al Birk



Wadis and topography



Existing road network



Al Birk urban center boundary



Figure 211 Conceptual land use plan: sample area for Al Birk

Dominant Use or Activity Categories

- Residential Activities (Neighborhood)
- Low Density Residential Activities (Cluster in Landscape)
- Commercial / Shopping, Business or Trade Activities
- Industrial / Light Industrial / Manufacturing Activities (Corridor)
- Civic / Governmental / Social, institutional, or Infrastructure related Activities
- Transportation / Travel or Movement Activities
- Recreational / Leisure Activities
- Environmental / Natural Resources related Activities
- Parkway/ Pedestrian Path
- Heritage District

Mixed of Uses and Activities

- Mixed Use / Commercial (Transit Oriented Corridor)
- Mixed Use / Commercial (Corridor)
- Mixed Use / Residential (Neighborhood)
- Mixed Use / Residential in Heritage District (Neighborhood)

City Landscape: Mix of Uses and Activities for Open Spaces

- Public Park / Civic Space
- Productive / Agricultural
- Open Space / Recreation / Productive

Al Birk: Urban Center + Priority Access Corridor

Zoom-in area showing typical situation of road 55 crossing urban center along the coast: with mixed use residential neighborhood and spontaneous/organic street and block configuration of downtown Al Birk and larger commercial uses along access corridor. Most of the built form is already constructed. Opportunities for redesign of priority access corridor for safety and public realm provision; infill and brown fill development; mixed use and commercial development along corridor to connect and leverage on seaside value also for tourism.



Key Plan

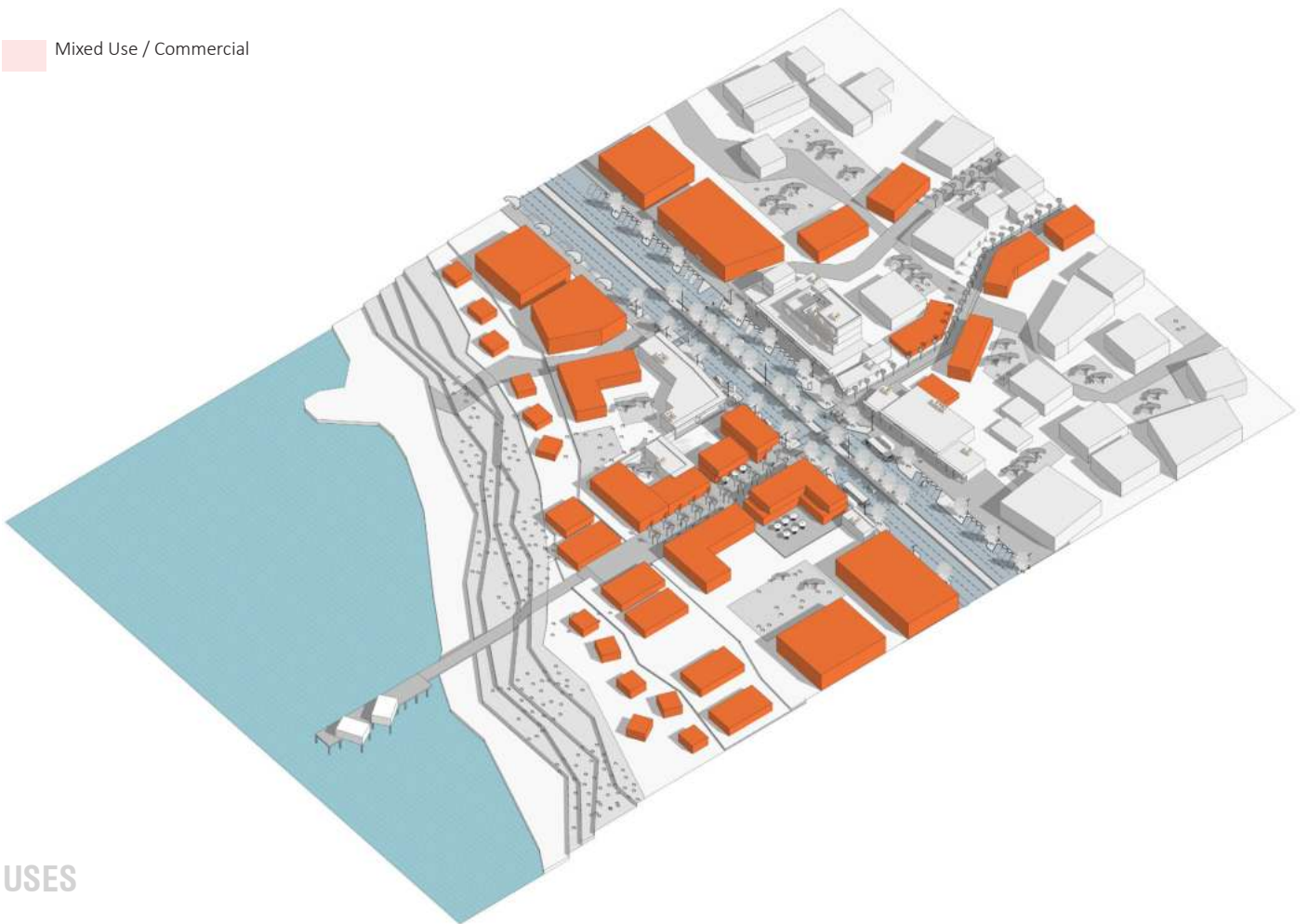


PLAN

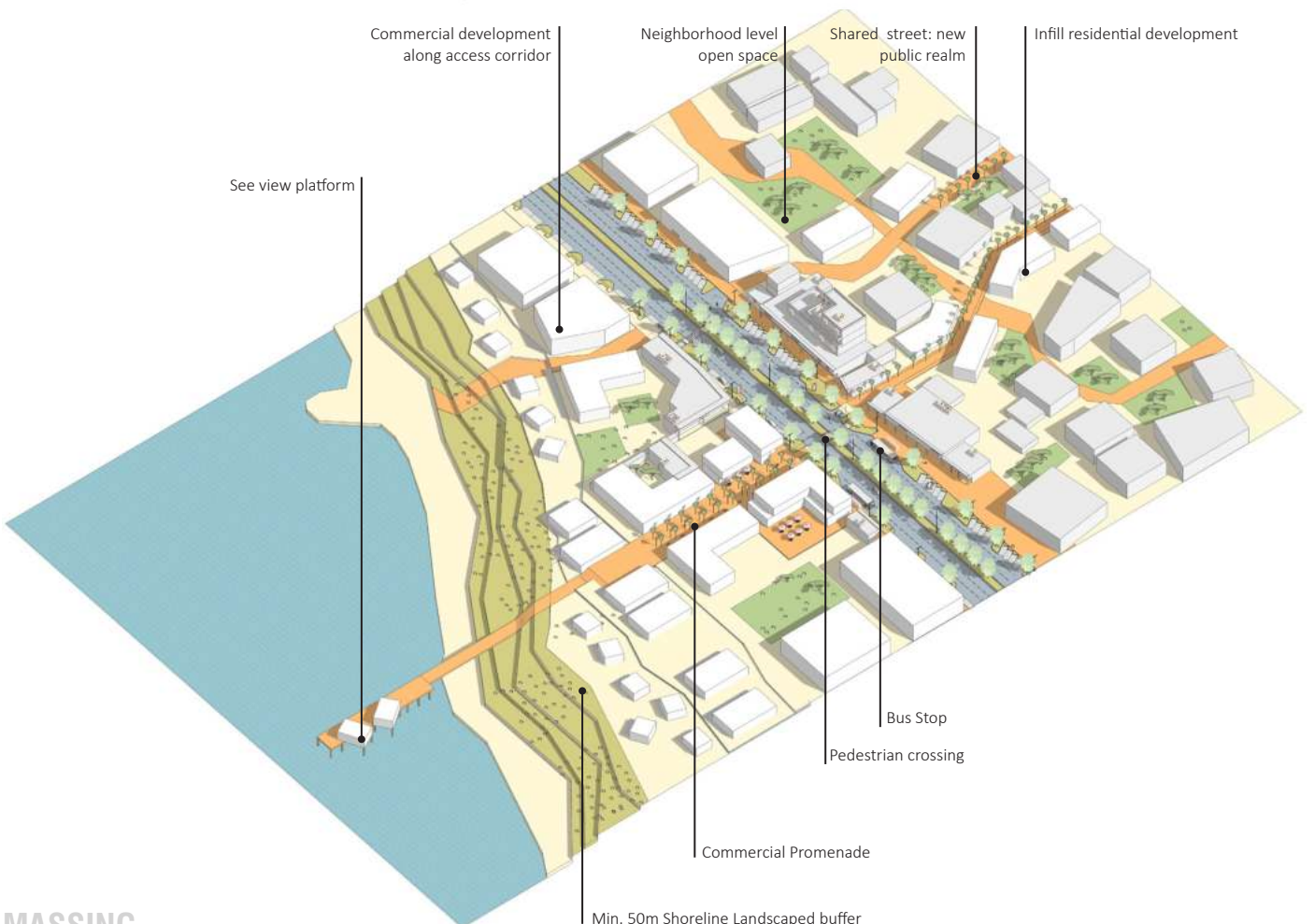


TYPICAL SECTION

Mixed Use / Commercial



USES



MASSING

4.2.2 Mahayel: Urban Center + Arterial Corridor (King Abdul Aziz Road)

Objective

Create a distinct and unique identity for Mahayel urban center. For the downtown area opportunities for infill and brown fill development; mixed use redevelopment; existing structures and public realm upgrade; provision of new open space and pocket parks network; complete streets should be promoted.

Guidance

Identify open space network

- 1 Areas with 15%-30% slope: new development shall be subject to additional development controls.
- 1 Areas with >30% slope: new development shall not be permitted.
- 2 Protect wadi areas: 50m from wadi edge on both sides for main wadis.
- 3 25m from wadi edge on both sides for sub-wadis.
- 4 Mapping of road network.
- 5 Mapping of existing open spaces, urban blocks, land uses and densities.

Apply placemaking concepts

- Wadis as linear civic park and green network.
- Area inside ring road as compact, walkable mixed-use district.
- Inner civic + heritage core district with special contextual architecture requirements and landmarks buildings.
- Future civic uses along wadi parks to reinforce representative functions.
- Commercial/ mixed-use with enhanced public realm to reinforce corridor's image within the city.
- Movement corridor to connect urban open space system to natural preserve - min. 100m wide for habitat.
- Slow movement parkways along civic park to redefine edges.
- Connected open space network + slow mobility + productive landscape system.

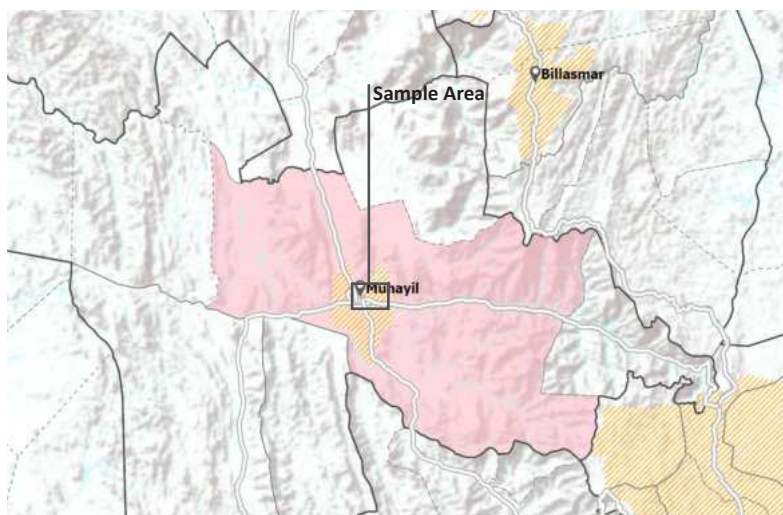
Sample Area - Mahayel



Wadis and topography



Existing road network



Mahayel urban center boundary



Figure 212 Conceptual land use plan: sample area for Mahayel

Dominant Use or Activity Categories

- Residential Activities (Neighborhood)
- Low Density Residential Activities (Cluster in Landscape)
- Commercial / Shopping, Business or Trade Activities
- Industrial / Light Industrial / Manufacturing Activities (Corridor)
- Civic / Governmental / Social, institutional, or Infrastructure related Activities
- Transportation / Travel or Movement Activities
- Recreational / Leisure Activities
- Environmental / Natural Resources related Activities
- Parkway/ Pedestrian Path
- Heritage District

Mixed of Uses and Activities

- Mixed Use / Commercial (Transit Oriented Corridor)
- Mixed Use / Residential (Neighborhood)
- Mixed Use / Residential in Heritage District (Neighborhood)
- Mixed Use / Commercial (Corridor)

City Landscape: Mix of Uses and Activities for Open Spaces

- Public Park / Civic Space
- Open Space / Recreation / Productive
- Productive / Agricultural

Mahayel: Urban Center + Arterial Corridor

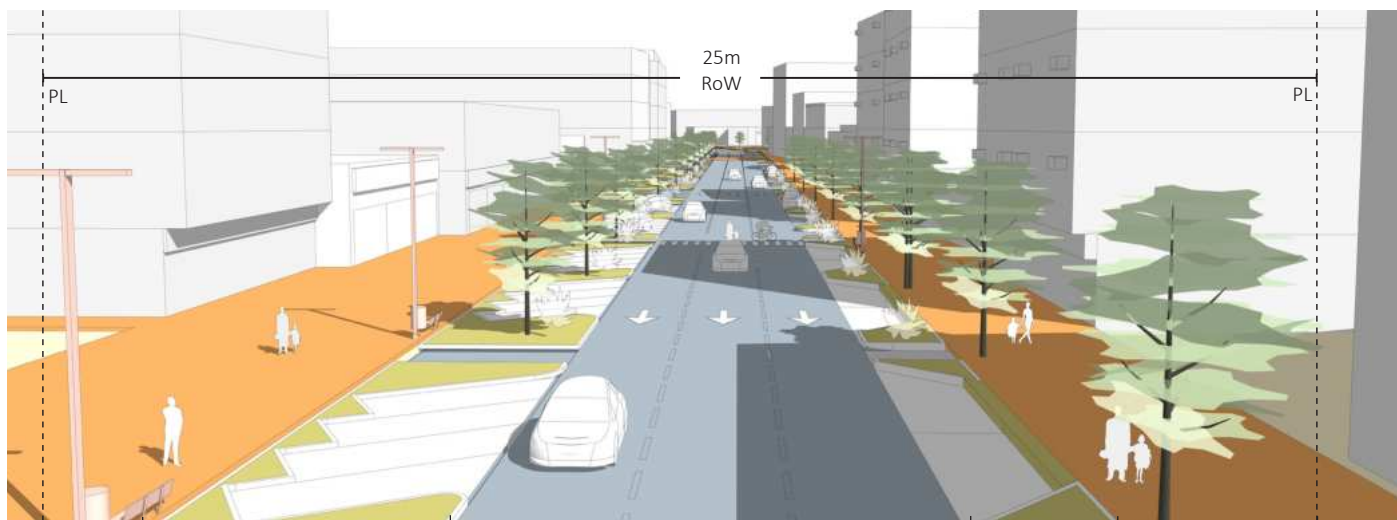
Zoom-in area showing typical mixed use residential neighborhood's street and block configuration in downtown Mahayel. Most of the built form is already constructed. Opportunities for infill and brown fill development; mixed use redevelopment; existing structures and public realm upgrade; provision of new open space and pocket parks network; complete streets.



Key Plan



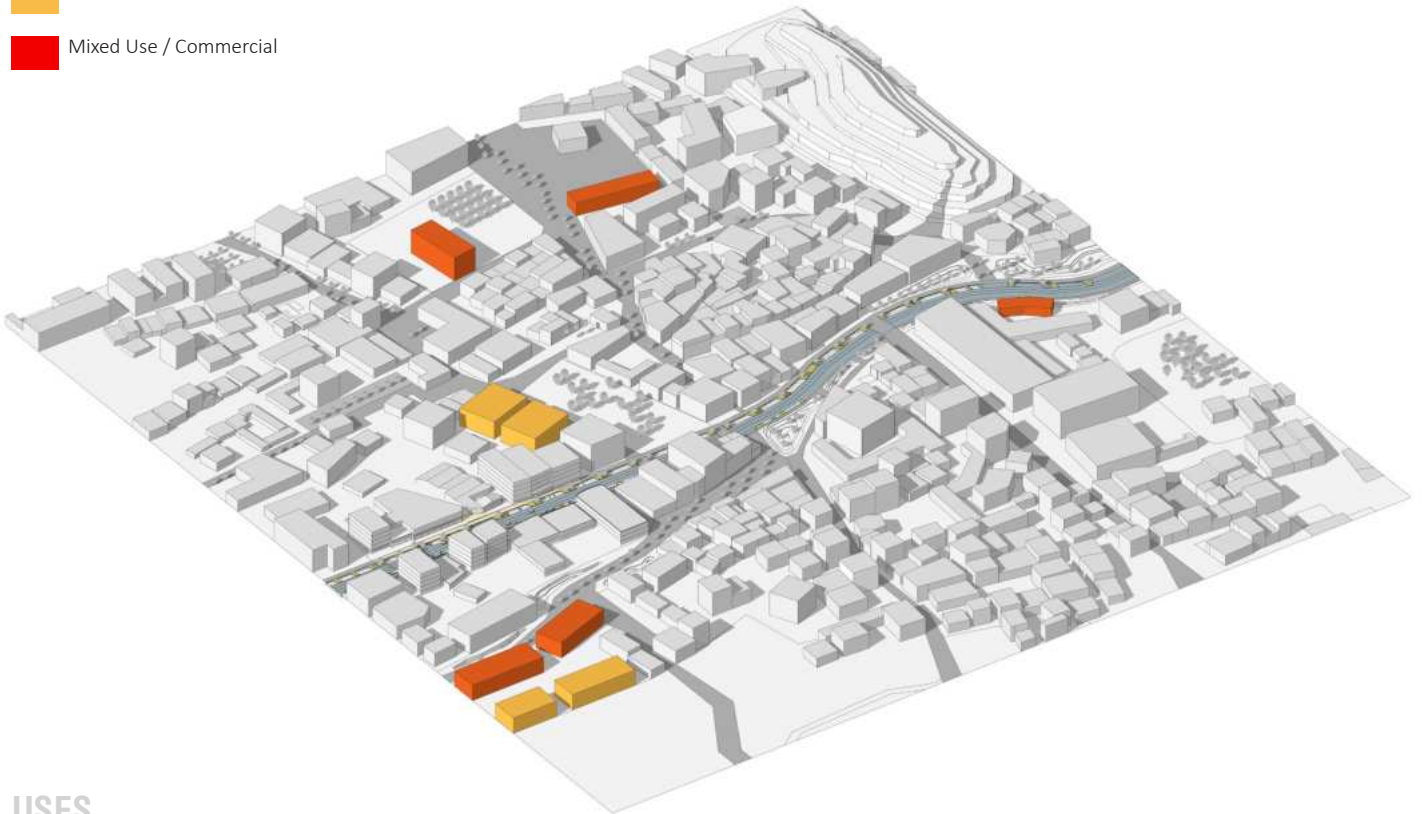
PLAN



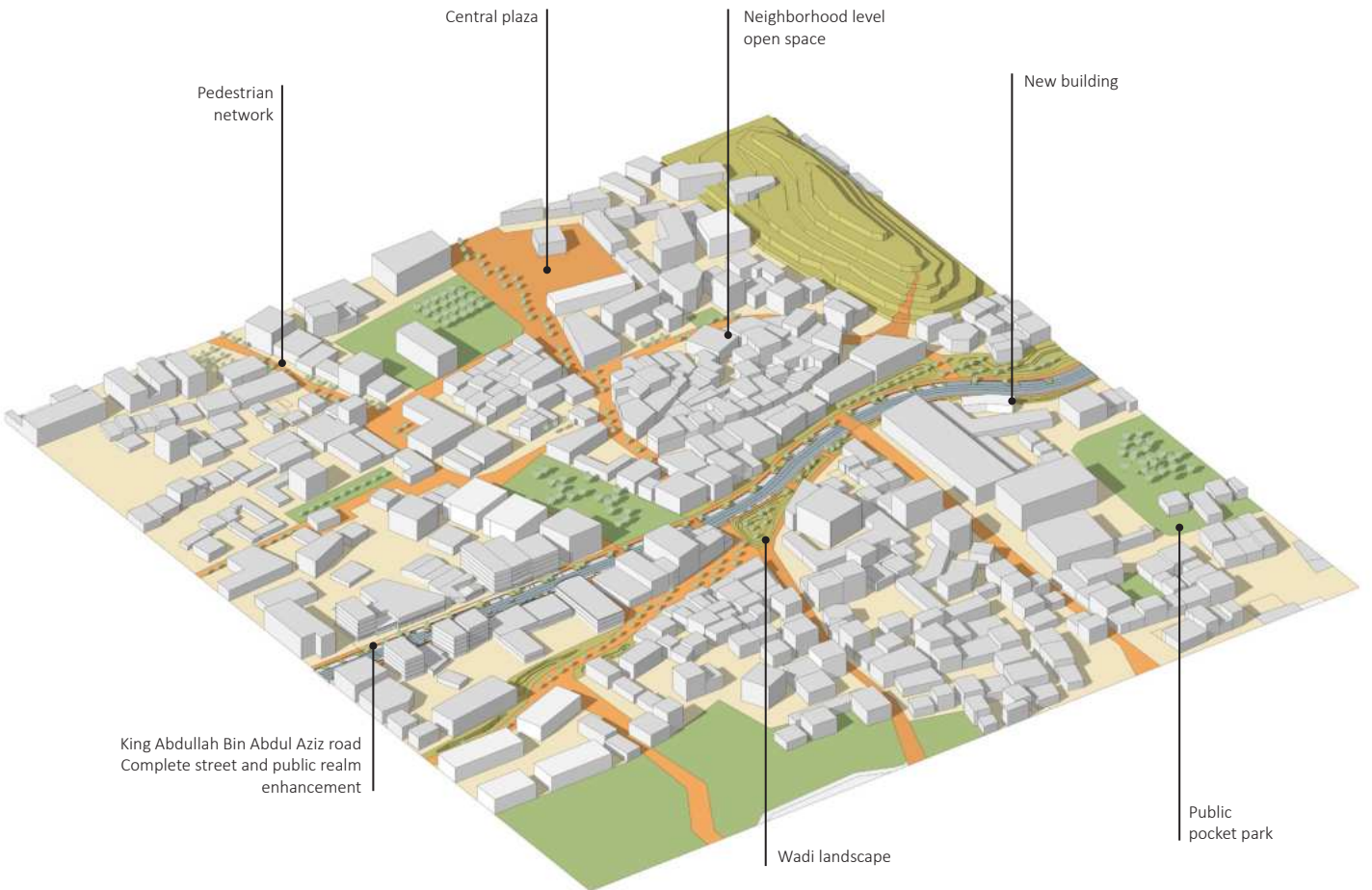
Public frontage	2.5m Sidewalk	6.5m Street parking	10.5m Carriageway	3m Flexible zone	2.5m Sidewalk	Public frontage
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TYPICAL SECTION

- Mixed Use / Residential
- Mixed Use / Commercial



USES



MASSING

4.2.3 Beesha: Urban Center + Mixed Use Residential

Objective

Create a distinct and unique identity for Beesha urban center. Opportunities for infill and brown fill development; mixed use redevelopment; existing structures and public realm upgrade; provision of new open space and pocket parks network; complete streets should be utilized.

Guidance

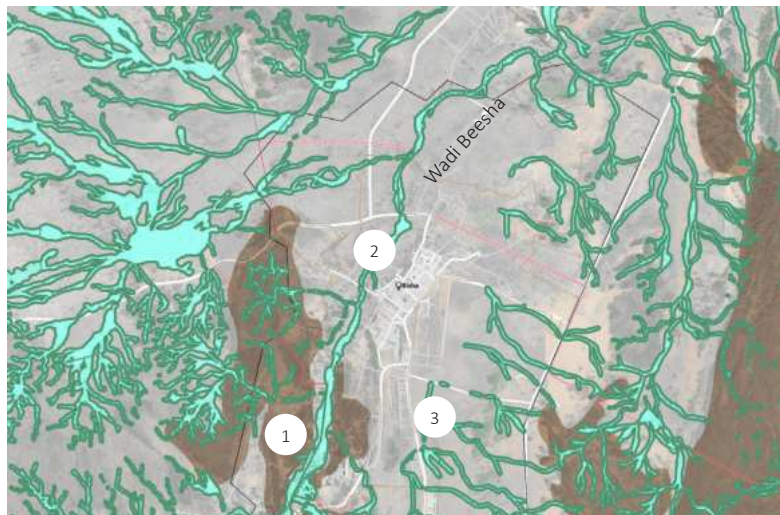
Identify open space network

- 1 Areas with 15%-30% slope: new development shall be subject to additional development controls.
- 1 Areas with >30% slope: new development shall not be permitted.
- 2 Protect wadi areas: 50m from wadi edge on both sides for main wadis.
- 3 25m from wadi edge on both sides for sub-wadis.
- 4 Mapping of road network.
- 5 Mapping of existing open spaces, urban blocks, land uses and densities.

Apply placemaking concepts

- Wadis as linear civic park and green network.
- Downtown neighborhood as compact, walkable mixed-use district.
- Future civic uses along parks to reinforce representative functions.
- Commercial/ mixed-use with enhanced public realm to reinforce corridors image within the city.
- Connected open space network + slow mobility system.
- Shared & living streets in residential neighborhoods.

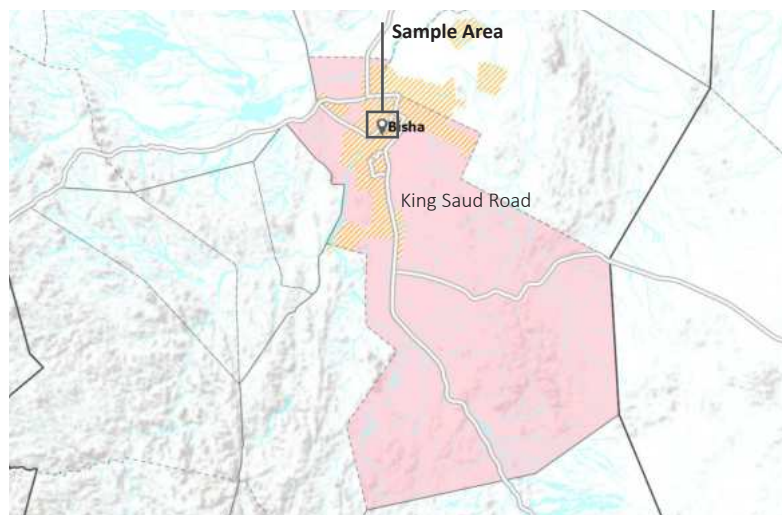
Sample Area - Beesha



Wadis and topography



Existing road network



Beesha urban center boundary



Figure 213 Conceptual land use plan: sample area for Beesha

Dominant Use or Activity Categories

- Residential Activities (Neighborhood)
- Low Density Residential Activities (Cluster in Landscape)
- Commercial / Shopping, Business or Trade Activities
- Industrial / Light Industrial / Manufacturing Activities (Corridor)
- Civic / Governmental / Social, institutional, or Infrastructure related Activities
- Transportation / Travel or Movement Activities
- Recreational / Leisure Activities
- Environmental / Natural Resources related Activities
- Parkway/ Pedestrian Path
- Heritage District

Mixed of Uses and Activities

- Mixed Use / Commercial (Transit Oriented Corridor)
- Mixed Use / Commercial (Corridor)
- Mixed Use / Residential (Neighborhood)
- Mixed Use / Residential in Heritage District (Neighborhood)

City Landscape: Mix of Uses and Activities for Open Spaces

- Public Park / Civic Space
- Productive / Agricultural
- Open Space / Recreation / Productive

Beesha: Urban Center + Mixed Use Residential

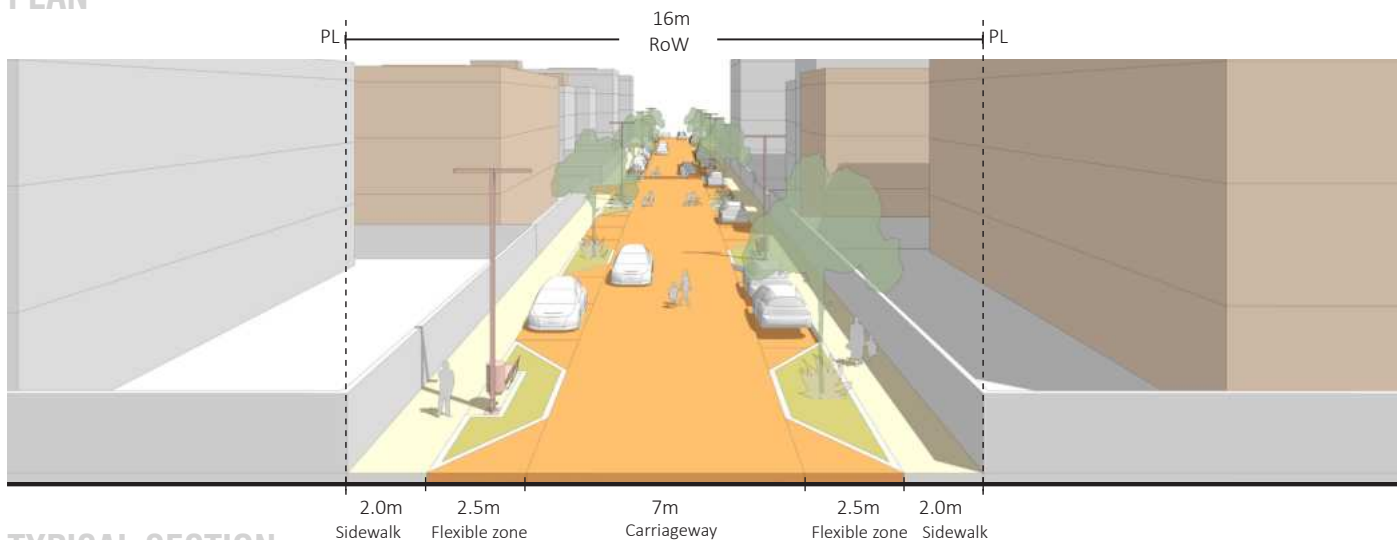
Zoom-in area showing typical mixed use residential neighborhood's street and block configuration in downtown Beesha. Most of the built form is already constructed. Opportunities for infill and brown fill development; mixed use redevelopment; existing structures and public realm upgrade; provision of new open space and pocket parks network; complete streets.



Key Plan



PLAN



TYPICAL SECTION

- Residential Activities
- Mixed Use / Residential
- Mixed Use / Commercial
- Civic / Governmental / Social/
Educational Institution



USES



MASSING

4.2.4 Al Namas: Urban Center + Mixed Use Residential

Objective

Create a distinct and unique identity for Al Namas urban center. Opportunities for infill and brown fill development; mixed-use redevelopment; existing structures and public realm upgrade; provision of new open space and pocket parks network; complete streets should be utilized.

Guidance

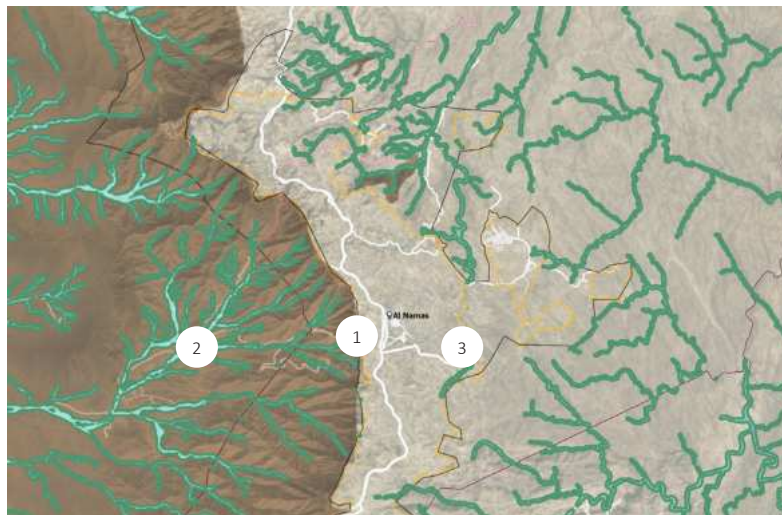
Identify open space network

- 1 Areas with 15%-30% slope: new development shall be subject to additional development controls.
- 1 Areas with >30% slope: new development shall not be permitted.
- 2 Protect wadi areas: 50m from wadi edge on both sides for main wadis.
- 3 25m from wadi edge on both sides for sub-wadis.
- 4 Mapping of road network.
- 5 Mapping of existing open spaces, urban blocks, land uses and densities.

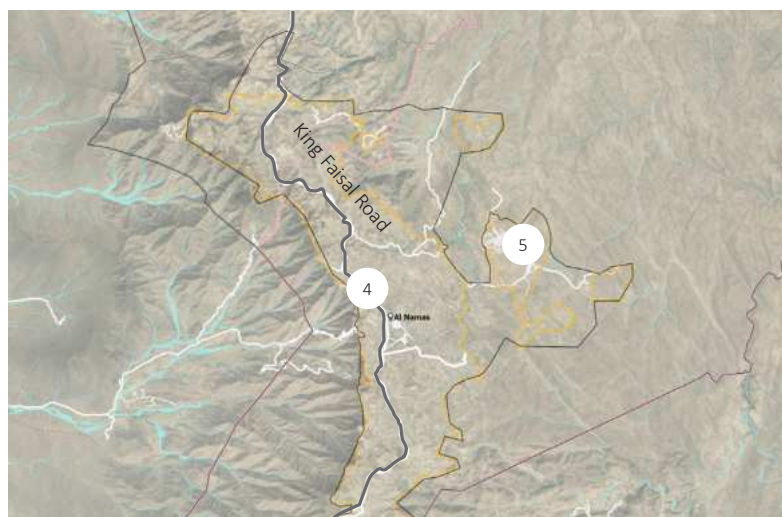
Apply placemaking concepts

- Wadis as linear civic parks and green network.
- Urban core as compact, walkable mixed-use district.
- Inner civic + heritage core district with special contextual architecture requirements and landmarks buildings.
- Future civic uses along wadi parks to reinforce public functions.
- Commercial/ mixed-use with enhanced public realm to reinforce King Faisal Road corridor image within the city.
- Movement corridor to connect urban open space system to natural preserve- min. 100m wide for habitat.
- Slow movement parkways along civic park/ cultural landscapes to redefine edges.
- Connected open space network + slow mobility + productive landscape system.

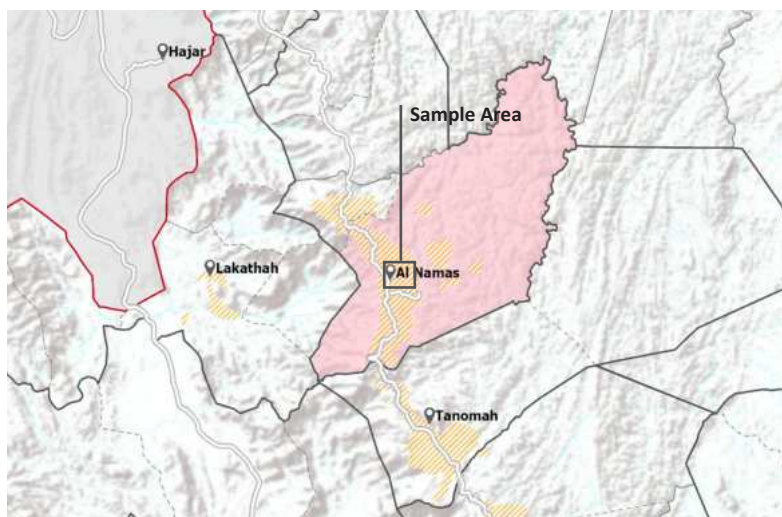
Sample Area - Al Namas



Wadis and topography



Existing road network



Al Namas center boundary

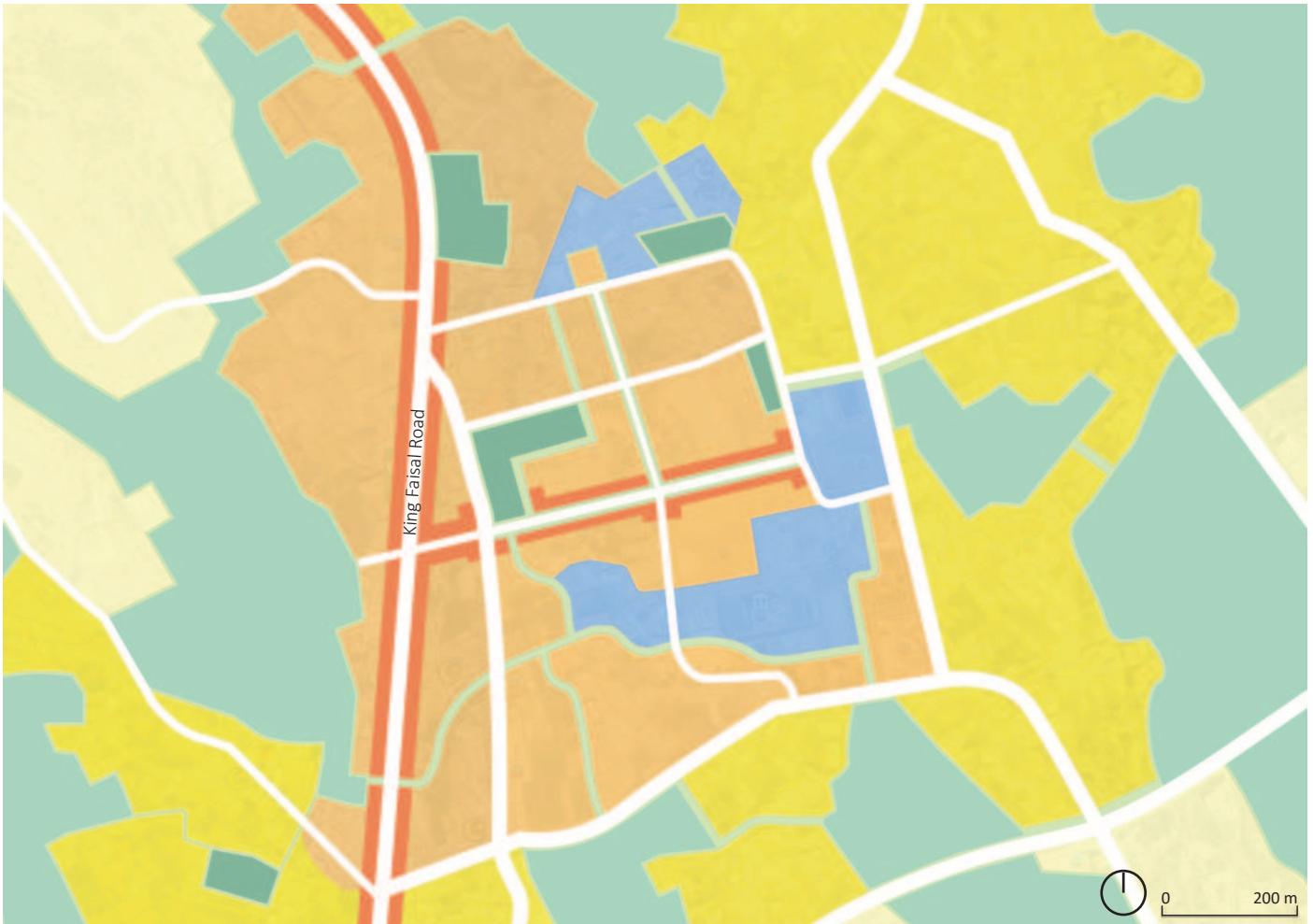


Figure 214 Conceptual land use plan: sample area for Al Namas

Dominant Use or Activity Categories

- Residential Activities (Neighborhood)
- Low Density Residential Activities (Cluster in Landscape)
- Commercial / Shopping, Business or Trade Activities
- Industrial / Light Industrial / Manufacturing Activities (Corridor)
- Civic / Governmental / Social, institutional, or Infrastructure related Activities
- Transportation / Travel or Movement Activities
- Recreational / Leisure Activities
- Environmental / Natural Resources related Activities
- Parkway/ Pedestrian Path
- Heritage District

Mixed of Uses and Activities

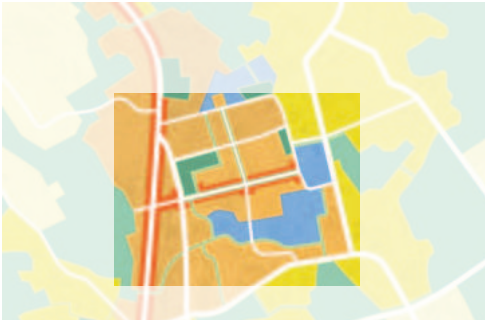
- Mixed Use / Commercial (Transit Oriented Corridor)
- Mixed Use / Commercial (Corridor)
- Mixed Use / Residential (Neighborhood)
- Mixed Use / Residential in Heritage District (Neighborhood)

City Landscape: Mix of Uses and Activities for Open Spaces

- Public Park / Civic Space
- Productive / Agricultural
- Open Space / Recreation / Productive

Al Namas: Urban Center+ Mixed Use Residential

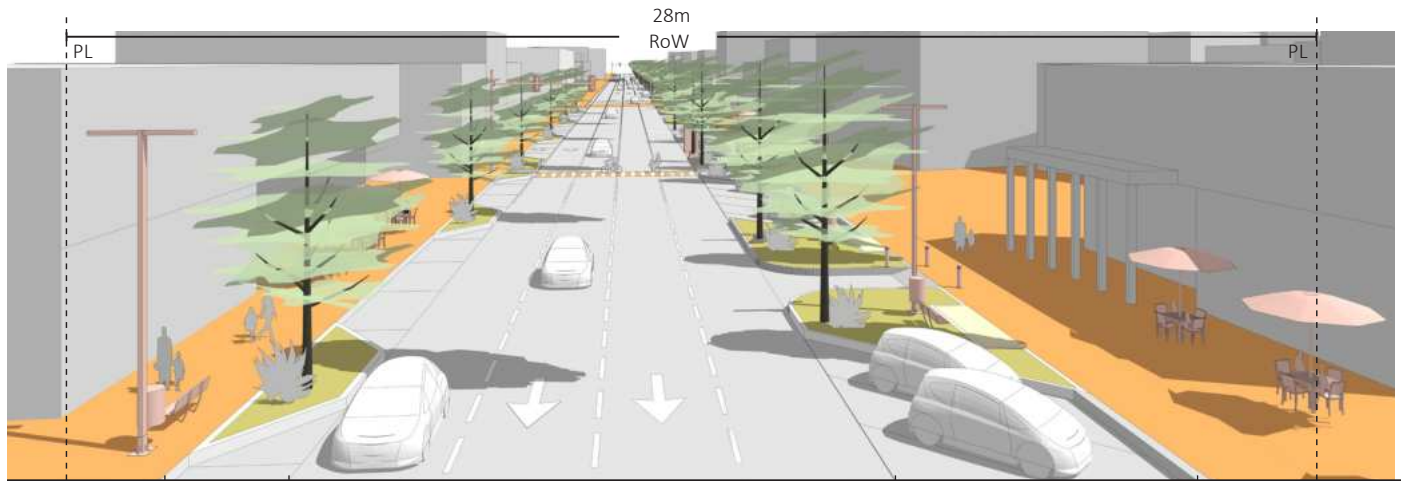
Zoom-in area showing typical mixed use residential neighborhood's street and block configuration in downtown Al Namas. Most of the built form is already constructed. Opportunities for infill and brown fill development; mixed use redevelopment; existing structures and public realm upgrade; provision of new open space and pocket parks network; complete streets.



Key Plan



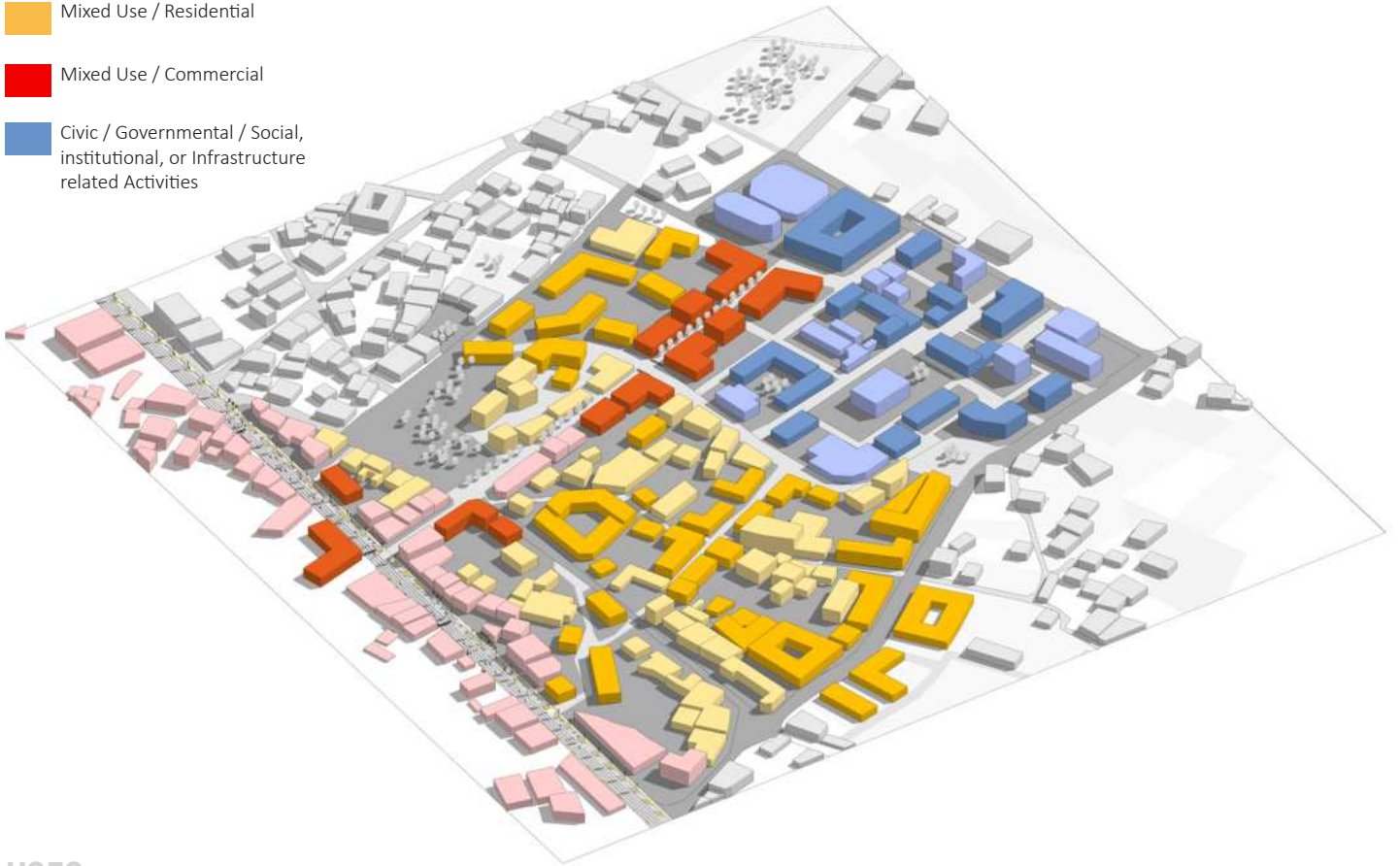
PLAN



Public Frontage 2.5m Sidewalk 2.5m Flexible zone 14m Carriageway 6.5m Street parking 2.5m Sidewalk Public frontage

TYPICAL SECTION

- Mixed Use / Residential
- Mixed Use / Commercial
- Civic / Governmental / Social, institutional, or Infrastructure related Activities



USES



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4.2.5 Khamis Mushait: Urban Center + Priority Access Corridor (Transit Oriented Corridor)

Objective

Create a distinct and unique identity for Khamis Mushait urban center, encouraging higher density mixed use and walkable neighborhoods, robust civic functions and civic spaces, and a continuous and high quality public realm and landscape network. Furthermore, King Fahd Road is envisioned as a highly representative future transit development corridor.

Guidance

Identify open space network

- 1 Areas with 15%-30% slope: new development shall be subject to additional development controls.
- 1 Areas with >30% slope: new development shall not be permitted.
- 2 Protect wadi areas: 50m from wadi edge on both sides for main wadis.
- 3 25m from wadi edge on both sides for sub-wadis.
- 4 Heritage buffer zones: 20m boundary and 200m- 300m buffer zone for heritage structures.
- 5 Mapping of road network.
- 6 Mapping of existing open spaces, urban blocks, land uses and densities.

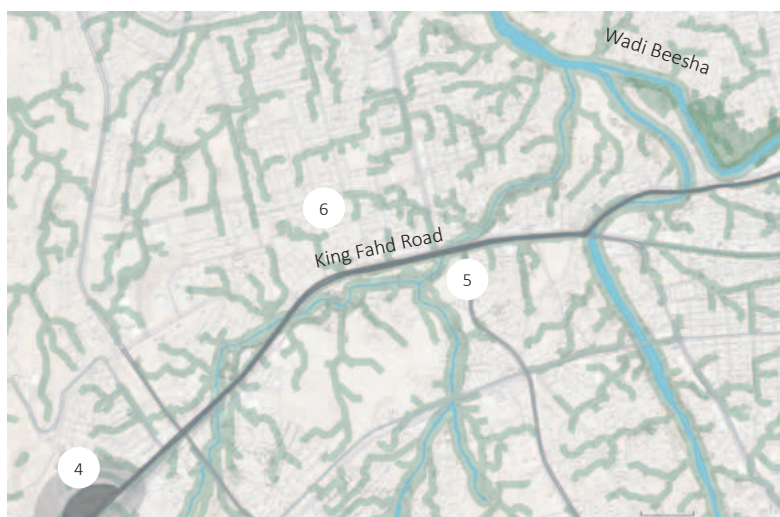
Apply placemaking concepts

- Development of King Fahd Road commercial corridor with higher densities and building heights; future public transit corridor.
- KFR TOD catchment area with compact, walkable mixed-use development and job related functions.
- Khamis Mushait downtown as compact, walkable mixed-use district.
- Commercial / mixed-use with enhanced public realm along old district corridors to reinforce image.
- Wadi Beesha as linear civic park.
- Linear wadi open space to mark entrance to Khamis Mushait downtown mixed-use district.
- Connected open space network + slow mobility + productive landscape.
- Slow movement parkways along wadi parks to redefine edges.

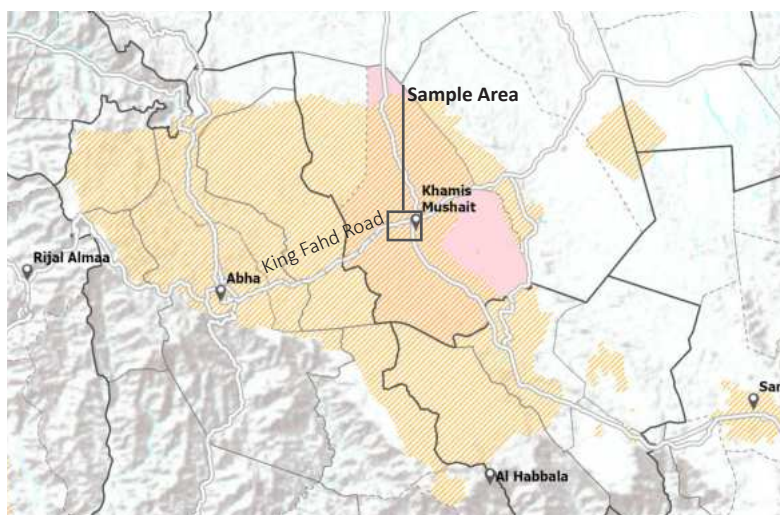
Sample Area - Khamis Mushait



Wadis, wadi buffers, open spaces, ecologically sensitive areas and topography



Existing road network and development



Khamis Mushait urban center boundary

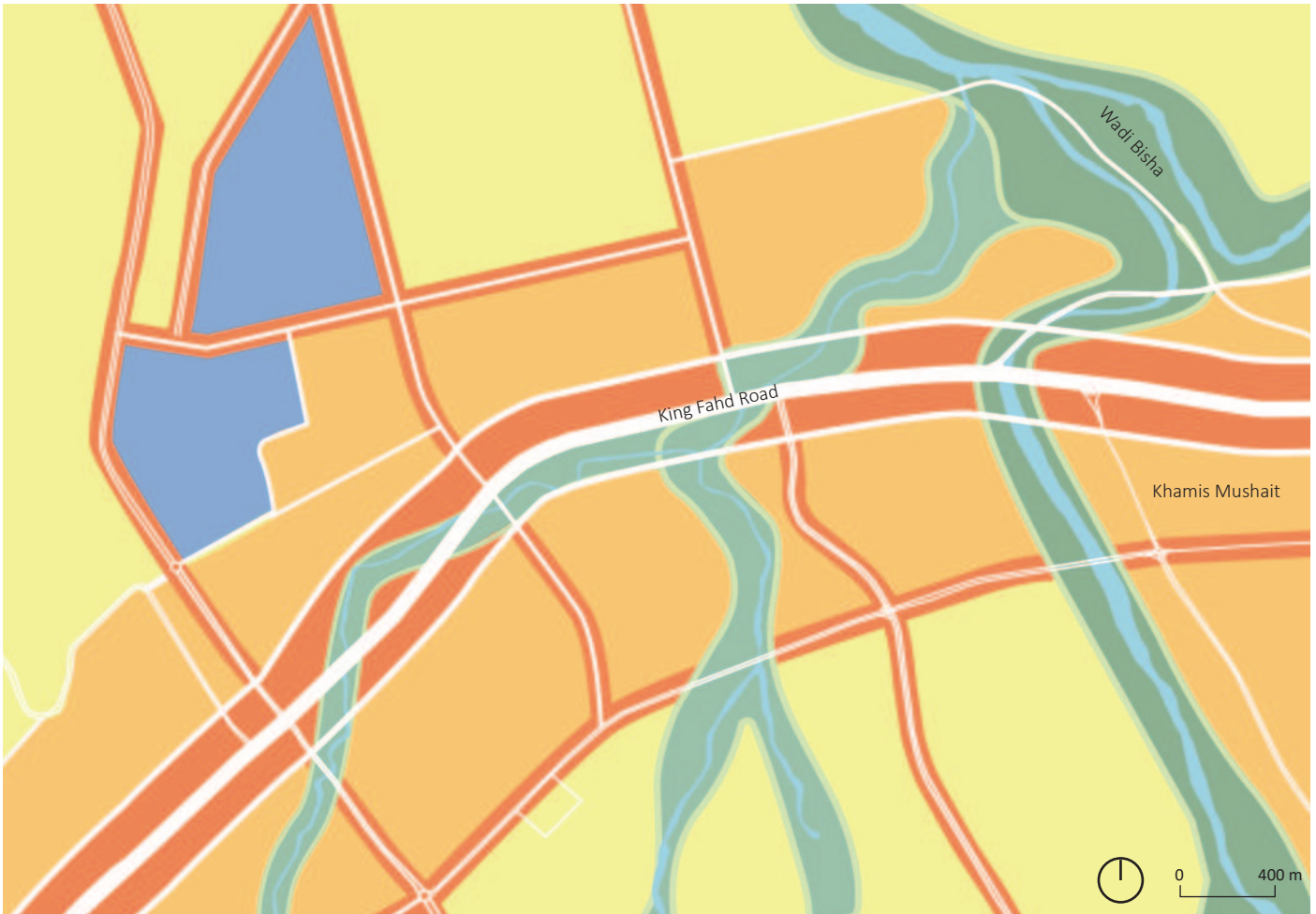


Figure 215 Conceptual land use plan: sample area for Khamis Mushait

Dominant Use or Activity Categories

- Residential Activities (Neighborhood)
- Low Density Residential Activities (Cluster in Landscape)
- Commercial / Shopping, Business or Trade Activities
- Industrial / Light Industrial / Manufacturing Activities (Corridor)
- Civic / Governmental / Social, institutional, or Infrastructure related Activities
- Transportation / Travel or Movement Activities
- Recreational / Leisure Activities
- Environmental / Natural Resources related Activities
- Parkway/ Pedestrian Path
- Heritage District

Mixed of Uses and Activities

- Mixed Use / Commercial (Transit Oriented Corridor)
- Mixed Use / Commercial (Corridor)
- Mixed Use / Residential (Neighborhood)
- Mixed Use / Residential in Heritage District (Neighborhood)

City Landscape: Mix of Uses and Activities for Open Spaces

- Public Park / Civic Space
- Productive / Agricultural
- Open Space / Recreation / Productive

Khamis Mushait: Urban Center + Priority Access Corridor

Zoom-in area showing typical configuration of King Fahd Road as urban boulevard in downtown Khamis Mushait. Frontage plots with mixed use commercial development; opportunities for infill and brown fill development; redevelopment of substandard structures; King Fahd RoW public realm upgrade; provision of new open space network and pocket parks.



Key Plan



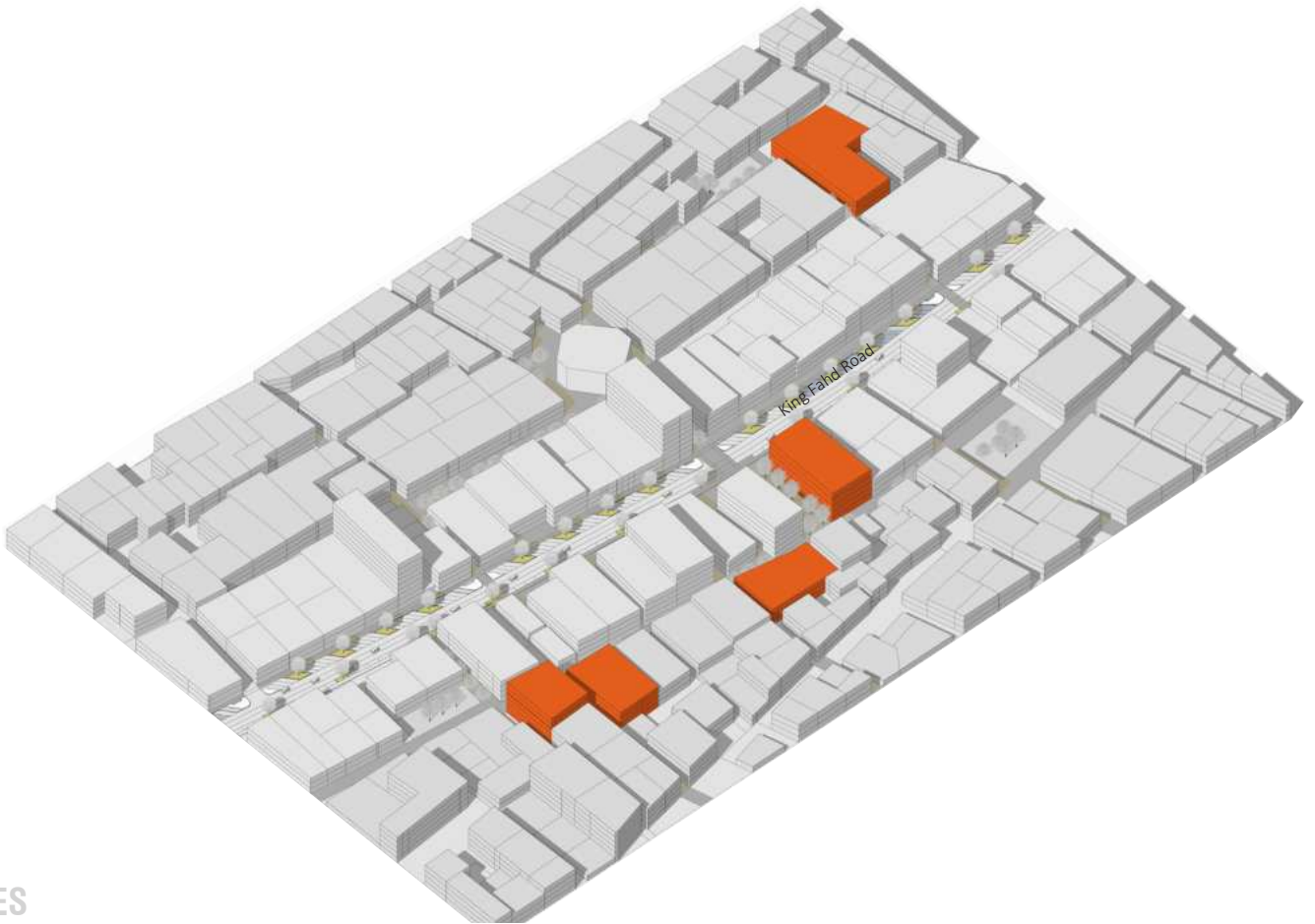
PLAN



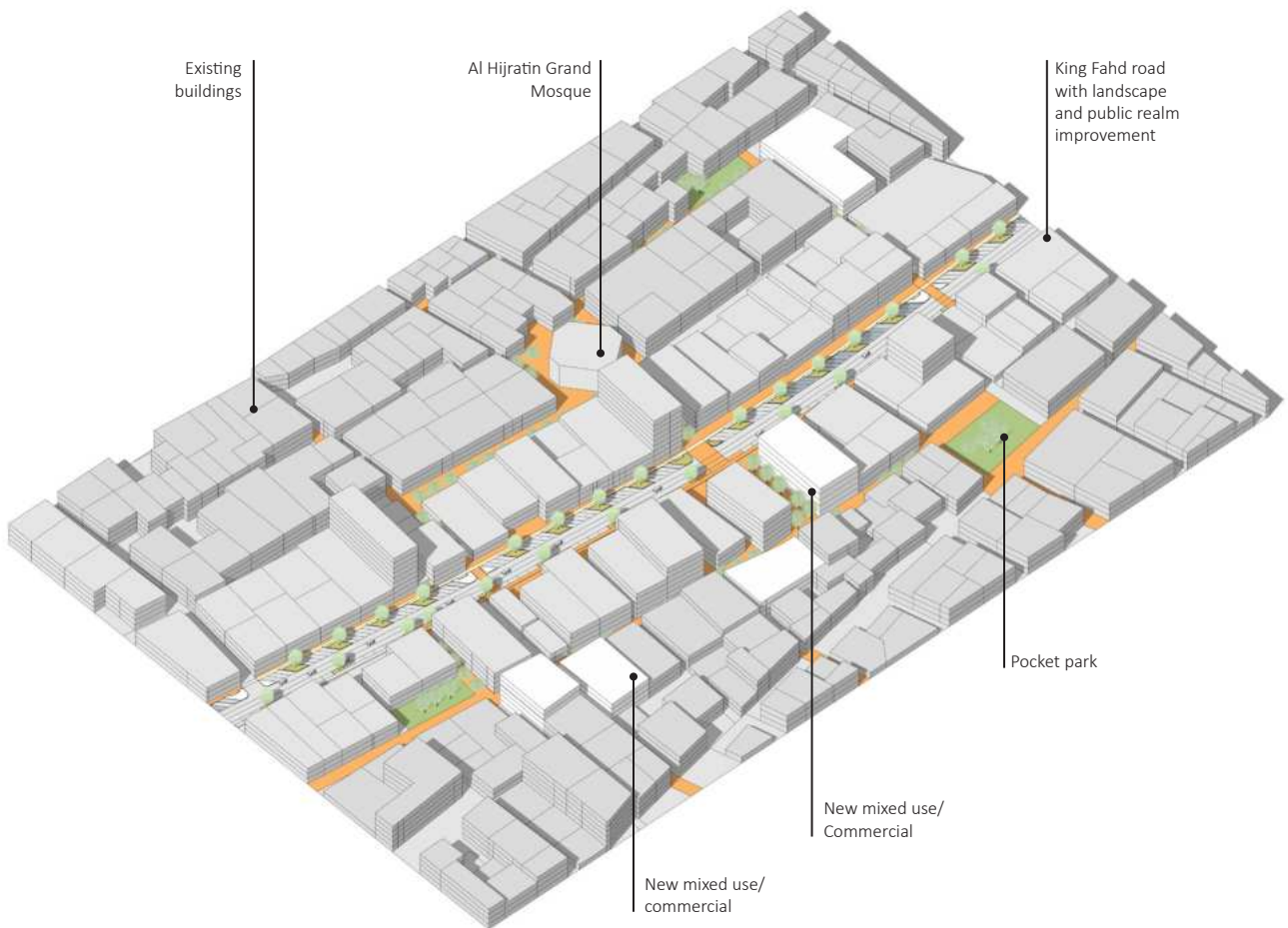
Public Frontage	3.0m Sidewalk	6.5m Parking space	9.0m Main Carriageway	2.5m Flexible zone	3m Sidewalk	Public Frontage
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TYPICAL SECTION

Mixed Use / Commercial



USES



MASSING



LAND SUBDIVISION

4.3 Land Subdivision

Overview

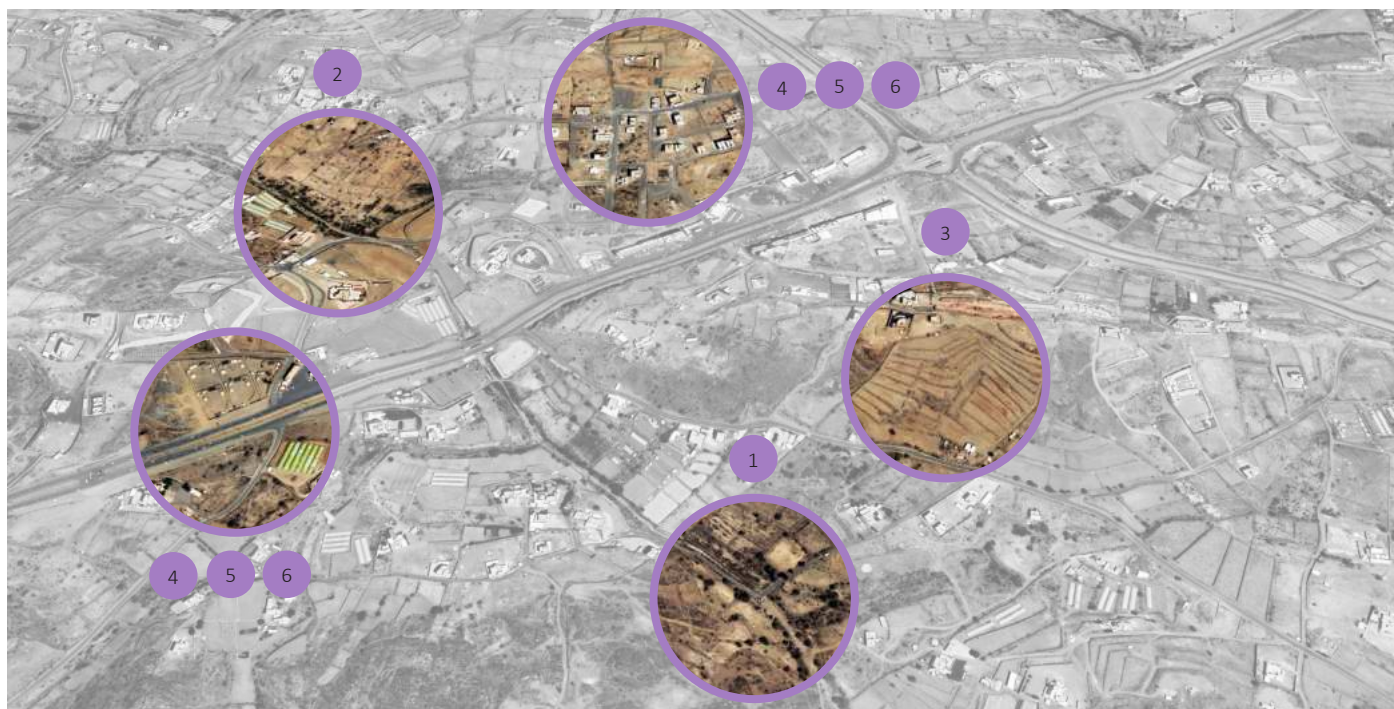
The process of land subdivision together with neighborhood design is a crucial step towards placemaking and thus integral in developing the character, identity and desired image of Aseer's urban areas. Land subdivision should respond, protect and enhance the natural context (i.e. landform and its features, ecology, vegetation) and cultural heritage (i.e. artifacts, productive landscapes; like terraced fields) of the site and minimize its impact on the environment.

Guidance

For standard land subdivisions, the design process for the site should be structured in the following steps:

- Assessment of natural environment and heritage.
- Open space and landscape.
- Movement network and utility systems.
- On site and surrounding land uses.
- Placemaking and public realm.
- Buildings envelope and architecture.

The following pages provide step by step guidance of the proposed methodology for a hypothetical land subdivision for a new neighborhood within the UGBs in Aseer.

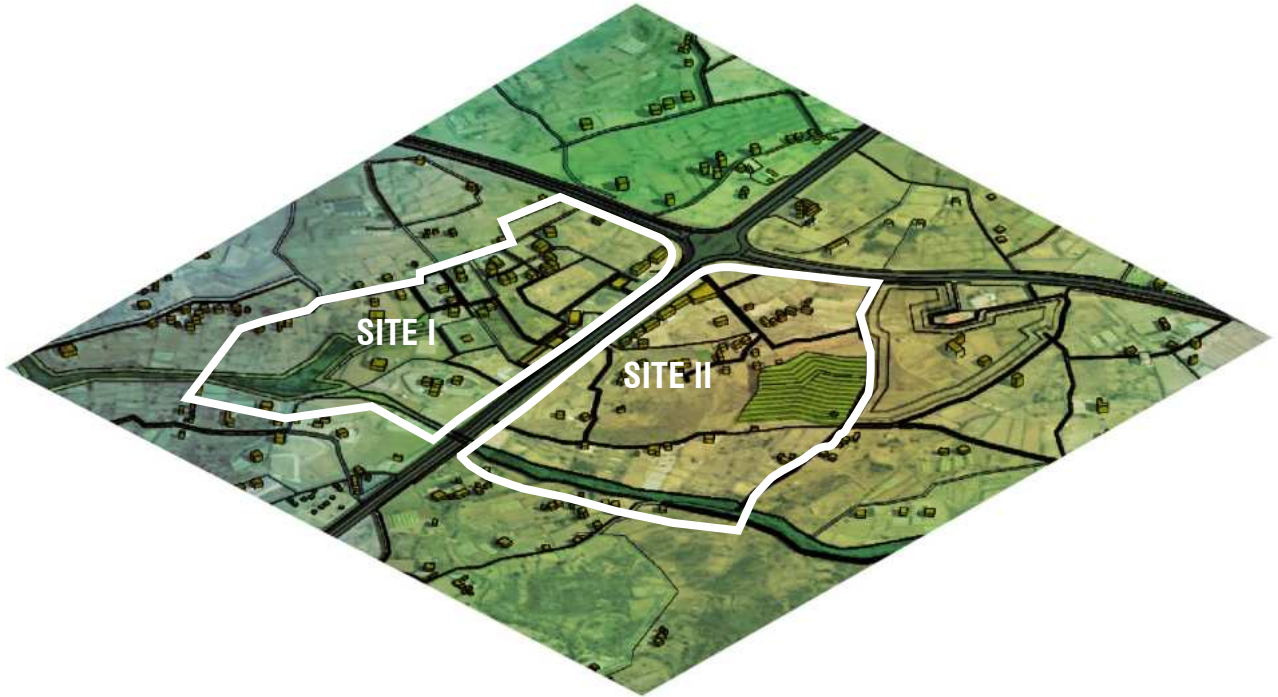


Design element to be considered in land subdivisions

- | | | |
|---|---|---------------------------------------|
| 1. Soil, topography and drainage | 4. Movement network and utility systems | 7. Building envelope and architecture |
| 2. Ecology, habitat and natural landscape | 5. On site and surrounding land uses | |
| 3. Heritage and cultural Landscape | 6. Placemaking and public realm | |

4.3.1 Assessment of Natural Environment and Heritage

1 Topography, Soil and Drainage



Guidance

- Areas with **>30%** slope should be demarcated as no development zone.
- Main escarpment ridge-line should be demarcated as no development zone with a minimum **100m**.
- Ridge lines should be demarcated as no development zone with a minimum **200m** offset from the top edge of the ridge for large structures.
- Wadi areas within the 100 year flood event zone and areas likely to be affected by storm-water should be demarcated as no development zone.
- A soil quality assessment study should be conducted for proper allocation of uses.
- Refer AUDC B.1.2, B.1.5.2, for further guidance on slope treatment and storm-water management.



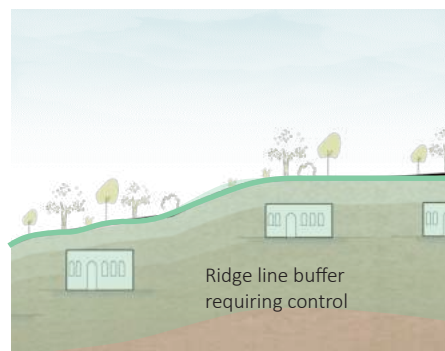
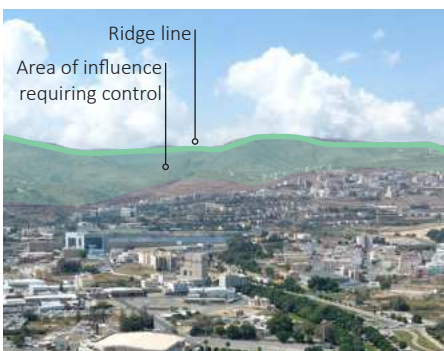
Areas with slopes more than 30%



Flood prone areas

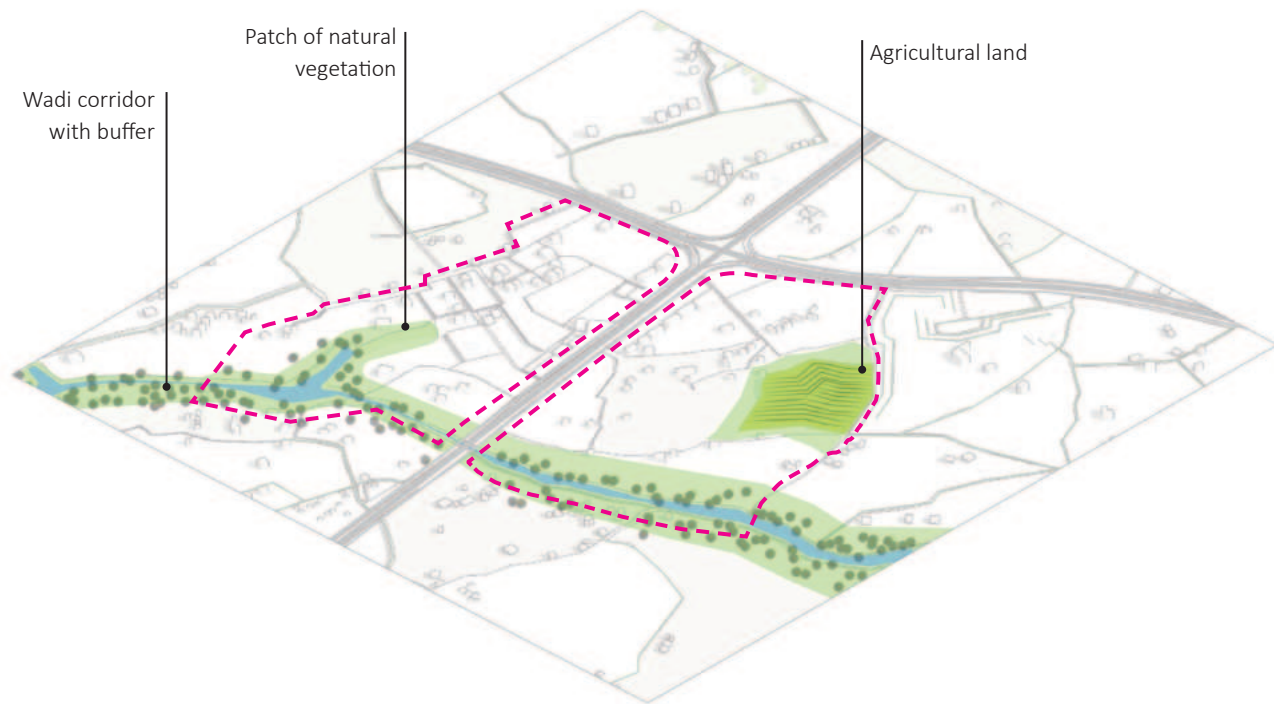


Resulting developable area



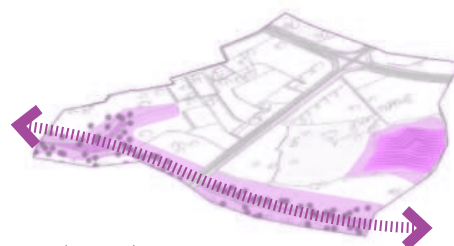
Diagrams illustrating appropriate siting of building in ridge line zone

2 Ecology and Habitat



Guidance

- Land subdivision should protect and complement the wadi corridor and enhance the ecology of the site.
- Protective wadi buffers of **25 to 50m** with riparian vegetation should be established.
- Critical patches of natural vegetation on the site should be demarcated as no development zone.
- Refer to AUDC B.1, for further guidance on treatment of Wadi corridors, buffer uses and natural vegetation.
- Environmental Impact Assessment(EIA) shall be required for land subdivision larger than **10 hectares**.



Wadi corridor area



Example of protection and treatment of wadi corridor in urban context

+



50m wadi buffer area

3 Heritage and Cultural Landscape



Guidance

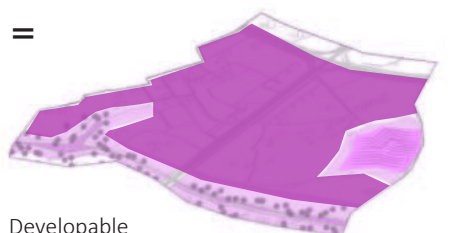
- Heritage or in general structures older than 100 years, cultural landscapes like agricultural terraces, wadi farming, watch towers, grain silos, traditional housing should be identified and protected from demolition.
- Required buffers adjacent to protected heritage sites should be established. No demolition, alteration or new development should be allowed in the protected areas and buffers unless approved by the concerned authorities.
- For further guidance refer AUDC B.2.



Heritage structures and cultural landscapes



Required buffers and transition zones



Developable land



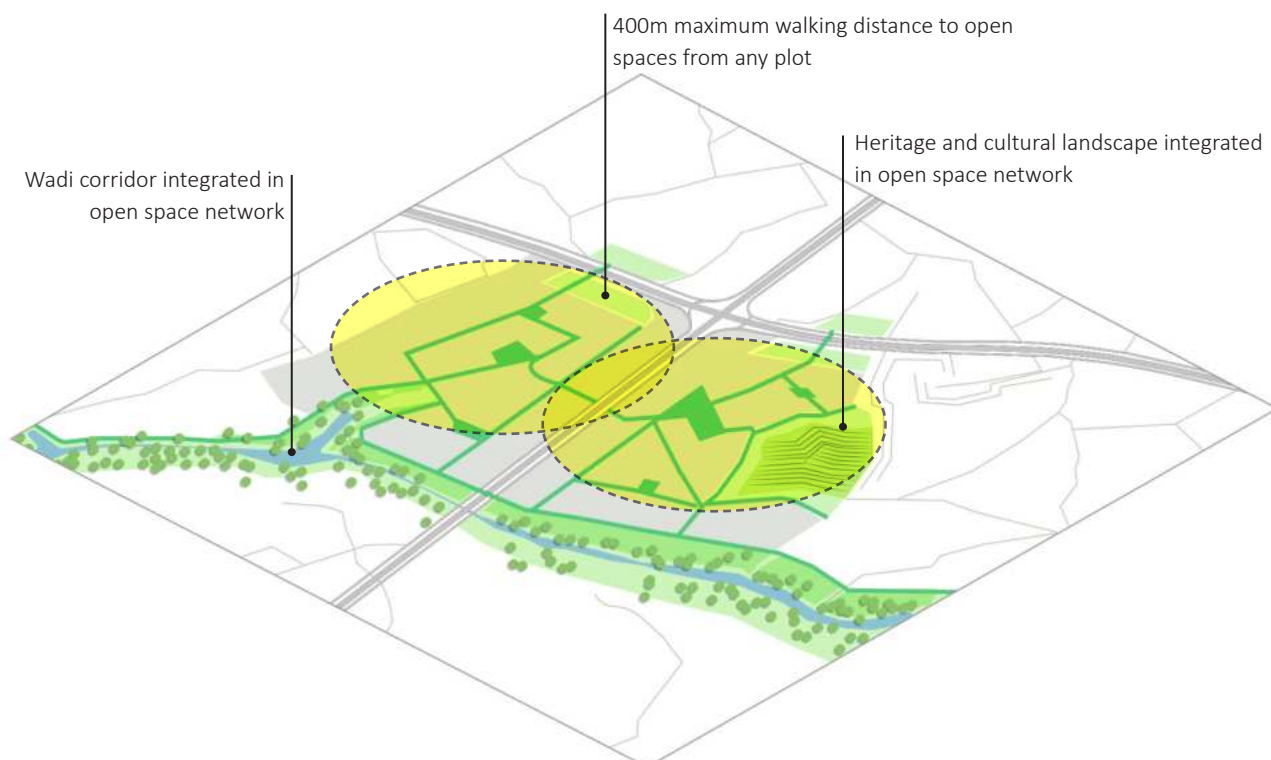
Terraced landscapes near Abha city



Heritage structures like grain silos near Abha city

4.3.2 Open Space and Landscape

4 Open Space network

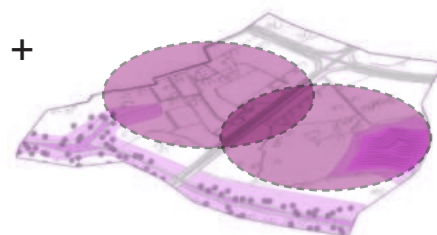


Guidance

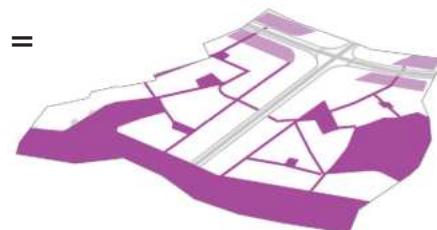
- Land subdivision to provide for a hierarchy of open spaces varying in size and function to meet a minimum of **9sqm** per person requirement.
- The nearest open space should be accessible and within a walking distance of not more than **400m / 5 minutes** walk from any plot.
- Open space network should be site responsive to enhance and celebrate the site's existing natural environment, topography and ecology.
- Open spaces network should incorporate stormwater management features and enhance native vegetation.
- Open space network within the subdivision should integrate natural and cultural landscape areas like wadi corridors and agricultural lands.
- Open space to provide for a range and variety of functions for daily needs of health and recreation; sports, leisure and nature activities.
- Schools, public amenities and community facilities located within open spaces should enable joint use for maintenance and social interactions.
- Activities and scale of open spaces should depend on the location, catchment area and serving population. Refer to AUDC B.4.2.6 Open Space Network for further guidance.
- For further guidance on open space elements refer to AUDC B.1.5.



Natural and cultural landscape areas



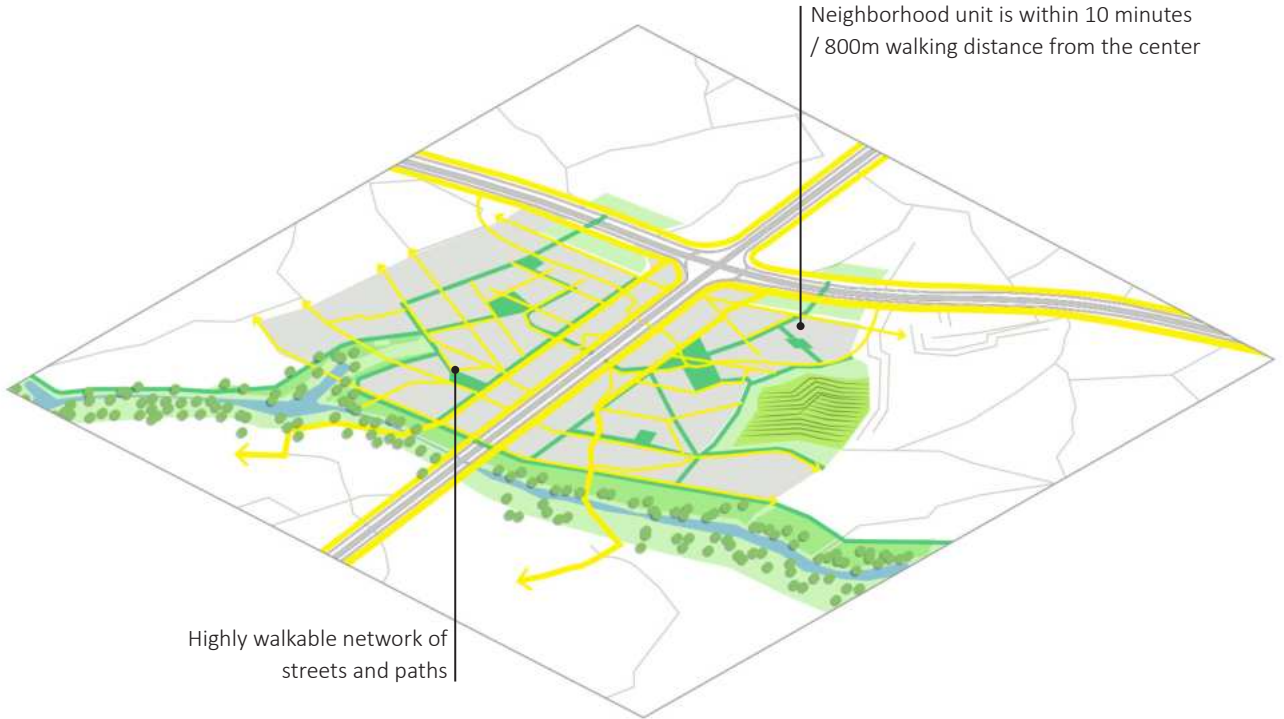
400m maximum walking distance to open space from any plot; 9sqm per person min



Resulting open space network

4.3.3 Movement Network and Utility Systems

5 Walkability and Neighborhood Unit



Guidance

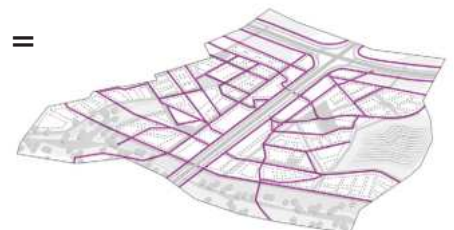
- Land subdivisions should promote highly walkable neighborhood units.
- Neighborhood units should not be more than **10 minutes / 800m** walking distance from the center.
- Walkable urban block sizes typically should not exceed **120m** in any direction.
- The idea of complete streets and living streets should be incorporated.
- Refer to AUDC B.3 for further guidance on complete streets.



Open space network



Subdivision promoting high permeability

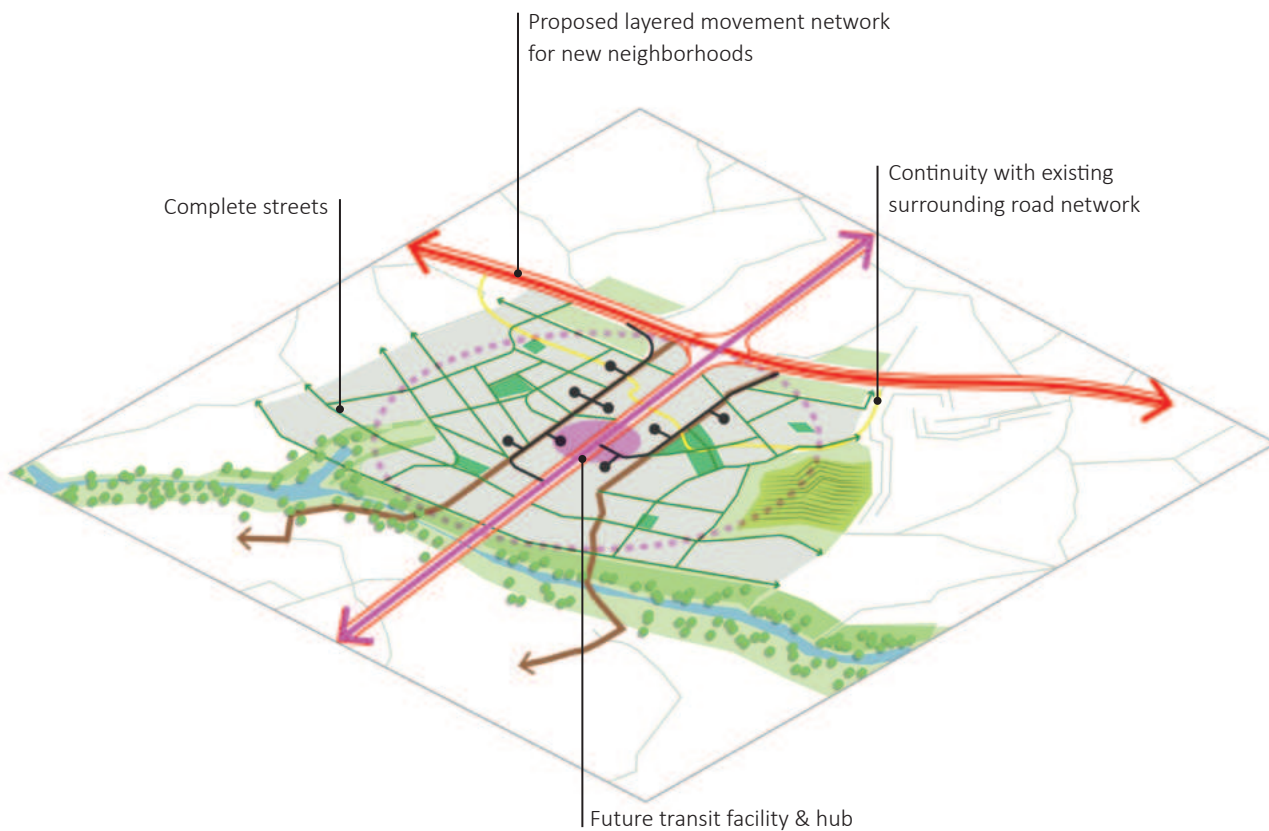


Pedestrian network



Example of safe, attractive and inclusive pedestrian environment

6 Movement Network

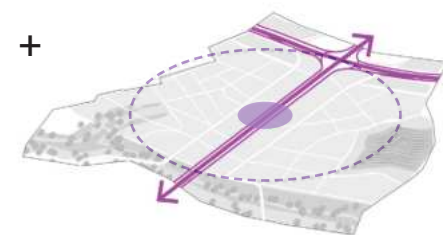


Guidance

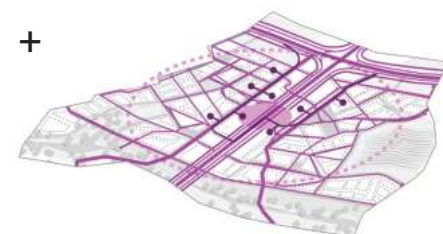
- Land subdivision should clearly display the hierarchy of streets.
- Hierarchy of streets should facilitate ease of travel, integration of open space network. It should respond to existing adjacencies, roads and future transit connections.
- Streets should display a layered system approach to movement providing a safe environment and adequate space for all users and modes of transport.
- Street network should balance 'movement' and 'place' needs with attractive edges and public realm.
- Subdivision should respond to possible future transit.
- Generally, cul-de-sacs should be avoided.
- For further guidance on movement network and complete streets refer to AUDC B.3.



Existing roads



Future transit facility & hub



Proposed layered system

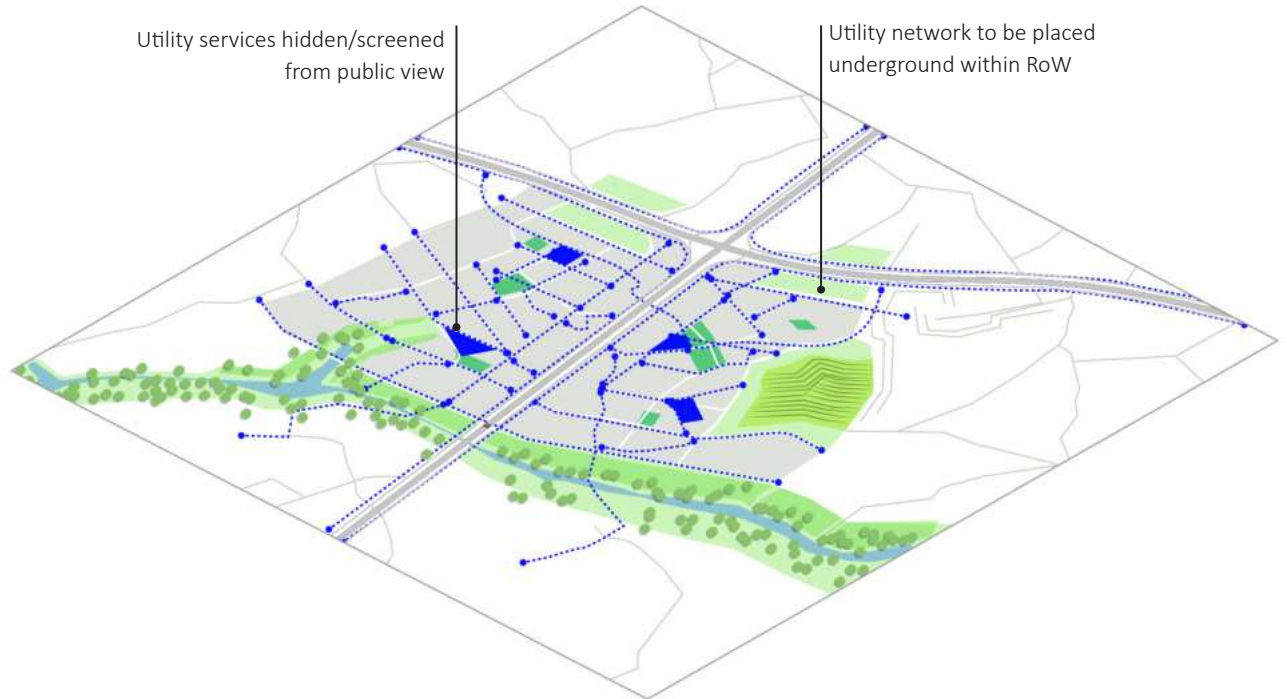


Recommended main access corridor organization



Recommended arterial road organization

7 Utility and Infrastructure Services

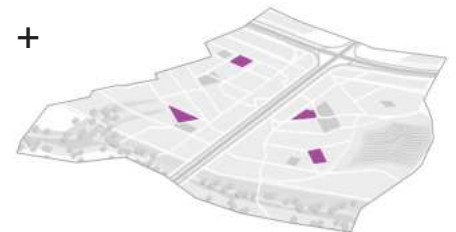


Guidance

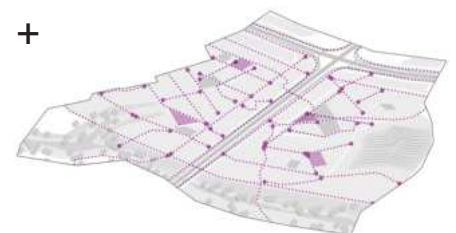
- Utility, stormwater drainage, street landscape and lighting shall be provided within RoW space wherever possible .
- Wherever possible utilities should be placed underground, particularly in activity centers and mixed-use nodes.
- Utilities and infrastructure planning should meet planned and future expansions.
- Utility services should be consolidated, accessible and hidden/screened from public view.
- Lighting should be provided for different street users including pedestrian and cyclists.
- Adequate landscaped buffers should be provided for overhead power lines.
- For further guidance on utilities, infrastructure, lighting and landscaped buffers refer to AUDC B.6 and B.1.4.



Road and open space network



Location for infrastructure plots



Underground infrastructure network



Example of adequate arrangements of storm water management and street lighting infrastructure

4.3.4 Placemaking and Public Realm

8 Mix of Uses and Activities

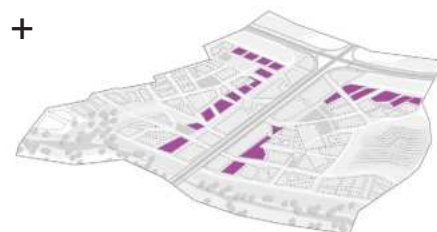


Guidance

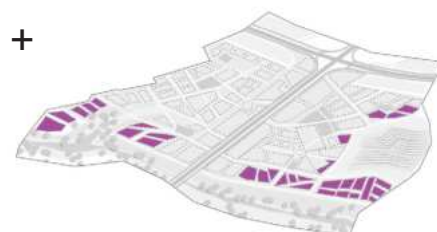
- Typical residential subdivision should comprise a mix of high, medium, and low-density residential plots grouped with retail, commercial, social, and open spaces to support the social and economic activities within walkable distances.
- Mixed use activity centers at the center of neighborhoods should provide varying range of public amenities, commercial uses, civic functions, and active street fronts.
- Main streets and major intersections should function as activity hubs with retail, commercial and public amenities.
- Residential densities should be intensified near activity centers, open spaces, and future public transport stops.
- Subdivision should be compatible for future transit-oriented development (TOD).



Activities/Mixed uses



High/mid density residential uses



Low density residential uses

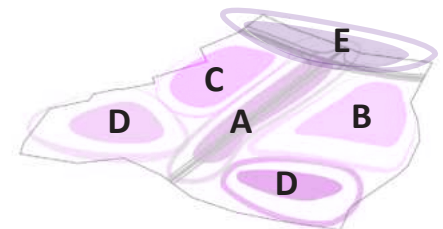
4.3.5 Building Envelope and Architecture

9 Built Form and Massing

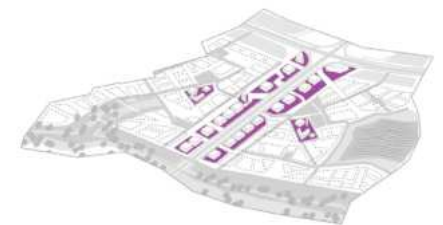


Guidance

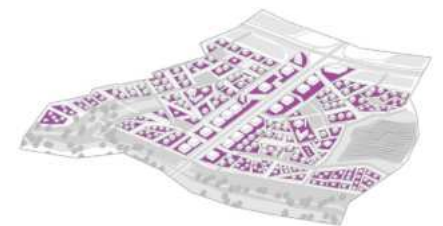
- Subdivision built form, scale and massing should respond and adapt to the district / character zone of the site.
- The district/character zone should inform the development pattern, layout, scale, massing, density, public realm, open space and frontage design for the subdivision.
- In presence of an adjacent corridor, the edge of the subdivision along the corridor should respond to the corridor development guidelines for land use, massing and frontages.
- Land subdivision should provide appropriate transitional buffers along wadi corridors, cultural landscapes, agricultural land and scenic buffers along prime / access corridors where required.
- Active ground floor uses like retail and attractive public realm should be provided along main streets and activity centers to promote active and vibrant streets and a sense of place.
- High quality public realm with pedestrian walkways, street furniture, trees, landscape and lighting should be provided along all street frontages.
- Parking areas, utility, infrastructure and service areas shall be located at back of the plot away from public frontages and public view whenever possible.



Identify character zones



Landmark buildings



Scale and massing to respond to character zones



5 | CHARACTERIZE ARCHITECTURE



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5 Characterize Architecture

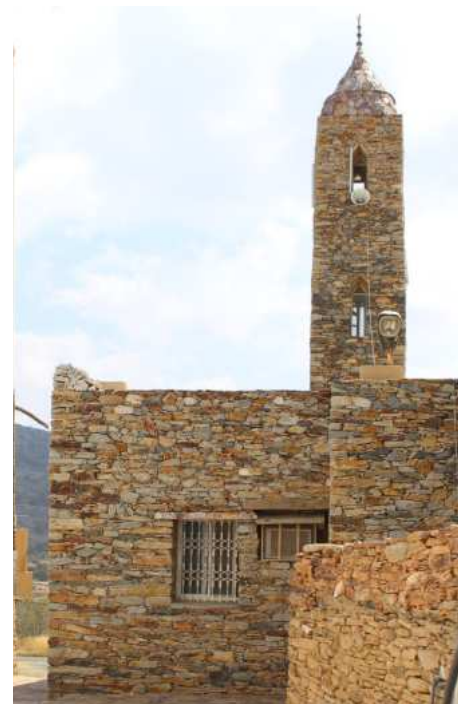
5.1 Overall Objectives & Checklist

5.1.1 Introduction

Architecture when derived from the heritage and culture of the place lends a unique and distinct character. Aseer region has a rich heritage and history has influence of various architecture styles. The AUDC proposes to characterize the architecture for Aseer based on climate, topography, history, heritage, culture and to create an attractive, contextual and vibrant image. The standards and guidelines proposed are intended to provide flexibility to encourage for design creativity and innovation, while maintaining the desired visual and spatial quality.

5.1.2 General Guidance

- Architectural design shall encourage for people, not for cars. And minimize the visual prominence of cars/parking within the plot and streetscape.
- Encourage walkability through permeable block structure and pedestrian friendly building frontages.
- Establish design character derived from contextual architecture for building layout and facades primarily from highly visible frontages.
- Encourage attractive and harmonious view corridors and streetscapes through providing design guidance for exterior architectural quality and appearance of new / redevelopment.



Heritage styles of Aseer region (typical materials used: Natural stone, Mud, Clay and Timber)



Extensive use of glazing without articulation lacking sense of identity



Prominence of car parking within site along the public frontage



Balance of openings and fenestrations in contemporary interpretation not reflecting traditional architecture

Examples of architectural styles in urban areas of Aseer

5.1.3 Requirements Checklist

The following checklist of requirements is intended as an agile tool to be used by the evaluating Authority or by the Applicant. It should be used to ensure all important topics related to architectural design and single plot development have been addressed and highlight where there may be a need for additional studies.

Evaluating Authority - Architecture Design Review Checklist		
Base Line Information	Project design to clearly illustrate: <ol style="list-style-type: none"> 1. Site and Building Layout 2. Permeability 3. Setbacks and Public Realm 4. LAC and Open Space 5. Vehicular Access and Parking 6. Scale and Heights 7. Street Wall and Frontage 8. Interpretation of Contextual Architecture 9. Building Typology 10. Facade Treatment 11. Materials and Colors 12. Architectural Elements 13. Building Services / MEP Equipments 14. Rooftops and Rooflines 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Pre-application Advice	Provide an opportunity for developer / owner to receive guidance on the proposed development and on what type of information / study may be required to obtain permitting.	<input type="checkbox"/>

Applicant (Developer / Owner) - Architecture Design Review Checklist

Applicant (Developer / Owner) - Architecture Design Review Checklist		
Required Information	<p>For review and approval as part of development permitting application:</p> <ol style="list-style-type: none"> 1. Location map of the subject-building project or site improvement in relation to Urban Area / Character Zone and contextual analysis. 2. Location of the plot on the land use system of the Urban Area. 3. Master plan and its relationship with adjacent neighborhoods. 4. Planning data sheet incl. site area, floor areas, LAC, FAR. 5. Mobility plan showing vehicular, pedestrian, cycling and transit circulation and access. 6. Public realm plan and proposed linkages with adjacent neighborhoods. 7. Architectural plans 1:200 scale minimum featuring: <ul style="list-style-type: none"> • Basement • Ground floor • Upper floors as needed to explain design intent 8. Typical architectural sections as required to explain design intent. 9. All publicly visible architectural facades elevations with specification regarding material treatments and colors- 1:200 scale minimum. 10. Details design architectural facades and features as required to explain design intent. 11. Details of landscape design and coordination of the general site, indicating specification of materials and treatments. 12. Landscape design showing specification of hardscape and softscape treatment, materials, and planting palette. 13. Site furniture details and materials. 14. Explanatory details of all environmental additions and treatments for climate comfort and microclimate improvements such as shading elements. 15. Design references and ideas inspired by local architecture and contextual analysis. 16. Architectural prospective renderings focusing particularly on the public frontages of the property and the main road frontage. 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Supporting Regulating Documents:

- MoMRA, (1441 -2019). Event Halls (Wedding Palaces) and Restrooms Requirements.
- MoMRA, (1441-2019). Health and Social Services Buildings Requirements.
- MoMRA, (1441-2019). Professional Buildings Requirements.
- MoMRA, (1441-2019). Recreational Buildings Requirements.
- MoMRA, (1441-2019). Sports Buildings Requirements.
- MoMRA, (1441-2019). Schools Requirements.
- MoMRA, (1441-2019). Service Centers Requirements.
- MoMRA, (1441-2019). Transport and Vehicle Service Centers Requirements.

Additional References

- Abha Amanah. Green Rooftop Initiative.
- Auckland Council. The Auckland Design Manual. <http://www.aucklanddesignmanual.co.nz/>
- Ula Design Studio, Royal Commission for AlUla Saudi Arabia. (2020), Architecture Guidelines for AlUla. uds.rcu.gov.sa
- The Executive council, Government of Dubai and Ministry of Public works. (2009), Green Building Guidelines, UAE.

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5.1.4 Visual Parameters

Overview

The standards and guidelines prescribed in this section primarily address the visual and spatial quality of the proposed development for built form and architecture.

- Emphasis is placed on the most public frontages of the development and access to the plot.
- Roof top view is also amongst the top priority given the impact on visual quality due to the topography of Aseer region.
- Measures are provided for achieving minimum standard of visual quality for frontages along the local and side roads.

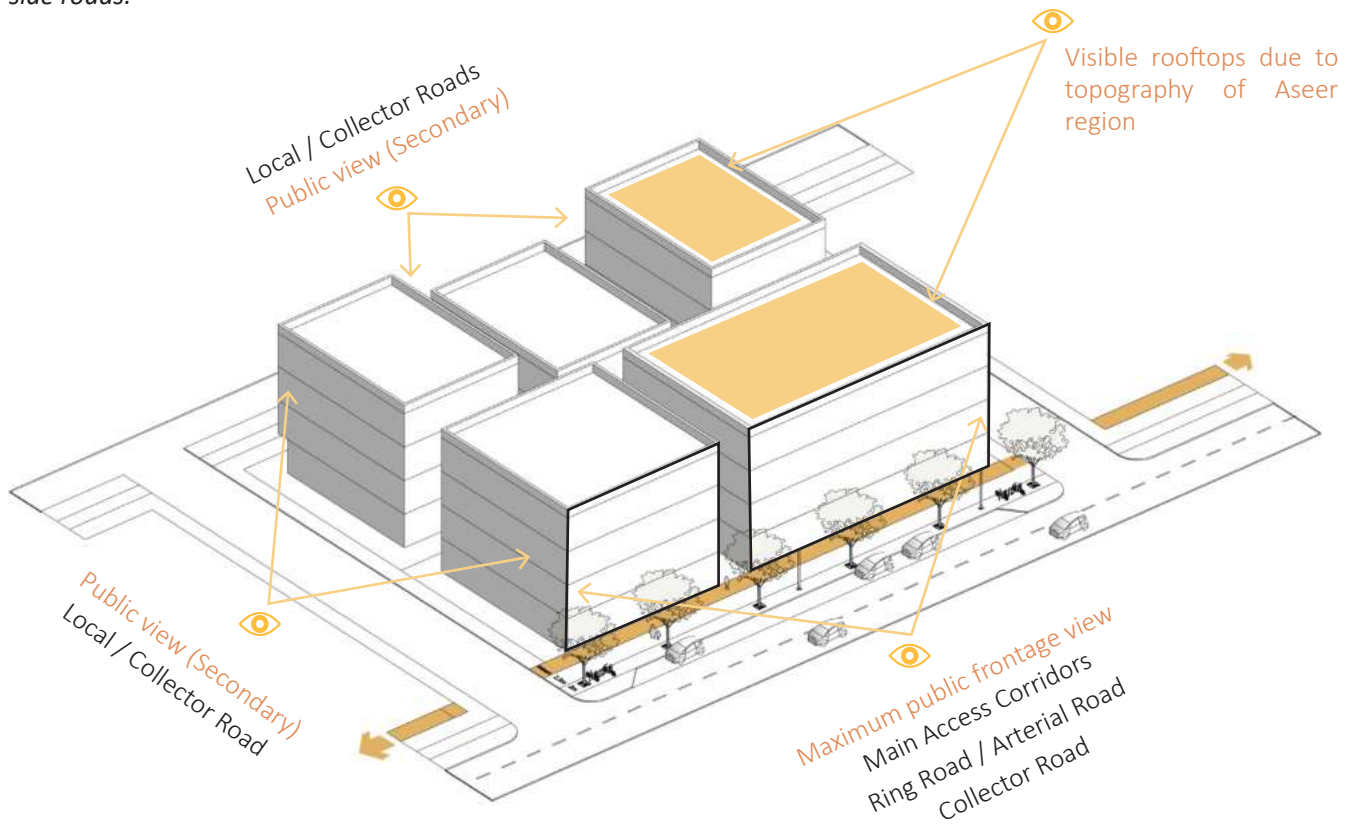


Figure 216 Visual parameters for a typical urban block

5.2 Plot

5.2.1 Site Consideration and Built Form

Objective

The ensure topography and the natural site environment are amongst the key drivers for the concept design of any development for human comfort and sustainability.

Site layout and built form should ensure careful use of high value natural land resources, avoid any strain on the local ecosystem, and respond to the landscape setting.

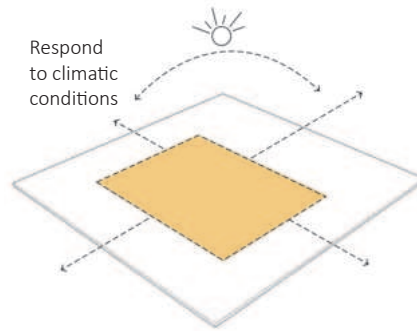


Figure 217 Site layout considerations

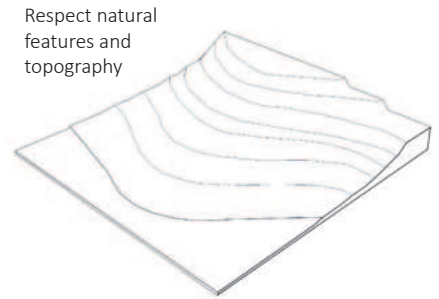


Figure 218 Topography considerations

Guidance

- Massing and layout shall respect and respond sensitively to the natural terrain.
- Large retaining walls to build over slope shall be generally avoided.
- Terraced landscape and built form should be preferred on slope.
- Massing shall foster human scale.
- Large floor plates should be broken down.
- The building's massing should be sculpted to avoid big bulky structures.

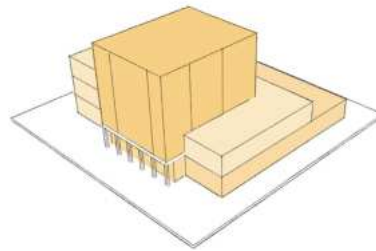


Figure 219 Sculpt building massing

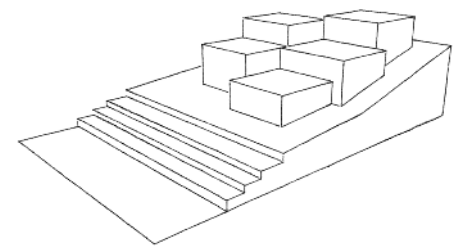


Figure 220 Respect natural terrain adopting terraced landscape, terraced built form

5.2.2 Urban Block Size

Objective

Promote meaningful block sizes encouraging walkability and pedestrian permeability.

Guidance

- A typical desirable block size for development in urban areas should have dimensions not exceeding **100-120m** along any direction.
- Typical block size in urban centers should be of **60x45m**, with fine grain of street.
- For large developments, consolidation of multiple plots may be acceptable, while maintaining the typical walkable block size using mid-block pedestrian passages.

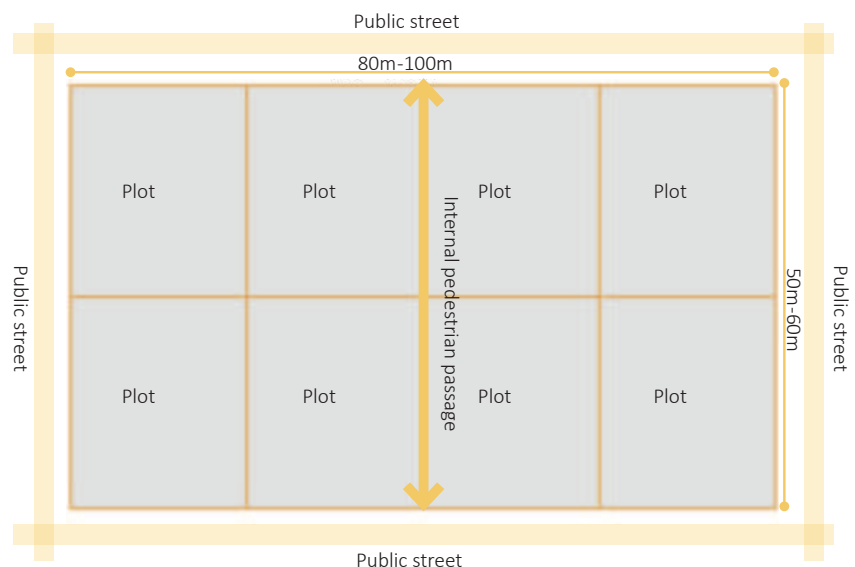


Figure 221 Appropriate block size for development

5.2.3 Permeability

Objective

To promote a livable environment, the block structure should provide a high level of connectivity to different land uses, public amenities, open space and mobility network.

Guidance

- Plots longer than **100m** should be developed with a mid-block shared pedestrian and cycling passage, or open space to provide permeability.
- Particular attention should be provided for downtown areas and other mixed use areas.
- Where pedestrian passages are utilized, they should be placed to connect to other passages, alleys, or mid-block crossings for greater street connectivity.
- Pedestrian passages should be no less than **5m** wide.
- For covered pedestrian passages, the floor to ceiling height should be at least **1.5** times the width of the passage.
- Pedestrian passages should be clearly visible, accessible and properly landscaped.
- Generally, to ensure pedestrian, cycling and vehicular permeability, consolidated blocks longer than **200m** should provide an easement for public through-access (vehicular, pedestrian & cycling) of **20m** in width.
- In any case, the building and basic organization of the site should demonstrate an understanding of the immediate street and wider neighborhood and enhance the street and open space connections.
- The mid block passages should provide 24 hour accessibility for pedestrians, bicycles and/or vehicles depending on the function and width of the passage.
- Any barricades hindering full access to alleys and mid block passages such as fences, gates, parking, stairs should be prohibited.
- Parking may be provided within the passage, provided it does not obstruct the pedestrian movement.

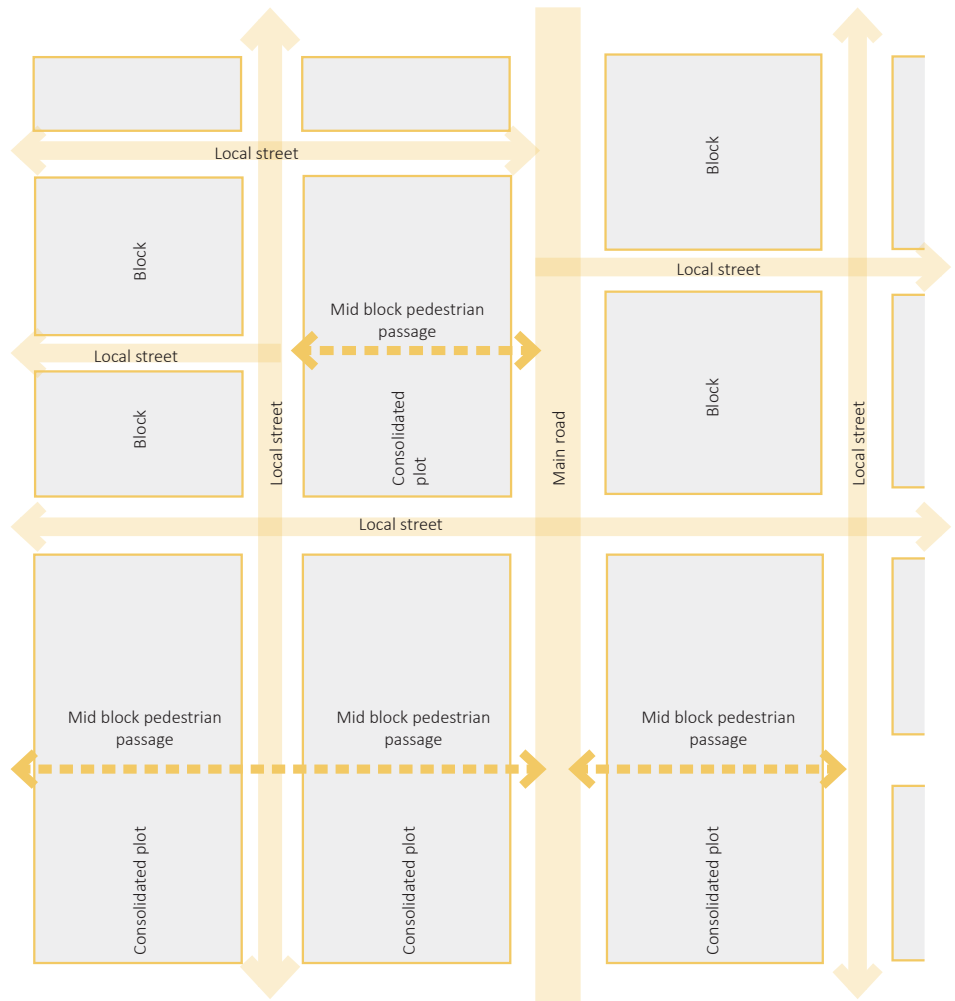


Figure 222 Block permeability



Example of mid block vehicular and pedestrian passage



Example of mid block pedestrian passage

5.2.4 Setbacks

Objective

To ensure new development achieve a minimum standard of setback treatment to bring uniformity and continuity of public realm. Treatment of setbacks have a large impact on the street frontage, priority street views and public realm.

Guidance

- Setbacks should match the standards and established setbacks of adjacent buildings for new development to achieve continuous street wall and well defined visual corridors.
- Setback should encourage maximum frontage to allow active public realm.
- Setbacks particularly in downtown areas and urban mixed use contexts should function as active public realm, and as an extension of the streetscape where there is lack of public realm.
- Setbacks must provide continuous connection to public realm treatment and slow mobility access along the roads.
- High perimeter / compound walls shall be generally discouraged.
- Larger setbacks shall be permitted on case by case basis, provided they function for pedestrian access, and public outdoor spaces.

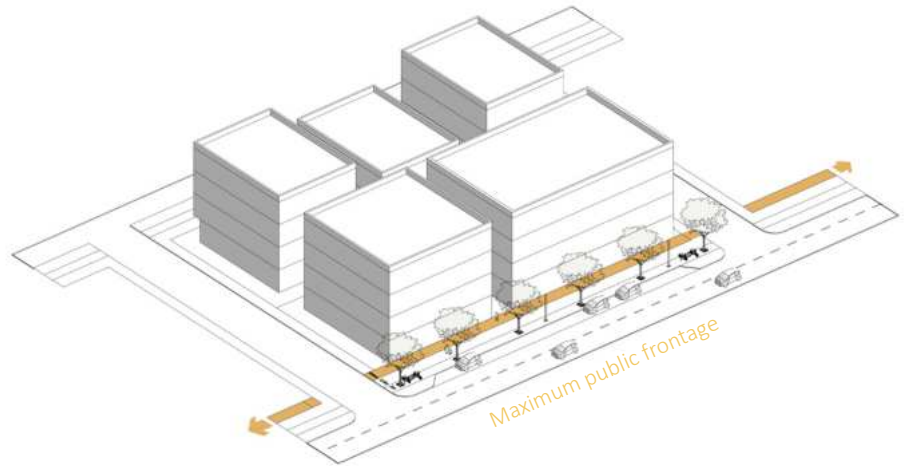


Figure 223 Setback providing continuous public realm

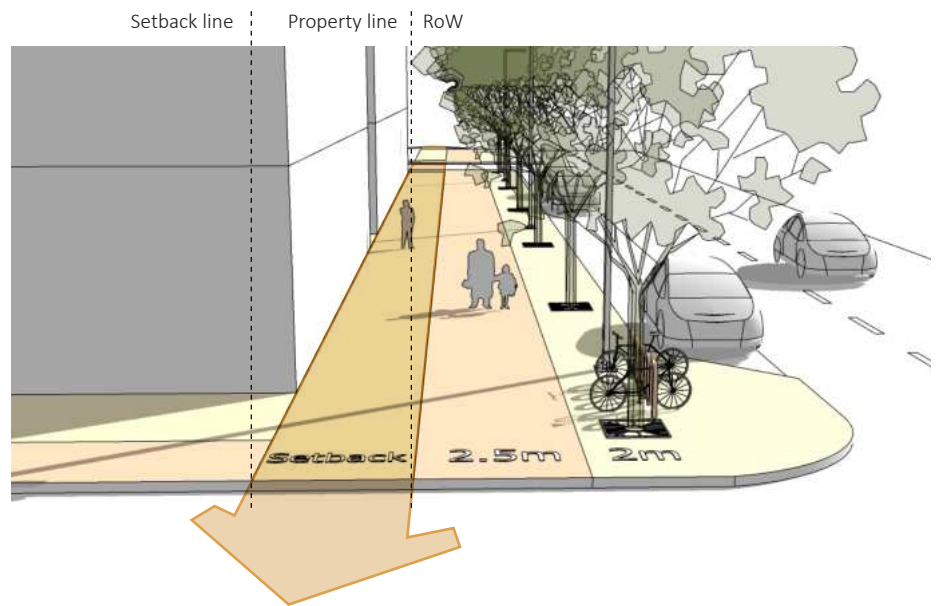


Figure 224 Setback and frontage zone as extension to public realm



Example of a urban setback providing continuous connection to public realm



Example of a suburban setback with continuous public realm

5.2.5 Open space and Building Coverage

Objective

To enhance the open space within the plot raising the image of the development, add value, improve the livability of the residents / visitors and add to the overall provision of greenery. The open space within the plot is as important as the built form.

Guidance

- Typically, a minimum **20%** usable open space (landscaped area) should be available within the plot.
- In addition to the minimum usable open space, areas not used for buildings, parking lot areas, driveways or pedestrian walkways shall be landscaped.
- Open space along public frontages should be treated as an extension to public realm, or a public space and form an attractive street front.
- Open spaces may be, but not restricted to, in the form of courtyards, plazas and activity areas.
- Where subterranean parking structures or other underground structures (including foundations or footings) project into the required setback or easement, they shall be deep enough to allow for a minimum **1m** clear depth of soil for planting.
- Generally, parking areas shall not exceed **70%** of the total open space area of the plot.
- For large development plots (plots > 40,000 sqm), parking areas shall not exceed **30%** of the total plot area.
- Open space within the plot should be usable for use dependent activities and not a marginal left over space.

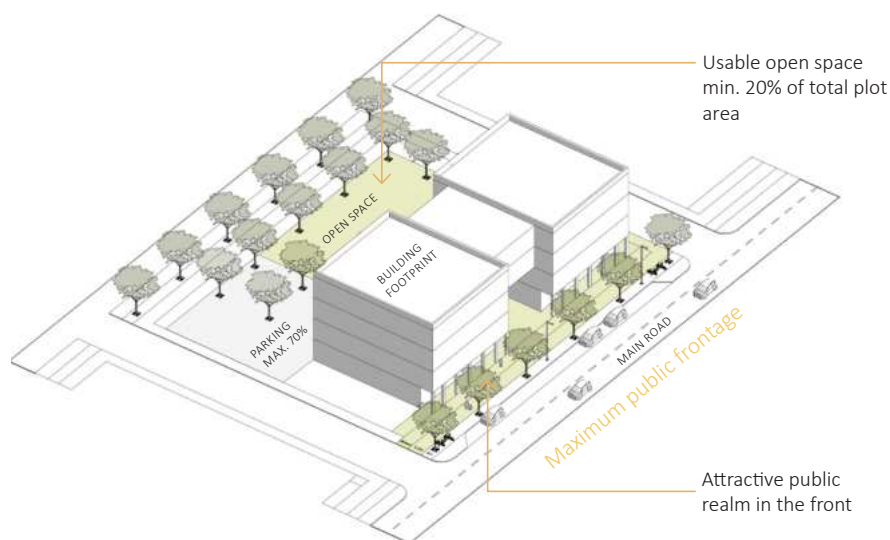


Figure 225 Open space and parking within the plot

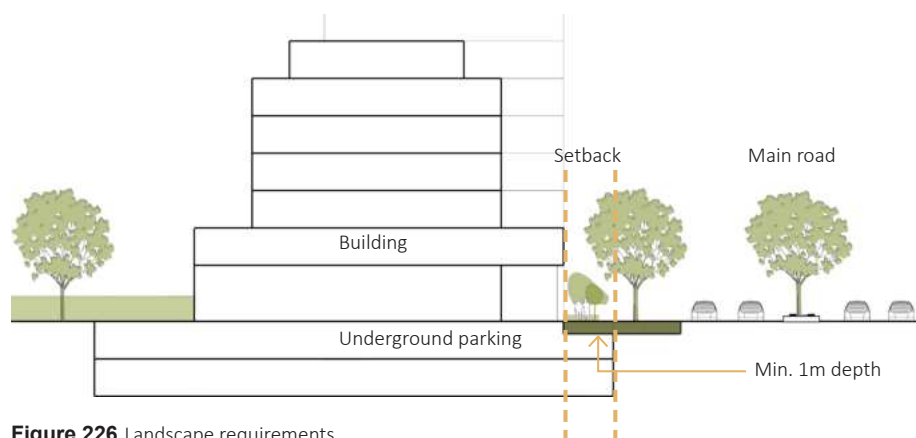


Figure 226 Landscape requirements



Open space along the public realm



Open space within the building enclosure for residential plot

5.2.6 Orientation and Entries

Objective

To design building layout / orientation for a consistent minimum road edge, and entries to ensure a pedestrian scale at ground level in urban areas. Building and plot entries form an integral part of street edge and public realm view.

Guidance

- Generally, primary building entrances should front the main road and should be well defined, clearly visible, and universally accessible from the adjacent public sidewalk.
- Entries should be recessed from the building facade and well proportioned for a pedestrian scale.
- In urban mixed use development, ground-level frontage should have multiple entries (to residential buildings, to individual dwelling units, to commercial establishments, and/or to neighborhood serving facilities) at reasonable intervals and in rhythm to promote livable streets.
- The main entrance of the building should be clearly distinguished through architectural design or treatment, in case of multiple entries.
- Exterior stairways and ramps shall be fully integrated into the architectural design of the building and not simply add ons.
- Ground floor retail and stores entries should be highly visible from streets, sheltered, well lit and separate from residential entries in case of mixed use development.

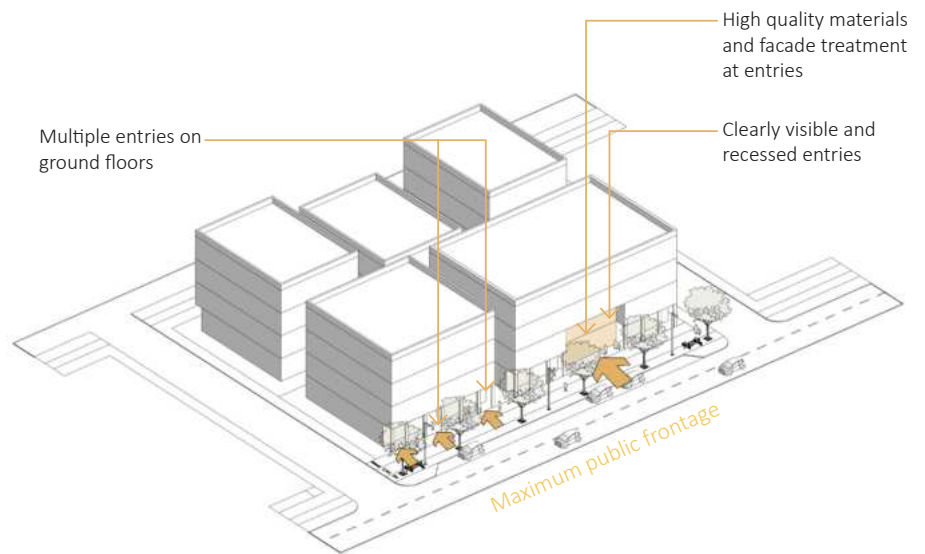
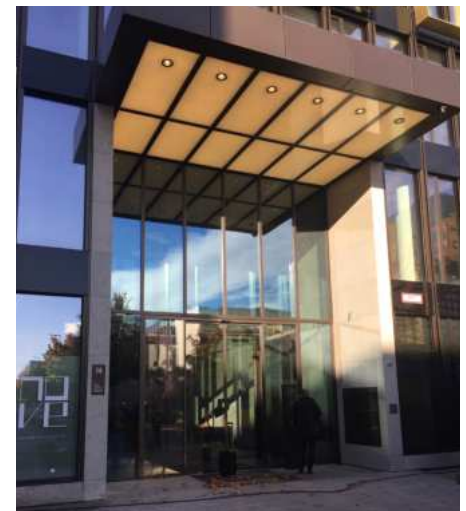


Figure 227 Orientation and entries for the buildings



Example of recessed entrances



Example of entrance canopies

5.2.7 Vehicular Access and Parking

Objective

To ensure parking design is well integrated into the overall design of plot, functionality, be visually attractive and promote a positive relationship with the public street. The arrangement and accessibility of parking has maximum impact on the visual quality of the development. It greatly affects the frontage view and the open space quality.

Guidance

- Generally, on-site parking shall be located to the side or rear of plots or underground.
- Only convenience parking and drop off should be allowed along the main edge street.
- Building should screen most of the parking lot from view from the main road.
- Visual screen or landscaped buffer should be provided between the sidewalk and the parking lot.
- Parking entrances should be recessed from the building face and aligned with the overall architectural massing, and composition.
- On-site surface parking shall be designed to reduce hard impervious surface. Shading should be provided through trees.
- In general, parking area shall not exceed **70%** of the total open space area of the plot.
- For large development plots (plots > 40,000 sqm), parking area shall not exceed **30%** of the total plot area.
- For additional guidance regarding open space and landscape treatment refer to AUDC B.1.

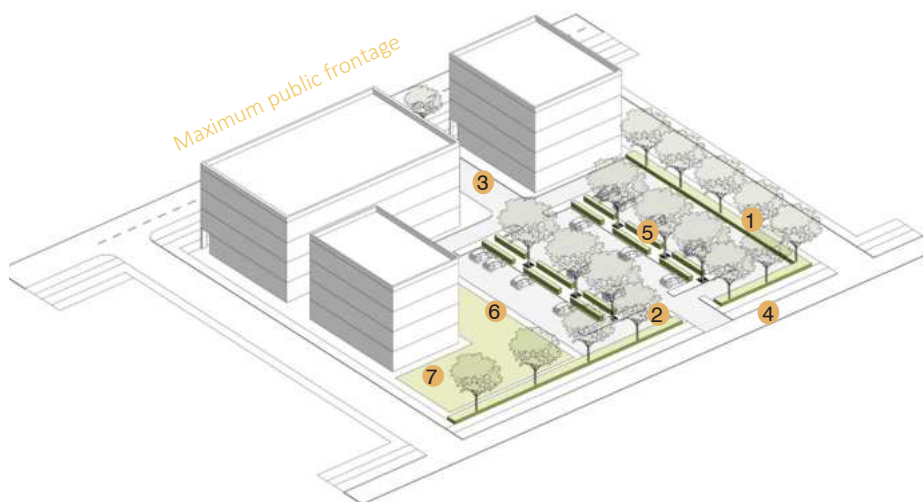


Figure 228 On-site parking located at back of the plot shielded from the public view

- 1 Mandatory perimeter planting with combination of shrubs and trees- min 2m wide, If with masonry wall- min height 0.8m
- 2 Mature trees for landscape treatment - max spacing 14m
- 3 Typically, no more than 1 driveway per property frontage- maximum width 8m
- 4 Continuous sidewalk min width 2m
- 5 Interior planting with combination of shrubs and trees- min 2m wide
- 6 Extension of at-grade parking lot is limited to less than 70% of total lot open space
- 7 Usable open space

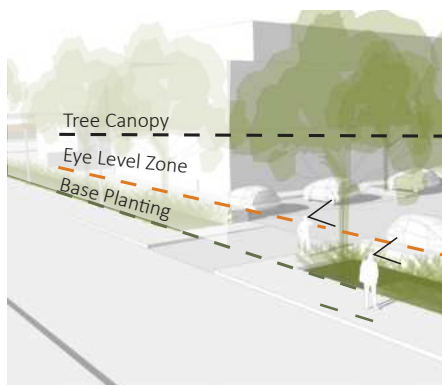


Figure 229 Typical landscape screening

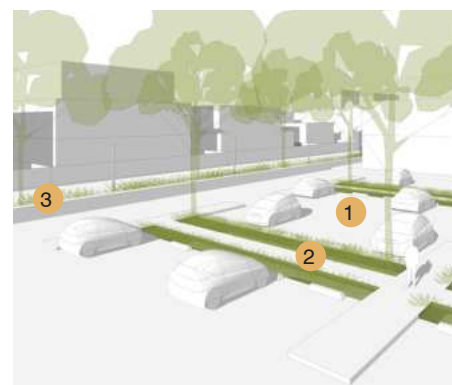


Figure 230 Parking layout

- 1 Landscaped parking islands with canopy trees and integrated with Sustainable Urban Drainage System (SUDS)
- 2 Pedestrian path - minimum 2m width
- 3 Perimeter parking lot landscaped buffer

Vehicular Access

- Maximum **1** vehicular entry per plot shall be allowed along the main road for small plots up to **30m** wide.
- For consolidated / large development plots, maximum **1** vehicle entry shall be allowed for every **50m** of a plot's main road frontage.
- Minimum **2m** landscape separation from vehicular entries of adjacent plots should be provided.
- The width of vehicular access shall be no more than **4.5m** for one way and **7m** for two way access.
- Entry and exits from the plot should be consolidated where possible.
- For large plots, multiple entries may be allowed provided they are consolidated and minimize the impact on the public realm continuity.
- Vehicular entries shall be preferred on side roads if available.
- Generally in urban contexts, drop-off zones should be located along the curb or within parking facilities to promote sidewalk/street wall continuity and reduce conflicts with pedestrians.

Podium Parking

- Podium parking shall be generally discouraged.
- Active ground floor uses should be provided in case of podium parking.
- Proper landscape buffer should be provided for podium parking.

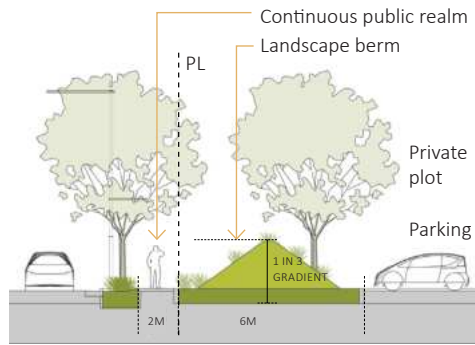


Figure 231 Parking screen: landscape berm

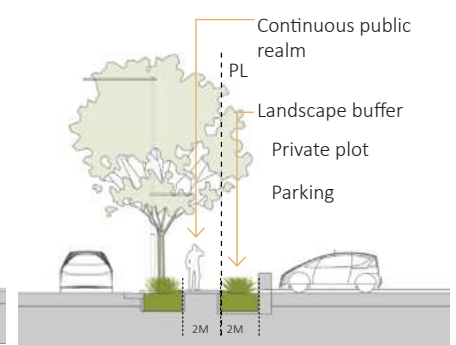


Figure 232 Parking screen: landscape + plinth wall

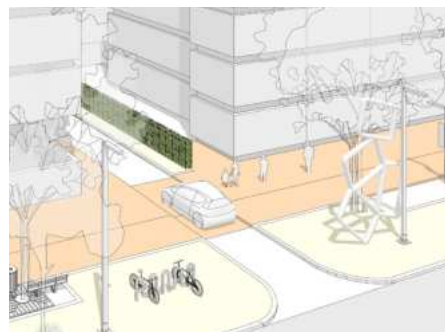


Figure 233 Example of 3m vehicular entry

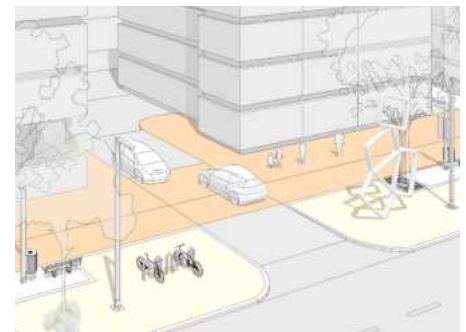


Figure 234 Example of one 6m vehicular entry



Parking lot along main public frontage



On site parking with landscape buffer and shading

5.2.8 Scale and Heights

Objective

To encourage architectural design responding to scale and massing that are in harmony with surrounding buildings, landscape setting and the skyline. Also to ensure that buildings do not negatively impact the townscape.

Guidance

- In general, building massing should be sculpted to help avoid big bulky structures and provide variety.
- For large projects that consume half of an urban block or more (i.e. longer than **60m**), large floor plates should be broken down and the building's height should be varied through the creation of smaller structures or façades.
- Corner buildings should require unique architectural treatments like increased height and/or building mass, or interesting entry designs, such as angled entries, to help "anchor" corners and further define the road.
- Buildings should be located to frame the edges of streets, parks, and open space, reinforce corners, and to fit harmoniously within the existing context.
- The scale and height of the buildings should be in proportion to the neighboring development, maintain street wall and should not dominate the neighborhood.



Uniform scale with gradual variation provides street wall and well balanced view



Disproportionate building scales and open space ratio causing lack of character and sense of place

5.2.9 Street wall and Frontage

Objective

To encourage a coordinated and positive definition of the edge of the road and to its spatial enclosure, creating view corridors, while also providing a better environment for pedestrian activities at the ground floor through street walls and frontages design. To ensure elevation of the overall urban character and resulting quality of image.

Guidance

- Generally, a general datum of **2 to 4** level minimum street wall should be held.
- A minimum of **50 to 70%** of continuous main frontage should be built to the setback line to reinforce the street wall.
- Regular breaks along the building façade should create a visual rhythm along the street with offsets.
- Typically, to prevent overly long, flat and dull facades, no facade plane should extend more than **60** meters in length without at least one break. Such a break should be a minimum of **1.5** meters in depth and **3** meters in width, for the entire height of the facade.
- Regular breaks along the building façade should create a visual rhythm along the street with offsets, recesses, stepped façades, varying materials or colours, and architectural ornaments such as balconies, awnings and projections, while ensuring a pleasing composition as a whole.
- All buildings should have a well-delineated termination at the street wall roofline.

Street Wall for Character Zones

- The street frontage character shall differ within the different character zones ranging from the Downtown Urban Core to New Suburbs and Hill Side suburban development.
- For additional guidance regarding the character zones refer to AUDC B.4.

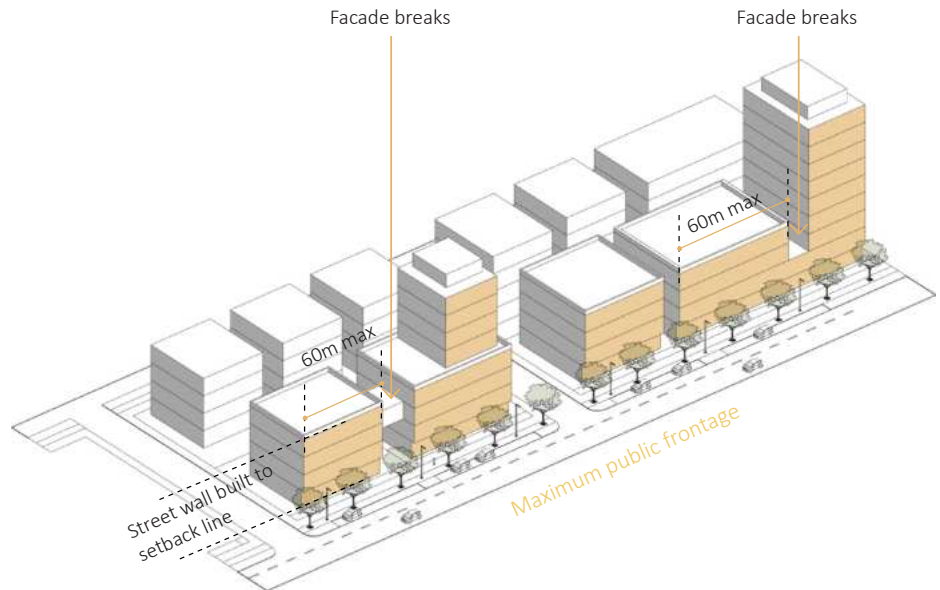


Figure 235 Street wall built to established setback line providing enclosure and creating a visual rhythm



Urban Centres (Downtowns)

- **Building placement:** shallow to no setbacks, buildings define street walls.
- **Frontage types:** stores, shopfronts, galleries.
- **Typical building height:** min. datum of **3-4** floors with podium for tall buildings.



New Districts

- **Building placement:** shallow to medium front and side setbacks.
- **Frontage types:** porches, fences, front yards.
- **Typical building height:** min datum of **2-3** floors with a few taller buildings.



Old Districts

- **Building placement:** shallow to no setbacks, buildings orient to street.
- **Frontage types:** stores, shopfronts, galleries, residential.
- **Typical building height:** Min. datum of **3-4** floors.



New Hill Side / Rural Districts

- **Building placement:** deep and variable front and side yard setbacks.
- **Frontage types:** Porches, fences, front yards.
- **Typical building height:** Min datum of **1-3** floors with a few taller buildings.

5.3 Architecture

5.3.1 Interpretation of Contextual Architecture

Overview

The AUDC promotes a more contextual urban design and architectural approach to new development within the urban areas of Aseer region. The design intent should blend originality with authenticity, creating a strong link between elements of the tradition and innovation. Emphasis shall be placed on the need for community identity and for clear visual continuity among individual development projects. Transplant of modernism Western or Eastern styles, unrelated to the local social, economic, and environmental context are generally discouraged.

Guidance

Refer to Aseer Contextual Architecture Guidelines for further guidance on interpretation of contextual architecture in the 5 natural environments of Aseer region.

The general guidelines are:

Built form

- Built form, massing and neighborhoods should foster human-scale and social interactions.
- Mixed use development should be adopted where possible.
- Walkable and non-car dominated environments shall be promoted.
- Open space within the plot should reflect local context in hard and soft scape treatment.

Design

- Facades should display alternation of solid and openings.
- Buildings should respond to climatic conditions through design, local materials and colors.
- High quality interface between the building and the street shall be established.
- Building design should display a plain, simple and elegant style with a sober exterior hiding abundance within.
- The architectural vocabulary shall celebrate the traditional regional architecture, typical facade elements, and local culture and art.

Coastal North and South



Tuhama



Rijal Alma



Northern Peaks



Cities In Between Peaks



Ahad Rafaidah



South Peaks



Tathleeth



Beesha



Figure 236 Traditional heritage architecture styles in Aseer



Examples of contextual interpretation in building design and open space in Abha city



Examples of building design interpreting contextual architecture into contemporary design



5.3.2 Facade Treatment

Objective

To ensure building facade treatment, entries, canopies and awnings, display windows, finish materials, lighting and signage all contribute and enhance the road-level experience of the building frontage.

Guidance

- Building facades shall employ architectural means to avoid the creation of flat or unarticulated building fronts.
- Facade design should respond to the contextual architecture in terms of opening proportions, facade breaks, materials and colors.
- Horizontal architectural variations should be applied to break down the scale and massing of longer facades.
- Alternation of different textures, colors, materials, and distinctive architectural treatments should help to provide scale and three-dimensional qualities to the building and add visual interest while avoiding dull or repetitive facades.
- Building facade and frontage design treatment shall be integral to all public sides (1,2,3,4). Every public face of the building should be designed to an equal level of resolution and detail while ensuring privacy to neighboring plots.
- Blank or purely utilitarian facades along public frontages shall be avoided.
- Entrances should be recessed to highlight entrance, provide shelter and to articulate the facade.
- Protection elements, such as overhangs and canopies, should be well integrated into building design.

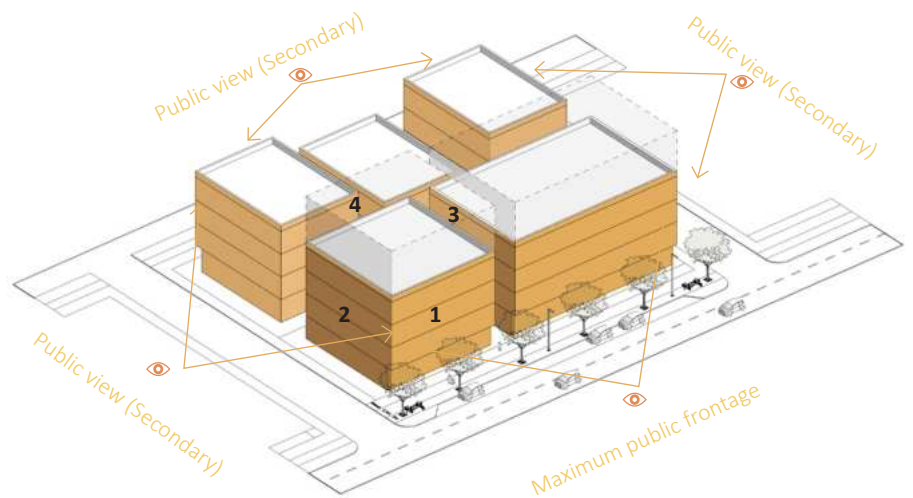


Figure 237 Building facades visible to public view



Fully glazed buildings shall not be encouraged



Well articulated facade with contextual colors and materials

Fenestrations

- All fenestrations (including windows, doors, and other major openings) shall be composed and fully integrated into the building's massing and facade articulation.
- Variations in window type, size and pattern should be encouraged.
- Windows and doors shall be used as character-defining features to reflect the architectural style consistent with other facade elements.

Entrances

- Building entrances in size and proportions shall respond to the human scale.

Balconies and Terraces

- The overall form and the specific detailing shall be designed as an integral part of any building's architectural vocabulary.
- Balcony design and location shall ensure privacy to residents and adjacent plots.

Openings

- Glass facades, reflective, mirrored, tinted and opaque glazing shall be minimized and/or used with environmental thoughtfulness.
- Generally, full glazed buildings shall be avoided.
- Openings shall share **30-50%** of the overall facade surface. Openings to follow either equal proportions and to align between floors.



Examples of facade design responding to contextual architecture with well articulated opening proportions, materials and colors

5.3.3 Materials and Finishes

Objective

To ensure appropriate specification and skilled application of building materials and finishes to contribute to good quality architecture and an aesthetically pleasing and distinctive urban environment.

Guidance

- Materials, finishes and color treatment should be integral to all sides.
- Facades shall be articulated by finishes, breaks, material banding, coping design, recessed entries, fenestration pattern, projections.
- **Min. 50%** of facade treatment shall be with one consistent material.
- Solid materials and clear shaped geometries shall be preferred. High-quality durable materials should be used for lower and upper floor facades.
- Materials should convey a sense of quality and durability, and be able to retain their appearance over time.
- Use of local materials should be encouraged.
- Since the lower part of a building, typically the first **4** levels, have the greatest visibility at ground level and while driving, its materials should be of enhanced quality and durability.

Recommended Building Materials

- Recommended materials are those durable and quality materials that give the building a sense of authenticity, weight, texture, and mass, such as: precast concrete or poured-in-place concrete, unitized ceramic panels, high-quality metal panels, mud brick (full or face brick), rammed earth, cementitious panel siding, green walls, smooth plaster, tile, terrazzo, stone veneer and low reflectivity glass and other durable, high-quality materials.
- Refer to Aseer Contextual Architecture Guidelines provided in Chapter D.4 for further guidance on material palette.

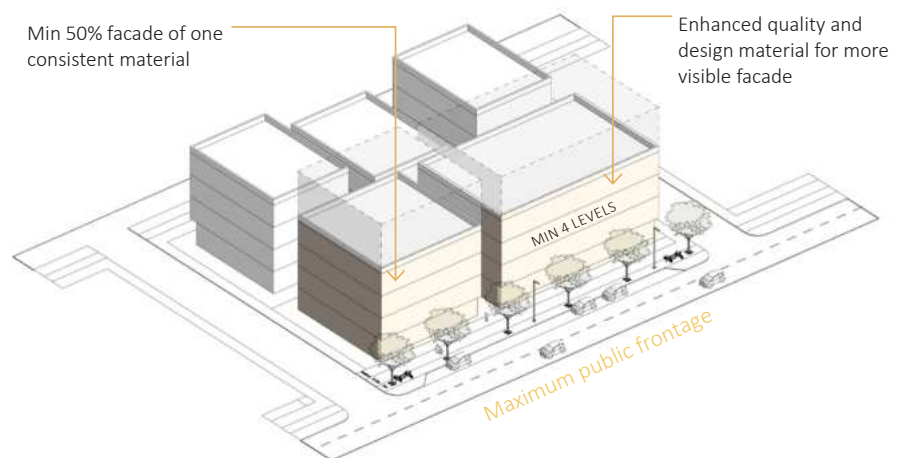


Figure 238 Application of materials on building facades



Figure 239 Desirable materials

Discouraged Building Materials

- Generally, the use of low-quality building materials and elements are discouraged particularly along the main public frontages: plywood siding, T-1-11 siding, vinyl siding, and thin layers of stone or unit masonry that appear veneer-like.
- Generally use of Curtain Walls should be limited to a maximum of 10%.
- Generally use of Metal Cladding should be limited to a maximum of 10%.

5.3.4 Colors

Objective

To ensure use of appropriate colors derived from the local landscape and heritage vernacular palette to contribute to an aesthetically pleasing, and distinctive while more uniform urban environment.

Guidance

- Limited spectrum of natural colors and materials shall be preferred. For all public frontages, typically, **70%** range of the project's colors palette shall be composed of light gradations of earth tones, with a maximum of **20%** of the total composition reserved for stronger gradations and complementary colors.
- Intensified and/or contrasting colors shall be reserved for accentuating important elements, such as entries, arcades, openings, etc. The range for intensified and/or contrasting colors should be within **10%**.
- A maximum of **20%** of the total composition shall be reserved for complementary colors.
- Complementary colors may also be used for public realm, hardscape and softscape elements.
- Changes of exterior color, texture or material may be used to reinforce the architectural formal idea and are best accompanied by changes in plane or occur at an inside corner (i.e. at vertical recesses, or horizontal step-backs), or accommodated via architectural detailing, such as gaps, or other changes in plane.
- Refer to Aseer Contextual Architecture Guidelines for further guidance on color palette for each of the five natural environments in Aseer region.

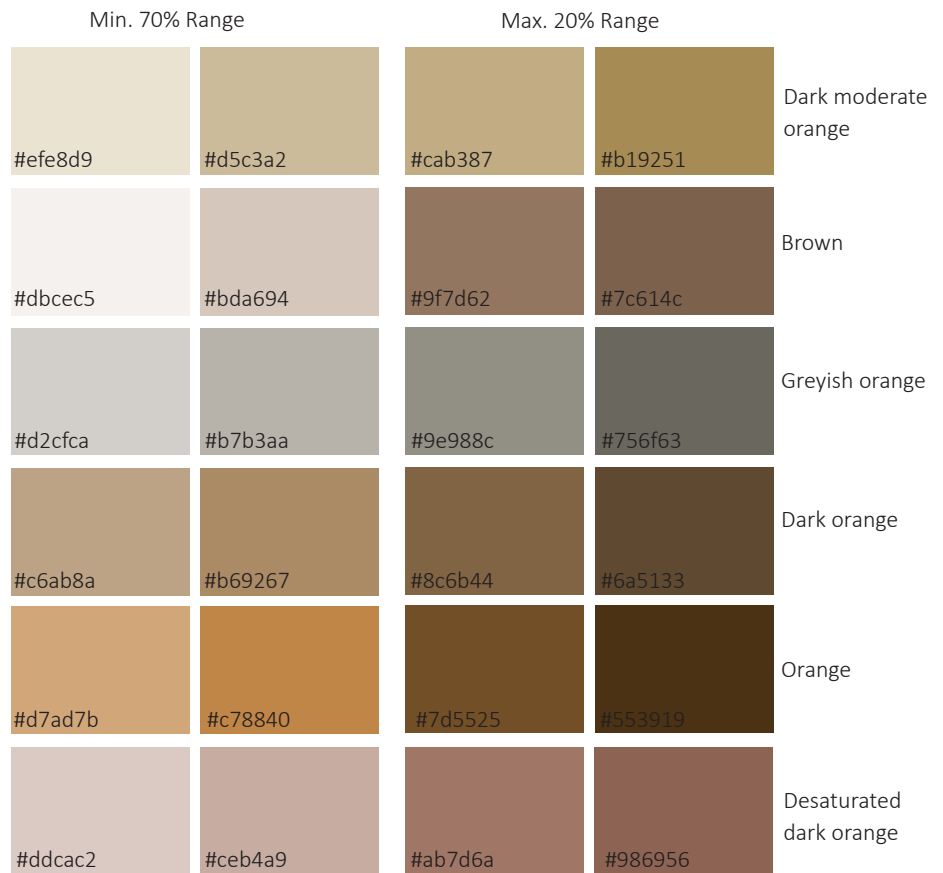


Figure 240 Desired earth tone color palette

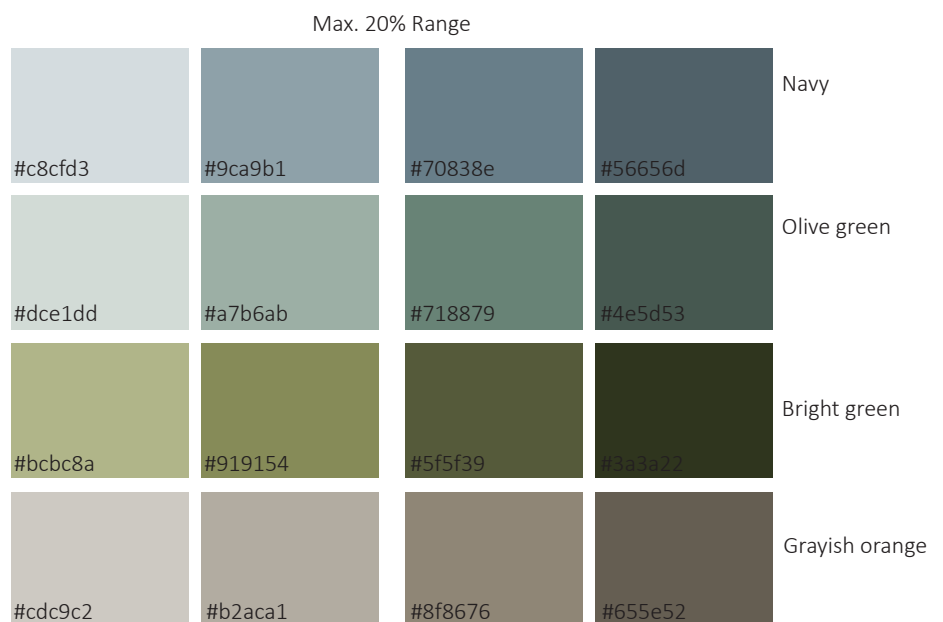


Figure 241 Desired complementary color palette

5.3.5 Local Art

Objective

To promote and encourage local art, artists and identity through use of local art in city branding, buildings and public realm elements.

Guidance

- Local art may be represented through use in facade treatment, public realm and hardscape elements.
- Art pattern may be used to reinforce the architectural formal idea, accentuate openings, entrance areas and for special architectural elements.
- Art patterns may also be used for enhancing a blank facade.
- In public plazas and open spaces, local art may be used for signage and way-finding, branding and street furniture theme.



Example of local art



Example of local art



Interpretation of local art for facade enhancement



Interpretation of local art for facade enhancement in Abha



Highlighted entrance using art

5.3.6 Architectural Elements

Objective

To ensure the architectural character is maintained and architectural elements help enhance the image of the built form. Also to ensure architectural elements like shading structures and fencing respond to the local context and add to the public realm value.

Guidance

Shading Structures

- Building frontages along active pedestrian paths should provide arcades or recesses at the ground floor to allow for pedestrian movement and climate comfort for ground floor activities.
- Recess and arcades shall have a depth between **3** and **6m** and a height of between **4** and **10m**. Double level height arcades shall be encouraged in large developments.

Screens and Awnings

- Typically, canopies at entrances should have a max. overhang of **3m** and should not obstruct movement and visual continuity within public realm/RoW.
- The structure should be light and consistent with other façade elements.
- Material used for shading structures, screens and awnings should be highly durable, water proof, high UPF (Ultraviolet Protection Factor) value, easy to maintain and provide adequate light transmission.
- Materials such as fabrics, tension membrane (matching the guidelines above), steel structures and wooden frames may be used.
- The colors should be in harmony with the building and match the guidelines prescribed in AUDC B.5.3.4.

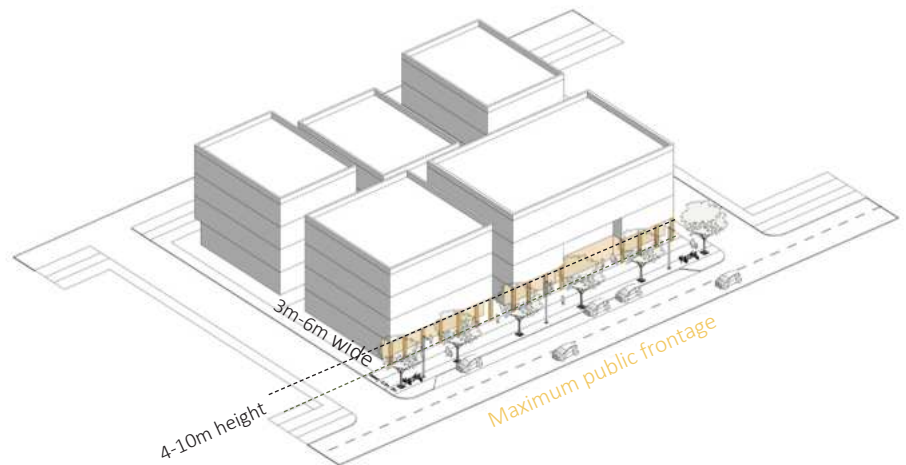


Figure 242 Arcades and recesses to provide active frontage, public realm, shading and highlight entrances

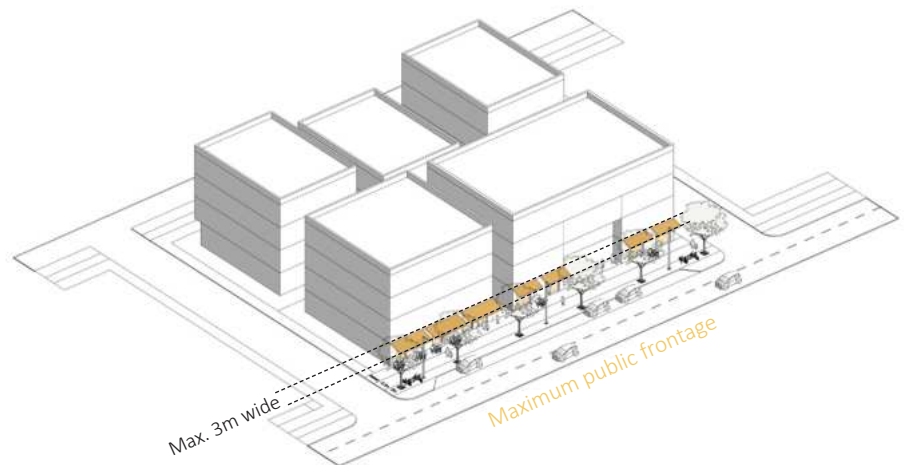


Figure 243 Shading screens and awnings providing extended attractive public realm

Walls and Fences

Guidance

- Colors should be limited in order not to compete with the appearance of the building. The color palette should be limited to a spectrum of natural colors.
- Typically, the height of all walls and fences shall be not less than **1.8m** and not more than **3m** in height.
- Fence design should respond and be in harmony with the overall architectural design of the wall and buildings. Monotonous fence walls should be discouraged.
- Encourage walls with multiple / combination of materials to break the monotony and visually decrease the height.
- Encourage use of light materials / landscape above **1m** height to allow transparency.
- Material palette for walls and fences should match the guidelines provided in AUDC B.5.3.3.
- Generally, walls and fences should be integrated with landscape.
- In solid boundary walls adjacent to a street, all gates and access doors adjacent to the street should be solid to ensure privacy and should be painted to match the color code of the building.



Figure 244 Wall and fences with levels of transparency and material change

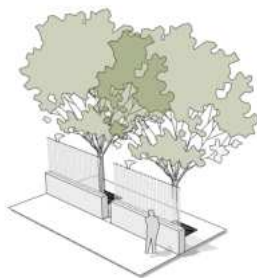


Figure 245 Low wall with transparency on upper side

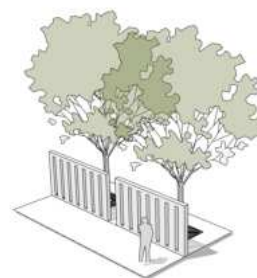


Figure 246 Articulated wall (Drilled wall)

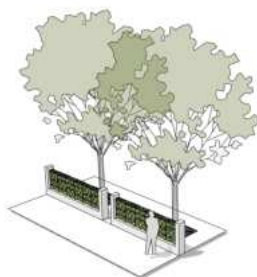


Figure 247 Low height fence integrated with landscape

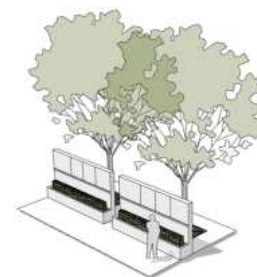


Figure 248 Articulated wall with textures and materials integrated with landscape



Example of perimeter wall with combination of textures and integrated with landscape



Example of high wall integrated with landscape elements



Low height fence integrated with landscape



Fence integrated with landscape and allowing more transparency

5.3.7 Building Services, Utilities, MEP Elements

Objective

To ensure all site building services and utilities are hidden from public view to the maximum extent possible in order to raise the urban quality of the streetscape and the city.

Guidance

- Generally, ‘back of the house’ activities, such as loading, servicing, utilities, and vehicle parking, shall be located underground or at the back of the lot, **min. 1/3** (side width) away from the main public frontage. Where above ground, utilities shall be placed together in contained areas and enclosed.
- Service, utility, and mechanical equipment (i.e. utility box transformers and standpipes) shall be screened from view from main road with landscaping and/or enclosures.
- Building design should accommodate equipment with niches or insets.
- A utilitarian or ‘add-on’ appearance shall not be allowed.
- Screening should be compatible with the architecture, materials and colors of buildings.
- Mechanical equipment should vent behind buildings wherever possible.
- Utility vents should be flush with surrounding grade and screened with landscape.
- In general, trash containers and retail loading areas shall be located at the back of the plot away and not visible from the main public frontage.
- Trash enclosures shall be screened from public view or enclosed.

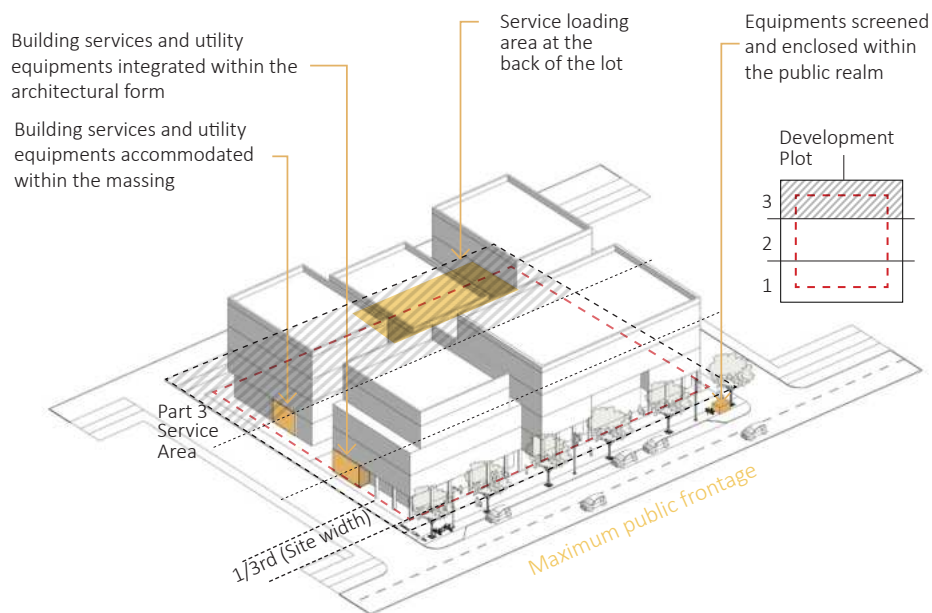


Figure 249 Utilities placement on site



Example of exposed services and utilities



Example of fully screened refusal area integrated within the design of the building



Exposed utilities on sidewalk



Fully integrated utility elements with the design of the building and open space

5.3.8 Rooftops and Rooflines

Objective

Given the topography of Aseer region, the roofs are prominent and noticeable. To ensure roof top elements and roof lines positively contribute to the view sheds and panoramic view quality of the city.

Guidance

- Rooftop mechanical equipment and roof-vent penetrations must be set back **min. 4m** from the edge of the building primary and secondary frontage and properly screened behind a parapet, or in an enclosure, to avoid visibility from the main road and other public streets and/or from other taller buildings .
- Any fixtures, fittings, or other equipment (i.e. pipes, tanks, compressors, air vents, solar panels) proposed for rooftop installations must be screened by screens / landscape / a solid or perforated parapet of at least equal height to the equipment and properly integrated within the building architectural design, colors and materials.
- Fixtures, fittings, or equipment on rooftops seen from above should also be screened on top.
- Rooftop equipment not within an enclosure should be painted to match the rooftop.
- Roof-top mechanical and telecommunications equipment, as well as signage must be well-integrated into the total building design to avoid detracting from the form and elegance of the top.
- A **min. 0.9m** parapet wall should be provided along all sides for terraced roof tops and a **min. 0.2m** wall should be provided for upper and lower level accessory building parapets.
- Roof coverings and finishes' materials with bright and white color with Solar Reflective Index of at least **0.8** preferably, **0.9** with high emittance value from **0.85-0.9** should be encouraged. (Reference: Green Building Guidelines (2009), UAE).
- Green Roof Initiative by Abha Amanah should be implemented based on the type and priority listing of the building within the initiative. For more guidance, refer to Amanah Green Roof Initiative design report.

Rooftop equipment placed at the back to prevent visibility on front facade

High parapet walls as an option to hide the rooftop equipment

Screens / enclosures to hide the rooftop service equipments

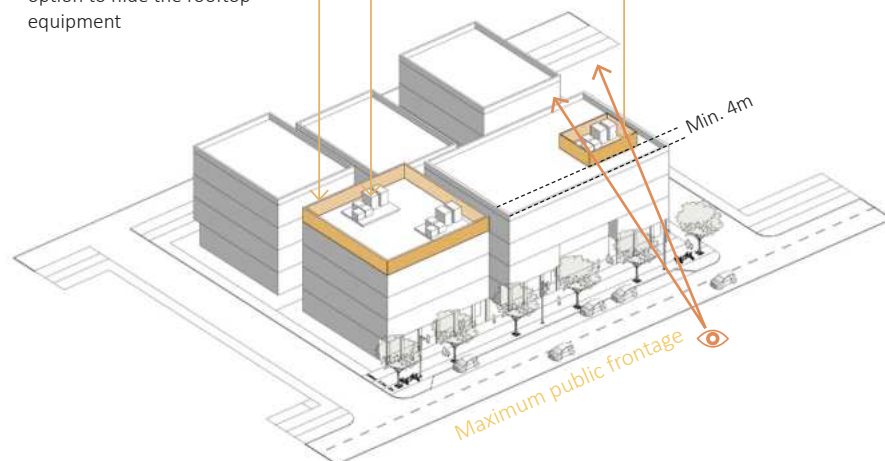
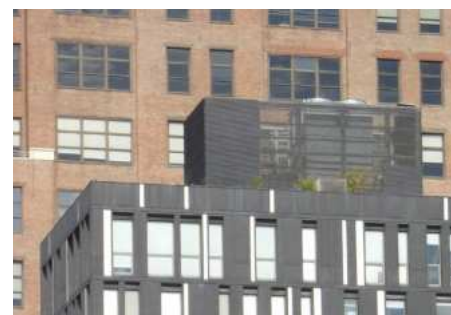


Figure 250 Rooftop equipment placement and screening



Example of unscreened visible rooftop equipments



Example of rooftop equipment screening well-integrated into the total building design



Green stepped terraces with furniture on roof top and appropriately screened equipments



Plantation screening for roof top mechanical elements

5.3.9 Temporary Structures, Walls and Works

Objective

To minimize the impact of temporary structures, vacant properties and construction projects on the visual quality of the environment, health and safety of residents over an extended period of time.

Guidance

- Typically, temporary structures are installed for the following:
 - Reparation works
 - Material storage
 - Material disposal
 - Temporary utilities
 - Safety
 - Liability to existing infrastructure
- As a minimum, a screened security fence must be installed on all construction projects.
- A fence screen cover shall be placed around the entire perimeter of the site.
- The fence should be no less than **1.8m** and not more than **3m** in height.
- The color palette of the screen cover should be limited to a minimum spectrum of natural colors.
- Temporary panels should not be permitted.
- Wherever possible, the side of the fence facing the road shall be set back **2m** to allow for temporary landscaping along the main road-front setback area.
- The size of entry gates shall not be larger in width than that of the driveway.
- Fence installation shall not result in obstructions preventing public access to sidewalks or a building's means of egress.

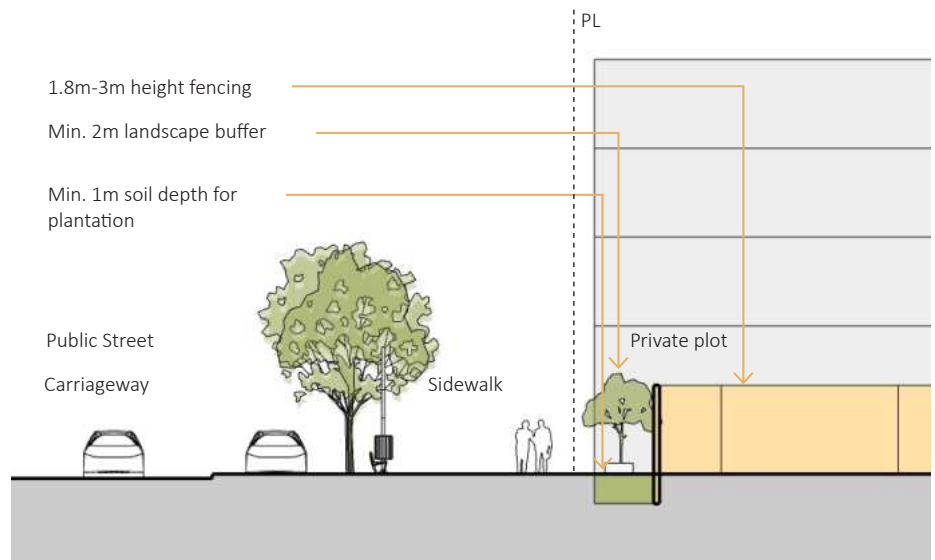


Figure 251 Appropriate fencing design



Temporary fencing with corrugated sheets



Example of appropriate fencing design with integrated landscape

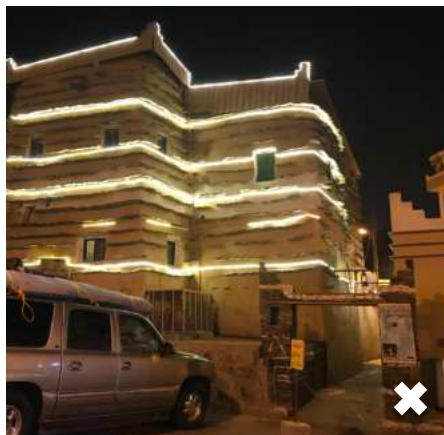
5.3.10 Architectural Lighting

Objective

To ensure architectural and site lighting contribute to the night time visual quality of a space, and may positively express the architectural design intent of buildings along with providing safety, orientation, accessibility and positively contribute to the night skyline.

Guidance

- Lighting sources should be shielded, aiming light downward or back to the building wall, to reduce glare.
- The quality of lighting in any particular area should depend on land use and associated operations, the desired effect, and night-time requirements.
- Frontages, entrances, arcades, pathways and adjacent pedestrian public rights-of-way should be illuminated for pedestrian safety.
- Decorative lighting may be added at entrances and window displays to activate pedestrian realm at night.
- Lighting fixtures should be installed to accent and complement architectural details.
- Shielded wall sconces and angled uplighting may be used at night to establish a facade pattern and animate a building's architectural features.
- Refer to AUDC B.6.1.6.



Lighting sources are not shielded



Lighting sources are indirect integrated within the facade



Lighting design with shielded lights, uplighting and highlighting facade features and landscape lighting

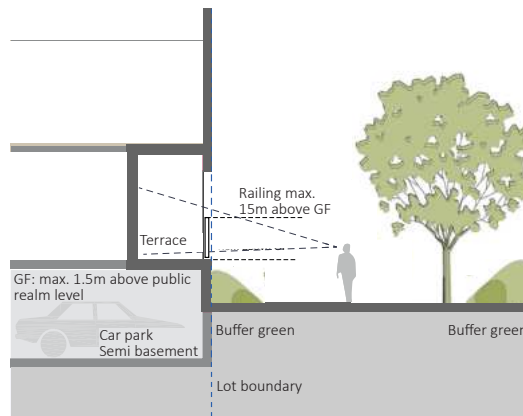
5.3.11 Privacy

Objective

To guarantee privacy with well defined spaces, use of walls, curtains and other partitions to create spatial boundaries that are of prime importance in planning. Ensuring the privacy in residential dwellings is a fundamental requirement in Saudi Arabia. Physical partitions are the primary mechanisms which people use to express their concern about privacy to outsiders. It is strongly connected to the Saudi sense of self identity.

Guidance

- In order to achieve privacy in individual properties during the planning process, the existing topography and the adjacent land uses shall be taken into account.
- Privacy must be maintained by an integrated approach on the orientation, positioning, and design of windows, other openings and shading elements.
- Window openings should be limited or located above eye level so as not to invade the privacy of adjacent neighborhoods.
- All external balconies and areas of accessible roof space should be surrounded by a solid parapet with a minimum height of 1.80 meters measured from the adjacent finished floor level. Roof terraces should have deep parapets preventing views down onto lower buildings (i.e. formed by planters).
- Screening and the use of obscure glass in building openings are not desirable as a means of achieving privacy.
- All screening elements have to be well integrated into the overall architectural design in terms of material, color and pattern.
- New buildings to be oriented to look toward public areas, such as squares or wide major streets is recommended.
- The sides of the buildings facing neighboring houses should be retained for service uses and staircases as much as possible.



Appropriate fencing design for residential use at first floor

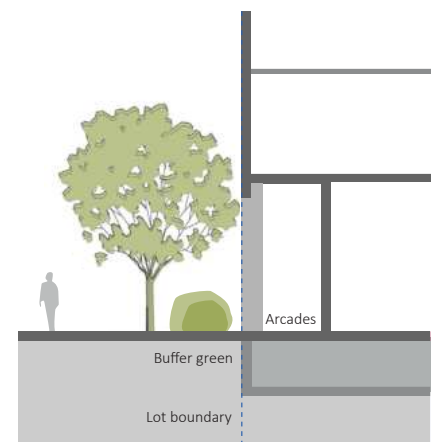


Figure 252 Appropriate screening of private ground floor activity from street by mean of arcade, screening element and landscape buffer



Example of screening elements included into the overall architectural design in terms of material, color and pattern

5.4 Building Typology

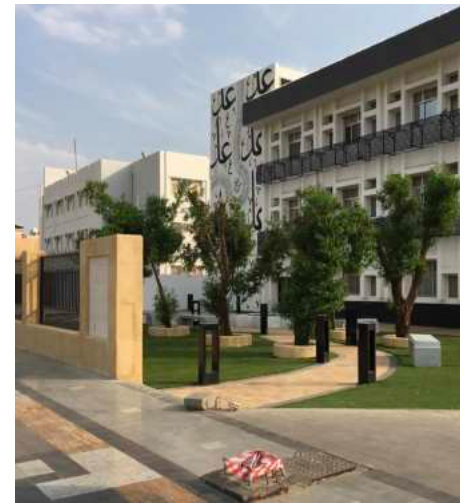
5.4.1 Government/Civic/Schools

All highly visible buildings should be designed to contribute to the elevation of the overall urban character and quality of the resulting image of the urban areas of Aseer. Government complexes, Civic buildings, Public amenities like Schools have a major impact on the identity, placemaking, character of the city.

These buildings should be highly contextual, inspired from local architecture, materials and colors.



Interpretation of contextual architecture for government buildings



Integrated open spaces and public realm for school building, Madina

Layout and Building Placement

- The layout and massing should foster human scale and provide high quality public realm.
- Building placement should ensure pedestrian access, connectivity and encourage social interactions.
- Open space should enhance and reflect the character of the natural environment through public realm elements.
- Buildings should have high quality interface with the streets.
- Vehicular and pedestrian entrances from the main access roads should be enhanced with landscape / paving/ lighting for civic use.

Massing and Scale

- Entrances should be clearly visible and accessible from the main access street.
- Expansive / unarticulated facades should be avoided along the main access roads.
- Architectural elements like arcades, columns, recesses should be provided along the public realm to encourage pedestrian interactions.

Facade Treatment & Architectural Elements

- To underline the desired timeless appearance of the civic building the palette of materials should harmonize with each other and strongly reflect contextual style of the natural environment.
- Facades must be integral to all sides.
- High proportion of openings with glazing and mirrored glass shall be avoided.
- Opening sizes should correspond to the contextual character.
- Openings in general, should have a share of maximum **30 to 50%** of the overall façade surface, according to their orientation to minimize solar impact.
- Large blank walls / purely utilitarian facades along street frontages shall be strongly discouraged.
- Compound walls / fences along the main access road should be discouraged.

Materials and Colors

- Highly reflective building materials and finishes shall be avoided.
- A balanced color palette and proportions between natural and complementary colors shall be used from the provided color palette for the natural environment.
- Exterior finish of walls should be aesthetically attractive, featuring a mix of harmonizing textures but not random.
- Refer to material palette for recommended and discouraged materials.

Utilities and Equipments

- Utilities facilities shall be placed underground where feasible.
- Roof top utilities shall be placed at an offset and screened through parapets / screens / landscape.
- Mechanical or electrical equipment shall be properly screened from public view with landscape / screens complimenting the facade.
- Large vent stacks shall be avoided and if necessary should be screened.

5.4.2 Residential

In general, residential buildings should have a calm and solid appearance as they constitute the majority of the built environment. The design should give the inhabitants an impression of safety and consistency.



Well articulated facades with integrated openings and balconies for residential typology



Integrated open spaces within residential plots

Layout and Building Placement

- Building placement should ensure continuous street wall, pedestrian access, connectivity and encourage social interactions.
- Entry driveways shall be located at a safe distance from the intersections and consolidate with neighboring plot to allow public realm continuity.
- Open space within the plot shall be usable for residents and not marginal remainder space.
- Infrastructure elements shall be incorporated within the open space, screened from public view.

Massing and Scale

- Entrances should be placed at grade level or slightly above and clearly visible from the main access street.
- Primary entrances should provide a sheltered area.
- Scale and massing should be appropriate to the contextual design and neighborhood character.
- Large buildings should be broken into small scale units within large development plots.

Utilities and Equipments

- Infrastructure elements shall be incorporated within the open space, screened from public view.
- Roof top equipment like satellite dishes, water tanks should be screened with parapet walls, screens or landscape.

Facade Treatment & Architectural Elements

- Facade design shall ensure privacy to residents and adjacent buildings.
- Openings shall be designed to prevent direct sight lines to openings and open spaces of adjacent development.
- Single windows and the combination of doors and windows should follow either horizontal, or vertical proportions. Irregular shapes should be allowed with moderation.
- Openings in general, should have a share of maximum **30 to 50%** of the overall façade surface, according to their orientation to minimize solar impact.
- Facade designs for new/ infill development / redevelopment shall compliment the character of the neighborhood and contextual architectural style.
- Awnings / canopies for entries and shading should foster human scale & compliment the facade.

Materials and Colors

- Highly reflective building materials and finishes shall be avoided.
- A balanced color palette and proportions between natural and complementary colors shall be used from the provided color palette for the natural environment.
- Use of bright colors shall generally be extremely avoided.
- Exterior finish of walls shall be aesthetically attractive, featuring a mix of harmonizing textures but not random.
- Refer to material palette for recommended and discouraged materials.

Balconies / Loggias

- Loggias should generally not protrude from the façade frontage.
- Balconies shall offer more exposed outdoor space, generally they should protrude façade frontage, not exceeding the plot boundary.
- Balconies should be located to minimize the impact on privacy issues.

5.4.3 Commercial

Commercial buildings should attract customers, therefore their architecture should be inviting, dynamic and light. The design should be contemporary, referring to vernacular architecture in an abstract way.



Commercial office building with well articulated facade and active ground floor use



Commercial office building with open space within the plot

Layout and Building Placement

- Locate building frontages at the minimum required setback to create a street wall and maximize pedestrian interaction.
- Locate parking / service areas at the rear of the buildings with appropriate landscape treatment and buffers.
- Parking, driveways, ramps, loading areas should not occupy more than **70%** of the total open space area of the plot.
- Entries should well integrated with pedestrian linkages.
- Attractive public realm with active uses should be provided along main access road.
- Open space may include but not limited to outdoor plazas, dining areas and landscaped areas for active and passive use.

Massing and Scale

- The scale and height of the buildings shall be in proportion to the neighboring development, maintain street wall and shall not dominate the neighborhood.
- Large floor plates and monolithic massing shall be discouraged. Facade breaks shall be provided at **60m**.
- Multiple buildings in single plot shall be organized to provide usable open space.

Facade Treatment & Architectural Elements

- Large blank walls / purely utilitarian facades along public street frontages shall be strongly discouraged.
- The ground level façade may have a distinct look from the upper floor façades to encourage pedestrian activity and attract consumers.
- Facades should be integral to all sides.
- Single windows and the combination of doors and windows should follow either horizontal, or vertical proportions. Irregular shapes should be allowed with moderation.
- High proportion of openings with glazing and mirrored glass should be avoided.
- Openings in general, shall have a share of maximum **30 to 50%** of the overall façade surface, according to their orientation to minimize solar impact.
- Compound walls / fences along the main access road should be discouraged.
- Awnings / canopies for entries and shading should foster human scale & compliment the facade.

Materials and Colors

- Highly reflective building materials and finishes shall be avoided.
- A balanced color palette and proportions between natural and complementary colors shall be used from the provided color palette for the natural environment.
- Exterior finish of walls should be aesthetically attractive, featuring a mix of harmonizing textures but not random.
- Refer to material palette for recommended and discouraged materials.

Utilities and Equipments

- Utilities facilities shall be placed underground where feasible.
- Roof top utilities shall be placed at an offset and screened through parapets / screens / landscape.
- Mechanical or electrical equipment shall be properly screened from public view with landscape / screens complimenting the facade.
- Large vent stacks shall be avoided and if necessary should be screened.

5.4.4 Industrial/Warehouses/Special Infrastructure

Ensure quality industrial development through visually appealing site and architectural design. Minimize the impact of industrial utilitarian edges /service areas / extensive parking lots through attractive landscape street edge and buffers encouraging pedestrian movement.

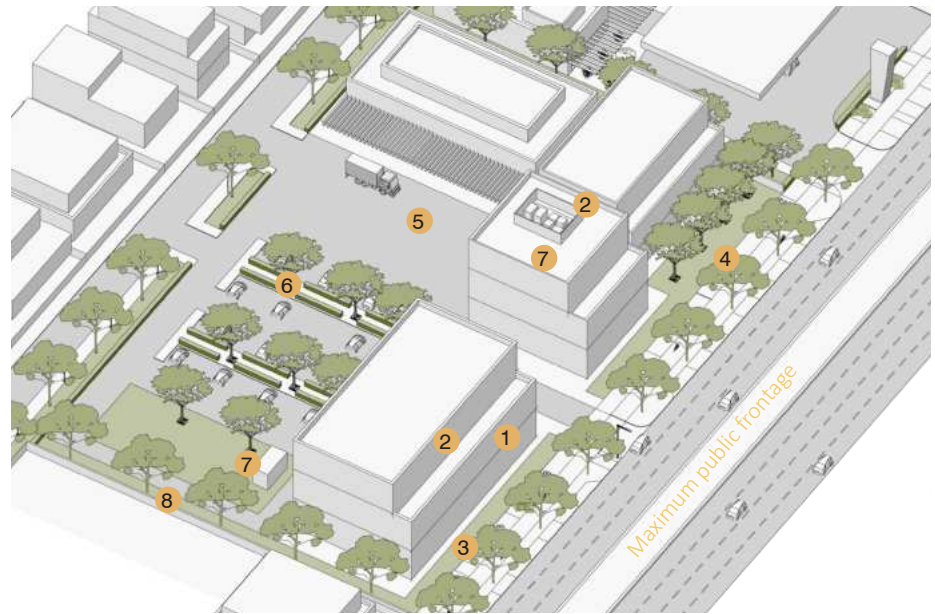


Figure 253 Recommended site planning considerations for industrial / warehouses

Layout and Building Placement

- Where possible, building frontages shall be at the minimum required setback / buffer to create a street wall (1/3).
- Outdoor storage and odor or noise-generating functions of industrial shall be screened by an appropriate green buffer of plant trees and shrubs (4).
- Loading facilities and parking shall be located at the rear of the buildings with appropriate landscape treatment and buffers (5/6). Loading facilities provided in front shall be screened from public view and shall not obstruct pedestrian and vehicular circulation.
- Parking, driveways, ramps, loading areas should not occupy more than **70%** of the plot area not occupied by the buildings.
- Provide landscape buffers (8).
- Open space should be usable the life of employees and workers.

Massing and Scale

- Entrances should be placed at grade level or slightly above and be clearly visible from the main access street.
- Large building massing and floor plates shall be broken / recessed to introduce variation and foster human scale (2).
- Surface detailing, color and material changes shall be used to enhance the massing and not substitute it.

Facade Treatment & Architectural Elements

- Street facing facade shall be organized to emphasize entry and special uses.
- Facades of temporary nature and quality shall be avoided.
- Purely utilitarian facades shall be avoided.
- Openings in general, shall have a share of maximum **30 to 50%** of the overall façade surface.
- Stylistic details shall conform the architectural theme. Quality materials should be used, regardless of architectural style.
- Awnings / canopies for entries and shading shall compliment the facade design.
- Long walls and fences shall be broken up by landscaping, pilasters, offsets in the alignment, and/or changes in material, color, or texture.

- For large parcels located in industrial areas, landscape buffer shall be provided to avoid uninterrupted walls and fences.
- Fence design shall incorporate safety and security and avoid use of bard wires and pickets.

Materials and Colors

- Building materials, trim and finishes shall convey a sense of permanence.
- Changes in material should enhance the facade and correspond to variations in building mass.
- Highly reflective building materials and finishes shall be avoided.
- Use of exterior surface materials that will reduce the incidence and appearance of graffiti shall be preferred.

Utilities and Equipments

- Utilities facilities shall be placed underground where feasible.
- Roof top utilities shall be placed at an offset and screened through parapets / screens / landscape (7).
- Mechanical or electrical equipment shall be located within the building or buffered with planting materials adding value to the public realm and not within external utility cabinet (7).
- Trash enclosures shall be hidden within parking garages / back of the building.

5.4.5 Gas Stations

Gas stations along major roads throughout Aseer shall contribute in the development of a positive community character, streetscape and city image through high quality architectural design and materials and proper urban and landscape design.

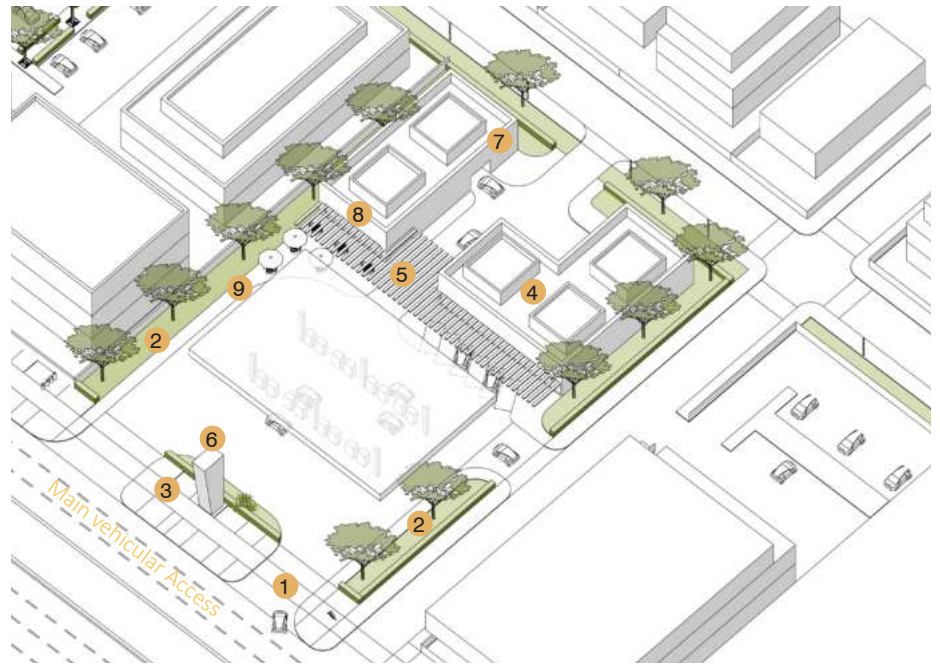


Figure 254 Recommended site planning considerations for gas stations

Layout and Building Placement

- Auto repair bay and car wash openings, service and storage areas and refuse enclosures shall be oriented away from public view and from view from the main roads (7).
- A minimum **3m** wide (5m in Sub-urban areas) landscape area along the edges of a site shall be provided (2).
- **2m** minimum wide pedestrian walkway between the public sidewalk (and/or parking areas) and building entrances and along the public realm must be provided (9).
- Walkways must be distinguished from driving surfaces by using varied paving treatments and by raising walkways to curb level.
- Road edge shall be defined through landscape when building placement is setback from the road.

Massing and Scale

- Entrances and major windows of gas station buildings shall be visible and coordinated with the streetscape and directly accessible by pedestrians from public streets (8).
- A common binding element such as Canopy element should be integrated to building and site walls to integrate the multiple buildings within the site (5).

Facade Treatment & Architectural Elements

- Blank walls along the main road and at the public realm shall be avoided.
- Purely utilitarian facades shall be avoided along public frontages.
- Facades of temporary nature and quality shall be avoided.
- All sides of buildings and pump islands shall be designed with a consistent architectural style.
- Drive-through windows, menu boards, and stacking lanes shall be oriented away from residential areas.
- Items for sale shall be displayed within the main building, or within designated areas that are screened from public streets.

Materials and Colors

- Overly dominating branding elements or colors shall be avoided on the facade. Branding elements shall be well integrated with the facade or the landscape. Extreme bright colors shall be avoided.
- Highly reflective building materials and finishes shall be avoided.
- Use of exterior surface materials that will reduce the incidence and appearance of graffiti.
- Refer to AUDC B.6 - Organize Infrastructure and Signage for additional guidance on signage.

Utilities and Branding

- All utility equipment within buildings must be enclosed or screened from public view. Rooftop mechanical equipment must be set back from the edge of the building and screened (4).
- Ground-mounted signs must be integrated with landscape treatment (6).
- Signs must be located and designed to complement the character and scale of the area and to promote an active, pedestrian friendly environment.

5.4.6 Tall Buildings

Tall buildings are defined as structures taller than 40m and or with more than 10 levels. Generally, tall buildings shall be designed with slender massing and sound proportions by using two integrated vertical building zones: The Podium Zone and the Tower Zone.

Podium Zone

- The Podium Zone is the portion of the building that extends vertically from the ground floor up to the 4th level of the building.
- The building area coverage in the Podium Zone should typically be minimum **50% LAC**.
- The Podium Zone shall be located to frame the edges of streets, parks, and open space, reinforce corners, and to fit harmoniously within the existing context.
- Facade breaks shall be provided at every **60m**.

Tower Zone

- The Tower Zone is the portion of the building above the Podium Zone.
- The building area coverage in the Tower Zone should be limited to a maximum floor plate of **35%** of LAC.
- Tall buildings/ towers shall be tall, slender structures that enhance the skyline without blocking significant views from other buildings and ensuring access to daylight to neighboring areas.
- Free standing towers without base buildings (Podium Zone) or a clear relationship to the street shall not be allowed.
- Large, elongated, boxy or slab like floor plates should be avoided.
- Tower Zone frontage should be limited to a maximum of **30m** wherever possible.

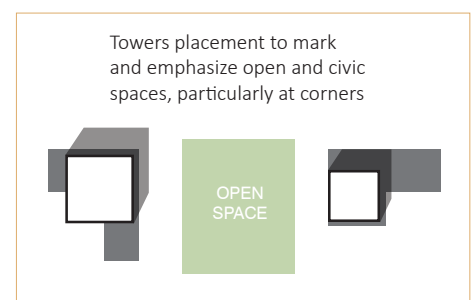
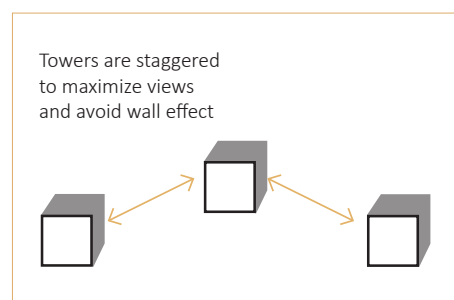
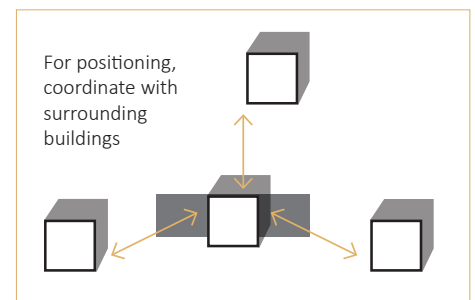
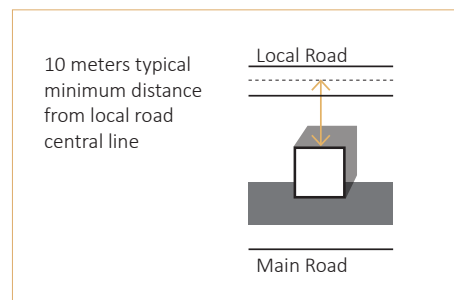
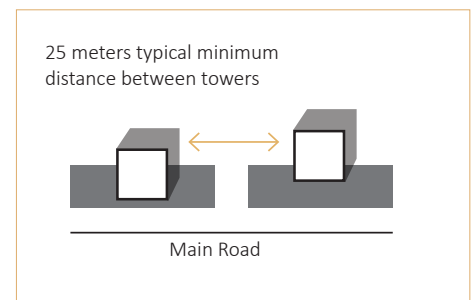
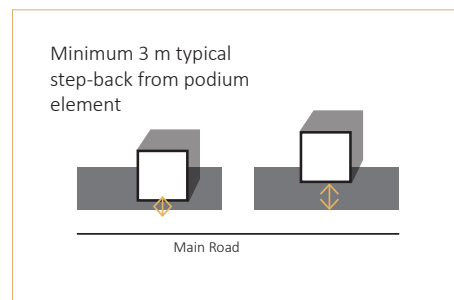
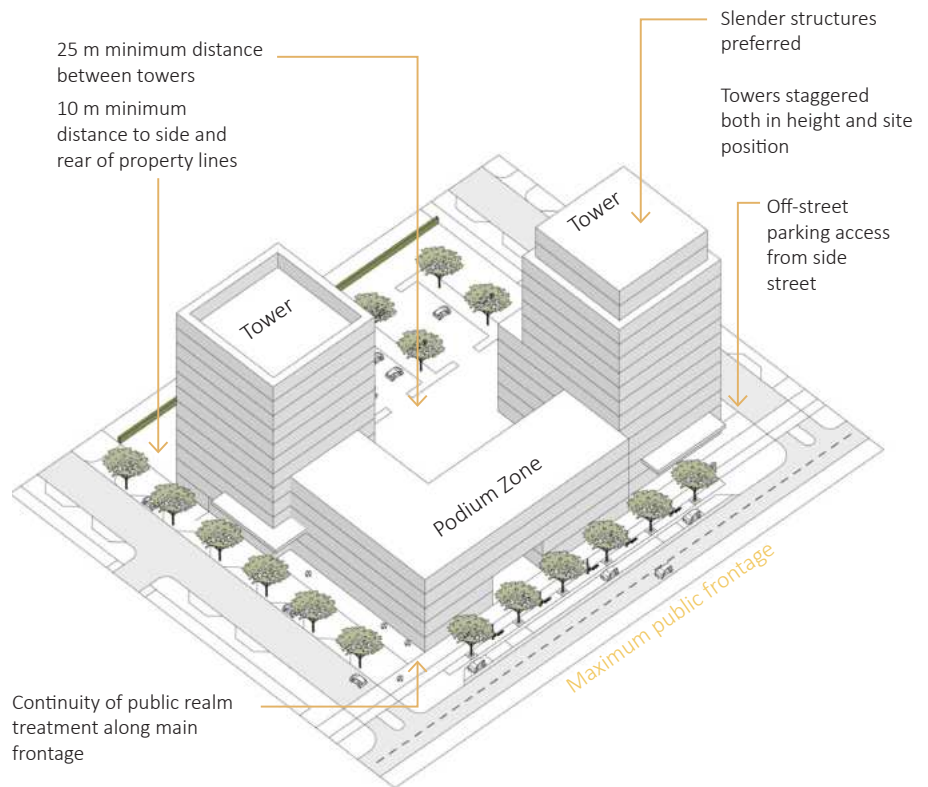
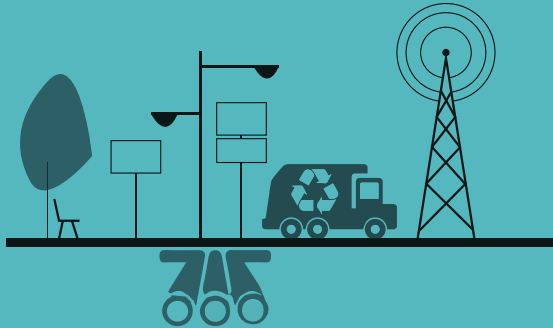


Figure 255 Recommended site planning considerations for tall buildings / tower placement



6 | ORGANIZE INFRASTRUCTURE & SIGNAGE

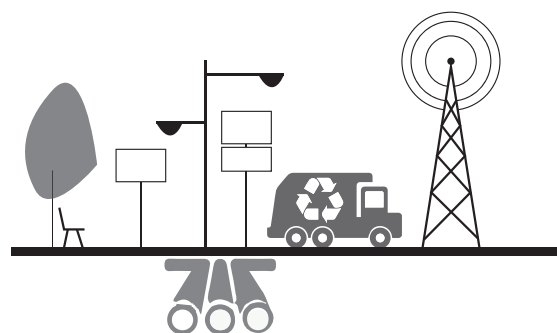


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6 Organize Infrastructure & Signage

6.1 Organize Infrastructure

6.1.1 Introduction

Infrastructural elements and utilities are an essential component for the functioning of built environment. Poorly designed infrastructural elements and poorly organized utilities and city services in public and private spaces contribute significantly to visual pollution, and too often result in a messy composition of the landscape and townscape. For this reason, the AUDC promotes design provisions to properly integrate, buffer or hide utilities and other utilitarian functions within development and away from public view.

6.1.2 General Guidance

- Hide utilities, services and utility related functions from public view.
- Integrate and/or buffer overhead power-lines and towers with development.
- Reduce light pollution in public and private developments.
- Hide waste and trash from public view.



Exposed infrastructural elements as seen in Aseer towns



Overhead power lines and utility towers hampering the natural view



Existing overuse of lighting in Tathleeth



Open and exposed trash containers along the street frontage

6.1.3 Requirements Checklist

The following checklist of requirements is intended as an agile tool to be used by the evaluating Authority or by the Applicant. It should be used to ensure all important topics related to a new development have been addressed and highlight where there may be a need for additional studies.

Evaluating Authority - Infrastructure Review Checklist		
Base Line Information	Project design to clearly illustrate: <ol style="list-style-type: none"> 1. Utilities are hidden or properly buffered from public view. 2. Service areas and back of the house functions are hidden or properly buffered from public view. 3. Other utility related functions (i.e. service parking, storage space, auto repair) are hidden or properly buffered from public view. 4. Overhead power-lines and towers are integrated and/or buffered within proposed development. 5. Site lighting plan to AUDC standards is required for public and private developments. 6. Waste and trash are hidden from public view. 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Pre-application Advice	Provide an opportunity for developer/owner to receive guidance on the proposed development and on what type of information/study may be required to obtain permitting.	<input type="checkbox"/>

Applicant (Developer / Owner) - Infrastructure Review Checklist		
Applicant (Developer / Owner)	For review and approval as part of development permitting application: Context and site plan clearly illustrating intended location for: <ol style="list-style-type: none"> 1. Service and back of the house areas. 2. Waste and trash. 3. Utilities and utility boxes and other utility related functions. 4. Power lines and towers. 5. Appropriately scaled elevation drawings and renderings/photomontages as needed to clearly illustrate impact and proposed mitigation measures for all public frontages for utilities, service area and waste areas. 6. Site lighting plan to AUDC standards. 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Supporting Regulating Documents:

- MoMRA, (1441-2019). Requirements for Wireless Communication Towers and Antennas.

Additional References

- AIA New York | Center for Architecture (2017). Zero Waste Design Guidelines. Design Strategies and Case Studies for a Zero Waste City.
- EirGrid (2015). Cultural Heritage Guidelines for Electricity Transmission Projects. A Standard Approach to Archaeological, Architectural and Cultural Heritage Impact Assessment of High Voltage Transmission Projects.
- MODON (2018). Building Standards and Requirements in Industrial Cities.
- NACTO (2016). Global Street Design Guide. Global Designing Cities Initiative.
- National Grid Transco. A Sense of Place. Design guidelines for development near high voltage overhead lines.

6.1.4 Utility Networks

Objective

To uplift the image of the place with better organization and screening of utility networks from public view. Utility networks generally comprises cables, pipelines and towers. Wherever possible, the AUDC recommends to place utility networks underground. Particular attention shall be placed for downtown areas and other urban mixed-use centers.

Guidance

- Wherever possible utility networks shall be placed underground.
- In general, utilities shall be installed prior to completion of new road and sidewalk surface within the public RoW.
- All building connections shall be installed up to the property line.
- For placement of underground utilities in the right-of-way the following three options shall be preferred, as shown in the given diagrams:
 1. Installing utilities in the roadbed, preferably for service lanes if they are existing.
 2. Installing utilities adjacent to the roadbed.
 3. Installing utilities within the underground corridor.
- In general, priority utilities shall be placed in more accessible areas to avoid frequent traffic interruptions, especially for high-capacity lanes. Like along service lanes. Priority should be given to utilities accessed most frequently. Typically, these are: electricity & communication; water supply; storm water & wastewater; gas and district cooling.

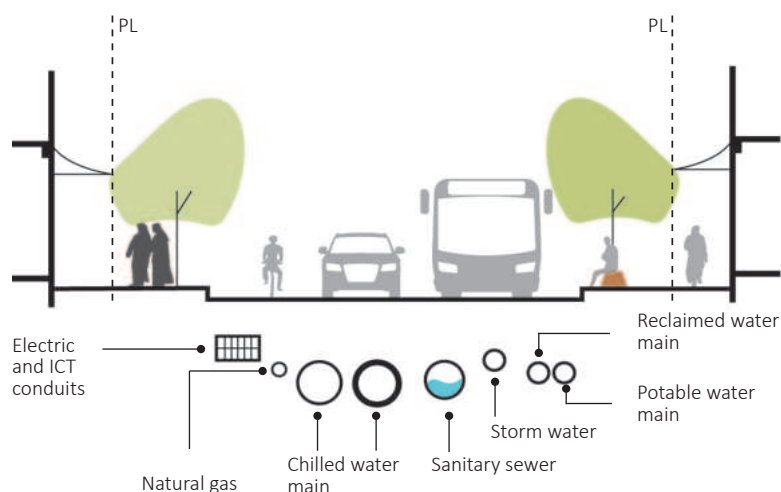


Figure 256 Option 1- Install utilities in the roadbed

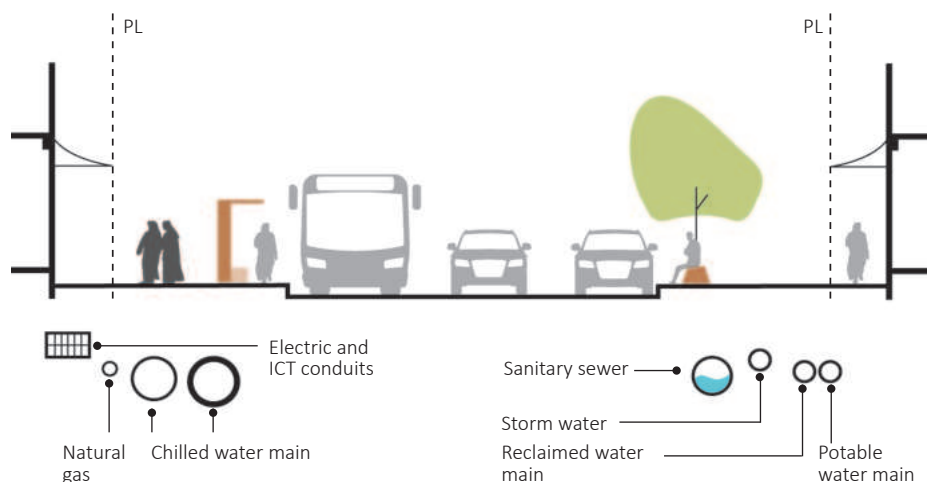


Figure 257 Option 2- Install utilities adjacent to the roadbed

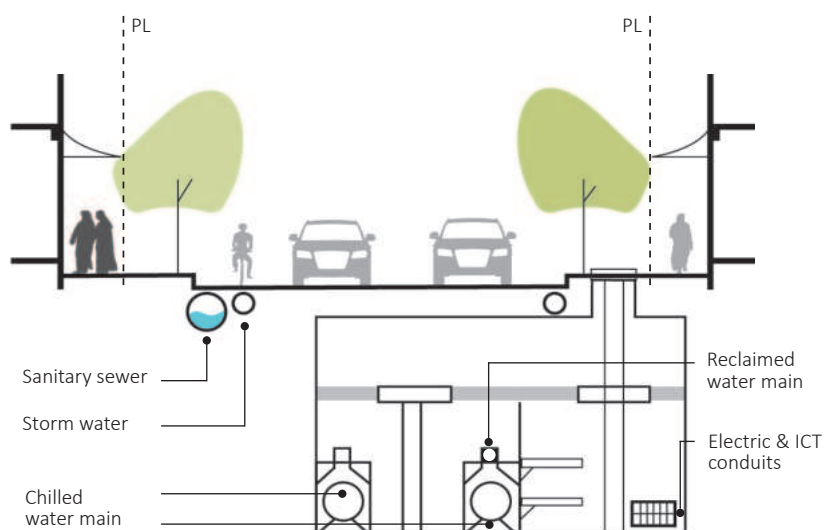


Figure 258 Option 3- Install utilities within the underground corridor

6.1.5 Infrastructural Elements

Objective

To mitigate visual impact of large-scale infrastructural elements related to utilities such as dams, water tanks, pumping stations, various power plants, oil/gas facilities and incinerators.

Guidance

- Generally, for large scale infrastructural elements generous setback and appropriately landscaped buffered zones shall be required. Refer to AUDC B.1.
- Particular attention shall be placed to proper buffering of public frontages and incompatible adjacent uses.
- Generally, a combination of vegetated and human made screens shall be required.
- Building massing shall be broken down and articulated to foster a positive dialogue with its adjacent context (i.e. imitating existing patterns and preexisting urban form).
- Harmonious or mimetic color arrangements shall be preferred.
- In any case, the proposed development shall demonstrate how the visual impact on the nearby population has been mitigated.



An example of building massing breakdown and harmonious color arrangements:

The FBA 8 hot-dip galvanizing plant in Dortmund comprises three hall sections arranged in parallel with one another in accordance with a color concept by Friedrich E. v. Garnier (Credits: ThyssenKrupp Rasselstein GmbH, Andernach)



Examples of mimetic color arrangements for utility boxes

6.1.6 Overhead Power Lines and Towers

Objective

To develop the approach to site layout and design based on two primary aims: diminishing the visual impact associated with high voltage overhead lines and promoting the environmental quality of an area.

Guidance

- Boundary areas to transmission routes shall be effectively screened by landscape to reduce visual prominence of power lines.
- Arrangement of urban development shall avoid following the linearity of the transmission route so to diminish its overall prominence.
- Wherever possible, pylons shall be located on lower ground so to limit their visual impact.
- When designing an electricity transmission project, consideration must be given to all listed and potential heritage sites as well as cultural landscapes.
- Comparative evaluation for corridor options should be carried out to select the electricity transmission corridor with the least impact on cultural heritage and all other environmental, technical and economic perspectives.
- Recommended factors to be considered for assessment of each corridor are-
 1. Physical presence in the landscape (Scale, mass, appearance, setting and visibility).
 2. Preservation (integrity, condition, vulnerability to change of the heritage asset).
 3. Documented value and material about the heritage asset.
 4. Inter-visibility between heritage assets.
 5. Rarity in the heritage record.
 6. Cultural and community value.
- For further guidance on utilities in connection to heritage, refer to AUDC B.2.2.4.

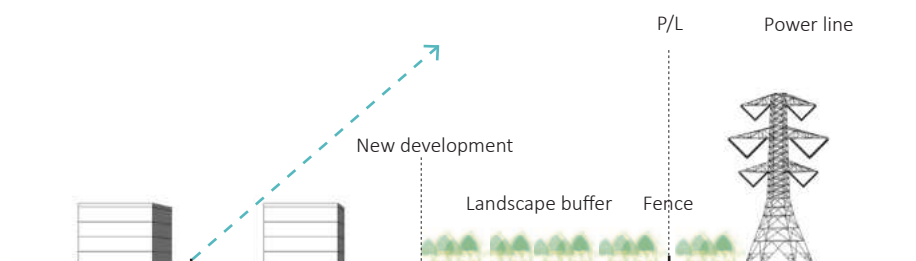
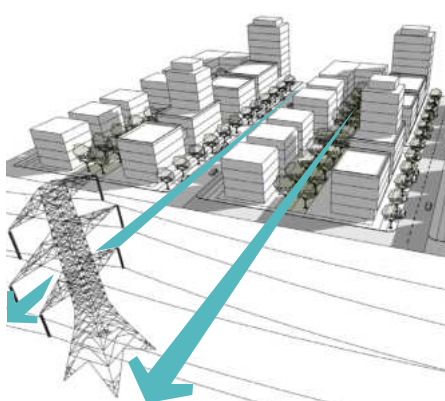
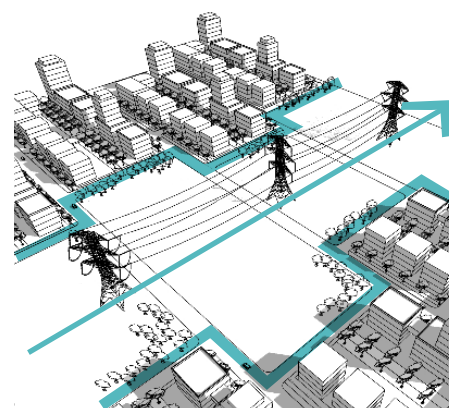


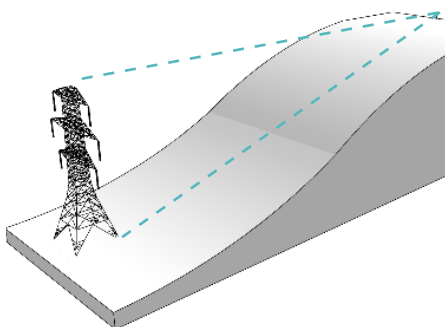
Figure 259 Narrower streets with taller buildings may enable development to be sited closer to pylons without increasing visual impact



Offsetting the views of pylons may help to make them less prominent. Orientated development block should be such that the majority of development does not front the transmission route



The linear arrangement of urban development in parallel with the transmission route over long distances tend to highlight the presence of overhead power lines. One or more urban development elements shall not follow the linearity of the transmission route so that its overall prominence may be diminished



Whenever possible pylons shall be placed on lower grounds to be viewed from elevated positions to reduce their visual impact



Appropriate planting may reduce visual impact of pylons from public spaces, enhancing the overall environment

Guidance

In general, site layout and design shall prioritize and promote meaningful public realm and integrate the transmission route in the overall open space design concept. And in particular focus on the following:

Public Open Spaces

Land adjacent to overhead power lines may be used for supervised recreation, informal open space (i.e. walking, cycling) or as nature conservation areas. The land beneath overhead power lines may accommodate a sustainable urban drainage system.

Car Parking Courtyards

Car parking courtyards may be used around the base of pylons and work well in both residential and non-residential contexts.

Transport Corridors and Movement

Land beneath overhead power lines may be used for street. Overhead power lines have less visual impact when seen from a moving vehicle than when seen from the same viewpoint by a pedestrian. Streets and paths also may allow more landscaping to take place in the vicinity of the overhead power lines.

Redesigning Utility Pylons

Updated design of electricity pylon in prominent view corridors may be a feasible option to improve the townscape visual quality of Aseer region.

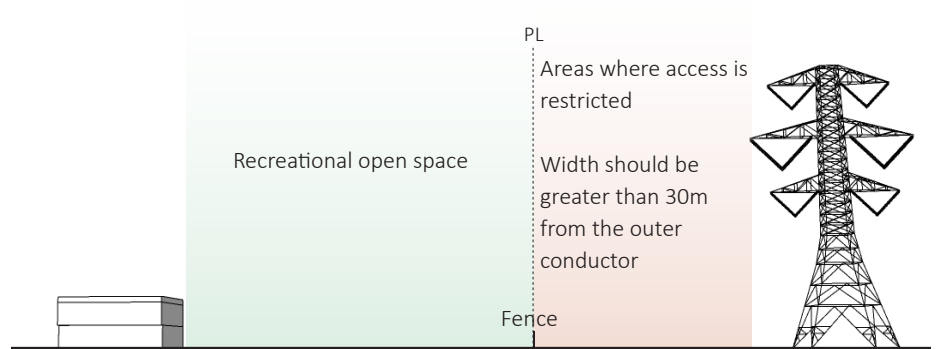


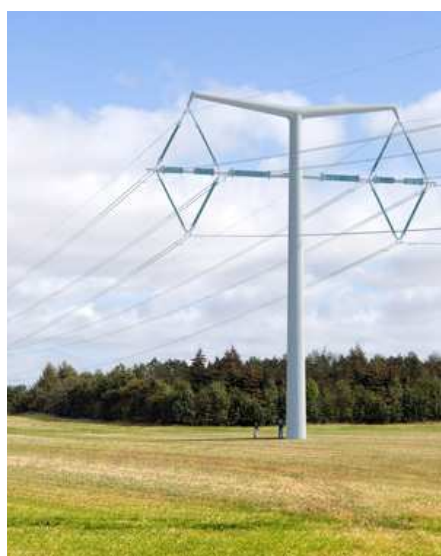
Figure 260 Example of schematic division of buffer area beside utility pylons



Example of public open spaces- children's play area in Abha city



Example of parking under high tension line



Example of updated design of electricity pylon in Denmark



Example of updated design of electricity pylon in Italy

6.1.7 Light Pollution

Objective

To control the light spillage from properties and new developments while improving the safety and visual quality of public spaces. Light pollution in urban areas affects flora and fauna threatening biodiversity, it has harmful effects on the human metabolism, and it is decremental on the visual quality of places at night.

Guidance

As illustrated in the side diagram, light pollution may be caused by:

- Glare
- Light trespass
- Over lighting
- Sky glow

In Development

- Generally, to ensure good lighting and minimize light pollution, glare shall be minimized and temperatures, colors, and ambiance shall be of consistent treatment, also to optimize energy efficiency.
- For any new development acceptable average light levels shall be with a typical uniformity ratio of **3:1**, where the maximum light level shall be **3** times the brightness of the minimum level.

In Right-of-Way

Height

- Standard light poles for sidewalks and bike facilities shall be kept to a height between **4.5–6m**.
- Light poles for roadbeds may vary according to the street typology and land use. In most contexts, standard heights for narrow streets in residential, commercial, and historical contexts shall be between **8-10m**.
- Taller light poles may be appropriate only for wider streets in commercial or industrial areas but should be generally discouraged.

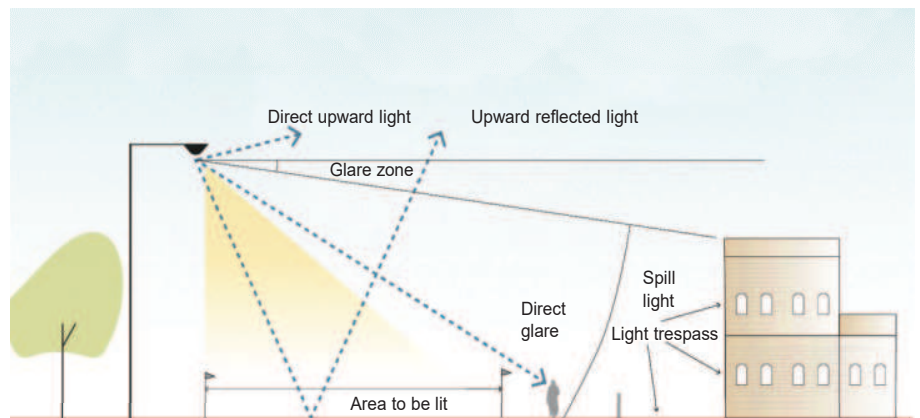


Figure 261 Example of effective lighting in development

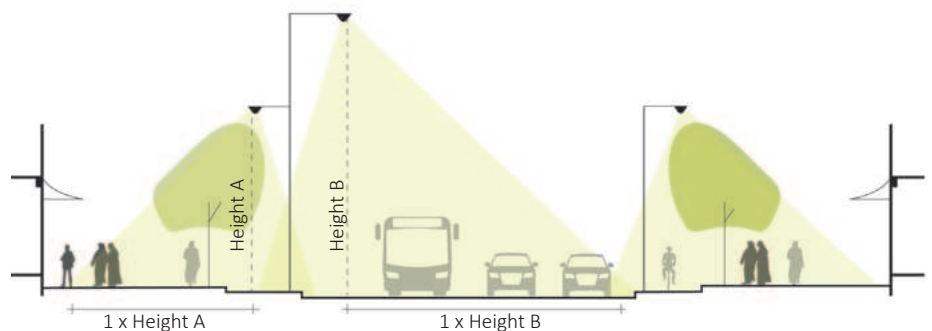


Figure 262 Examples of effective lighting in right of way

The spacing between light poles is typically 2.5- 3 times the height of the fixture, a single row of light poles might be sufficient for a narrow street, while wider streets may require multiple rows

Spacing

- Generally, spacing between two light poles should be **2.5–3** times the height of the pole.
- Shorter light poles should be installed at closer intervals.
- The density, speed of travel, and the type of light source along a corridor shall also determine the ideal height and spacing.

Light Cone

- The light cone of the pole has roughly the same diameter as the height of the fixture from the ground. The height of the pole shall therefore determine the maximum suggested distance between two light poles to avoid dark areas.

- Lighting from light poles and fixtures shall be focused directly onto the street to minimize glare and light pollution.

Light Fixture

Different light fixtures will produce different light cones. Generally, cut-off and fully shielded fixtures directed into the street shall be preferred to minimize glare and light pollution.

6.1.8 Waste Management

Objective

To improve the environmental quality of Aseer by tidying up the streets, public frontages and public realm from visible garbage, rubble, dilapidated elements and substandard-low quality temporary structures.

Guidance

Placement of Waste Bins

- Generally, trash containers and retail loading areas should be preferably located in the one third portion (shown in the image) at the back of the plot away from the main public frontage and screened from public view.
- Trash enclosures shall be screened from public view or enclosed.
- Screened areas should be capable of accommodating such number of waste containers as needed to hold the maximum calculated daily garbage output of the lot.
- All publicly visible areas from the main public road shall be kept clean from trash, construction materials and/or other refuses at all time.
- Trash container placement areas should be cleaned of residual waste at any time.
- Wherever possible, containers should be placed on a platform or raised from the floor to allow cleaning and ease of lifting.

Neighborhood-Scale Collection

Generally, location of centralized facilities shall be away from major public road and in any case screened from public view.

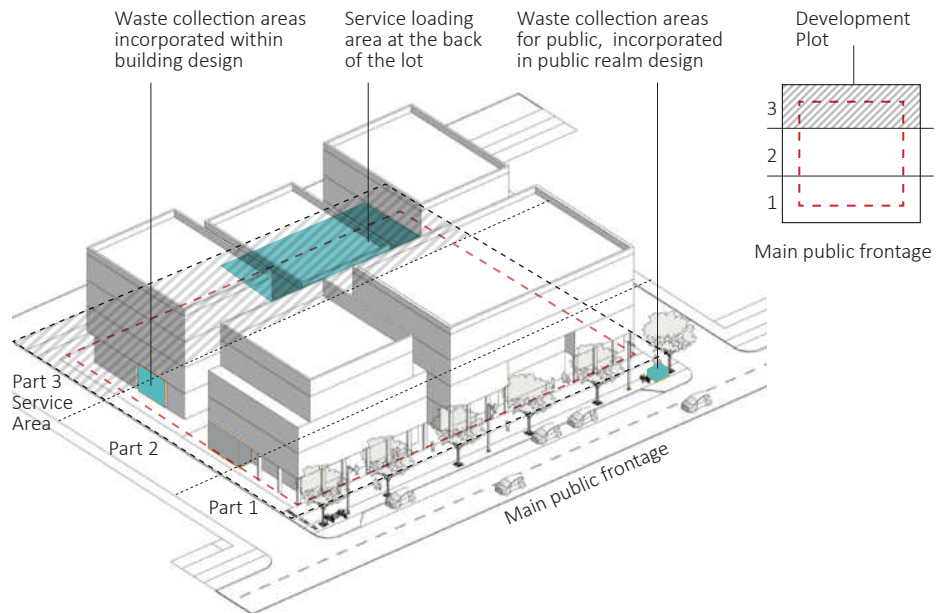


Figure 263 Appropriate placement of waste collection areas in development

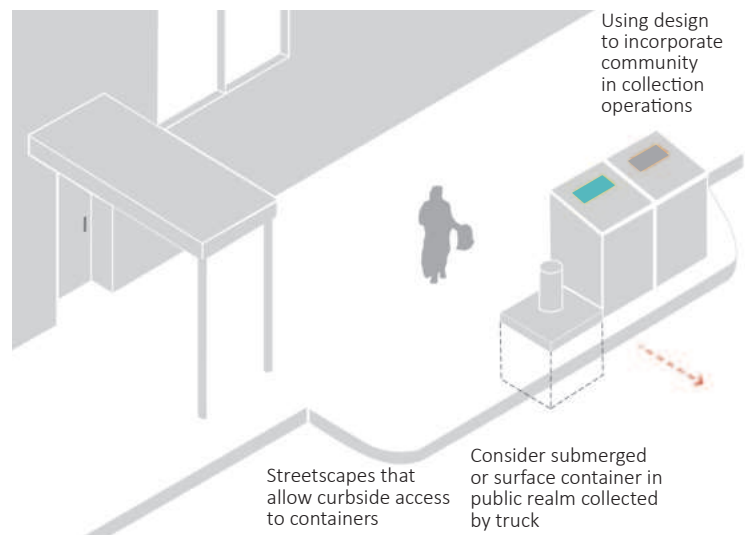


Figure 264 Appropriate streetscape design integrating waste collection elements



Screened waste disposal area



Waste bins for segregated waste

6.2 Organize Signage

6.2.1 Introduction

Signage is the design or use of signs and symbols to communicate a message. A signage also means signs collectively or being considered as a group. Signage is an important visual system that provides orientation, way-finding or advertising for residents and visitors in cities. The urban areas in Aseer region face problems of inconsistent signage that fails to establish a defined tone and contextual aesthetic, significantly contributing to visual pollution.

The objective of the AUDC is to provide clear provisions for applicants to better organize signage within the public space of the metropolitan area, so to produce better quality places and, more generally, to uplift the overall image.

The AUDC considers signage as any kind of visual communication element present and/or visible in and from the public space (i.e. roads, streets, avenues, squares).

The AUDC classifies signage into 2 main categories:

- *Way Finding Signage*
- *Advertisement*

The following provisions focus on regulating advertisements as major source of visual pollution.

6.2.2 General Guidance

- In any case signage must be conceived as an integral part of the project design and composition so not to appear as an afterthought.
- The location, size, and appearance of signage must complement the building and/or should be in character with the urban context in which they are located.
- If falling under a family of elements, signage must be related in their design approach and convey a clear hierarchy of information.
- In any case signage must respect residential use. Small signs, no animation, limited lighting and shorter operating hours shall be appropriate where signs are visible from residences.



Existing images of unregulated signage in Aseer

6.2.3 Requirements Checklist

The following checklist of requirements is intended as an agile tool to be used by the evaluating Authority or by the Applicant. It should be used to ensure all important topics related to a new development have been addressed and highlight where there may be a need for additional studies.

Evaluating Authority - Signage Review Checklist		
Base Line Information	Comprehensive plan to clearly illustrate: <ol style="list-style-type: none"> 1. Placement 2. Proportion 3. Form 4. Logo/Text Size 5. Colors 6. Materials 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Pre-application Advice	Provide an opportunity for developer/owner to receive guidance on the proposed development and on what type of information/study may be required to obtain permitting.	<input type="checkbox"/>

Applicant (Developer / Owner) - Signage Review Checklist		
Applicant (Developer / Owner)	For review and approval as part of development permitting application: <ol style="list-style-type: none"> 1. Comprehensive plan and program for all site signage features and locations 2. Appropriately scaled elevation drawings and renderings/photomontages to clearly illustrate impact of signage on all public frontages Comprehensive plan to clearly illustrate: <ol style="list-style-type: none"> 1. Placement 2. Proportion 3. Form 4. Logo/Text Size 5. Colors 6. Materials 	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Supporting Regulating Documents:

- MoMRA, (1441-2019). Requirements for billboards and advertisements.

Additional References

- Department of Transport, Abu Dhabi, UAE(2018). Roadside Advertising Manual.
- Prefeitura de Sao Paulo(2006). Manual Ilustrado de Aplicacao da Lei Cidade Limpa e normas complementares.

6.2.4 Types of Advertisements

Objective

To better regulate advertisement signage the AUDC identifies 3 categories of advertisement based on their functions as explained below.

A. Indicative Announcement

Indicative Announcement is signage that identifies the place of the activity, the establishment and/or professionals that make use of it, and may contain the name of the establishment or professional and their respective logos, indication of the services and activities performed, telephones, addresses and websites. Examples of Indicative Announcements are: signage for stores, medical establishments, schools, institutions, hotels, gas stations, petrol pumps, or parking areas.



Example of indicative announcement in Tathleeth

B. Publicity Advertising

Publicity Advertising is signage that is installed outside the place of activity for advertising. Examples of Publicity Advertisings are: advertising on billboard, advertising on freestanding poles, real estate related communication, advertising on street furniture, advertising on vehicles.



Example of publicity advertisement in Abha city

C. Special Announcement

Special Announcement is signage specifically dedicated to address cultural, educational, event information, administrative or real estate purposes. Examples of Special Announcements are: signage for stores, medical establishments, schools, institutions, hotels, gas station, petrol pumps, or parking areas.



Example of special announcement in Abha city

6.2.5 Restricted Areas and Categories

Overview

The AUDC identifies specific areas and builtform elements where placement of advertisement is generally not allowed, in order to preserve a clear image and prevent obvious visual pollution issues. Furthermore, vehicular types of advertisement signage are generally prohibited in urban mixed-use centers as these are deemed out of scale and place to foster a more walkable and less dominating car environment.



Natural assets like mountains & Wadi beds



Parks, squares and other public spaces



Trees of any size



Bridges and tunnels



Utility towers & structures



Continuous blank walls/fencing



Public art

Figure 265 Areas and elements where advertisement placement is generally prohibited or highly controlled

Guidance

Placement of advertisement in the built environment shall be prohibited or highly restricted/ controlled in the following areas and built-form elements:

- In riverbeds, reservoirs, lakes, dams and mountains.
- In public parks, squares and other public places.
- On trees of any size.
- On transportation related signs.
- On streetlights.
- On infrastructure elements like bridges, viaducts, tunnels and utility towers.
- On continuous blank walls or fencing.
- On or next to public works of art.

Exceptions may be granted for announcements by the administrative body specifically related to public welfare.

The following type of advertisement structures shall be prohibited in downtown areas and other urban mixed-use centers within the Aseer region:

- Unipoles
- Billboards
- Megacomms
- Hoardings

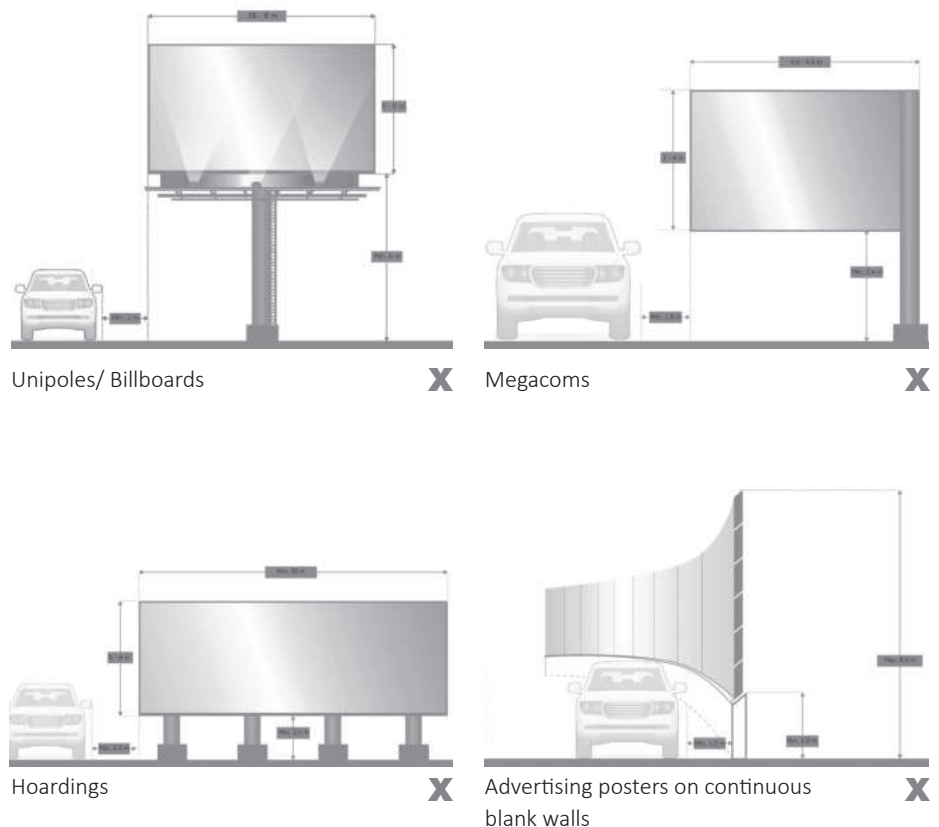


Figure 266 Restricted types of signage structures within downtown areas and urban mixed use centers

6.2.6 Building Signage Placement

Overview

In order to have signage that is well-integrated within the overall architectural composition and provide a positive contribution to public frontages, the AUDC provides overall guidance regarding the correct placement of signage on building and structures.

Guidance

Based on building placement, signage shall be divided in three categories/zones:

Pedestrian Signage

Pedestrian signage is defined as signs placed at the pedestrian level - i.e. within the first vertical **5m** of a building wall. Generally, pedestrian signage must be part of a common design family i.e. style, dimensions, colors, materials and with similar alignment and proportion when part of the same project. Pedestrian signage must reinforce the identity of the public street frontage and be conducive to a pleasant walkable environment.

Building Wall Signage

Building Wall signage is a sign placed above the pedestrian level - i.e. above **5m** in height along a building wall. Building Wall signage shall be generally discouraged for building structures less than **3 levels** height. For structures taller than **3 levels**, **1** Building Wall signage per main frontage shall be allowed. Signage shall be appropriately scaled for the primary viewing audience (i.e. more pedestrian-oriented corridor segments will require smaller signage than fast moving automobile-oriented segments).

Tall Building Signage

Tall Building signage is a sign that identify tall buildings. The AUDC identifies tall buildings as structures taller than **40m** and/or **9 levels**. Tall Building signage shall be located within the area available **5m** below the top of the parapet or between the top of the windows on the topmost floor and the top of the roof parapet (in case of flat-topped buildings). It should not take up more than **50%** of that area or **8sqm** (whichever is less). For tall buildings maximum **2** signage are allowed (each of max. size **8sqm**).

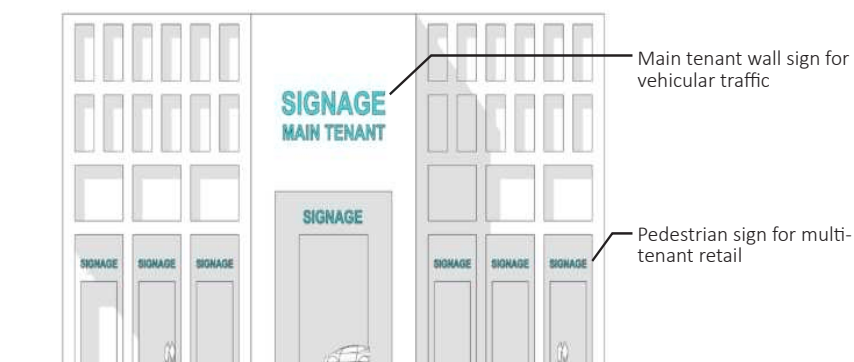


Figure 267 Example of correct placement for pedestrian and building wall signage

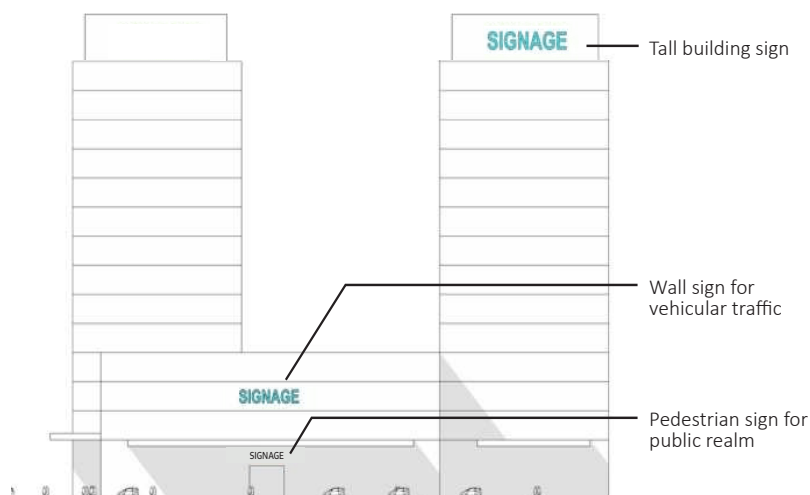


Figure 268 Example of correct placement for tall building signage



Example of building wall signage



Example of pedestrian signage

6.2.7 A. Indicative Announcement

General Cases

Allowed Zone Placement

Pedestrian/ Wall/Tall

Allowed Proportion

- For building frontage less than **10m** the maximum exhibit area of signage shall be restricted to **1.5sqm**.
- For building frontage in between **10m** & **100m** the maximum exhibit area of signage shall be restricted to **4sqm**.
- For building frontage more than **100m**, **2** advertisements with areas of **10sqm** each separated by a minimum distance of **40m** shall be allowed.
- One advertisement per facade shall be allowed in case of more than one public frontages.

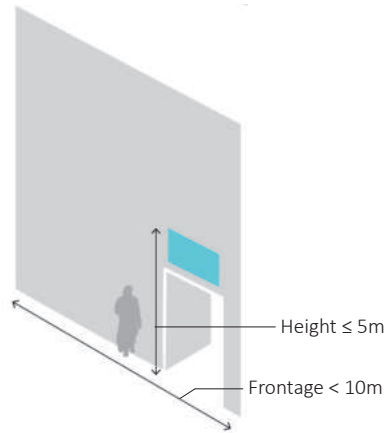
Allowed Form

On Facade

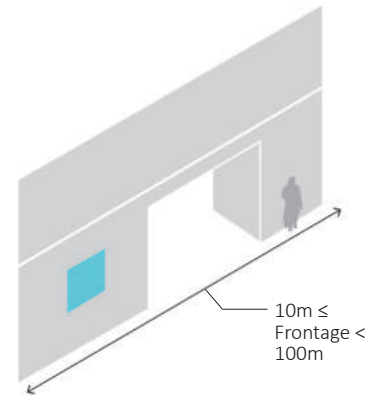
- Minimum allowed height from ground level shall be **2.2m** and maximum shall be **5m**.
- Fully contained within the facade.
- Projection shall not be more than **15cm** from facade.

Projected

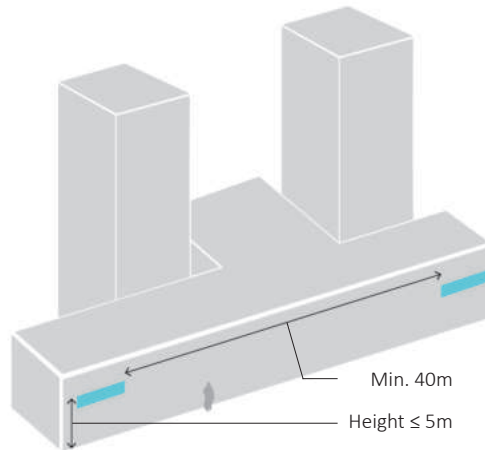
- Minimum height form ground level shall be **2.2m**.
- Maximum Projection from the facade shall be **1m**.
- Minimum gap between the facade and display area shall be **20cm**.
- Maximum height of display area **2m**
- Depth of letters **0.5cm**.
- Multiple signage may be used to achieve the maximum allowed area mentioned as per length of frontage.



For facade frontage less than **10m**, the total area of the Ad shall not exceed **1.50sqm**



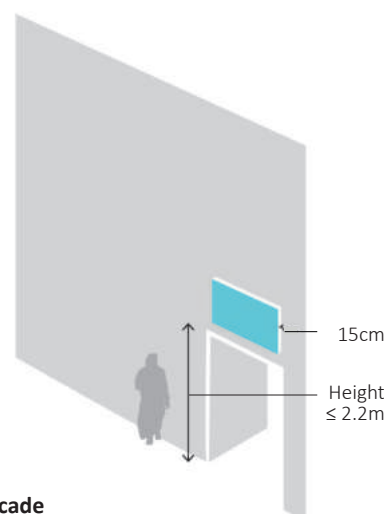
For properties with facade frontage between **10m** and **100m**, the area total Ad shall not exceed **4sqm**



Properties with facade frontage **100m** or more shall be allowed **2** Ads, with area up to **10sqm** each and separated by at least **40m**

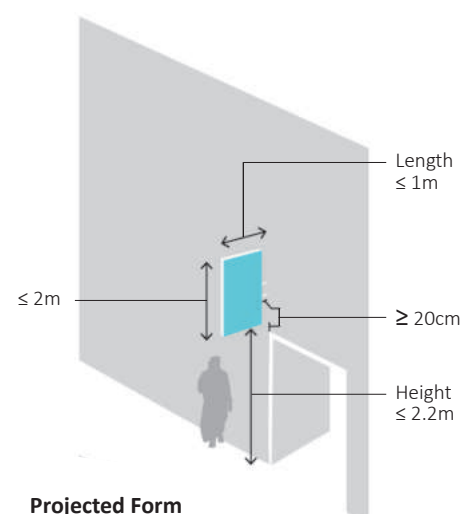


For corner properties or properties with more than one frontage, the installation of **1** Ad per facade frontage shall be allowed



On Facade

An advertisement shall advance up to **15cm** on the sidewalk, provided it is at a minimum height of **2.20m** from the ground



Projected Form

Signage may advance up to **1m** on the sidewalk, having maximum height of **2m**. It shall be at a minimum height of **2.20m**

General Cases

On Totem

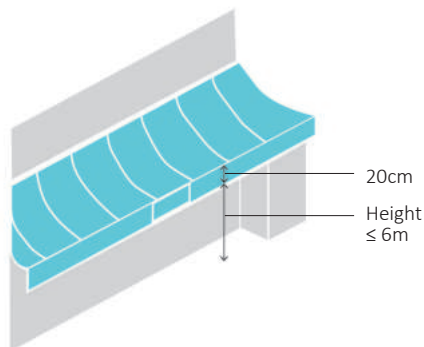
- Maximum allowed height from ground level shall be **5m**.
- The signage must be fully contained within the boundary of the plot.

Retractable

- Maximum allowed height from ground level shall be **5m**.
- Height of letters on awning pediment shall not be more than **20cm**.

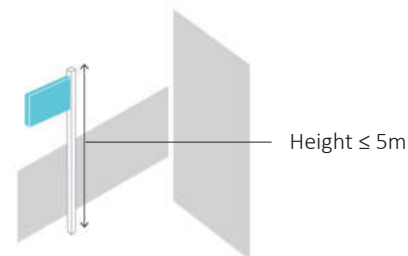
Allowed Color, Material, Logo/Text Size

- All signage must be of the same family type (i.e. cut out letters, color scheme, material palette, blade, or neon) and the same relative size and source of illumination.



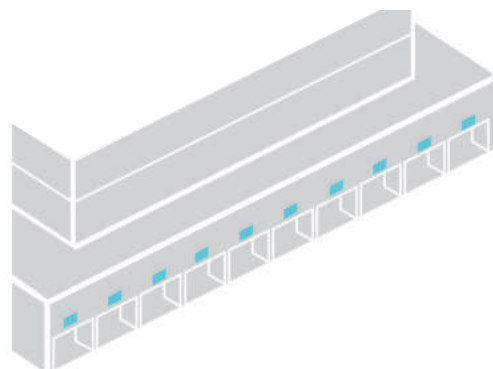
Retractable Form

The indicative advertisement may occupy the awning pediment retractable as long as the height of the letters do not exceed **20cm**



Totem Form

The structure must be fully contained within the boundaries of the lot, including its structure and total exposure area



Advertisement subdivisions for various establishments

If the property houses more than one activity, the advertisement shall be subdivided into the different establishments, provided that the sum of areas of the advertisements do not exceed the total allowed area



Examples of appropriate indicative announcements

Indicative Announcement - Petrol Pumps / Gas Stations

Allowed Zone Placement

Pedestrian/ Wall

Allowed Proportion

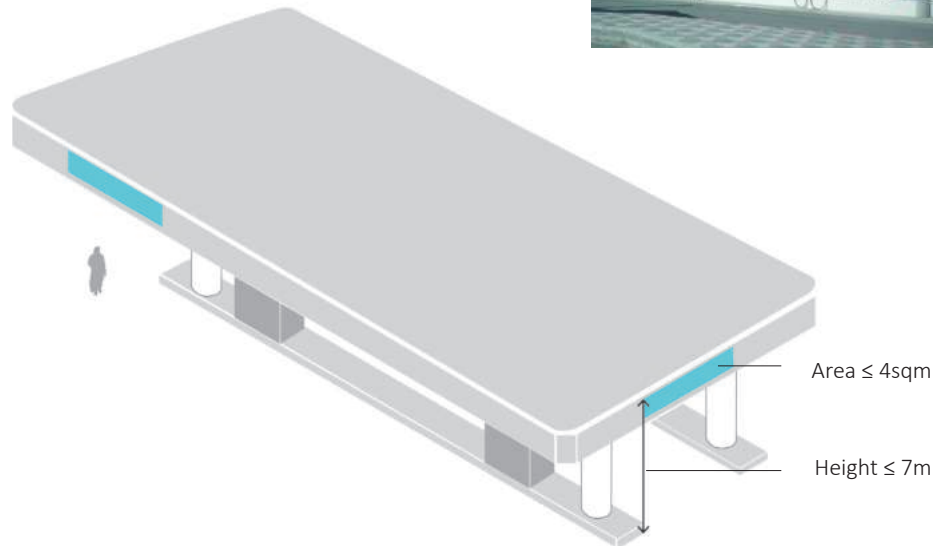
- The maximum allowed height shall be **7m**.
- The exhibit area shall be between Minimum **1sqm** to **4sqm**.
- In case of more than one frontage maximum **2** frontages can be utilized, only **1** Advertisement per frontage shall be allowed.

Allowed Form

- The signage should be on facade or in totem form.
- Additional advertising elements like balloons or umbrellas shall generally be discouraged.

Color, Material, Logo/Text Size

All signage must be of the same family type (i.e. cut out letters, color scheme, material palette, blade, or neon) and the same relative size and source of illumination.



Logo or brand of establishments when installed in the front panels, shall observe the maximum insertion area of **4sqm** per front panel and the maximum height of **7m**, measured from the floor to its highest point

Indicative Announcement - Parking Areas

Allowed Zone Placement

Pedestrian/ Wall

Allowed Proportion

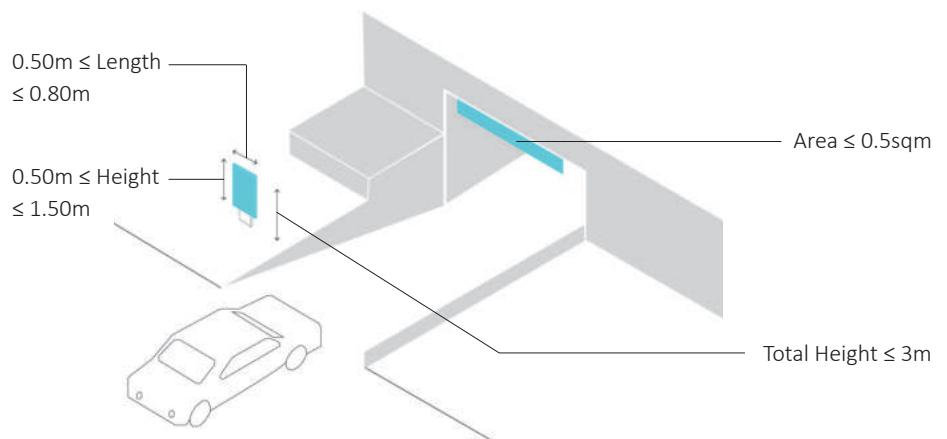
- Length of the signage shall be within **0.50m** and **0.80m**.
- Height of display shall be within **0.50m** and **1.50m**.
- Total height shall not be more than **3m**.
- Area of display shall not be more than **0.50sqm**.

Allowed Form

The signage can be on facade or in totem form.

Allowed Color, Material, Logo/ Text Size

All signage must be of the same family type (i.e., cut out letters, color scheme, material palette, blade, or neon) and the same relative size and source of illumination.



Signage in parking areas shall observe the dimensions of width between **0.50m** and **0.80m** and height between **0.50m** and **1.50m**. They must not advance on the public sidewalk or sidewalk, nor be posted in height above **3m**

6.2.8 B. Publicity Advertisement

General Cases

Allowed Placement

One ad per Pedestrian/ Wall zone per frontage shall be allowed.

Allowed Proportion

- For building frontage less than **10m** the maximum exhibit area of signage shall be restricted to **1.5sqm**.
- For building frontage in between **10m** and **100m** the maximum exhibit area of signage shall be **4sqm**.
- For building frontage more than **100m**, two advertisements with areas of **10sqm** each separated by a minimum distance of **40m** shall be allowed.

Allowed Form

On Facade

- Height from ground level shall not be more than **5m**.
- Fully contained within the facade.
- Maximum projection **15cm** from facade.

Projected

- Minimum **2.2m** height from ground.
- Minimum projection from the facade **1m**.
- Maximum gap between the facade and display area **20cm**.
- Maximum height of display **2m**.
- Depth of letters **0.5cm**.

On Vertical Structure with Multiple Ads

The maximum total height shall be **3m** inside urban core areas of Aseer.

On Vehicles

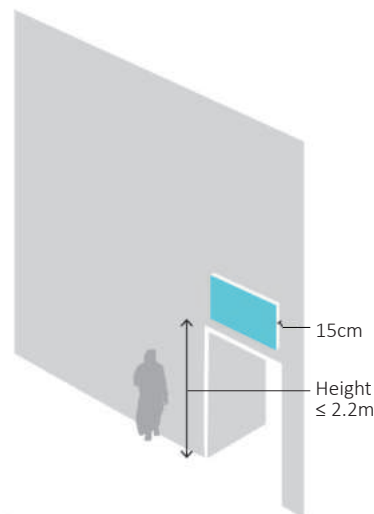
Maximum area of advertisement is **1sqm** (**1** ad per face of the vehicle maximum **2** faces can be utilized).

Others

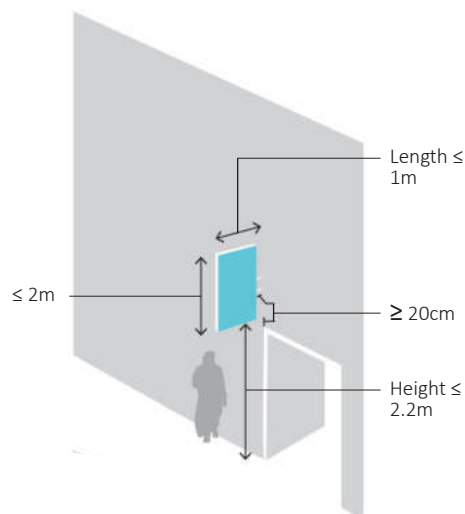
Electronic screens, flags & banners, unipoles, megacoms, hoardings, advertising on lamp posts, MUPs as per MoMRA guidelines.

Allowed Color, Material, Logo/Text Size

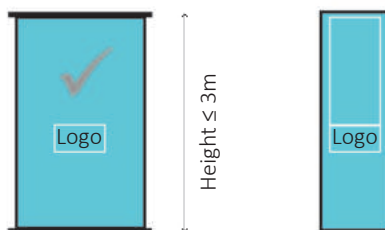
All signage must be of the same family type (i.e. cut out letters, color scheme, material palette, blade, or neon) and the same relative size and source of illumination.



When attached to a building an advertisement may advance a maximum of **15cm** on the sidewalk, provided it is at a minimum height of **2.20m** from the ground

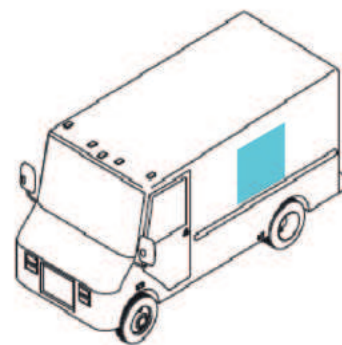


Signage may advance up to **1m** on the sidewalk, having maximum height of **2m**. It shall be at a minimum height of **2.20m**



Total Area $\geq 0.25\text{sqm}$

The totems and banners must be installed at a minimum distance of **100m** from each other. The elements cannot be more than **3m** high; The exhibition area for each logo shall be a maximum of **0.25sqm**, limited to two faces of the element



The insertion of logos will be allowed only on the sides of the vehicles, with a maximum total area of exposure limited to **0.50sqm** on each side



Examples of appropriate publicity advertisements

Publicity Advertisement - Street Furniture

Allowed Zone Placement

Pedestrian

Allowed Proportion

Not more than **30%** of total available surface area.

Allowed Form

On Bus Stops

- Must not in anyway obscure vision for bus driver/ users.
- No projections shall be allowed, No advertising shall be allowed to be attached to the overhang.

Kiosks / Temporary Structures

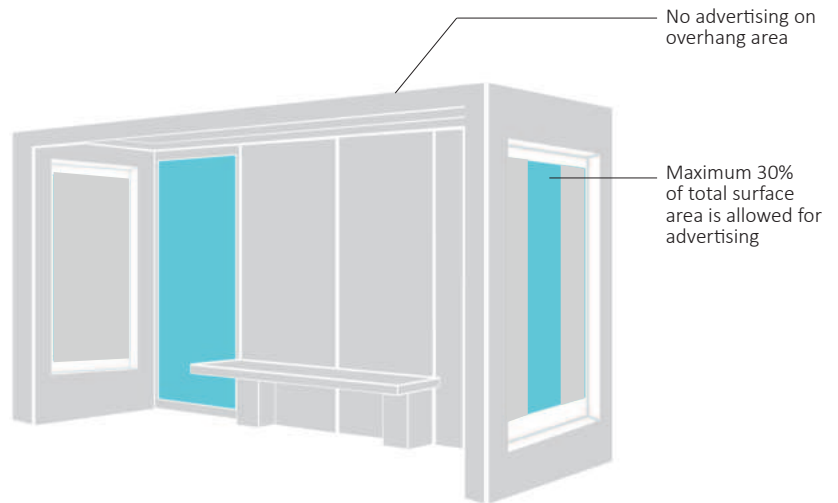
- In case of kiosks, **30%** of the total surface area available can be utilized for public advertising provided there are no projected advertisements.
- No projections or advertisements shall be allowed on public seats, flower beds.

Others

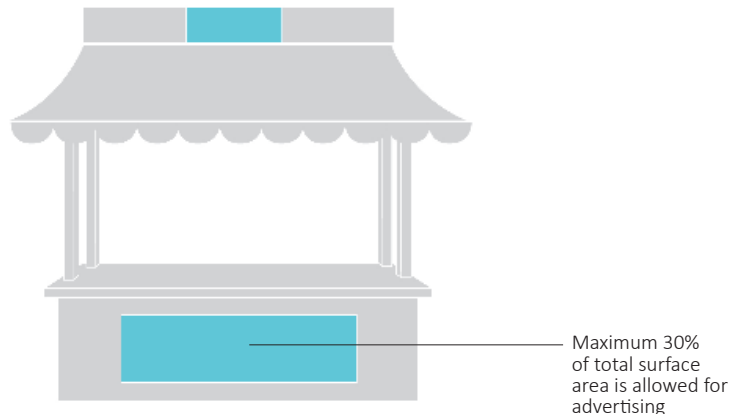
For Optical laser display on building facades and flying advertisements MoMRA guidelines shall be followed.

Allowed Color, Material, Logo/Text Size

All signage must be of the same family type (i.e. cut out letters, color scheme, material palette, blade, or neon) and the same relative size and source of illumination.



In case of bus stops, **30%** of the total surface area available can be utilized for public advertising provided there is no projected advertisements, no advertising attached to the overhang and should in no way hamper the vision of the drivers/ users



In case of kiosks, **30%** of the total surface area available can be utilized for public advertising provided there are no projected advertisements



Proposed bus stop design in Riyadh



Example of Advertisement on a kiosk

Publicity Advertisement - Real Estate

Allowed Zone Placement

Pedestrian/ Wall

Allowed Proportion

- For properties with frontage less than **100m**, one advertisement with maximum area of **10sqm** shall be allowed.
- For properties with frontage more than **100m**, **2** ads of **10sqm** each separated by a minimum distance of **40m** shall be allowed.
- One advertisement per frontage shall be allowed in case of more than one frontages.

Allowed Form

On Facade

- Maximum allowed height shall be **5m**.
- Fully contained within the façade.
- Maximum projection allowed shall be **15cm** from facade.

Totem

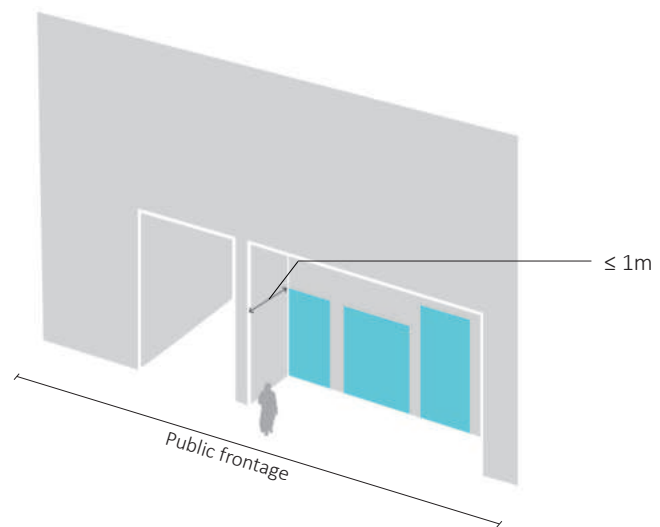
- Maximum allowed height shall be **5m**.
- Signage shall be fully contained within the boundary.

Others

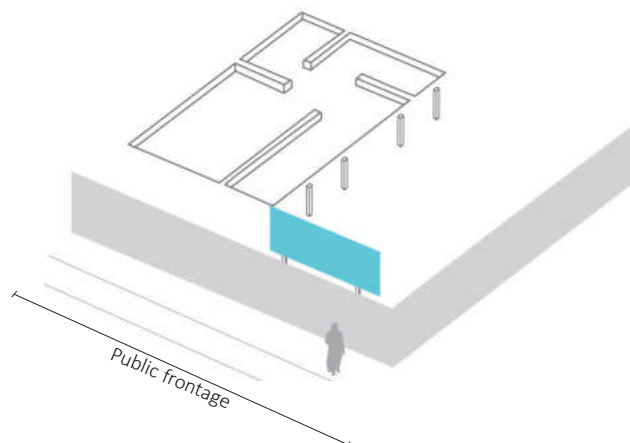
Mandatory messages by federal, state and local laws regarding real estate may be displayed in one or more boards, with total exposure area of up to **10sqm** per property

Allowed Color, Material, Logo/ Text Size

All signage must be of the same family type (i.e., cut out letters, color scheme, material palette, blade, or neon) and the same relative size and source of illumination.



Showcasing posters and banners indicating products, prices or settlements in the internal space of buildings may be allowed, provided they are set back more than **1m** from any door, window or shop window of the establishment



One hoarding per construction site fully contained within the site boundaries and within the vertical limits of **5m** height may be allowed



Examples of appropriate indicative announcements

6.2.9 C. Special Announcement

Allowed Zone Placement

Pedestrian

Allowed Proportion

- For frontages more than **10m** allowed length of advertisement shall be less than **10%** of facade.
- For frontages less than **10m** maximum allowed length of advertisement shall be **1.2m**.

Allowed Form

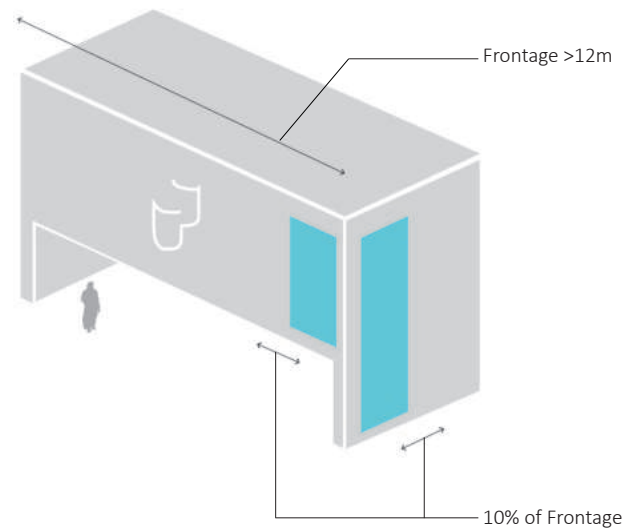
On Facade / Totem

Others

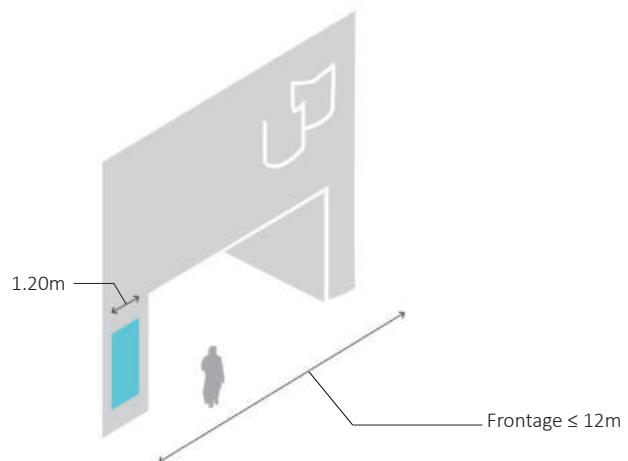
For Optical laser display on building facades and flying advertisements MoMRA guidelines shall be followed.

Allowed Color, Material, Logo/Text Size

All signage must be of the same family type (i.e. cut out letters, color scheme, material palette, blade, or neon) and the same relative size and source of illumination.



Banners or posters indicating cultural events on the site of the activities should not occupy more than **10%** of the public facade where it is installed



In the case of frontage equal to or less than **12m**, should not exceed the maximum width of **1.20m**



Example of correct placement of special announcement

C

APPENDICES



1 Glossary

This glossary provides the most common terms and their definitions used in the AUDC. It is primarily intended to help local officials and the public understand the terms that are frequently used in the document and their meaning.

Adaptive reuse. Converting obsolete or historic buildings from their original or most recent use to a new use. For example, an old manufacturing site could be converted into apartments or retail space.

AMA. Abha Metropolitan Area.

AUDC. Aseer Urban Design Code (Background document).

Agriculture. Use of land for the production of food and fiber, including the growing of crops and/or the grazing of animals on natural prime or improved pasture land.

Access corridor. Widest city street with regional significance that function as the entry gateways to the city. Designed to serve through-traffic, these streets form barriers to cross-street traffic. Crossing aids are needed to minimize segregation. Roadside activity should be properly buffered.

Accessible (publicly). A place able to be reached or entered by the public.

Base flood. In any given year, a 100-year flood that has a one percent likelihood of occurring, and is recognized as a standard for acceptable risk.

Best practice. A working method, or set of working methods, that is officially accepted as being the best to use in a particular business or industry.

Buffer (zone). An area of land separating two distinct land uses that softens or mitigates the effects of one land use on the other. Where a commercial district abuts a residential district, for example, additional use, yard, or height restrictions may be imposed to protect residential properties. The term may also be used to describe any zone that separates two unlike zones, such as a multifamily housing zone between single-family housing and commercial uses.

Brownfield (development). An area with abandoned, idle, or under-used industrial and commercial facilities where expansion, redevelopment, or reuse is complicated by real or perceived environmental contamination.

Building envelope. The space remaining on a site for structures after all building setback, height limit, and bulk requirements have been met. The skin of a building – including the windows, doors, walls, foundation, basement slab, ceilings, roof and insulation – that separates the interior of a building from the outdoor environment.

Built-to line. A zoning requirement that sets a line that a building facade must be built to. Usually required in order to maintain a uniform street wall and create a street as an “outdoor room.”

Built environment. Buildings, roads, parks, and all other improvements constructed by people that form the physical character of a community.

Character zone (community character). The image of a community or area as defined by factors such as built environment, natural features and open space elements, type of housing, architectural style, infrastructure, and the type and quality of public facilities and services.

Clustered development. Development in which a number of dwelling units are placed closer together than usual, or are attached, with the purpose of retaining an open space area.

Civic (use). A use providing for public functions under the auspices of a government body and includes offices, public schools and colleges, public hospitals, community centers, libraries, museums, fire halls, police stations and courts of law.

Commercial. A land use classification that permits facilities for the buying and selling of commodities and services.

Common open space. Land within or related to a development, not

individually owned or dedicated for public use that is designed and intended for the common use of the residents of the development.

Community. (1) A specific group of people, often living in a defined geographic area, who share a common culture, values, and norms and who are arranged in a social structure according to relationships. (2) More generally, a distinct local area such as a neighborhood, district, jurisdiction or municipality.

Commute shed. The area from which people may commute from their homes to a specific workplace destination, given certain assumptions about maximum travel time or distance.

Compatibility. The characteristics of different uses or activities that permit them to be located near each other in harmony and without conflict. The designation of permitted and conditionally permitted uses in a district is intended to achieve compatibility.

Complete streets. Streets designed to accommodate all modes of travel and enable safe access for all users. Pedestrians, bicyclists, motorists and bus riders of all ages and abilities are able to safely move along and across a complete street.

Conservation management plan. Process which sets out what is significant in a place and, consequently, develops policies that are appropriate to enable that significance to be retained in its future use and development. It should be carried out before any master plan or interventions for any place with heritage, conservation or natural values, otherwise there is a risk that damage may be done to the importance/significance (or Outstanding Universal Values).

Connectivity. The ease of travel between two points. The degree to which streets or areas are interconnected and easily accessible to one another by direct routes. An example of high connectivity would be

a dense grid pattern in a downtown area.

Consistency (consistent with).

Free from significant variation or contradiction.

Context. The interrelated conditions in which development exists or occurs.

Corridor. An area or stretch of land identified by a specific common characteristic or purpose.

Cul-de-sac. A short street or alley with only a single means of ingress and egress at one end and with a large turnaround at its other end.

Curb Cut. A ramp opening in a curb where vehicles or wheel chairs may enter or leave the roadway.

Cultural Landscape. Represent the combined works of nature and of man. Represent the diverse, essential and distinct manifestations of a clearly defined geo-cultural region. Are illustrative of the evolution of human society and settlement over time, under the influence of the physical constraints and/or opportunities presented by their natural environment and of successive social, economic and cultural forces, both external and internal.

Density. The amount of development permitted on a parcel under the applicable regulation. Common measures of density include population per square mile. Gross density includes the area necessary for streets, schools and parks. Net density does not include land area for public facilities.

Developable land. Land that is suitable as a location for structures and that can be developed free of significant impact on natural resource areas.

Development (new). The process of developing something new in construction.

District. An area of a city that has a unique character identifiable as different from surrounding areas because of distinctive architecture, streets, geographic features, culture, landmarks, activities, or land uses.

Dwelling Unit (DU). A room or group of rooms which constitutes

an independent housekeeping unit, occupied or intended for occupancy by one household on a long-term basis.

Easement. The right to use property owned by another for specific purposes or to gain access to another property. For example, utility companies often have easements on the private property of individuals to be able to install and maintain utility facilities.

Easement (scenic). A tool that allows a public agency to use an owner's land for scenic enhancement such as roadside landscaping or vista preservation.

Ecosystem. The complex system of plant, animal, fungal, and microorganism communities and their associated non-living environment interacting as an ecological unit. Ecosystems have no fixed boundaries. Their parameters depend on the scientific, management, or policy question being examined. Depending upon the purpose of analysis, a single lake, a watershed, or an entire region could be considered an ecosystem.

Encroachment. Any obstruction or protrusion into a right of way or adjacent property, whether on the land or above it.

Endangered species. Animal or plant species designated as endangered under national law, whose prospects for survival and reproduction are in immediate jeopardy from one or more causes.

Environment. The physical conditions which exist within the area which will be affected by a proposed project, including land, air, water, minerals, flora, fauna, noise, objects of historic or aesthetic significance.

Environmental Impact Assessment (EIA).

A report required when an agency determines that a project may have a significant effect on the environment. An EIA evaluates a proposed project's impacts on the environment and recommends mitigation measures to reduce or eliminate those impacts. Decision makers use information in an EIA to help determine whether or not to approve a project.

Erosion. (1) The loosening and transportation of rock and soil debris by wind, rain, or running water. (2) The gradual wearing away of the upper layers of earth.

Flood, 100-year. The magnitude of a flood expected to occur on the average every 100 years, based on historical data. The 100-year flood has a one percent chance of occurring in any given year.

Floodplain. The relatively level land area on either side of the banks of a stream or wadi regularly subject to flooding. Based on the expected 100-year flood flow rate, the flood water level can be mapped as an area of inundation. The resulting floodplain map is referred to as the 100-year flood plain.

Floor Area Ratio (FAR). The gross floor area permitted on a site divided by the total net area of the site, expressed in decimals to one or two places.

Form-Based Codes. A method of regulating development to achieve a specific urban form by controlling physical form primarily, with a lesser focus on land use. Form-based codes address the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks.

Freeway. A high-speed, high-capacity, limited-access road serving regional and municipality travel. Freeways generally are used for trips to or from major land use generators. Major streets cross at a different grade level.

Frontage. The frontage, or front, of a lot is usually defined as the side nearest the street.

Gateway. A point along a roadway where a motorist gains a sense of entering a city or county.

GBA. Growth Boundary Area of urban development. See UGB.

General plan. The general plan is the foundation for local land use planning. The plan provides a vision

for the foreseeable planning horizon – usually 10 to 20 years – and translates it into goals and policies for the physical development of the city or metropolitan area. All other land use ordinances and policies should flow from the general plan. The general plan should cover all of the land within the jurisdiction and any additional land that, in the agency’s judgment, bears relation to its planning.

Guideline. Statements of policy direction. Guidelines are meant to set a direction and are typically put forth using the words “should” or “may”. They are not prescriptive but aim to provide guidance to property owners, architects, design professionals, evaluating authorities, residents and other interested parties. Most of the guidelines are specific in nature, while others are a matter for broad interpretation; however, none should be confused with imposing a mandated style or motif.

Grade. (1) Leveling or smoothing the contours of a property. (2) The rate of rise or descent of a sloping surface usually expressed in degrees or a percentage.

Greenfield. Farmland and open areas where the lack of prior industrial or commercial activity means that the threat of contamination is lower than in urbanized areas.

Green space. Open, undeveloped land with natural vegetation.

Greenways. Linear open spaces that link parks and neighborhoods within the community, such as paths or trails. Greenways provide public access to green spaces and opportunities for residents of all ages and abilities to be physically active.

Habitat. The physical location or type of environment in which an organism or biological population lives or occurs.

Health. A state of physical, mental, and social well-being and not merely the absence of disease and infirmity.

Heritage. Features belonging to the culture of a particular society, such as traditions, languages, or buildings, which come from the past and are still important.

Heritage boundary. Incorporates all the attributes that ensure integrity and/or authenticity of a property including any outlying features or access routes.

Heritage buffer / Transition zone. Immediate or close areas surrounding a heritage asset and closely associated with it not included within the boundary of the heritage property.

Heritage site. Works of man or the combined works of nature and of man, and areas including archaeological sites which are of Outstanding Universal Value from the historical, aesthetic, ethnological or anthropological points of view. Including Historic Towns and Town Centers no longer inhabited, still inhabited and new towns of the 20th century.

Heritage visual buffer area (or view corridor). Single line of sight from a specific point from the heritage property or approaching it.

Historic preservation. The preservation of historically significant structures and neighborhoods to facilitate restoration and rehabilitation of the building(s) to a former condition.

Human scale design. Design optimized for human use and perception. Traditionally, in Aseer region human scale built form refers to a massing of 4-5 storied and 20-30m wide with narrow shaded streets.

Impact. The effect of any direct human actions or the indirect repercussions of human actions on existing physical, social, or economic conditions.

Infill Development. Development of vacant or underutilized land (usually individual lots or leftover properties) within areas that are already largely developed.

Infrastructure. Public services and facilities like sewage-disposal systems, water-supply systems, other utility systems, schools, roads, bicycle and pedestrian facilities, and transit systems.

Industrial. A land use classification often divided into “heavy industrial” uses, like construction yards,

quarrying, and factories; and “light industrial” uses, like research and development and less intensive warehousing and manufacturing.

Integral (architecture). Necessary and important as a part of a whole architectural composition, or contained within it.

Issues. Important unsettled community matters or problems. Issues may be identified in a community’s local plan and dealt with by the plan’s objectives, policies, plan proposals, and implementation programs.

LAC. Lot Area Coverage (or Building Coverage). The amount of a plot that is covered by buildings, usually expressed as a percentage.

Layered network (Movement). Layered network approach of transportation facilities- not all streets can or should be prioritized for bicycles or pedestrians, given the need to accommodate essential automobile trips on strategic routes. Likewise, vehicle throughput cannot take priority in the design of every street.

Land use. The occupation or use of land or water area for any human activity or any purpose defined in the local plan.

Landscape Character Assessment. is the process of identifying and describing variation in the character of the landscape. LCAs identify and explain the combination of elements and features that make landscapes distinct from one another by mapping and describing Landscape Character Types and Areas.

Landmark. (1) A building, site, object, structure, or significant tree having historical, architectural, social, or cultural significance and marked for preservation by the government. (2) A visually prominent or outstanding structure or natural feature that functions as a point of orientation or identification.

Lot (plot). A tract or piece of land having fixed boundaries and designated on a plot or survey map.

Microclimate. The climate of a small, distinct area, such as a city street or a building’s courtyard; can be altered

through functional landscaping, architecture, or other design features. Mitigation Measures. Measures that modify a project to reduce or eliminate a significant environmental impact.

Mixed use. Properties on which various uses like office, commercial, institutional, and residential are combined in a single building or on a single site in an integrated development project with significant functional interrelationships and a coherent physical design. A “single site” may include contiguous properties.

Modal choices. Transportation options; one’s preferred method of transportation, such as walking, bicycling, using an automobile, or riding a bus or rail transit.

Monument. Architectural works, works of monumental sculpture and painting, elements or structures of an archaeological nature, inscriptions, cave dwellings and combinations of features, which are of Outstanding Universal Value from the point of view of history, art or science.

Natural State. The condition existing prior to development.

Neighborhood. A planning area commonly identified as such in a community’s planning documents, and by the individuals residing and working within the neighborhood. Neighborhood (Unit). Self-contained residential areas bounded by major roads with shops at the intersections and schools in the middle. Children would be able to walk to school without having to cross major roads, and the limited size of the units (typically 6,000-10,000 inhabitants) would encourage community spirit.

Objective. A specific statement of desired future condition toward which the city or metropolitan area will expend effort in the context of striving to achieve a broader goal.

Open Space Land. Any parcel or area of land or water that is essentially unimproved and devoted to an open space use for the purposes of (1) the preservation of natural resources, (2) the managed production of resources, (3) outdoor recreation, or (4) public health and safety.

Overlay. A land use designation or a zoning designation on a zoning map, that modifies the basic underlying zone.

For example, overlay zones are often used to deal with areas with special characteristics, like flood zones or historical areas. Development of land subject to an overlay must comply with the regulations of both zones.

Overlay zoning. Additional or stricter standards to existing zoning that can be used to protect particular natural or cultural features or to avoid or mitigate potential hazards.

Parcel. A lot in single ownership or under single control usually considered a unit for purposes of development.

Parking area (public). An open area, excluding a street or other public way, used for the parking of automobiles and available to the public, whether for free or for compensation.

Parks. Open space lands whose primary purpose is recreation.

Pedestrian friendly. A street, neighborhood, or district that supports, through planning and zoning, the location of stores, offices, residences, schools, recreational areas, and other public facilities within walking distance of each other, and oriented to promote pedestrian access. Such areas also often feature narrow streets, street trees, awnings, covered transit shelters, benches, less conventional paving types, sidewalks on both sides of the roadway, and safe street crossings, among other elements.

Placemaking. Building communities around places, to mitigate the most negative aspects of conventional zoning practices.

Permit. A specific authorization from a planning body to engage in a particular type of development or activity.

Permitted use. An authorized use within a zoning district.

Quality of life. The degree to which individuals perceive themselves as able to function physically, emotionally and socially. Quality of life includes all

aspects of community life that have a direct influence on the physical and mental health of its members.

Quantitative provisions. Quantifiable requirements. Quantitative data is information about quantities, and therefore numbers.

Qualitative provisions. Descriptive requirements. Qualitative data is descriptive and regards phenomenon which can be observed but not measured; relating to, measuring, or measured by the quality of something rather than its quantity.

Redevelop/Redevelopment. Building new construction on a site that has pre-existing uses or renovating existing uses on a site. Redevelopment generally is a strategy to rehabilitate blighted urban areas through renovation.

Recreation (active). A type of recreation or activity that requires the use of organized play areas and various forms of children's play equipment.

Recreation (passive). Type of recreation or activity that does not require the use of organized play areas.

Reforestation. Planting forests on lands that have previously contained forests but that have been converted to some other use.

Regional. Pertaining to activities or economies at a scale greater than that of a single jurisdiction, and affecting a broad geographic area.

Regulation. A rule or order issued by a public agency having the force of law.

Residential. Land designated in the city or general plan and zoning ordinance for buildings consisting only of dwelling units. May be improved, vacant, or unimproved land.

Retrofit. To add materials and/or devices to an existing building or system to improve its operation, safety, or efficiency. Buildings have been retrofitted to use solar energy and to strengthen their ability to withstand earthquakes, for example.

Ridgeline. A line connecting the highest points along a ridge and separating drainage basins or small-scale drainage systems from one another.

Right-of-Way (street). Publicly owned land that contains both the street and a strip of land on either side of the street with facilities such as sidewalks, sewers and storm drains.

Road arterial. Connect different neighborhoods and allow access to key destinations and city services. Although they primarily promote faster mobility, they should accommodate for all users, supporting a higher volume of pedestrians and roadside activity.

Road collector. Neighborhood main streets which offer a series of walkable destinations and future transit stops. Traffic speeds should be limited to accommodate for the needs of multiple users, prioritizing key transit routes and cycle lanes where possible.

Road local. Provide access to residential units, schools and some local stores within neighborhoods. They could be utilized as places for play and leisure, requiring slower speeds and higher safety standards for pedestrians and cyclists.

Riparian lands. Plant and wildlife areas adjacent to perennial and intermittent streams. Riparian areas are delineated by the existence of plant species normally found near freshwater.

Runoff. Water from rain or snow that is not absorbed into the ground but instead flows over less permeable surfaces into streams and rivers.

Rural (area). Any area not in urban areas. Areas outside the UGBs.

Subdivision (land). The division of a tract of land into defined plots, either improved or unimproved, which can be separately conveyed by sale or lease, and which can be altered or developed. The process often includes setting aside land for streets, sidewalks, parks, public areas, and other infrastructure needs, including the designation of the location of utilities.

Scenic corridor (highway). The area outside a highway right-of-way that is generally visible to persons traveling on the highway.

Scenic highway/Scenic route. A highway, road, drive, or street that, in addition to its transportation function, provides opportunities for the enjoyment of natural and scenic resources and access or direct views to areas or scenes of exceptional

beauty or historic or cultural interest. The aesthetic values of scenic routes often are protected and enhanced by regulations governing the development of property or the placement of outdoor advertising.

Setback. The minimum distance required to be maintained between two structures or between a structure and a property line.

Setback regulations. The requirements that a building be set back a certain distance from the front, side or rear lot line. The frontage or front of a lot is usually defined as the side nearest the street. On a corner lot, the narrowest side is usually determined to be the front lot line.

Shared street. The concept of the Living Street follows ‘Shared Space’ principles in order to reduce car speeds by not designating space exclusively for cars. Designated car lanes would be underutilized in these short residential streets and result in high speeds.

The concept is practically suitable for local street arrangements in heritage districts and for new updated local street in residential development

Signage. Any kind of visual communication element present and/or visible in and from the public space (i.e. roads, streets, avenues, squares).

Site. A parcel of land used or intended for one use or a group of uses and having frontage on a public or an approved private street.

Site plan. A plan, to scale, showing uses and structures proposed for a parcel of land. It includes lot lines, streets, building sites, public open space, buildings, major landscape features – both natural and man-made – and, depending on requirements, the locations of proposed utility lines.

Sprawl (urban/suburban). The spreading of a city and its suburbs over rural land at the fringe of an urban area. Characteristics of sprawl include single-use zoning that often separates housing from jobs and commercial centers; low-density land use focused on single-family homes; and automobile dependent communities with extensive land devoted to parking that often require residents to commute and conduct errands by car. The term sprawl generally has negative connotations due to associated health

and environmental issues. For example, residents of sprawling neighborhoods tend to emit more pollution per person and suffer more traffic fatalities. Sprawl is also linked with increased obesity since walking and bicycling are often not viable commuting options.

Standard (in development). (1) A rule or measure establishing a level of quality or quantity that must be complied with or satisfied. (2) Requirements in a zoning ordinance that govern building and development as distinguished from use restrictions. Standards are required and are signified by the word “shall” or “must”. Development standards, for instance, regulate new site and building development by establishing place-making standards for building form, frontage, open space, and other elements.

Street furniture. Features associated with a street that are intended to enhance its physical character and use by pedestrians and bicyclists, such as benches, trash receptacles, kiosks, lights, or bicycle racks.

Streetscaping. Physical enhancements that affect the appearance or view of a street. Streetscaping can include changes to the road cross section, traffic management, sidewalk conditions, landscaping, street furniture (such as utility poles, benches, or garbage cans), building fronts and materials, signage, and other amenities.

Streetwall. The vertical elements that define the edges of public streets. In most instances, streetwalls are the front walls of buildings along the street edge. Streetwalls, however, may also consist of elements that are not buildings, such as landscaping, fences, or other structures. A streetwall helps define the public street by providing enclosure and creating a human-scaled space.

Structure. Anything constructed or erected that requires location on the ground (excluding swimming pools, fences, and walls used as fences).

Structure (large). Any construction exceeding 3m in any direction.

Steep slope. any slope above 20 degrees.

Sustainable development.

(1) A pattern of physical development and resource use that aims to meet human needs while preserving the environment, often stated as development meeting the needs of the present without compromising the ability of future generations to meet their own needs. (2) Physical development that simultaneously provides for economic prosperity, environmental quality, and social equity.

SuDS. Sustainable Urban Drainage Systems.

Traffic calming. A strategic set of physical changes to streets to reduce vehicle speeds and volumes. It refers to the use of street design techniques, such as curb extensions, widened sidewalks, traffic circles and speed humps, to slow and control the flow of automobile traffic.

Transit, public. A system of regularly scheduled buses and/or trains available to the public on a fee-per ride basis. Also called mass transit.

Transit-Oriented Development (TOD). Moderate- to higher-density development, located within easy walk of a major transit stop, generally with a mix of residential, employment, and shopping opportunities designed for pedestrians without excluding the auto. TOD can be new construction or redevelopment of one or more buildings whose design and orientation facilitate transit use.

Traditional architecture (vernacular). Architecture characterized by the use of local materials and knowledge, in the past usually without the supervision of professional architects. Vernacular architecture represents the majority of buildings and settlements created in pre-industrial societies.

Urban. 1) Of, relating to, characteristic of, or constituting a city. Urban areas are generally characterized by moderate and higher density residential, commercial, and industrial development, and the availability of public services required for that development, specifically central water and sewer, an extensive road network, public transit, and other such services (for example, safety and emergency

response). Development not providing such services may be “non-urban” or “rural.” 2) Area within the UGB.

Urban Growth Boundary (UGB).

An officially adopted and mapped line dividing land to be developed from land to be protected for natural or rural uses. Urban growth boundaries (also called urban limit lines) are regulatory tools, often designated for long periods of time (20 or more years) to provide greater certainty for both development and conservation goals.

Urban design. The attempt to give form, in terms of both beauty and function, to selected urban areas or to whole cities. Urban design is concerned with the location, mass, and design of various urban components and combines elements of urban planning, architecture, and landscape architecture.

Universal (design). Design of buildings, products and environments that are usable and effective for everyone, not just people with disabilities.

View corridor. The line of sight - identified as height, width, and distance- of an observer looking toward an object of significance to the community (like ridgelines, rivers and historic buildings, for example); the route that directs the viewer’s attention.

Viewshed. The area within view from a defined observation point. Area visible from a property (including everything in line-of-sight) or from which a property can be seen within a wider area of influence.

Visual Impact Assessment (VIA).

Is the analysis of the potential visual impacts to the landscape and landscape views resulting from a proposed development or land management action. The document that contains a visual impact analysis is also often referred to as a visual impact assessment or VIA.

Vacant. Lands or buildings that are not actively used for any purpose.

Walkable (community). Communities where goods (such as housing, offices, and retail) and services (such as transportation, schools, and libraries) that a community resident or employee needs on a regular basis are located within an easy and safe walk. Walkable communities facilitate pedestrian activity, expanding transportation options, and creating a streetscape that better serves a range of users -- pedestrians, bicyclists, transit riders, and automobiles. To foster walkability, communities typically mix land uses and build compactly, and ensure safe and inviting pedestrian corridors.

Wadi. A valley, ravine, or channel that is dry except in the rainy season.

Wadi corridor. Wadi Corridor is defined as the extent of the flood zone comprised of the 1 in 100-year flood event.

Wadi development zone. Area within a 100m offset from the Wadi Corridor boundaries or the first urban block, whatever larger.

Wadi edge. Area adjacent to the wadi corridor boundaries, typically with a minimum width of 10-20m and publicly accessible.

Zoning. The division of a city or county by legislative regulations into areas, or zones, that specify allowable uses for real property and size restrictions for buildings within these areas; a program that implements policies of the general or local plan.

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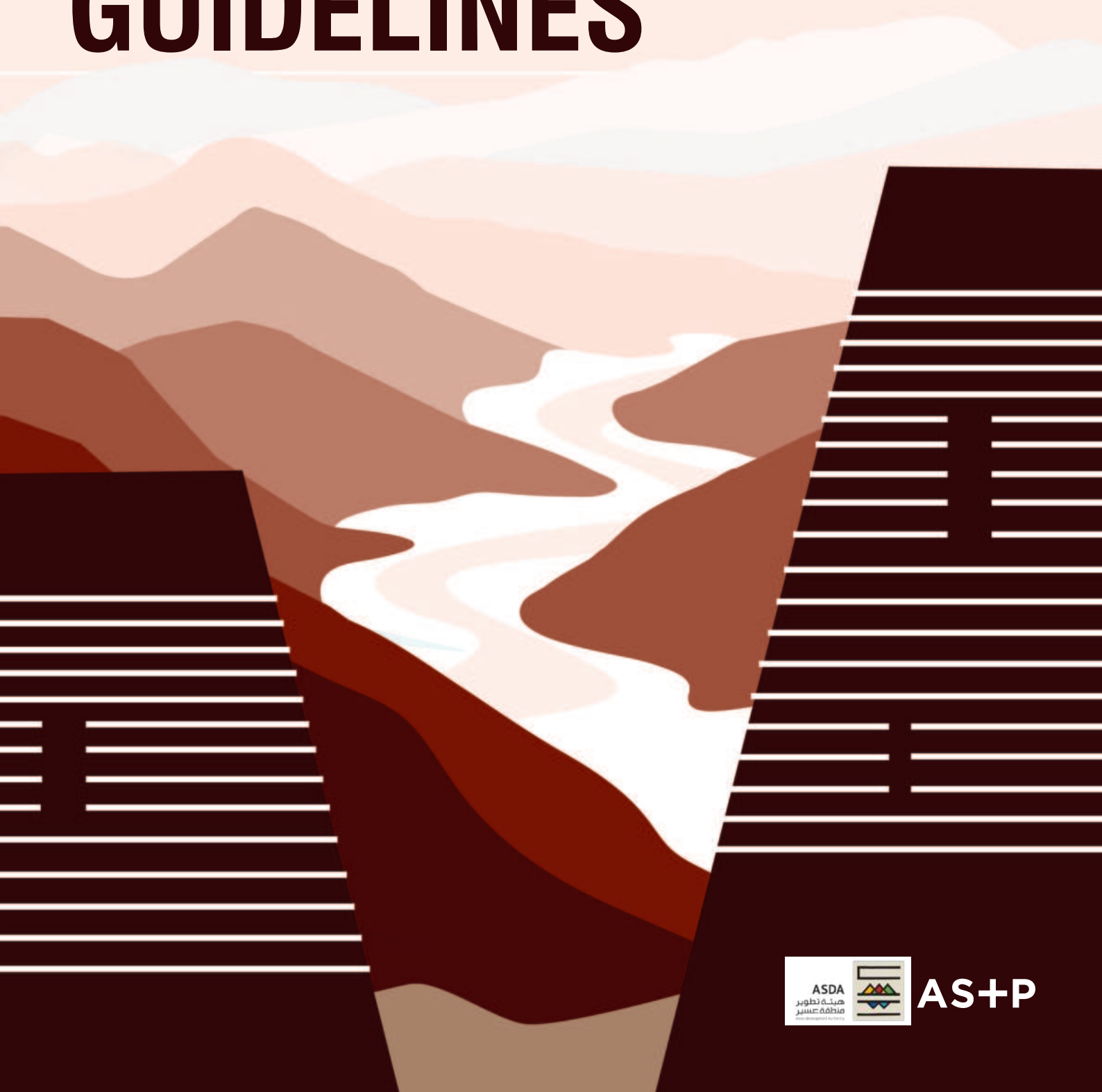
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ASEER CONTEXTUAL ARCHITECTURE GUIDELINES



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ASEER CONTEXTUAL ARCHITECTURE GUIDELINES



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1 Defining Aseer Architecture

New architecture when inspired by the heritage and culture of the place can lend a unique and distinct character, reinforcing the identity of that place and of its people. The Aseer region has a long history and is rich in natural beauty and cultural heritage influenced by various architectural styles. This section aims to provide an agile overview of the distinctive vernacular elements and unique features of Aseer's architecture based on climate, topography, landscape, history, heritage, culture and art.

The section starts by describing the ecology of Aseer and by identifying the characters of the 5 distinct natural environments of the region. Distinct vernacular architecture and cultural landscapes are then identified for each of the 5 environments. Lastly, an overview of the different architectural compositional elements is provided for each environment based on layout and open space, massing and design, frontages and openings, construction techniques, materials and colors.

Ultimately, the analysis of the architectural character for 5 environments helps to formulate a basis to inspire a more contemporary and contextual architecture for Aseer. For an holistic design of future development this document should be used in synergy with the Aseer Urban Design Code.





1.1 The Aseer Region

1.1.1 Environment Summary

Located in the southwest of the Kingdom of Saudi Arabia, Aseer has an area of approximately 77,250 km² and an estimated population of 2.2 million. Abha city, the capital of Aseer is the most highly populated while other important towns include Khamis Mushayt, Qal'at Beeshah and Bareq. The Aseer region's natural environment is extremely diverse compared to the rest of the Kingdom. Featuring the Red sea shoreline, coastal plains, mountain valleys, high mountains and plateaus that include the Kingdom's highest peak Mount Sawdah at almost 3000m, to inland desert. The region receives more rainfall than the rest of the country resulting in many wadi tributary systems and provides a moderate year round climate ideal for outdoor comfort.

Climate: the climate of the southwestern region of Saudi Arabia is affected by the prevailing southwesterly wind and the monsoon rains which fall mainly during winter and summer.

- The climate is hot during the summer with the mean monthly temperature ranging between 22 and 32°C, and minimum temperature ranging between 16 and 24°C. The typical maximum temperature reached is 39°C.

Landform: the region is influenced by the Aseer mountain range reaching up to 3000m that runs parallel to the Red sea in the western half of the region and forms part of the Sarwat mountains.

- An escarpment drops sharply to the west and declines gently to the east. This mountain range subsequently receives most of the rain as cloud formations are pushed upwards.
- Wadis subsequently run eastwards and westwards form the high mountains where rain falls, resulting in a matrix of wadis, sub-wadis and stormwater channels across the region.

Geology: the geology of the region is also diverse and further influence the regions landscape features. Generally it can be understood as sandy with areas of extensive lava fields in the west that transitions to jagged mountains of sedimentary rock, before transitioning back into sandy inland desert with rocky outcrops.

Vegetation: the vegetation is subsequently influenced by rainfall, soils and available water supplied by wadi networks. Typically, mountains feature dense vegetation while the coastal plains and inland deserts are sparsely covered.

These variations in climatic conditions, landforms, elevations, soils and vegetation, lead to the identification of 5 distinct natural environments. The 5 environments begin to establish a general understanding of the elements that define the character and make places in Aseer unique.

The 5 environments are defined as:

- Coastal Plains
- Tuhama Plains
- Escarpments
- The Sarwat Mountains
- Inland Desert

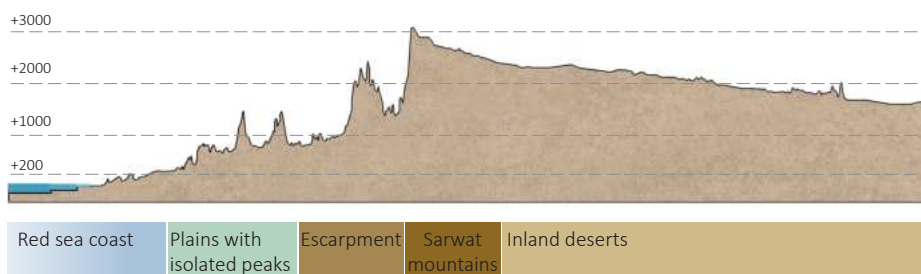


Figure 1 Section across Aseer region

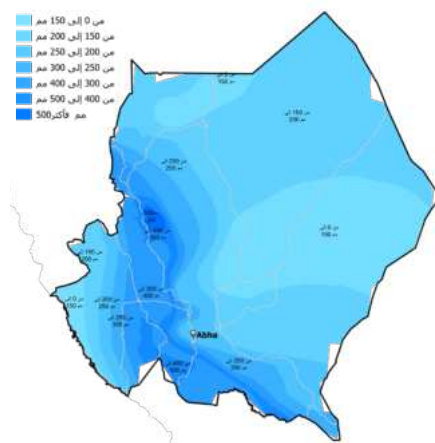


Figure 2 Precipitation rate

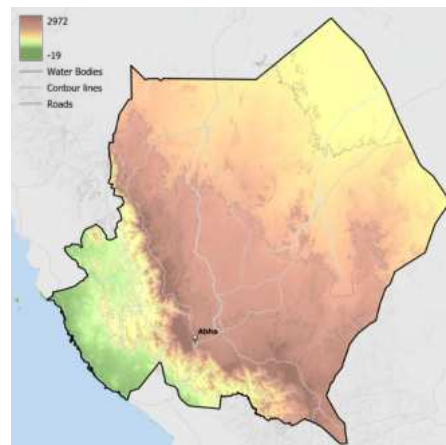


Figure 3 Topography

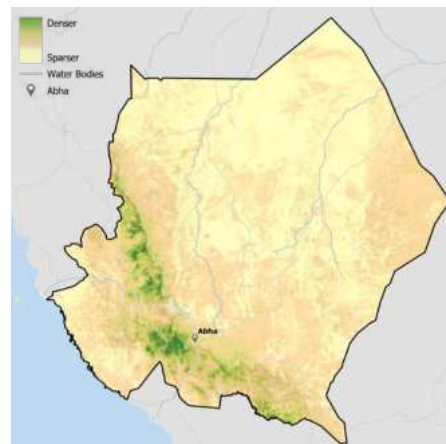


Figure 4 Vegetation

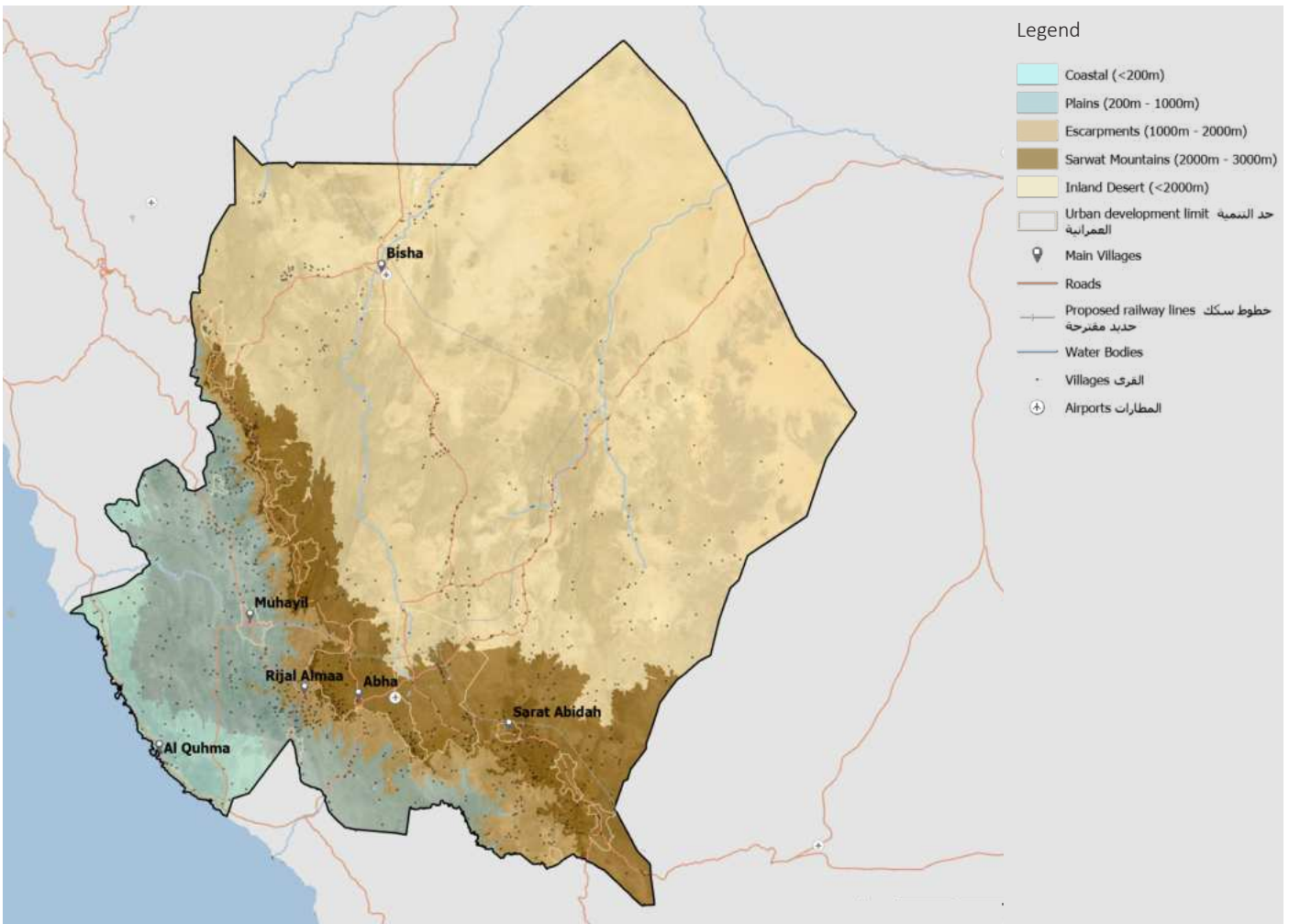


Figure 5 Plan: 5 Natural environments of Aseer region

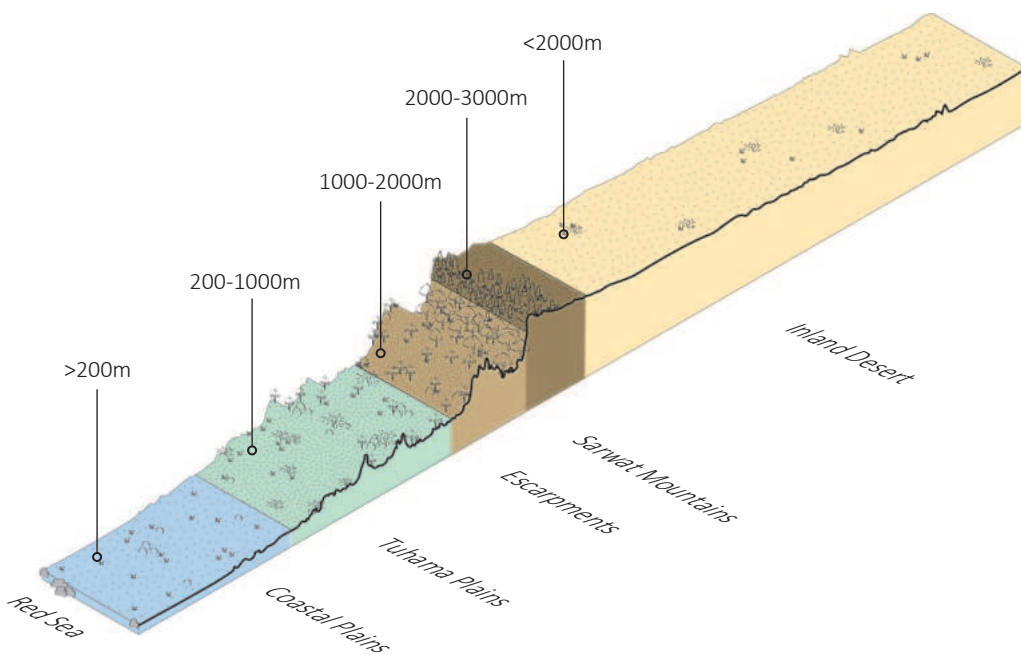
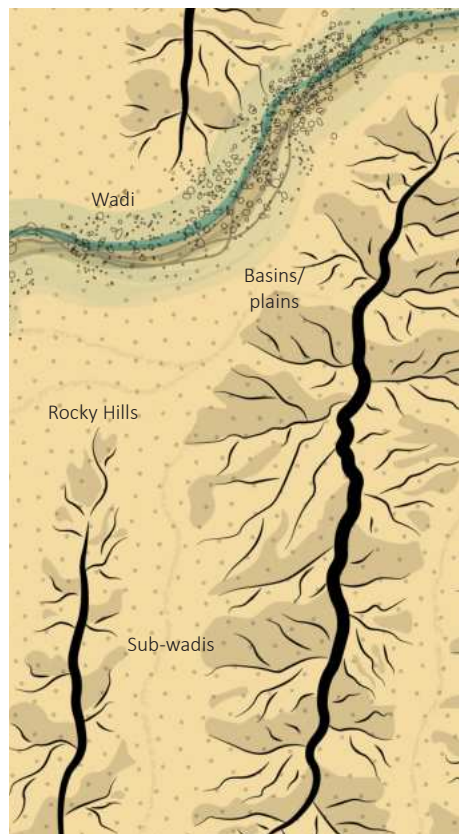
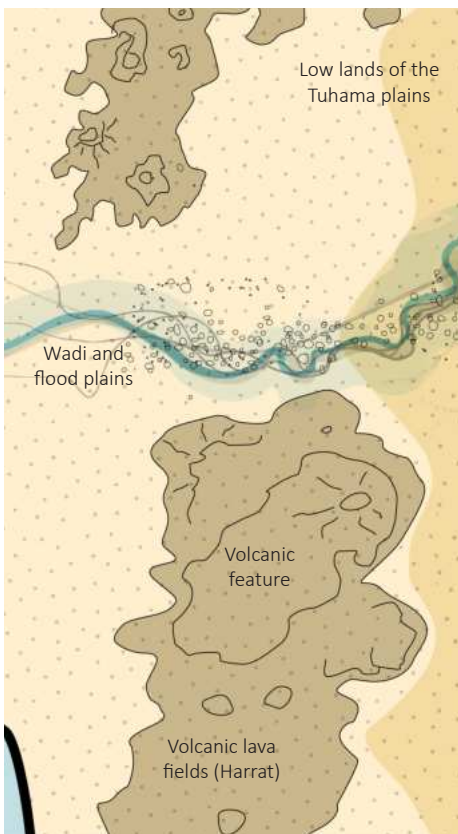
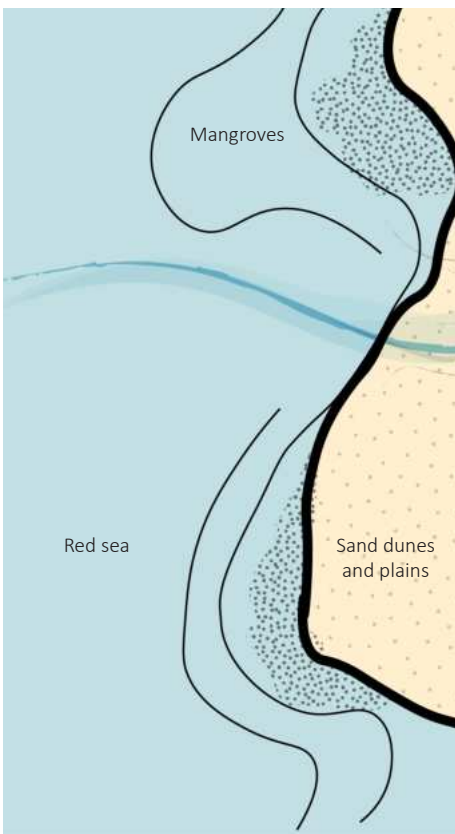


Figure 6 Topography: 5 Natural environments of Aseer region

1.1.2 5 Natural Environments



Red Sea

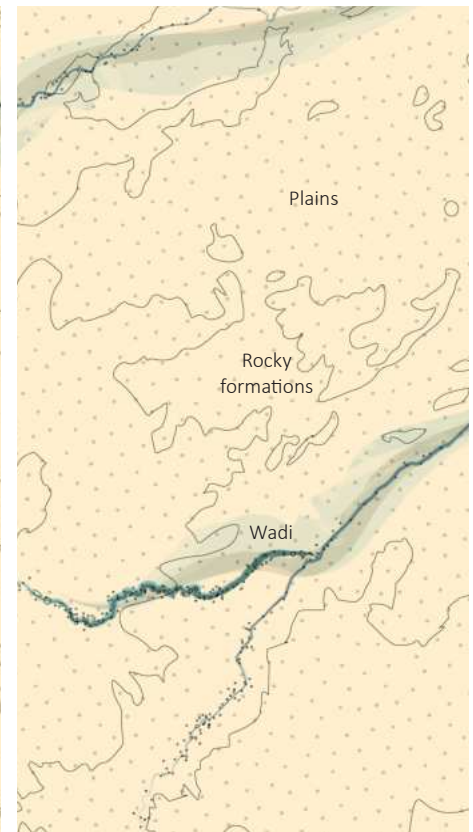
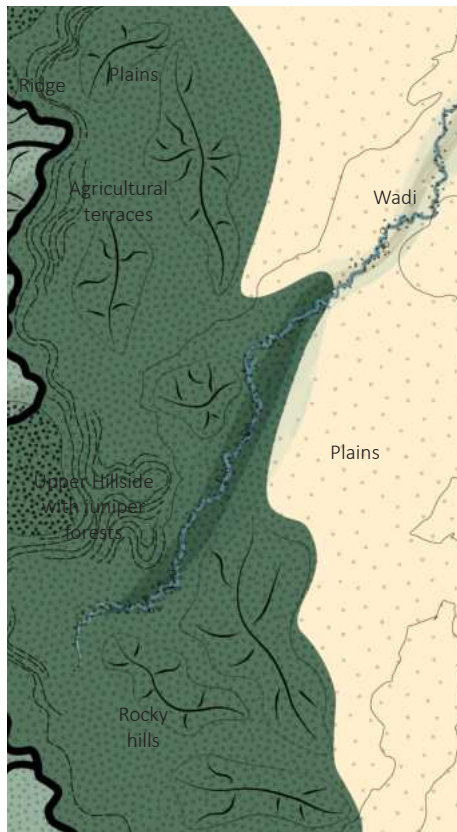
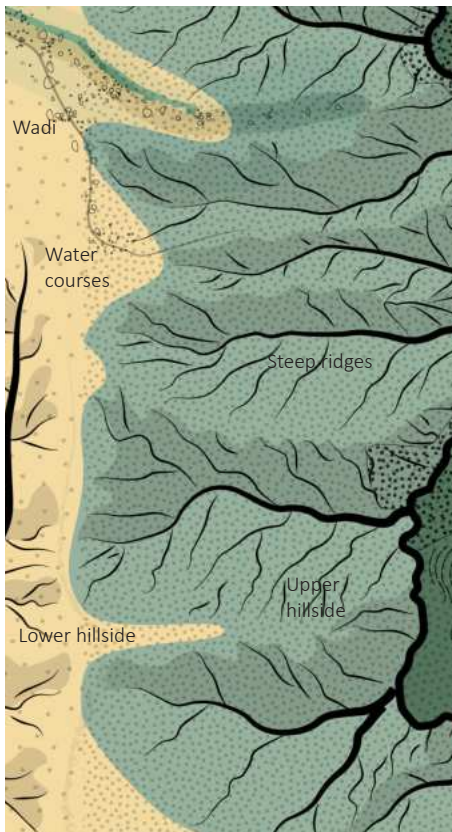
The 5 natural environments are characterized by their mix of geology, elevation, vegetation and climate. These characteristics have subsequently influence traditional settlement patterns and the built form within the environments.

Coastal Region

The coastal area is influenced by the Red sea climatic conditions; receiving little rainfall and high temperatures. They are characterized as open, vast and expansive with gentle slopes towards the shoreline. Only ancient volcanic forms protrude from horizon in some locations contrasting with the sandy colored sand dunes and sabkha (mud flats). Wide wadi channels terminating at the coast line as deltas or short estuaries are often flanked by green dense vegetation. The coastline is dotted with fragmented deep green mangrove stands and small sandy or volcanic islands. Settlements are concentrated along wadis and the coastal edge, becoming more sporadic, small and spares the further away from the coast line.

Tuhama Plains

The Tuhama plains are characterized by foothill open flat basins with strong defining mountain ranges that enclose and define the flat areas and undulating basins separated by water courses. This unique condition at times provides 360 degree views to mountain ridges that define the skyline and reinforce the flatness of the basin. Wadis gently wind through these valleys informing settlement patterns. Settlement is broad and non specific, however limited by the foothills to the flat areas and traditionally along wadi water courses where traditionally wadi farming could be established and in some areas field farming is evident. In some cases development has begun on lower slopes of the mountains or rocky outcrops that are scattered in the flatter valleys between the ridges.



Escarpments

The Escarpments are characterized by lower foothills (lower escarpments), water courses, and hillsides (upper escarpments), which are generally steep.

The hillside slopes in the upper escarpments are generally steep and appear in the forms of cliffs, ridges, sharp peaks, and consist of granite boulders, sandstone and limestone rocks.

The escarpments feature wadi valley basins, where stormwater streams meet to form wadis and sub-wadis. Vegetation is diverse and of higher density than the Plains and Coastal areas.

Typically, pockets of development are established along the valley basins where wadi water courses supply water for farming or on the lower hillsides where terrace farming can be sustained by rain.

Sarwat Mountains

The High Mountains are characterized by steep hillsides and ridge line, an eastward declining plateau, rocky hills, water courses, some plains and disturbed sites.

Vegetation is typically high density however due to human activity significantly degraded.

Dry slopes and boulder-strewn wet slopes, ridges and crests are densely covered by junipers forest, shrubs and annual and perennial under-story. Settlement patterns cover much of the upper plateau where traditional terrace farming was established fed by rain, and along wadis where wadi farming has also been established.

Inland Deserts

The Inland desert is characterized as moderate desert with low annual rainfall and is located to the east of the high mountains from where it gradually declines toward the east. This character results in a warmer summer and cooler winter than the adjacent mountains. Sporadic rock formations that range in height from a few to 20m above the general sloping surface are scattered throughout the inland desert zone. Sand dunes are sporadic and cover small areas in the rain shadow slopes. The vegetation reflects the moderate desert climate with low density sporadic vegetation.

Settlements are concentrated along wadis where wadi farming was traditionally established, becoming more sporadic, small and sparse the further away from vegetation and water source.

1.2 Traditional Architecture in Aseer

1.2.1 Traditional Architecture in the Kingdom

The Arabian Peninsula is a vast expanse of land of which Saudi Arabia covers the major part. The Kingdom of Saudi Arabia with wide-ranging variance in environmental conditions and social norms, variance in climate, topography, available materials and influence from neighboring regions has resulted in distinct architectural expressions and a diversified architectural heritage. Generally, these can be grouped into four distinct areas:

- *Al Hijaz - to the West*
- *The Hofuf and Quatif - to the East*
- *The highlands of Asir and Najran and the Empty Quarter - to the South*
- *The Najd Region – in the center and extending to the North*



Figure 7 Balad- Jeddah



Figure 8 Qaisariya Market- Hofuf



Figure 9 Al Turaif- Najd



Figure 10 Mud houses in Aseer (Location: Dhahran Al Janoub)

1.2.2 Traditional Architecture in the Aseer Region

History of the Aseer Region

In the early times, Aseer was characterized as a region dominated by tribesmen. These tribesmen relied on the region's fine land and water resources in order to domesticate crops and livestock. Agricultural development took place in terraced fields on the slopes of wadi and sometimes on the main stream rain water. Overtime Aseer was ruled by different empires before merging to the Kingdom of Saudi Arabia. Thus the architecture showcases strong influences from styles common in the Pre Islamic, Early Islamic, Ottoman and Saudi era.

Along with this, various pilgrim trails and trade routes also had an impact on the architecture and settlement pattern in the region. These heritage routes were namely: the Incense trading trail, the Pilgrims trail, the Abraha Al Habashi trail and the trail of Ibrahim Pasha.

Particularly, the region showcases strong influences from:

- Najd Plateau
- Iraq and Levant region
- Tuhama Plains
- Red Sea that connects it to Africa
- Egypt, Yemen
- Southern Arabia in Oman
- Hadramout and Dhofar towards India and Asia

Traditional Architecture in Aseer Region

The architecture of Aseer region evolved from the human need for shelter in a difficult environment, with varying geographical and climatic conditions and regional and historic influences.



Figure 11 Mapping the historic trails of Aseer

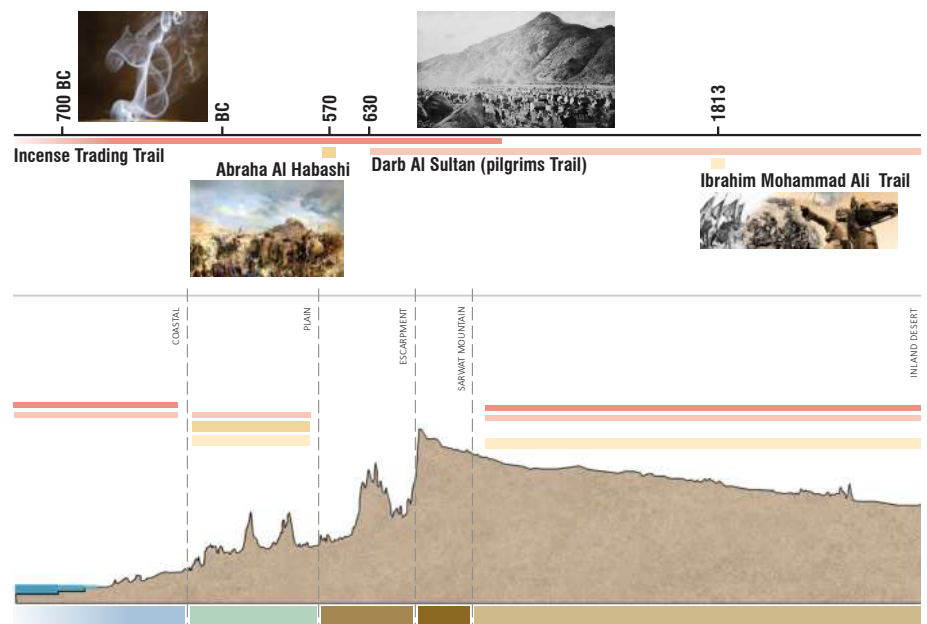


Figure 12 Historic trails of Aseer- timelines with respect to the five natural environments

Settlement Patterns in Aseer

Due to the geographical diversity of Aseer, architectural typologies, materials and settlement patterns vary according to the context.

Coastal Plains: In the coastal villages such as Al Quhma the majorly used construction materials are mud, bricks and wood.





Tuhama Plains: In the villages of transitional plains of Tuhama most of the traditional constructions are done with mud and stone.

Escarments: As the altitude goes higher for example in villages like Rijal Almaa in the escarpment zone, traditional palaces made of natural stone, clay and wood are found.

Sarwat Mountains: In the Sarwat mountains zone, settlements made of traditional construction materials such as black stone and mud houses built with slates are quite common. Within this environment, the areas which are sometimes hit by heavy rain (e.g. Sarat Abidah) showcase use of angled slates as a unique and key building material to help prevent water from getting inside the houses and damaging the walls. Places like Tanomah or Dahran al janub within the same zone uses stones and traditional mud bricks respectively as construction material.

Inland Deserts: settlements are made of traditional construction materials such as compacted mud houses.

Legend

-  Individual House
-  Small Sized Hamlet
-  Medium Sized Hamlet
- 

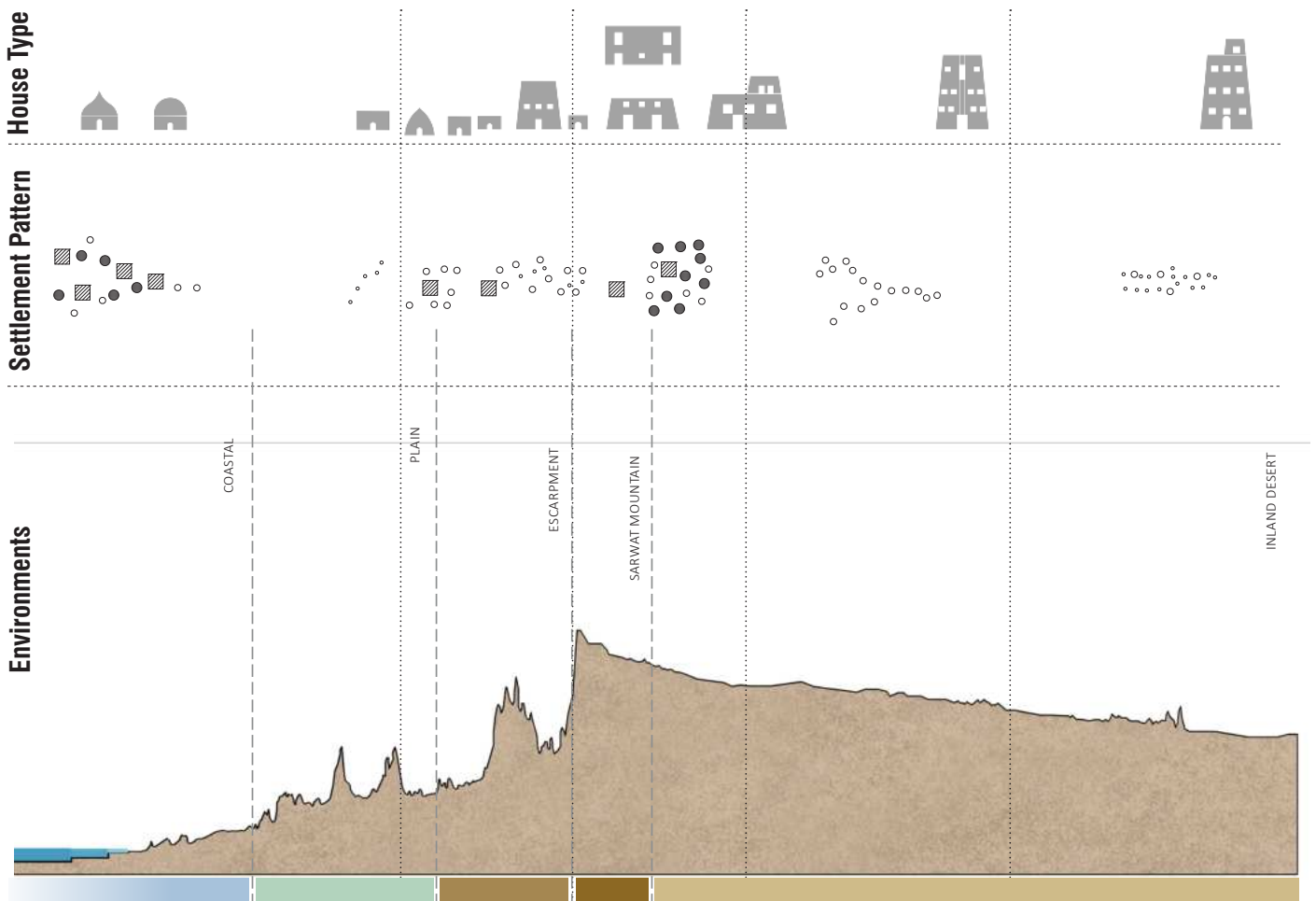


Figure 13 Settlement pattern within 5 natural environments

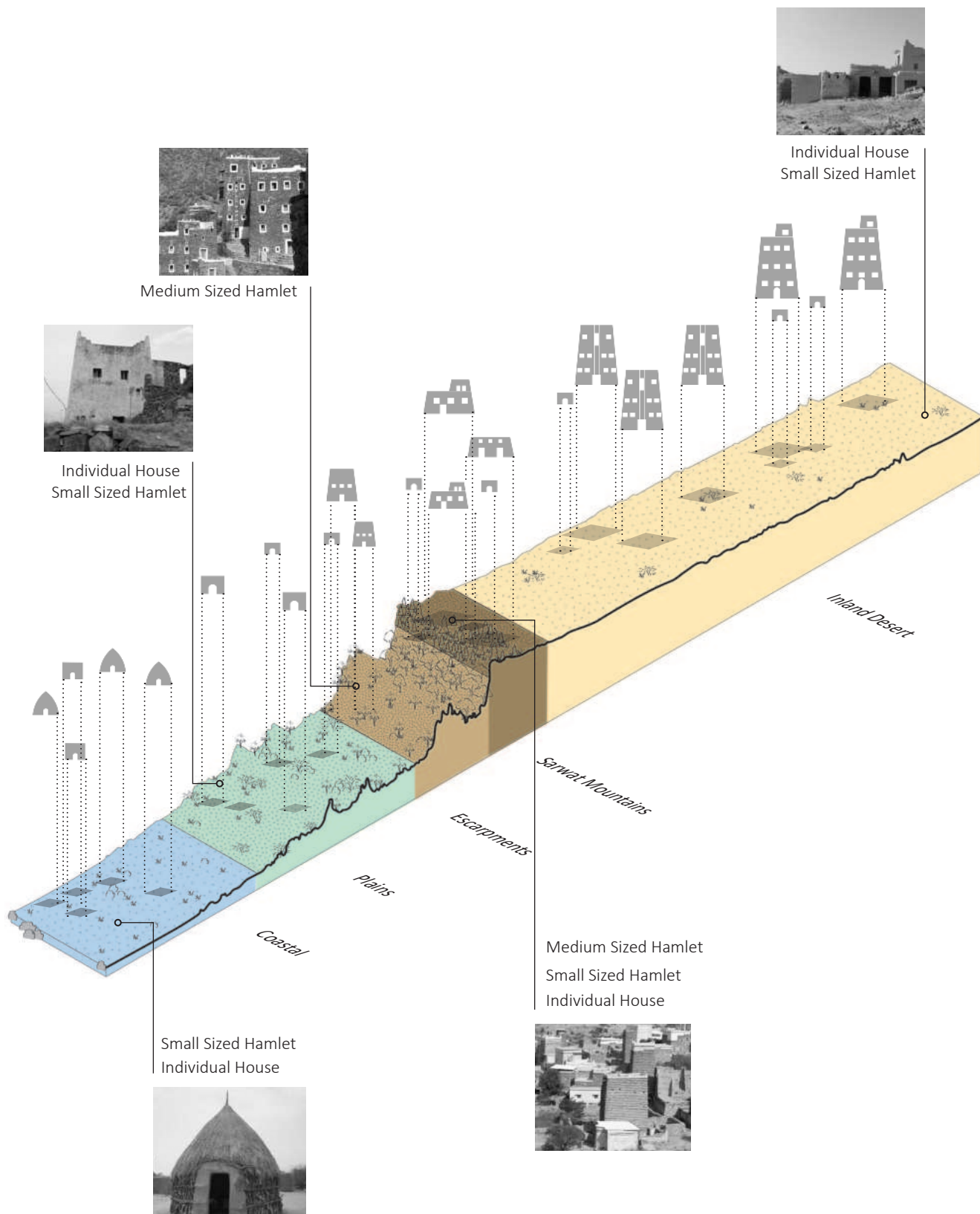


Figure 14 Settlement pattern within 5 natural environments

1.2.3 Heritage Sub-zones

The 5 different natural environments, history, economy and safety are the primary factors defining the main architectural and settlement typologies across Aseer. However, the strong cultural and heritage influences of the surrounding regions (north and south of the Kingdom) also had an influence on the architectural style of each environment, which leads to further categorizations of the 5 natural environments into heritage sub-zones. Furthermore, various sub-zones appear in one or more natural environments, as a result of the overlapping of the 5 natural environments, history and cultural factors.

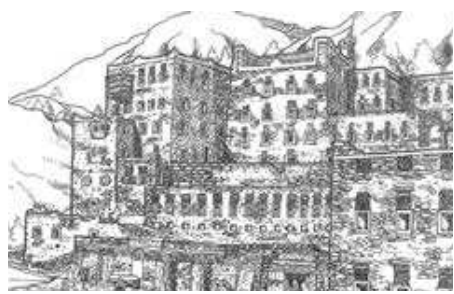
Coastal North and South



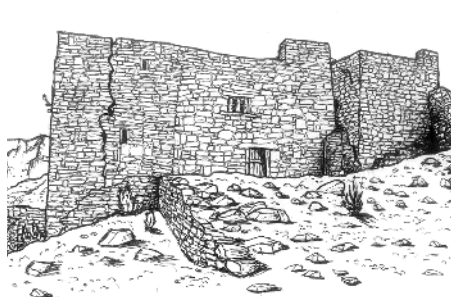
Tuhama



Rijal Alma



Northern Peaks



Cities In Between Peaks



Ahad Rafaidah



South Peaks



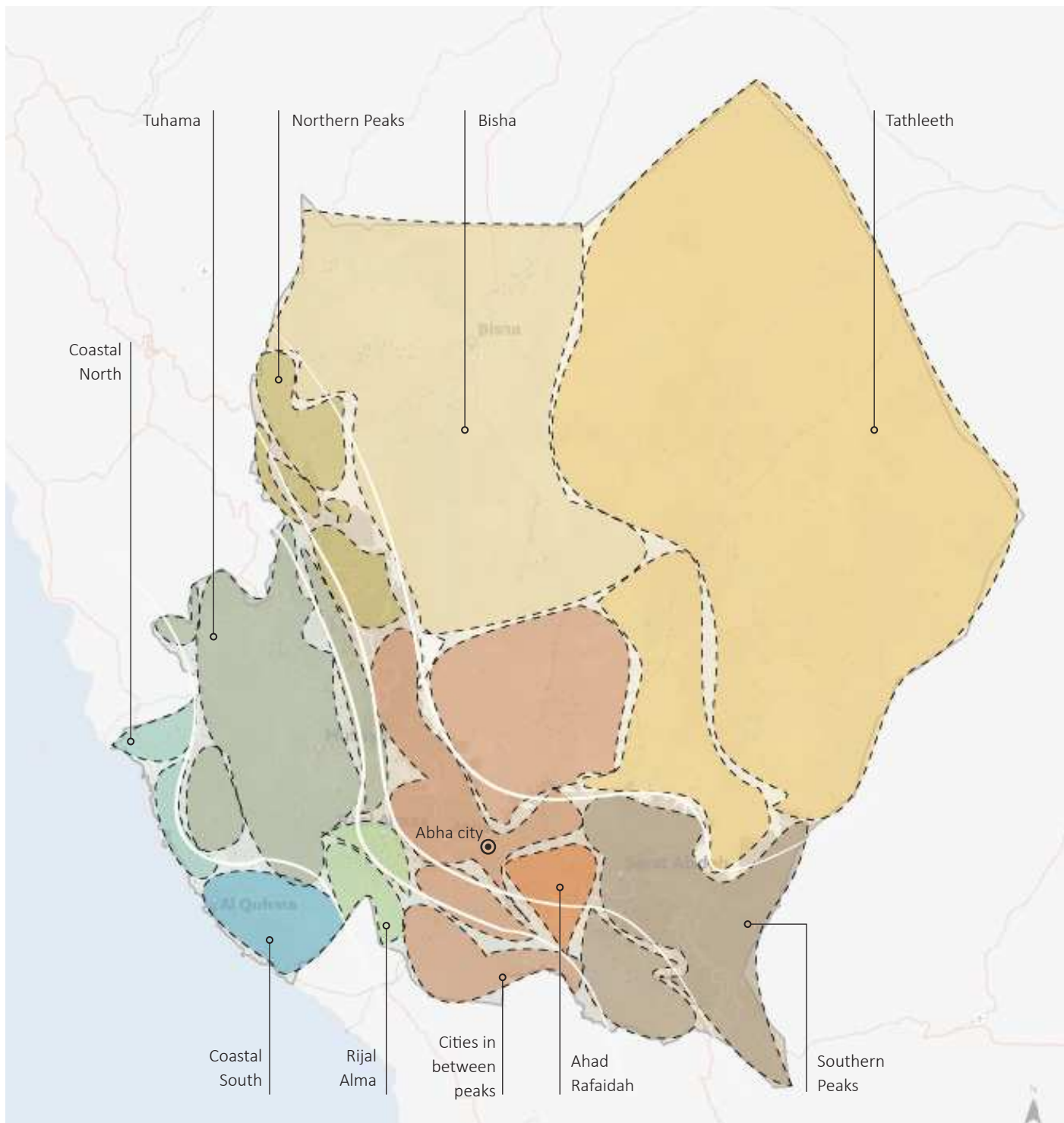
Tathleeth



Beesha



Figure 15 Heritage areas across 5 natural environments of Aseer



Legend











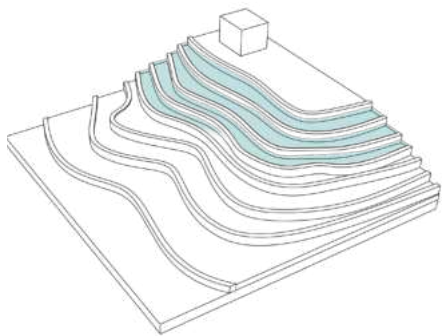
	Coastal North		Northern Peaks		Beesha
	Coastal South		Cities (In-between Peaks)		Tathleeth
	Tuhama		Ahad Rafaidah		
	Rijal Almaa		Southern Peaks		

Figure 16 Identified heritage sub-zones in Aseer region

1.2.4 Cultural Landscapes

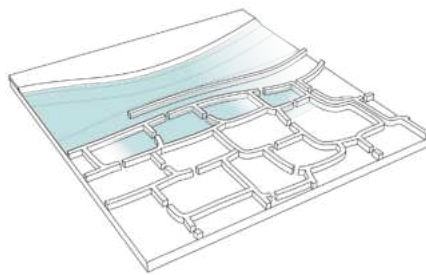
In addition to the 5 natural environments and heritage sub-zones, 6 predominant types of man-made landscape manipulation relating to agricultural and irrigation techniques have been identified within the landscape of the region. These influence the character and design of traditional open spaces.

Terraces



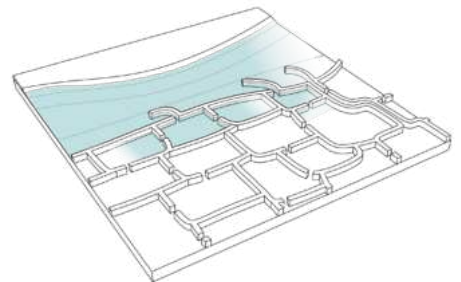
Typically found on escarpments and Sarwat mountains. Terraces are flooded with rain or irrigation water. Typically constructed of mud or stone which also helping to retain fertile soil. Terraces become narrower as elevation and slope increases.

Wadi Farming



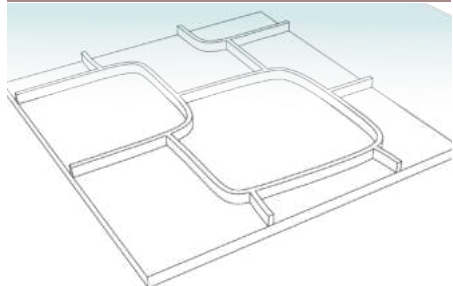
Found along wadis. 'aqum (dikes), are used to divert water flow into adjacent fields, flooding field after field. Typically used on a larger scale. Traditionally a community member was responsible for opening/closing the 'aqum. Typically constructed of mud or stone.

Sporadic Wadi Farming



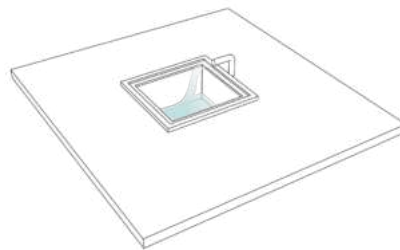
Found along wadis. Smaller 'aqum, used to divert water flow into adjacent fields, flooding field after field. Used for smaller scale farming. Traditionally a community member was responsible for opening/closing the 'aqum. Typically constructed of mud or stone.

Flat Fields



Typically found on flat landscapes. Constructed of mud, stone or defined by vegetation. Ploughed, leveled and smoothed regularly to ensure water absorption. Irrigated by rainwater or flood irrigated.

Wells



Found throughout zones. Traditionally hand dug, modern bumps and bores. Traditionally stone construction, modern concrete. Water can be drawn and stored.

Wells

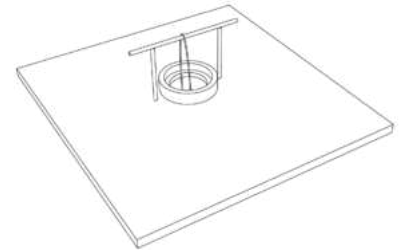
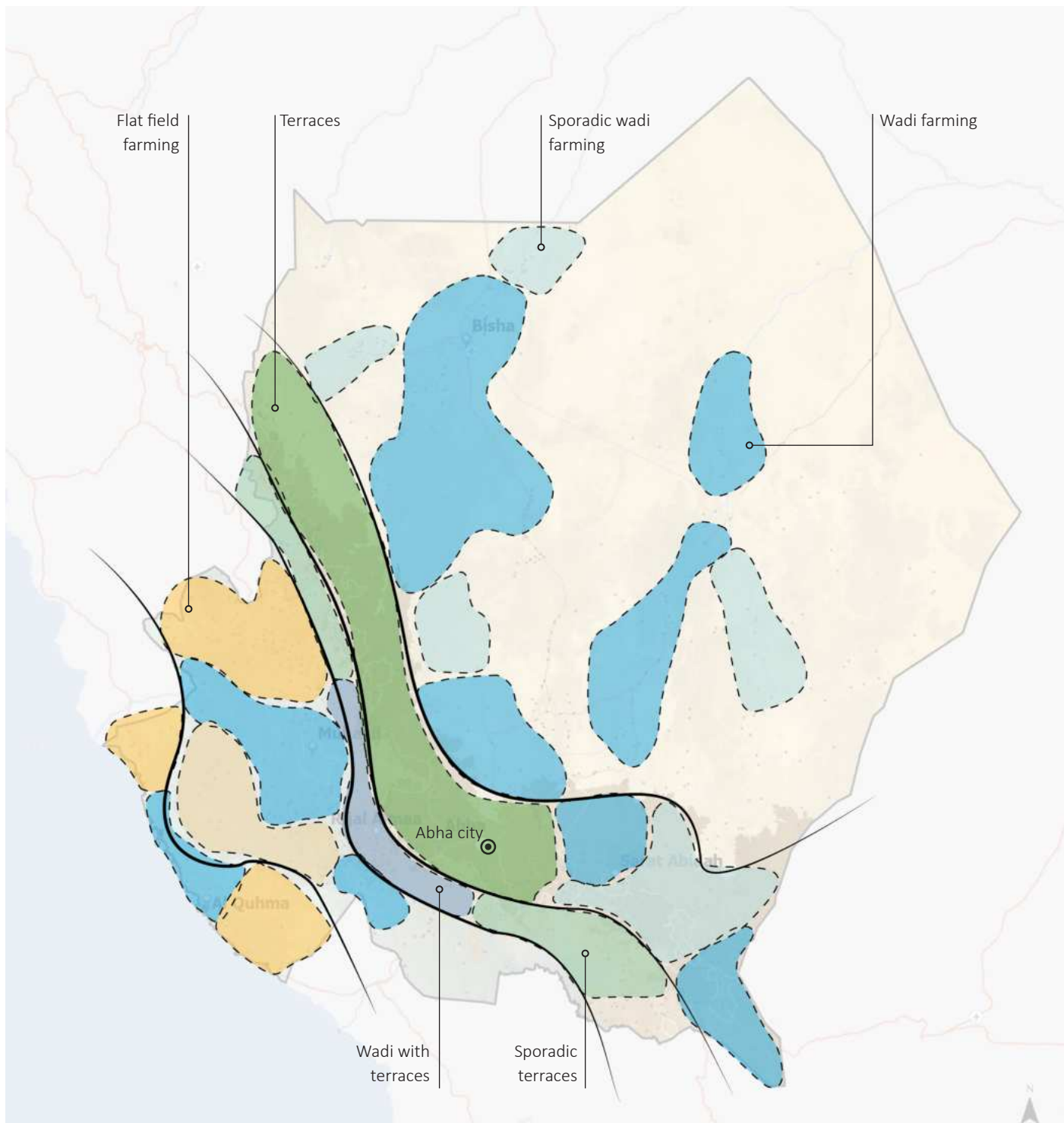


Figure 17 Cultural landscapes of Aseer



Legend

- Flat Field Farming
- Scattered Wadi & Field Farming
- Terraces
- Sporadic Terraces
- Wadi with Terraces on Lower Escarpments
- Wadi Farming
- Sporadic Wadi Farming

Figure 18 Mapping cultural landscapes in Aseer region

1.2.5 Factors Shaping Traditional Aseer Architecture

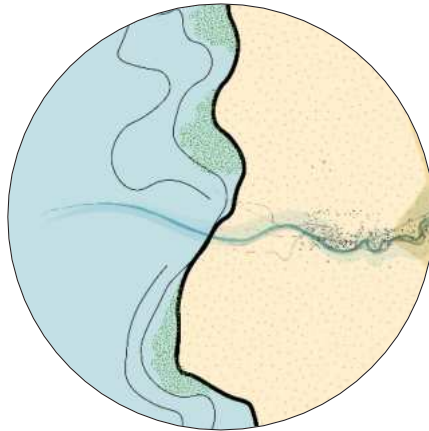
The main factors driving the traditional architectural styles in the region are:

- *Natural environment (geology, climate, topography, vegetation) generally affecting the orientation of buildings, massing, building materials and colors.*
- *Cultural landscapes: different types of cultural landscapes influence the location, character and use of open / social spaces.*
- *Heritage sub-zones: the heritage sub-zones derived from the styles prevalent in the area, influence the articulation and character of facades and frontages.*

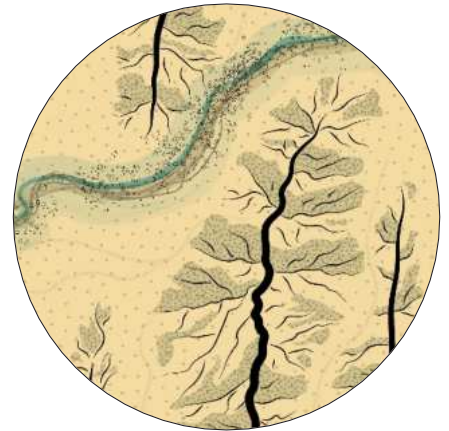
5 Natural Environments



Coastal Plains
0-200m



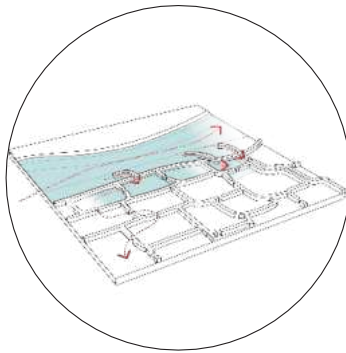
Tuhama Plains
200-1000m



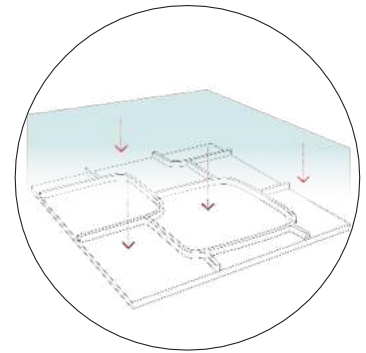
Cultural Landscapes



Flat fields



Wadi farming – large scale



Heritage Sub-zones



Coastal North



Tuhama



Northern Peaks



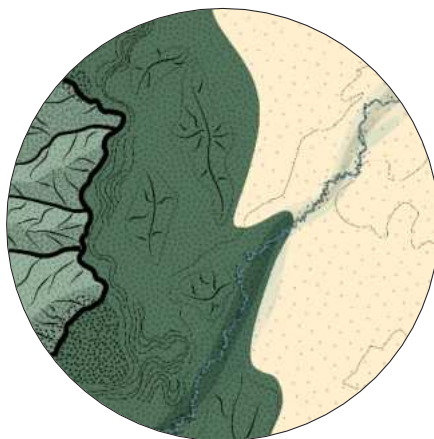
Rijal Almaa



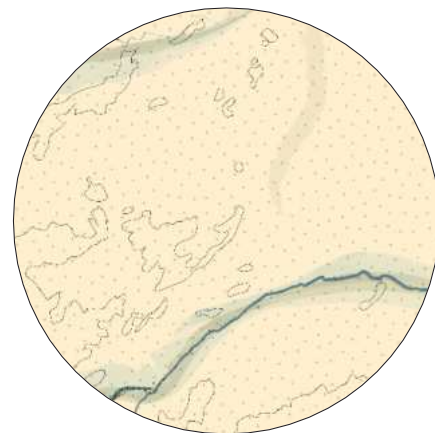
Escarpments
1000-2000m



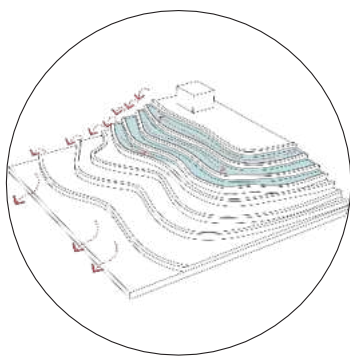
Sarwat Mountains
2000-3000m



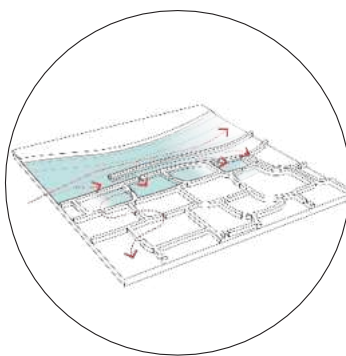
Inland Desert
<2000m



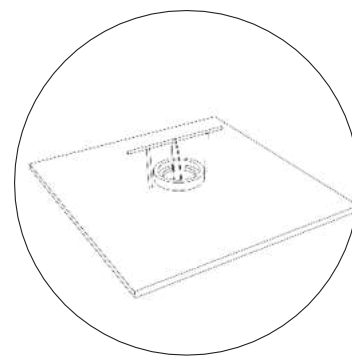
Terraces



Wadi farming- small scale



Hand dug / modern wells



Ahad Rofaidah



Southern Peaks



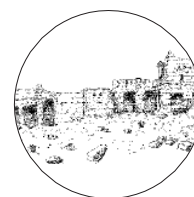
Cities
(In-between Peaks)



Beesha



Tathleeth



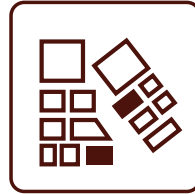
1.3 Components of Traditional Architecture in Aseer

1.3.1 5 Components

The traditional architecture for each environment is further analyzed on the basis of 5 components, namely:

- Layout & Open Space
- Massing & Design
- Frontages & Openings
- Architectural Elements & Construction Techniques
- Materials & Colors

The 5 components help to break down and describe each architectural type for inspiration in producing new architecture. The following section analyzes the traditional Aseer architecture for each of the natural environment identified based on these 5 components.



Layout & Open space



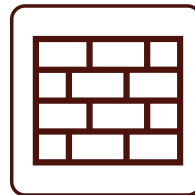
Massing & Design



Frontages & Openings



Architectural Elements & Construction Techniques



Materials & Colors

Coastal Plains

Tuhama Plains

Escarpments

Sarwat Mountains

Inland Desert



Coastal Plains



Location: Al Birk

1.3.2 Coastal Plains

The Coastal areas are experienced as a vast, open and horizontal landscape. It feels exposed, yet the rough textured volcanic lava fields, smooth sand dunes and flat sea creates a balance composition, both from a distant and human scale. The coastal area is influenced by the Red sea climatic conditions; receiving little rainfall and high temperatures. It is characterized by sand dunes that steadily migrate towards the sea and can reach up to 4m, wadis, flood plains, ancient volcanic lava fields (Harrat al Birk) and few rocky hills at the Tuhama plains threshold.

Main cities: Al Birk, Al Qahma, Al Huraida



Figure 19 Red sea coast with mangrove vegetation
Location: Al Birk

Heritage Architecture

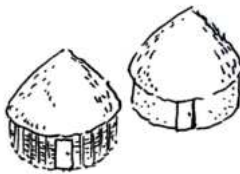
The coastal environment has been divided into two heritage sub-zones as shown in the map mainly:

- Coastal North
- Coastal South

Typical architecture along Red sea coast were huts constructed with locally available vegetation, timber and some stone structures where material was available.



Coastal North South



Coastal hut typology

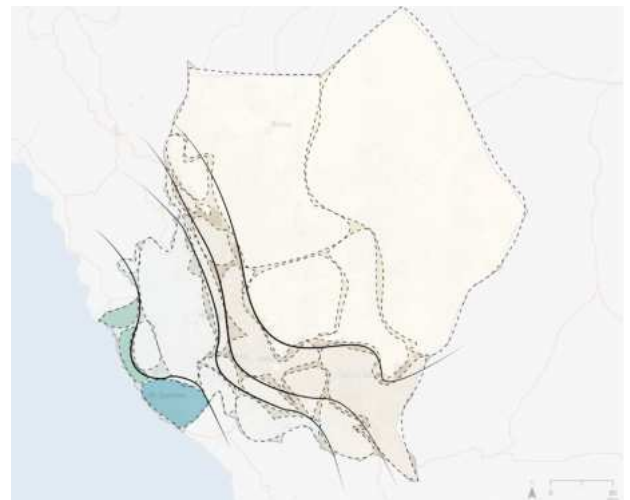
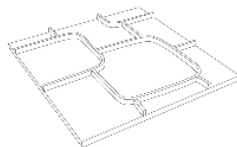


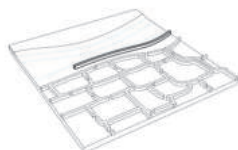
Figure 20 Coastal plains heritage sub-zones

Cultural Landscape

- Typical types of man-made landscape manipulation that can be observed are flat fields in northern and southern areas of the coastal environment and wadi farming along wadis in-between area of the coastal environment for small scale farming.
- Vegetation is typically low coverage/density.
- Grassland vegetation is typical with some trees found on the rocky hills that provide the right micro climates. Mangroves are found along the inter-tidal zone of the seashore.



Flat field farming



Wadi farming

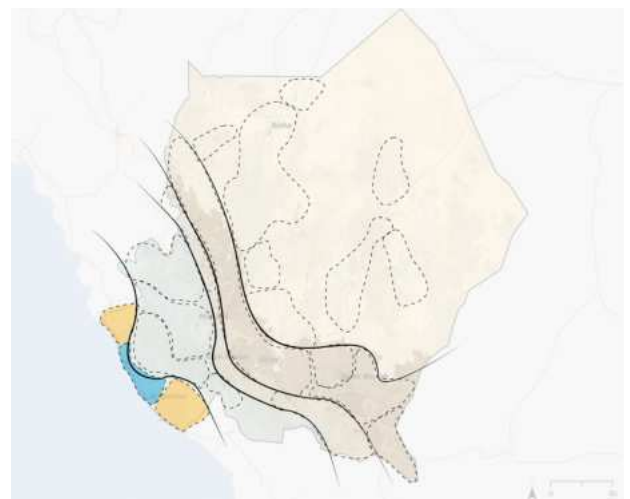


Figure 21 Coastal plains cultural landscapes



Layout and Open Spaces

- Dispersal of stone or mud houses based on the direction of the prevailing winds in the region from the western sea side.
- Minimal entrances to the building mainly oriented towards northeast to bring in the breeze.
- Buildings with mud/stone have internal courtyards with large openings.
- Productive landscapes and cultural landscapes surrounding the built settlement are flat field farming and wadi farming.



Figure 22 Stone houses oriented to bring the breeze inside

Location: Al Birk



Figure 23 Huts grouped with open space outside.



Location: Sabya, Image: Ibraheem Jubran



Massing

- A general low development of one to two story high.
- Building blocks of huts are circular in shape with curved roof. The horizontal projection of the roof allows least facade surface to be exposed to the sun.
- Buildings of medium size and mass composed with facades breaks and clustered together.
- Minimal entrances to the building.
- Massing broken into vertical volumes.
- Soft and simple but articulated with openings.
- Buildings with limited openings in huts.
- Thick stone walls used in stone houses and tree trunks in huts.
- Flat roofs.
- Balconies are not used.



Figure 24 Massing of 1 to 2 story high with minimal openings

Location: Al Birk



Frontages and Openings

- Facades with breaks either with material change or massing.
- High positioned openings primarily for bringing in the breeze.
- Elaborate parapets with pointed parapet walls.
- Colors used for highlighting the openings.
- Combination of materials and construction techniques used for variation in facade.
- Larger openings oriented towards west bringing the gentle wind from the Red sea.
- Upper floor rooms have large screened openings to bring in more breeze and for privacy.
- Exterior walls have few smaller / no openings. Large windows facing the internal courtyards.
- Openings do not cover more than 25-40% of the overall facade.
- Arched windows are prevalent in this style of architecture.



Figure 25 Openings on frontages facing internal courtyard / open spaces

Location: Al Birk



Figure 26 1-2 story with openings on upper floors oriented to bring the sea breeze inside

Location: Al Birk



Figure 27 Openings only on one side

Location: Al Birk



Figure 28 Varying volumes of huts



Figure 29 Single opening for huts



Architectural Elements & Construction Techniques

Architectural elements help in characterizing the sober facades. They are described in three parts: top, middle and base.

Top:

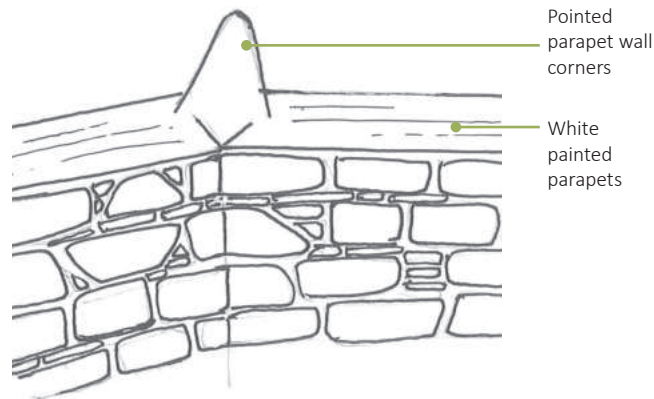
- Flat roofs with parapets articulated with pointed corners.
- Huts featured curved roof with pointed top.

Middle:

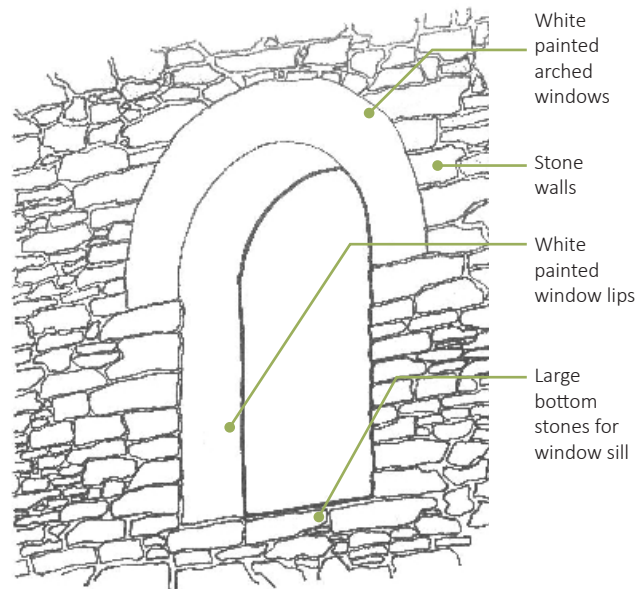
- Arched windows placed on upper floors articulated with plaster prevalent in this style to bring the sea breeze in.
- Huts have no openings except main door.

Base:

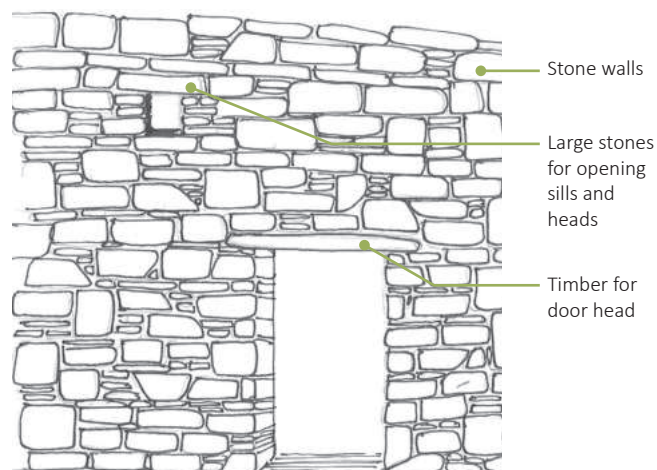
- Solid base with stone masonry is prevalent.
- Huts have base with tree trunks or other plant timber like branches.



Top



Middle



Base

Figure 30 Traditional architectural elements & construction techniques in coastal plains



Materials & Colors

- Huts with walls built of tree trunks and branches were prevalent in coastal areas.
- Stone, clay and gypsum plaster are other materials used in coastal areas.
- Generally rooms are roofed using the trunks of locally available trees.
- Stone houses - diaper masonry with large boulders alternate with small pieces of stone arranged in horizontal irregular layers.
- Typical colors are mainly shades of beige, brown, orange and white derived from locally available natural stone (black volcanic rock), sand, and white coral from sea.
- Complementary colors derived from the landscape elements of the Red sea coast.
- Local art is also used for decorating internal walls and doors.



Figure 31 Earth tone color and material palette



Figure 32 Complementary color palette



Figure 33 Patterns and colors used in local art



Figure 34 Patterns and colors used in local art

Tuhama Plains



1.3.3 Tuhama Plains

The Tuhama Plains are marked by a distinctive north-south mountain range that defines vast, mostly flat open plains. Boulder type rocky features and extinct volcanoes add further interest to the sky line, yet the open plains allow the ridge line to be viewed from afar.

The major wadis dominate these plains as the wadi arms and tributaries from the escarpments meet in the plains to form larger wadi channels.

Main cities: Mahayel, Bareq, Al Majared



Figure 35 Tuhama plains with isolated hills with backdrop of Sarwat mountain range Location: Al Majared

Heritage Architecture

The plains environment has been divided into three heritage sub-zones as shown in the map:

- Tuhama
- Rijal Almaa
- Cities in between Peaks

The architecture in Tuhama plains has influence of the western (Red sea) coast and the architecture in the foothills and high mountains.

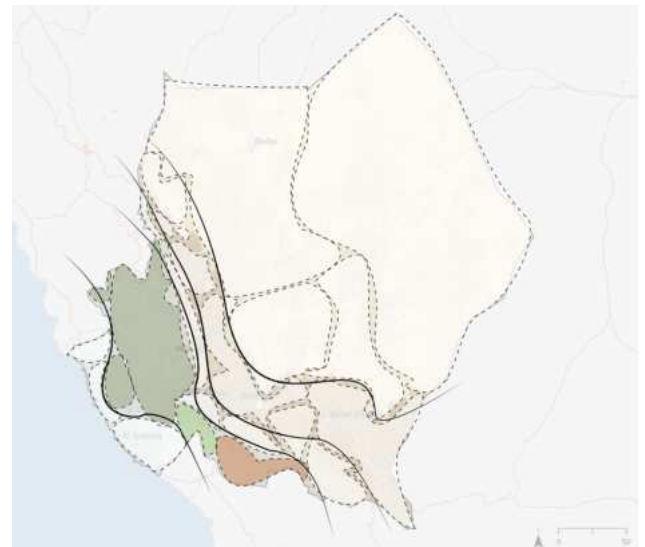


Figure 36 Tuhama plains heritage sub-zones

Cultural Landscape

- Major wadis dominate these plains as the wadi arms and tributaries from the escarpments meet in the plains to form larger wadi channels.
- Typical types of man-made landscape manipulation that can be observed in this area are flat fields, wells and wadi farming along wadis for small scale farming.

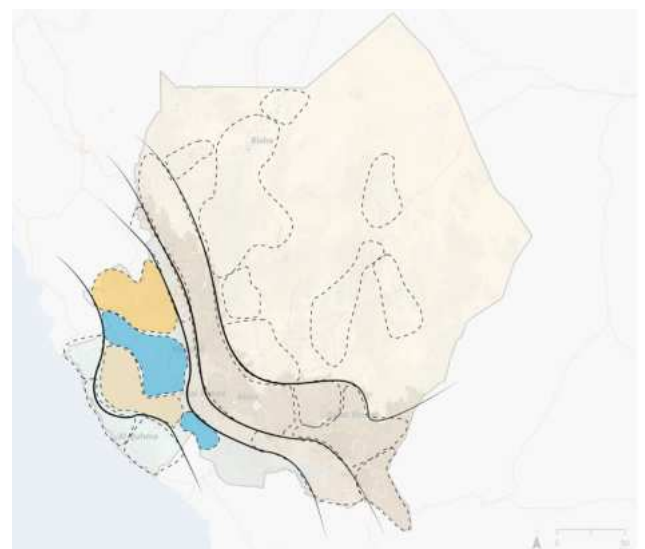
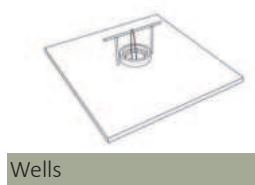
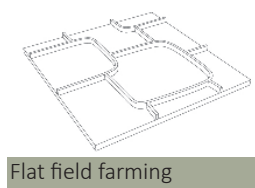


Figure 37 Tuhama plains cultural landscapes



Layout and Open Spaces

- Settlements towards the coastal plains and wadis: dispersal of stone or mud houses based on the direction of the prevailing winds in the region from the western sea.
- Settlements along the foothills and isolated mountains: houses clustered together with narrow alleys and fewer open spaces.
- Slopes are generally terraced.
- Internal courtyards and terraces function as open spaces within the housing cluster.
- Market areas located along the wadis.
- Along the plains, settlement is scattered with open spaces.
- Along the foothills, houses are clustered together with few open spaces.
- Productive and cultural landscapes of terraces and wadi farming.



Figure 38 Houses clustered together with narrow alleyways and open terraces

Location: Al Majared



Figure 39 Open space plazas within a cluster

Location: Al Majared



Massing

- A general development of one to three story high.
- Built form is defensive and fortress like.
- Buildings are clustered together.
- Massing broken into horizontal volumes built on slopes using terracing.
- Soft and simple but articulated, sculptural building forms.
- Buildings with limited openings.
- Thick stone walls to strengthen the base.
- Flat roofs.



Figure 40 Massing with terraces, retaining walls and 2 story building volumes

Location: Al Majared



Frontages and Openings

- Facades formed with closely knit buildings with occasional breaks with difference in massing.
- Facades built in naturally available stone placed diaper masonry. Gaps are filled with chips of small rocks.
- External openings are small for defense and for air and light while maintaining privacy.
- Elaborate parapets articulating the facade.
- Colors used for highlighting the openings.
- Combination of materials and construction techniques used for variation in façade.
- Settlements near coast: larger openings oriented towards west bringing the gentle wind from the Red sea.
- Settlements along the foothills of the high mountains: exterior walls have few smaller openings on upper floors for defense and privacy purposes.
- Openings do not cover more than 25-40% of the overall facade.



Figure 41 Solid facades with small and narrow openings

Location: Al Majared



Figure 42 Massing and material change to articulate the facade

Location: Al Majared



Figure 43 Use of parapet walls for articulation
Location: Al Majared



Figure 44 Openings highlighted with white plaster
Location: Mahayel



Figure 45 Cluster of buildings forming frontage with small and highlighted openings
Location: Al Majared

Architectural Elements & Construction Techniques

Architectural elements help in characterizing the sober facades. They are described in three parts: top, middle and base.

Top:

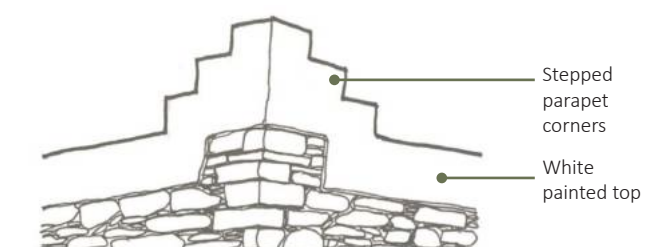
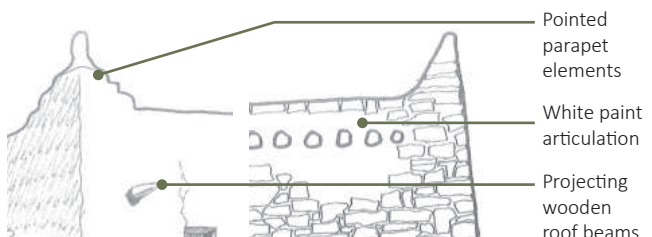
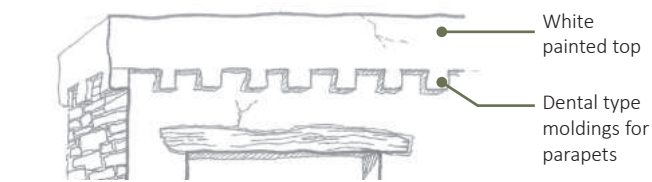
- Flat roofs with parapets articulated with pointed corners or stepped crenelations.
- White painted parapet walls with articulation.
- Water spouts.

Middle:

- Inclined walls with stone masonry/stone plastered walls.
- Small and narrow openings on external facade.
- Windows highlighted with white plasters.

Base:

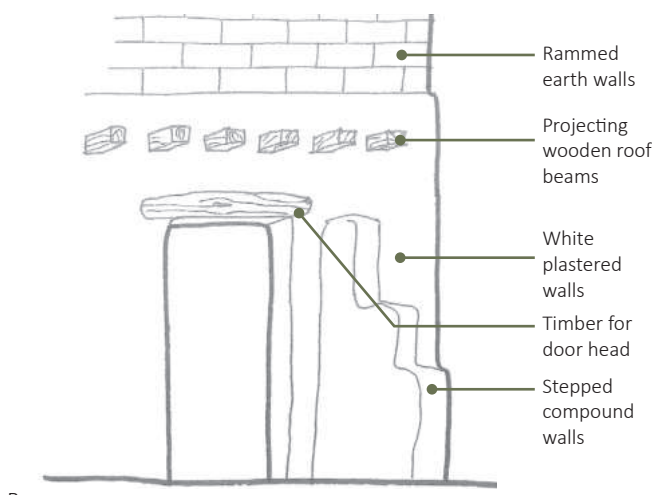
- For mud/stone buildings plastered with mud, base is distinguished with stone masonry with plastered floors on top.
- Stepped compound walls connected to the base.



Top



Middle



Base

Figure 46 Traditional architectural elements & construction techniques in Tuhama plains



Materials & Colors

- Local stone is dominant within the Tuhama plains.
- Combinations are frequent for stone masonry and plastered buildings.
- Typical colors of locally available natural stone, mainly shades of beige, brown and dark brown and complementary colors derived from the landscape of Tuhama plains and wadis.
- Local art is used for decorative patterns for highlighting elements.



Figure 47 Natural material and color palette



Figure 48 Complementary color palette derived from local landscape



Figure 49 Patterns and colors used in local art to highlight doors and windows

Escarpments



Location: Rijal Alma

1.3.4 Escarpments

The distinctive landscape elements that define the escarpments are high monumental ridges and deep wadi valleys. The landscape is vast, impressive and highly textured as natural vegetation covers much of the escarpment slopes. Shadows and complex ridges provide depth and detail from the ridges, whilst the sky draws the eye up the slopes from within the valleys. They are characterized by lower foothills (lower escarpments), water courses, and hillsides (upper escarpments), which are generally steep.

Main cities: Rijal Alma, Al Namas



Figure 50 Escarpments with settlements along the wadis in valleys
Location: Enroute Rijal Alma from Abha

Heritage Architecture

The escarpments environment has been divided into four heritage sub-zones as shown in the map:

- Northern Peaks
- Tuhama
- Rijal Alma
- Cities In Between Peaks
- Southern Peaks
- Generally, the villages in the escarpment region present a fortress like arrangement for defense and security purposes.



Northern peaks



Rijal Alma



Southern peaks

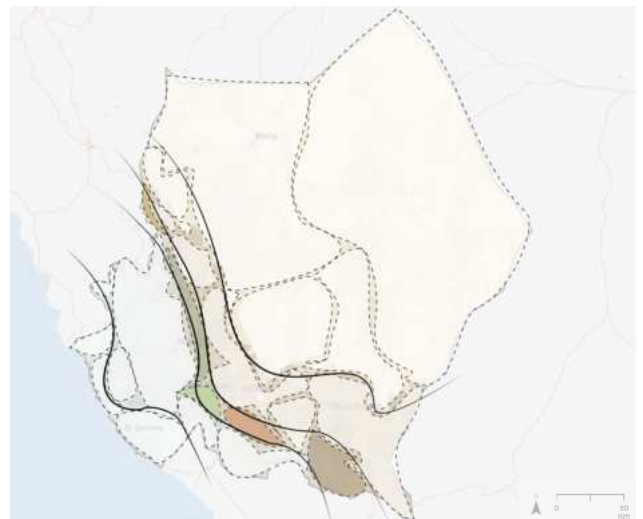


Figure 51 Escarpments heritage sub-zones

Cultural Landscape

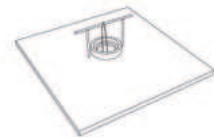
- Typical types of man-made landscape manipulation that can be observed in this area are terraces, wells and wadi.
- Terraces: found typically on escarpments, they are flooded with rain or irrigation water.
- Wadi farming: found along wadis, smaller 'aqum, used to divert water flow into adjacent fields.
- Wells: found throughout the zone.
- Vegetation is diverse and of higher density than the plains and coastal areas.



Terraced farming



Wadi farming



Wells

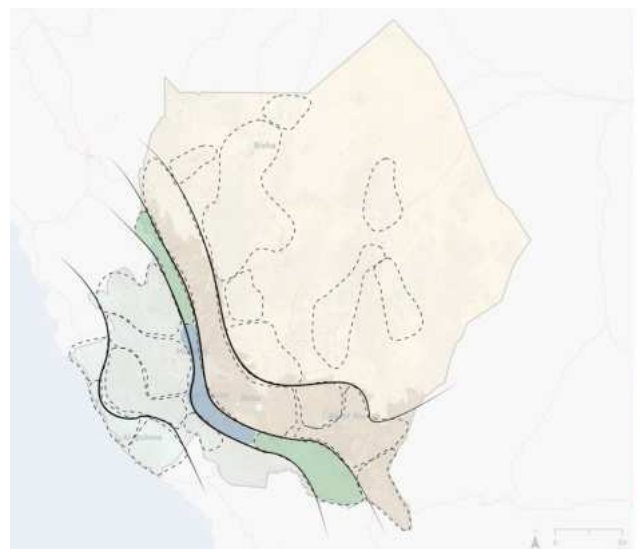


Figure 52 Escarpments cultural landscapes



Layout and Open Spaces

- Settlements are spread across valley areas and patterns differ based on the location within the topography.
- Villages are generally several neighborhoods clustered together in one single agglomeration for structural and defensive purposes.
- Areas flanking the wadis are extensively terraced and cultivated, specially where valley opens into vast plains.
- Generally, villages sit on one side of the wadi while other side hosts pilgrims or visitors.
- Market areas located along the wadis.
- Slopes are steep and terraced, dotted with fortified granaries and watchtowers.
- Within the buildings, the central feature is a staircase core with two to three rooms arranged around it on each floor. Granary and animals are kept in the ground floor, kitchen and household storage in the middle floors and living quarters in the top floors.



Massing

- Stone tower houses may reach up to six story high.
- A general development of three to four story high.
- Built form is defensive and fortress like.
- Buildings clustered together.
- Massing broken into vertical volumes.
- Buildings with limited openings.
- Thick stone walls to strengthen the base.
- Flat roofs.

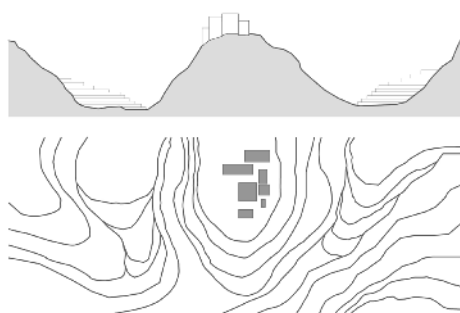


Figure 53 Village on a confluence

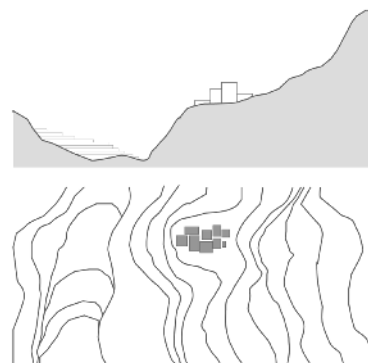


Figure 54 Village on a terraced slope



Figure 55 Village at the cliff

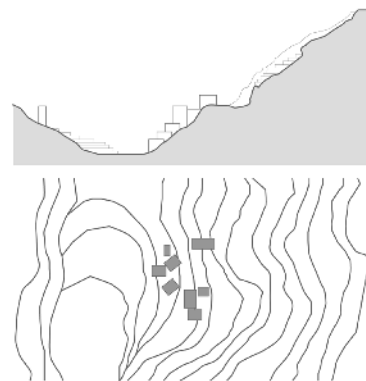


Figure 56 Village on a steep slope



Figure 57 Hierarchy of open spaces
Location: Rijal Alma



Figure 58 Terrace farming
Location: Al Saudah



Figure 59 General massing 2-4 storied
Location: Rijal Alma



Figure 60 Six story tower house
Location: Rijal Alma



Frontages and Openings

- Facades formed with closely knit buildings with occasional breaks with difference in massing.
- Facades built in naturally available stone placed in a coordinated manner. Gaps are filled with chips of small rocks.
- External openings are small for defense and for air and light while maintaining privacy.
- Doors and windows are set back, thus accentuating the austere appearance of the stone surfaces.
- The whitewashed window surrounds may have been a decorative feature or used to reflect more light into the interior. Along with the whitewashed parapets they accentuate the layering of the stone facades set against the hillside
- A distinguishing feature of the openings are the elaborate decorative motifs created with inlaid quartz that surround the windows and gun slits and contribute to the character of the houses.
- Combination of materials and construction techniques used for variation in facade.
- Windows have wooden shutters painted with bright colors.
- The outer doors are made of heavy wooden planks with stone tops.
- The timber doors are elaborately decorated with incised patterns and knockers.
- Lightweight projecting features, seen on the upper levels of a number of the larger houses, are constructed from timber and filled in with lightweight reeds to form a semi-transparent screen with a small opening. This is used as a utility or kitchen space for light cooking.



Figure 61 Cluster of buildings forming frontage with colorful openings
Location: Rijal Alma



Figure 62 Colorful windows with decorative motif
Location: Rijal Alma



Figure 63 Occasional provision of balconies
Location: Rijal Alma



Architectural Elements & Construction Techniques

Architectural elements help in characterizing the dark stone facades. They are described in three parts: top, middle and base.

Top:

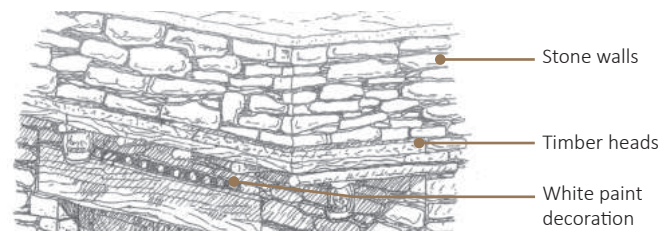
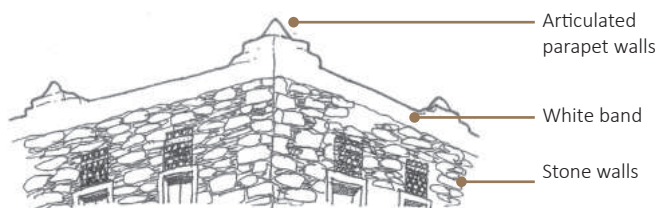
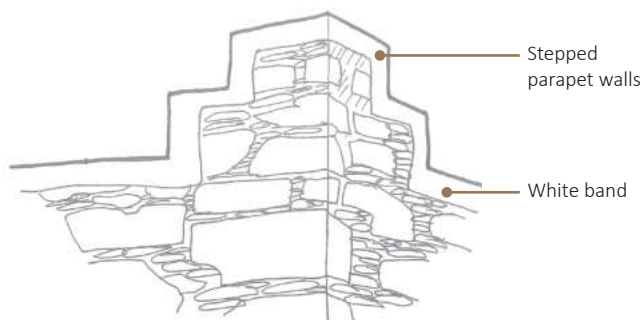
- Flat roofs with parapets articulated with pointed corners or stepped crenelations.
- Articulation also in form white painted parapet walls.
- Occasionally, the parapets extrude out of the facade forming overhangs for openings.

Middle:

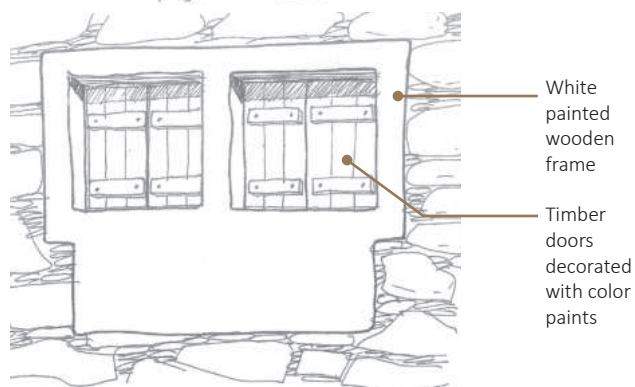
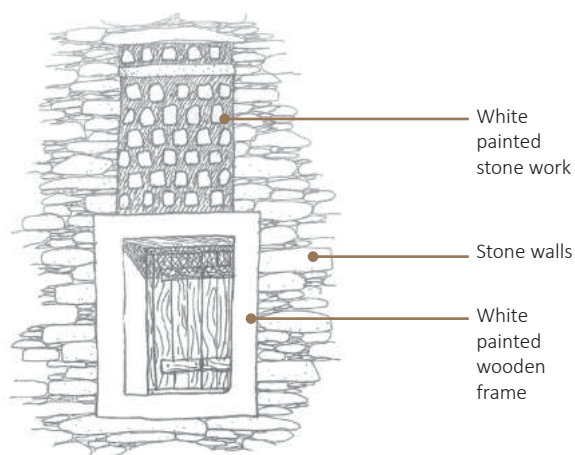
- Inclined walls with stone masonry.
- Small and narrow openings on external facade.
- Windows highlighted with colored shutters, white plaster and decorative motifs.

Base:

- For mud/stone buildings plastered with mud, base is distinguished with stone masonry with plastered floors on top.
- Door openings with painted beams, and colored wooden shutters.

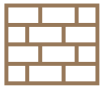


Top



Middle and Base

Figure 64 Traditional architectural elements & construction techniques in escarpments



Materials & Colors

- Local stone is dominant within the escarpments.
- No clear distinction between use of materials, combinations are frequent.
- Stone houses - pieces of stone arranged in horizontal coordinated manner.
- Stone masonry with plastered walls can also be found in this region.
- Tree trunks as visible opening head jambs and decorative wooden entrance doors.
- Typical colors of locally available natural stone, mainly shades of beige, brown and dark brown and complementary colors derived from the landscape of escarpments and wadis.
- Local art is used for decorative patterns for highlighting elements.



Figure 65 Natural material and color palette

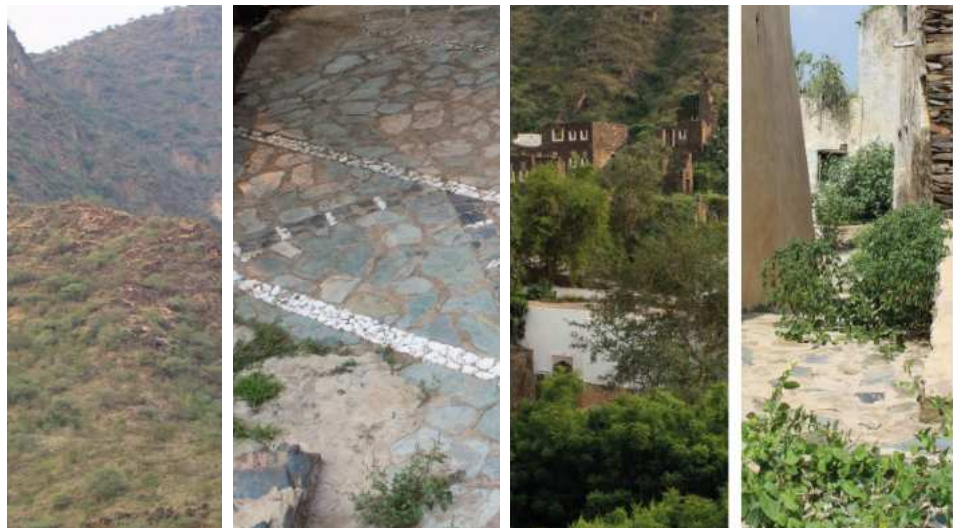


Figure 66 Complementary color palette derived from local landscape



Figure 67 Patterns and colors used in local art to highlight openings and special elements

Sarwat Mountains



Location: Sarat Obaldia

1.3.5 Sarwat Mountains

The hard angular mountain ridge establishes a strong curvilinear edge that contrasts with the typically inland sloping, complex landscape of valleys, low mountains, wadis and rocky features. This results in a varied and complex landscape that disrupts the vastness experienced at the ridge creating a more human scale and detailed landscape. The many ridges and valleys also create natural boundaries that define settlement patterns.

Main cities: Abha, Khamis Mushait, Ahad Rafaidah, Tanoumah, Sarat Abeedah, Dhahran Al Janoub



Figure 68 Plateau with the backdrop of Sarwat mountain peaks
Location: Dhahran Al Janoub

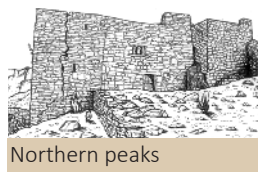
Heritage Architecture

Traditionally, the Sarwat hills and mountain sites were used for the purpose of hiding and protecting from the attacks of enemies. Vernacular architecture and building patterns in this region are differing from some nearby areas that exclusively use stones, such as in Rijal Almaa. The heritage sub-zones prevalent in this environment are:

- Northern Peaks
- Cities In Between Peaks
- Ahad Rafaidah
- Southern Peaks.



Cities



Northern peaks



Ahad Rafaidah

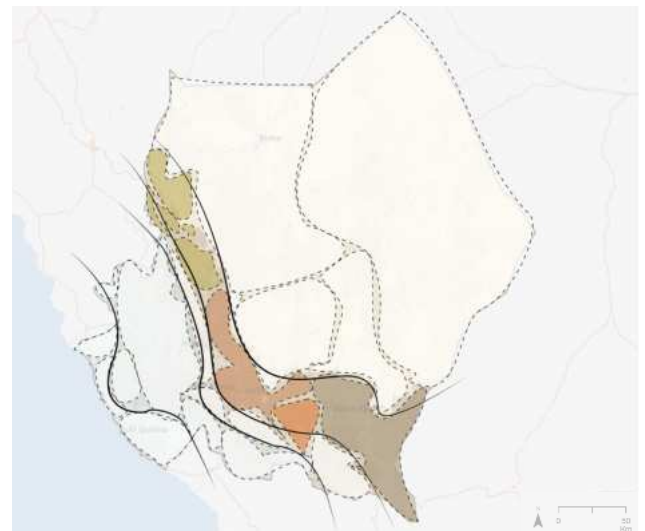


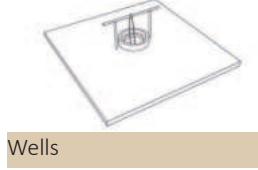
Figure 69 Sarwat mountains heritage sub-zones

Cultural Landscape

- The hard angular mountain ridge establishes a strong curvilinear edge which contrasts to the general inland sloping complex landscape and offers a variety of unique landscape characters across the Sarwat Mountains.
- Typical types of manmade landscape manipulation that can be observed in this area are wadi farming, terraced farming and dug out wells.



Wadi farming



Wells



Terraced farming

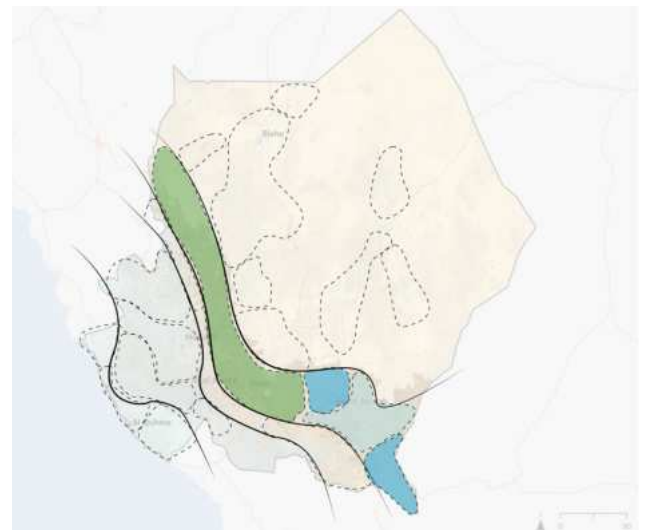


Figure 70 Sarwat mountains cultural landscapes



Layout and Open Spaces

- Wadi villages are loosely composed with street hierarchy while houses on hill tops of Sarwat mountains are tightly grouped with inner system of communication, labyrinth of covered alleys and passages.
- In general, compact settlement pattern form with narrow, zigzagged alleys and hierarchy of open spaces.
- Clear street hierarchy from public, to semi-public, to private.
- Compact cluster of houses with courtyards and common spaces.
- Introverted house types built around courtyard(s) for micro-climate and privacy reasons.
- Productive landscapes surrounding the built settlement.
- Strategic placement of towers for defense purposes.



Figure 71 Layout of streets and open spaces
Location: Dhahran Al Janoub



Figure 72 Narrow alleys and shaded pathways
Location: Tanaumah

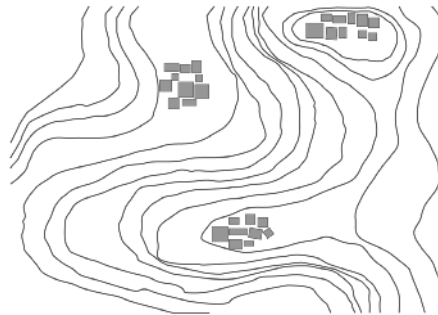


Figure 73 Mountain top settlements

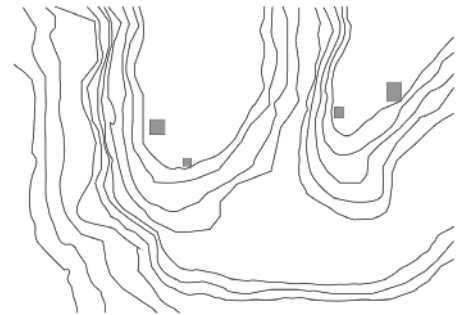


Figure 74 Small settlements along wadi



Massing

- A general development of two to four story high.
- Built form situated on hill top or wadi is defensive and fortress like.
- Buildings of medium size and mass composed with facades breaks and clustered together.
- Massing broken into vertical volumes.
- Soft and simple but articulated, sculptural building forms.
- Buildings with limited openings.
- Thick stone walls with mud plastered walls.
- Flat roofs.
- Balconies are not used.



Figure 75 Massing on stepped terraces clustered together
Location: Dhahran Al Janoub

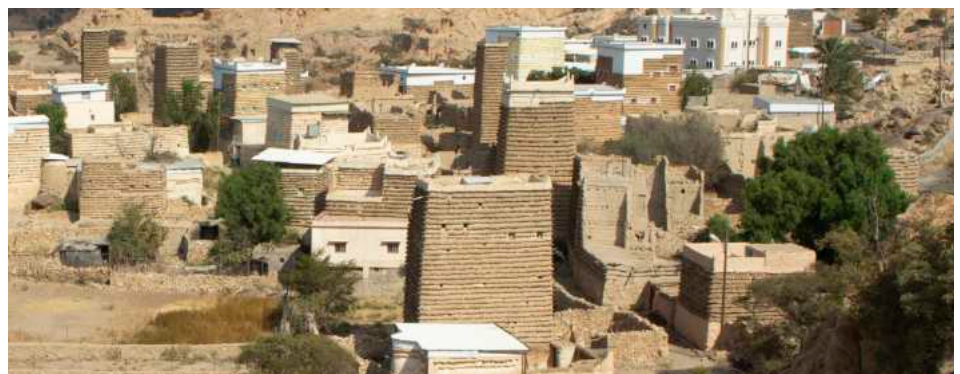


Figure 76 Varying massing with vertical volumes interspersed with open spaces on plains
Location: Sarat Obaidah



Frontages and Openings

- Facades with occasional breaks either with material change or massing.
- Limited small and high positioned openings are placed on the walls primarily for air circulation and light while maintaining privacy. These were also useful for defense purposes.
- Elaborate parapets with stepped or pointed parapet walls.
- Colors used for highlighting the openings.
- Combination of materials and construction techniques used for variation in facade.
- Thick walls with small window openings for the need of defense.
- Upper slab of white quartz or natural stone inserted in common masonry stands out in the dark masonry and stone wall.
- Windows have wooden shutters sometimes painted blue or green.
- The outer doors are made of heavy wooden planks with stone tops.



Figure 77 Facade breaks with vertical volumes
Location: Abha



Figure 78 Facade variations with use of material
Location: Ahad Rafaidah



Figure 79 Frontage with limited openings, articulated parapets and integral treatment to all sides
Location: Tanaumah



Figure 80 Rows of slates for rain protection, material variation at base, parapets for facade articulation
Location: Abha



Figure 81 Heavy stone tops for doors
Location: Tanaumah



Figure 82 Highlighted door frames and windows
Location: Abha



Architectural Elements & Construction Techniques

Architectural elements help in characterizing the sober facades. They are described in three parts: top, middle and base.

Top:

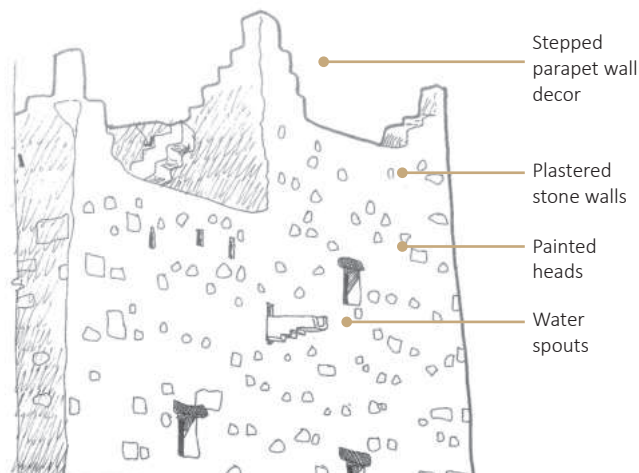
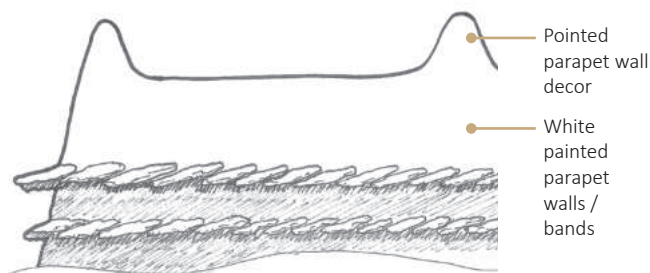
- Flat roof with parapets articulated with pointed corners or stepped crenelations.
- Articulation also in form white painted parapet walls.
- Water spouts.
- On the flat roof a wooden guttering for rain water is put in.

Middle:

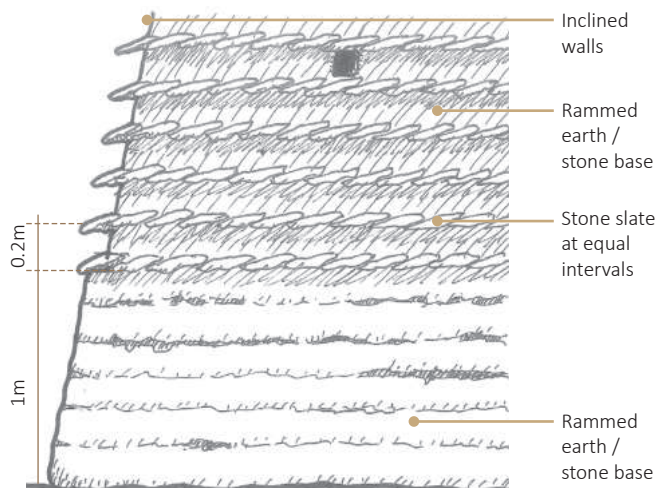
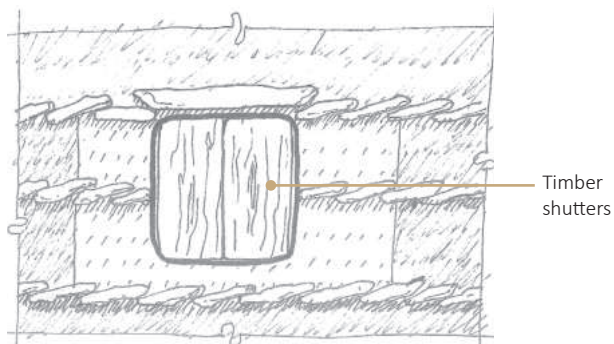
- Inclined walls with rows of slate inserted into walls at equal intervals.
- Bunker style holes. Small number and narrow openings higher on external facade.
- Windows highlighted with colors or wooden beams.

Base:

- The construction of house consists of 2-2.50 m high stone foundations, in which layers of mud are laid in cubes, in Adobe technique.
- Different material like gypsum paint / stone wall for highlighting the base.
- Openings with painted beams, patterns on doors.

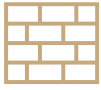


Typical architectural elements at top: parapet wall and water spouts



Typical architectural elements in middle and base

Figure 83 Traditional architectural elements & construction techniques in Sarwat mountains



Materials & Colors

- In hilly areas, local stone is dominant, while for wadi houses, mud extracted from nearby places. Locally available wood is also used.
- No clear distinction between use of materials and combinations are frequent.
- Stone houses - diaper masonry with large boulders alternate with small pieces of stone arranged in horizontal irregular layers.
- In case of highland areas with more rain, mud houses have rows of slate inserted into walls to protect from rain. Sheets of slate are carefully put side by side between the layers of mud. The slate sticks out 20-30 cm and in this way stops the mud walls from being washed away.
- Tree trunks as visible opening head jambs and decorative wooden entrance doors.
- Typical colors of locally available natural stone, mainly shades of beige, brown and orange and complementary colors derived from the landscape of Sarwat mountains.
- Local art is used for decorative patterns for highlighting special elements like windows or entrances.
- The inner walls of the houses are covered with mud, white washed and sometimes painted.



Figure 84 Natural material and color palette



Figure 85 Complementary color palette derived from local landscape



Figure 86 Patterns and colors used in local art

Inland Deserts



Location: Beesha

1.3.6 Inland Deserts

The Inland Desert's distinctive landscape is defined by desert plains, monumental and rocky boulder features and low maintain ridges. The landscape is vast, open and the scale is expansive. The rock formations, sparse vegetation and sand dunes form a layered landscape with different textures and forms. The Inland Deserts are characterized as moderate desert with low annual rainfall and are located to the east of the Sarwat mountains from where it gradually declines toward the east.

Main cities: Tathleeth, Beesha



Figure 87 Inland desert plains with boulders and backdrop of Sarwat mountains
Location: Tathleeth

Heritage Architecture

The traditional architecture within this zone is influenced by the desert plains and Najd Plateau styles. The heritage subzones prevalent in this environment are:

- Cities In Between Peaks
- Beesha
- Tathleeth



Cities



Beesha



Tathleeth

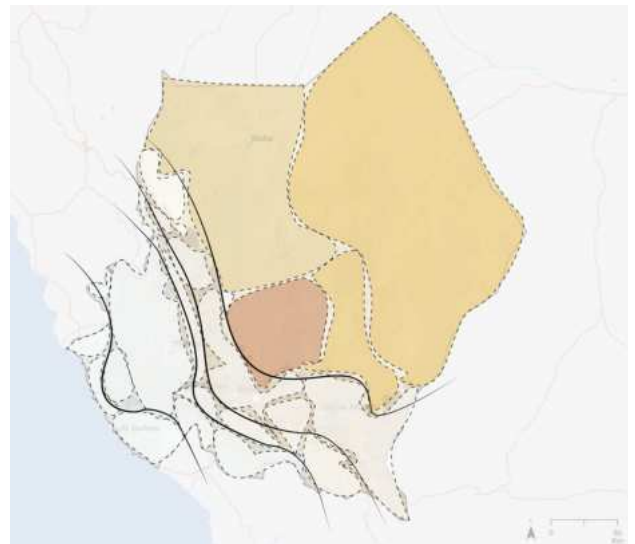


Figure 88 Inland deserts heritage sub-zones

Cultural Landscape

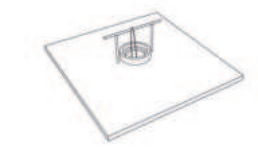
- Wadis are the main water course in this zone and are typically made up of white sand soil and support various vegetation communities.
- Typical types of man-made landscape manipulation that can be observed in this area are wadi farming and dug out wells.
- Wadi farming: found along wadis, smaller 'aqum, used to divert water flow into adjacent fields, flooding field after field for small scale farming.



Wadi farming



Sporadic wadi farming



Wells

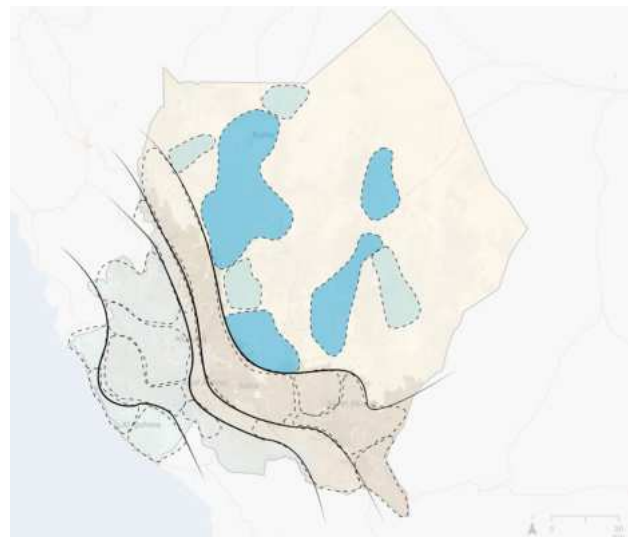


Figure 89 Inland deserts cultural landscapes



Layout and Open Spaces

- Compact form with narrow, zigzagged alleys and limited open spaces.
- Clear street hierarchy from public, to semi-public, to private.
- Compact house design with shared sidewalls (up to three sides) shading one another.
- Massing is interspersed with internal courtyards for thermal comfort. The layout of building is distributed around one or more courtyards.
- Outer facades protected by direct sunlight by external shading provided by narrow lanes and alleys.



Figure 90 Compact housing

Location: Beesha



Figure 91 Narrow alleys between buildings
Location: Tathleeth



Figure 92 Alleys leading to internal courtyards
Location: Beesha



Massing

- A general development of one or two story high.
- Buildings of smaller to substantial size and mass composed of large planar wall surfaces.
- Massing broken into horizontal and vertical volumes.
- Soft and simple but articulated, sculptural building forms.
- Alternation of solid masses and openings.
- Thick load bearing walls.
- Flat roofs.
- Balconies not commonly used.



Figure 93 Large planar surfaces with articulation using openings and parapet walls
Location: Tathleeth



Figure 94 Alternation of solid masses and openings
Location: Tathleeth



Frontages and Openings

- Facades breaks provided usually with massing/heights.
- Limited small and high positioned openings primarily for thermal comfort.
- Elaborate parapets with stepped or pointed parapet walls.
- Combination of materials of clay, stone and construction techniques used for variation in facade.
- Exterior walls have small number and narrow openings to protect the interior from thermal transfer inside the building.
- Large openings facing the internal courtyards.
- Openings do not cover more than 25-40% of the overall facade.
- Arcades/colonnades are frequently used on ground floor for shading purposes.
- Wooden members generally used as opening tops.



Figure 95 Facades breaks with change in with massing/heights

Location: Beesha



Figure 96 Combination of materials

Location: Tathleeth



Figure 97 Ground floor colonnades/shading elements



Figure 98 Smaller openings placed on upper floors

Location: Tathleeth



Figure 99 Colonnades and articulated parapets

Location: Ahad Rafaidah



Figure 100 Timber used as tops for the openings

Location: Tathleeth



Figure 101 Colonnades on ground floor

Location: Tathleeth

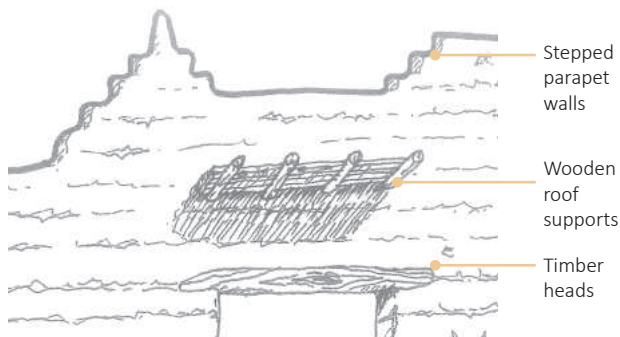


Architectural Elements & Construction Techniques

Architectural elements help in characterizing the sober facades. They are described in three parts: top, middle and base.

Top:

- Flat roofs with parapets articulated with stepped crenelations or pointed corners.
- Articulation in form patterns is also present in parapet walls.

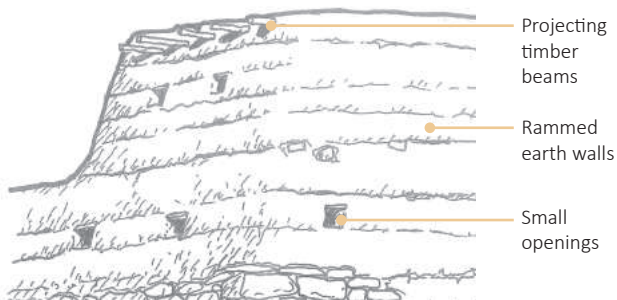


Top



Middle:

- Small number and narrow openings higher on external facade.
- Walls are generally inclined with horizontal lines of mud brick courses articulating the walls.

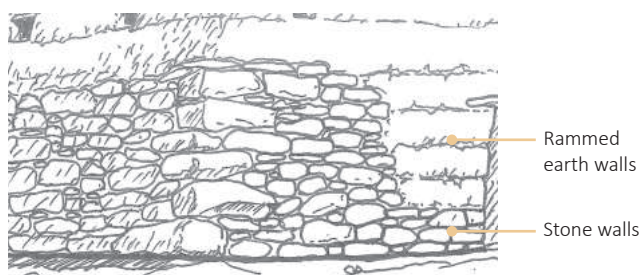


Middle



Base:

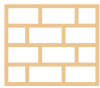
- Base with stone masonry are found in some parts of the region like Beesha.
- Arcades/colonnades are frequently used at the ground floor.
- Doors are highlighted with decorative elements.



Base



Figure 102 Traditional architectural elements & construction techniques in inland desert



Materials & Colors

- Mud/clay and stone are the predominant materials used in inland deserts.
- Generally, building material is clay extracted from the soil. Roofing material is palm trunk.
- The materials lend the facade a sober character.
- Typical colors are mainly shades of beige, brown and yellow derived from locally available natural stone, mud and sand.
- Complementary colors derived from the landscape features of inland deserts like vegetation and boulders.



Figure 103 Natural material and color palette of soil, stone and compacted mud

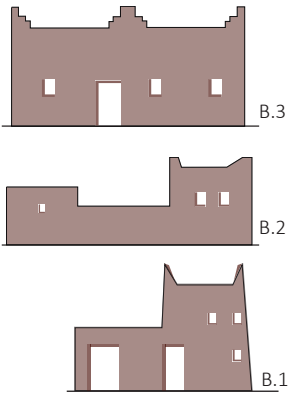


Figure 104 Natural material and color palette derived from vegetation, rocks and soil

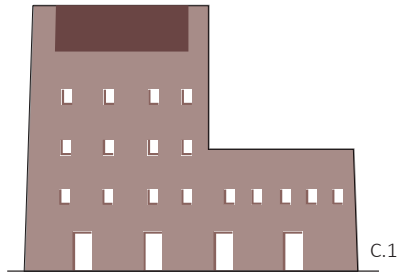


Figure 105 Patterns and colors used in local art

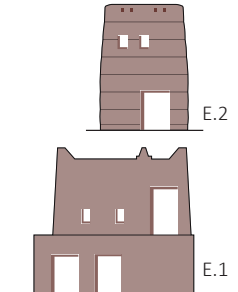
1.4 Building Typologies and Morphologies



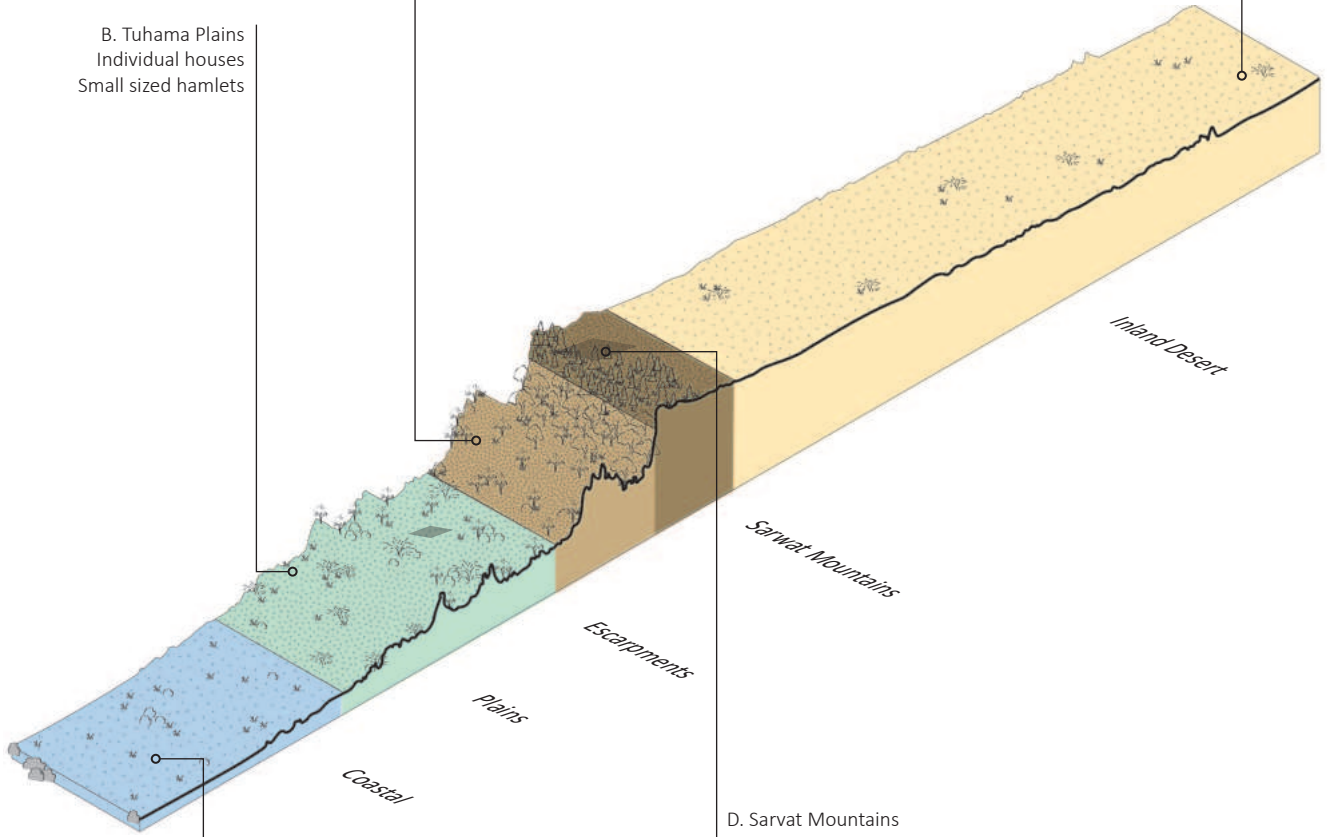
B. Tuhama Plains
Individual houses
Small sized hamlets



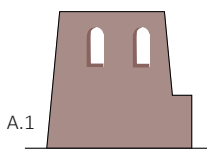
C. Escarpments
Medium sized hamlets



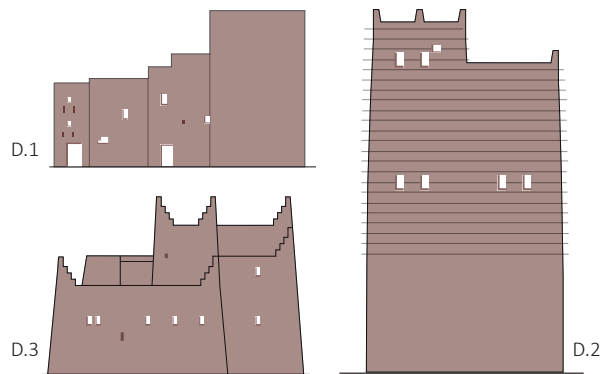
E. Inland Deserts
Individual houses
Small sized hamlets



A. Coastal Plains
Individual houses,
Small sized hamlets

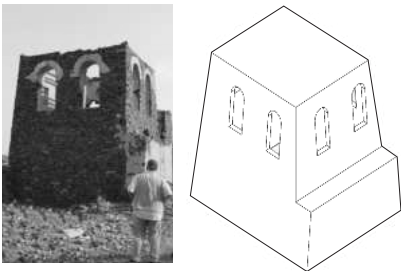
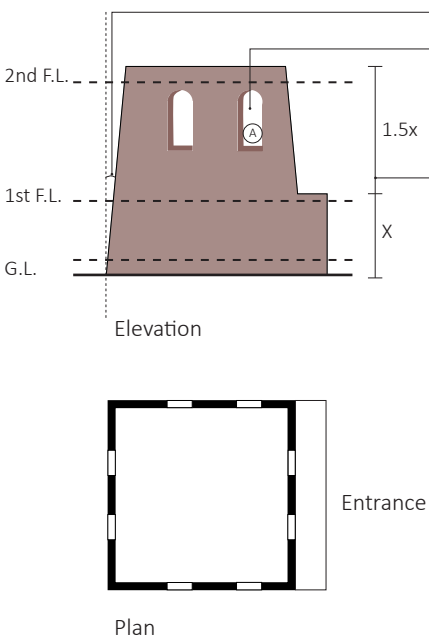
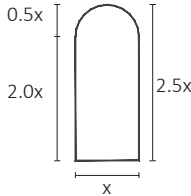


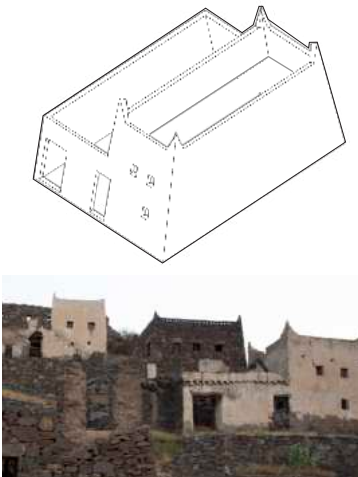
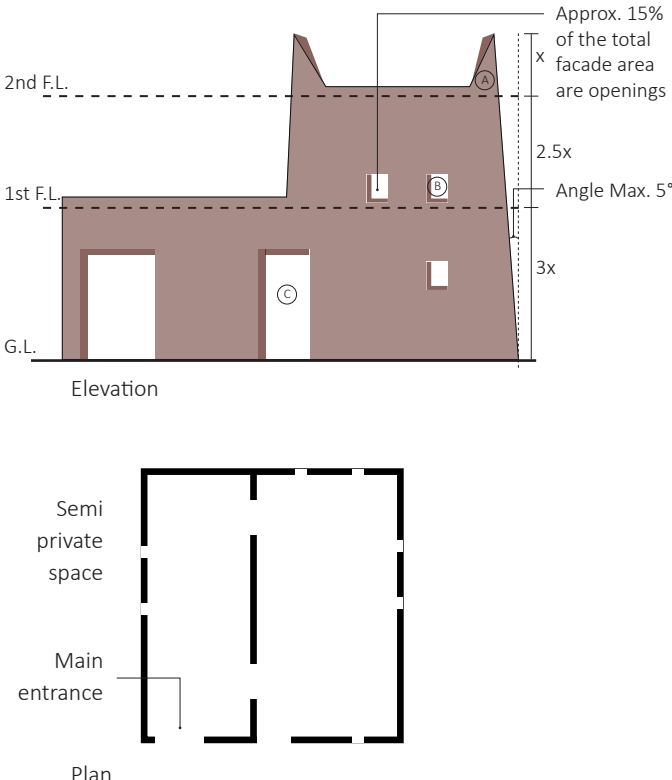
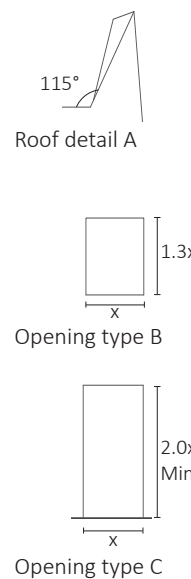
D. Sarvat Mountains
Individual houses
Small/medium sized hamlets



D.1 D.2 D.3 D.4

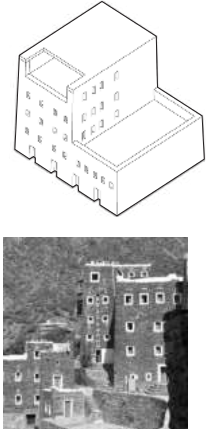
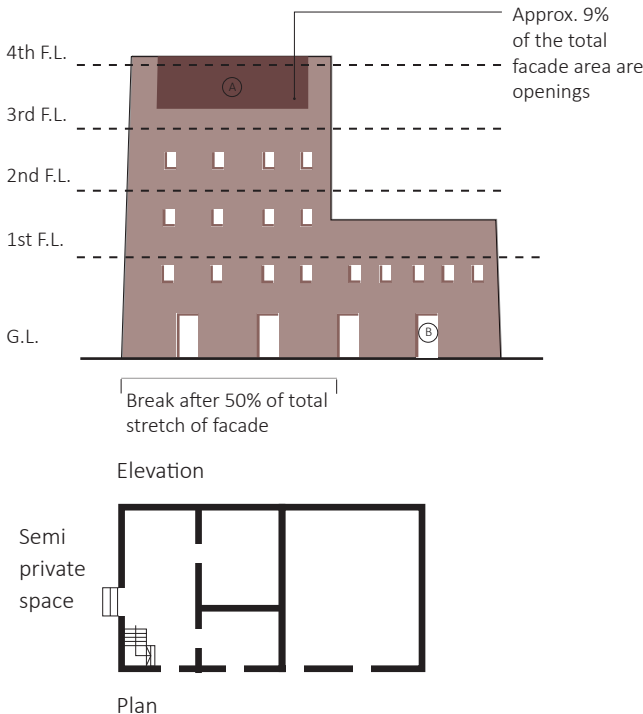
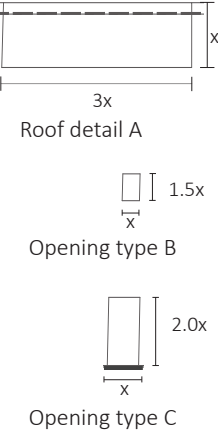
1.4.1 Building Typologies of Aseer

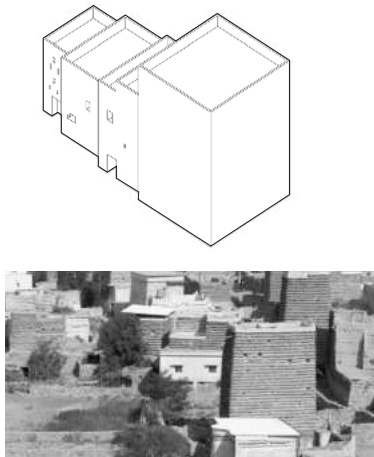
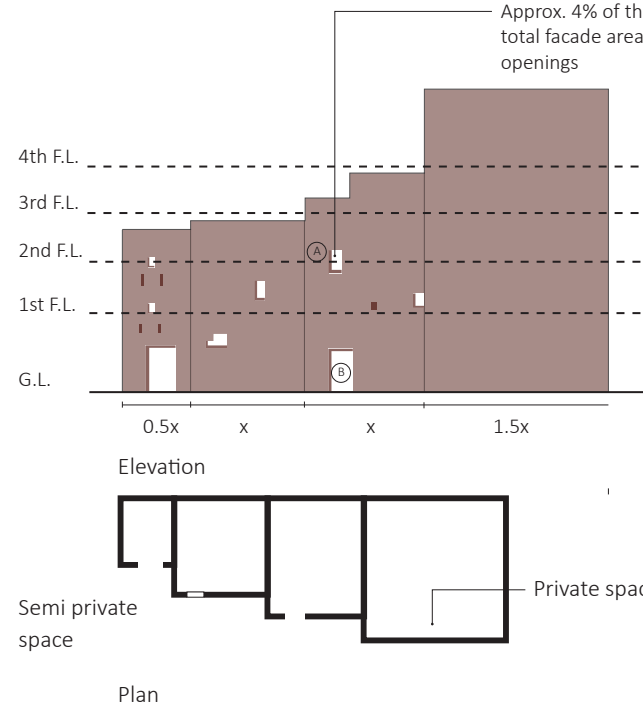
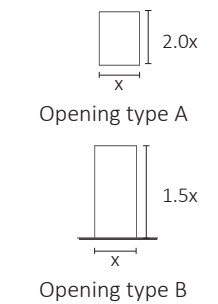
Typology	Facade & Layout Study	Dominant Features
<p>A.1. Coastal Plains</p>  <ul style="list-style-type: none"> • Dwellings are mostly Individual houses or small sized hamlets. • Sufficient spaces are generally kept around each dwelling even within closely knit settlement areas. • Mostly horizontal volumes are used along with occasional horizontal elements. • Limited entrances but larger windows oriented to let in the see breeze is a characteristic feature. • Natural stones, concrete and timber are the commonly used materials. 	 <p>Elevation</p> <ul style="list-style-type: none"> • Angle Max. 5° • Approx. 8% of the total facade area are openings • 1.5x • Top : Bottom 1.5 : 1 • X <p>Plan</p> <ul style="list-style-type: none"> • Entrance 	 <p>Opening type A</p> <ul style="list-style-type: none"> • 0.5x • 2.0x • 2.5x • x

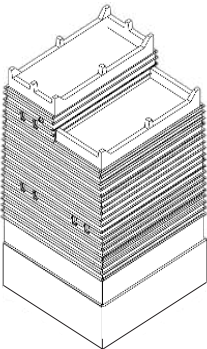
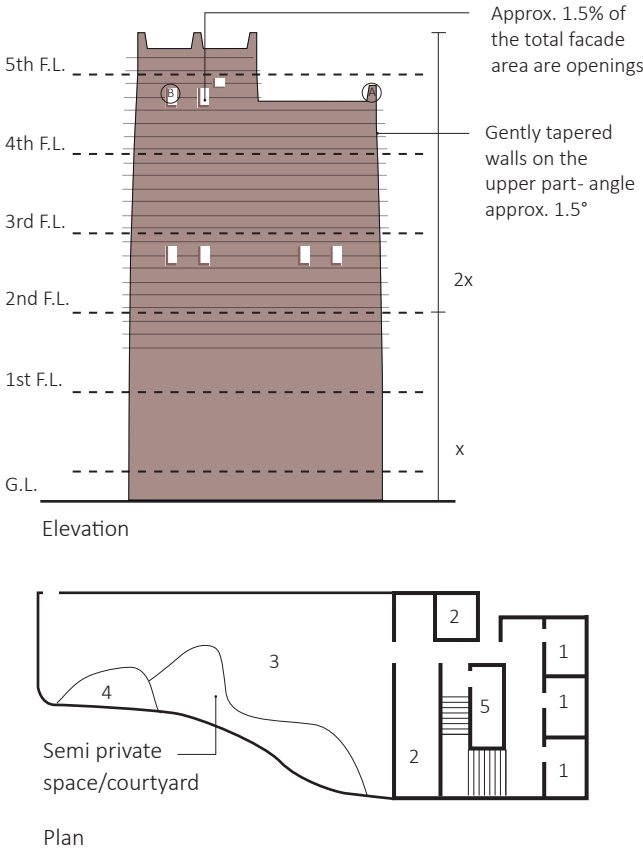

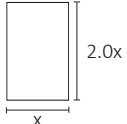
Typology	Facade & Layout Study	Dominant Features
<p>B.1. Tuhama Plains</p>  <ul style="list-style-type: none"> • Dwellings are mostly small sized hamlets. • Mostly horizontal volumes are used. • Terraces at different levels create private open spaces. • Incrementally attached units sharing common walls is a characteristic feature. 	 <p>Elevation</p> <ul style="list-style-type: none"> • Approx. 15% of the total facade area are openings • 115° • x • 2.5x • Angle Max. 5° • 3x <p>Plan</p> <ul style="list-style-type: none"> • Semi private space • Main entrance 	 <p>Roof detail A</p> <ul style="list-style-type: none"> • 115° <p>Opening type B</p> <ul style="list-style-type: none"> • 1.3x • x <p>Opening type C</p> <ul style="list-style-type: none"> • 2.0x Min. • x

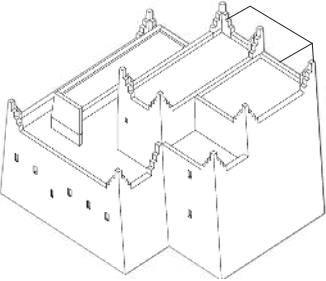
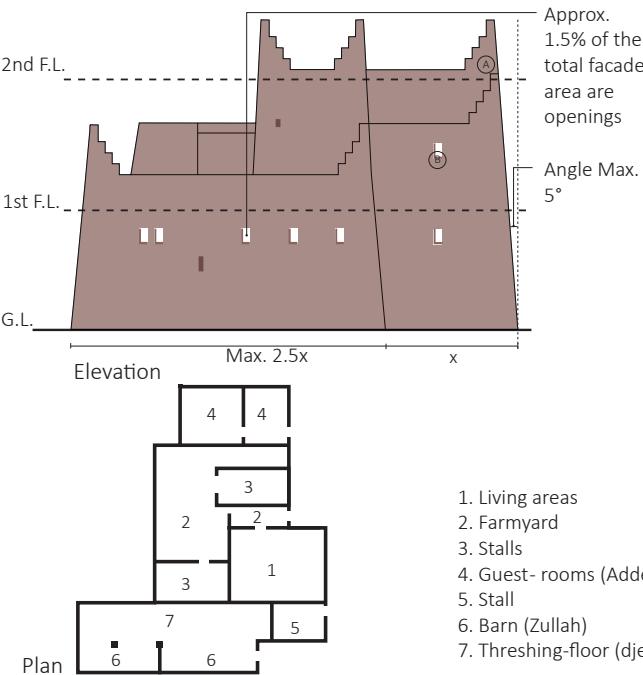
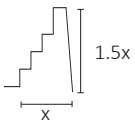
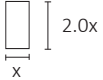
Typology	Facade & Layout Study	Dominant Features
<p>B.2. Tuhama Plains Type I</p>	<p>Approx. 2.5% of the total facade area are openings</p> <p>2nd F.L. 1st F.L. G.L.</p> <p>x 1.5x 3x</p> <p>Elevation</p> <p>Main entrance</p> <p>Plan</p>	<p>145° 1.5x x</p> <p>Roof detail A</p> <p>1.3x x</p> <p>Opening type B</p>
<ul style="list-style-type: none"> • Dwellings are mostly individual houses or small sized hamlets. • Incrementally attached units sharing common walls is a characteristic feature. 		

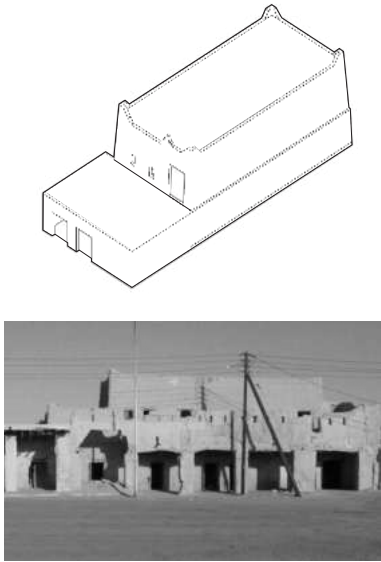
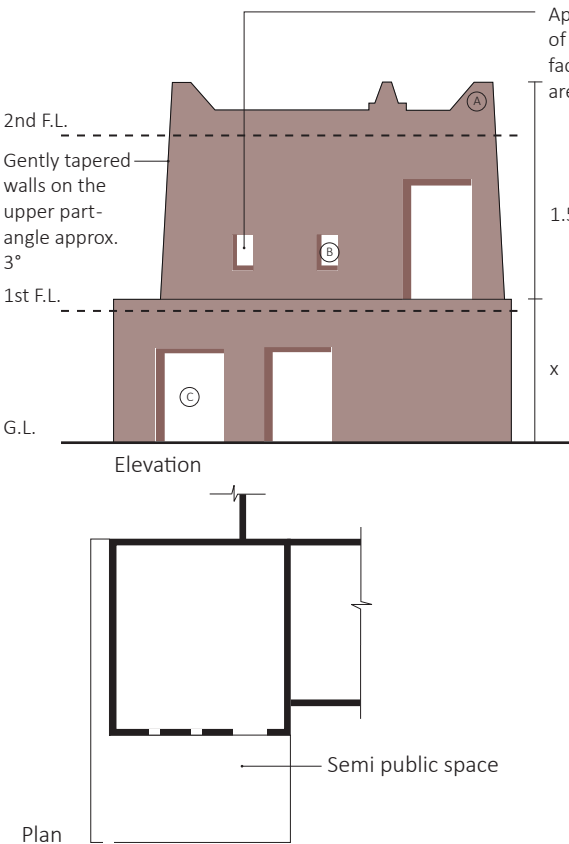
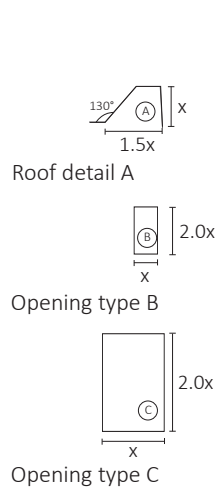
Typology	Facade & Layout Study	Dominant Features
<p>B.3. Tuhama Plains Type II</p>	<p>Approx. 8% of the total facade area are openings</p> <p>1st F.L. G.L.</p> <p>x 2x</p> <p>Elevation</p> <p>Plan</p> <p>Main entrance</p>	<p>x x</p> <p>Roof detail A</p> <p>1.2x x</p> <p>Opening type B</p> <p>2.0x x</p> <p>Opening type C</p>
<ul style="list-style-type: none"> • Dwellings are mostly individual houses. • Mostly horizontal volumes are used. • Terraces at different levels create private yet open spaces. 		

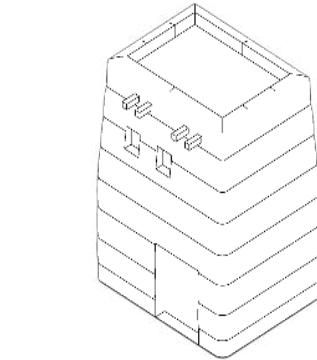
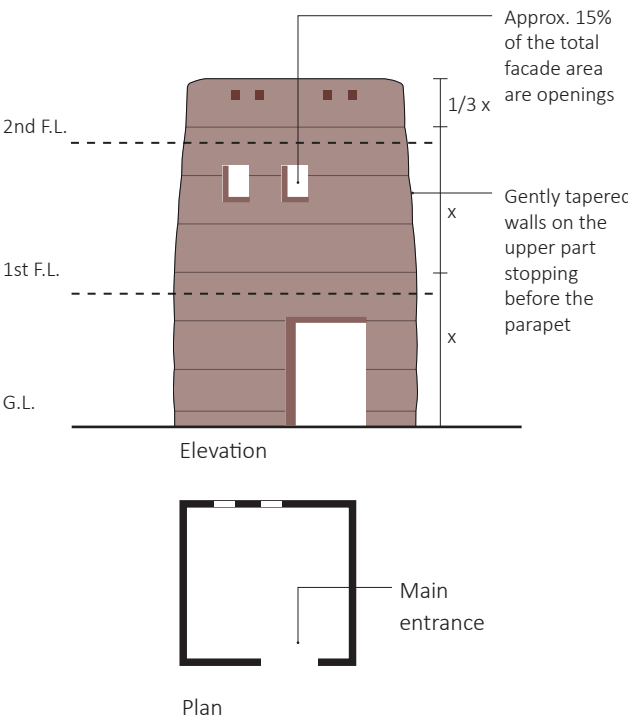
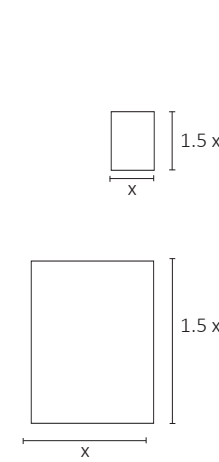
Typology	Facade & Layout Study	Dominant Features
<p>C.1. Escarpments</p>  <ul style="list-style-type: none"> • Dwellings are mostly medium sized hamlets. • Buildings can go up to 6 stories. • Shelter for animals and grain stores are kept in ground floor. Kitchen and household storage are located in the middle floors and livings quarters on the top floors. 	 <p>Approx. 9% of the total facade area are openings</p> <p>Break after 50% of total stretch of facade</p> <p>Elevation</p> <p>Plan</p>	 <p>Roof detail A</p> <p>Opening type B</p> <p>Opening type C</p>

Typology	Facade & Layout Study	Dominant Features
<p>D.1. Sarwat Mountains Type I</p>  <ul style="list-style-type: none"> • Dwellings are mostly small/ medium sized hamlets. • Mostly vertical volumes are used. • Terraces at different levels create private yet open spaces. • Incrementally attached units sharing common walls is a characteristic feature. 	 <p>Approx. 4% of the total facade area are openings</p> <p>Elevation</p> <p>Plan</p>	 <p>Opening type A</p> <p>Opening type B</p>

Typology	Facade & Layout Study	Dominant Features
<p>D.2. Sarwat Mountains Type II</p>  <ul style="list-style-type: none"> • The characteristic feature is the imposing design of tall houses. • To protect the dried mud walls from rain damage, sheets of slate are carefully put between the layers of mud. The houses are about 13-16 m high; and corresponding with this height the mud layers run conically towards the roof, whereby the base of the wall is more than 1 m wide, to give the walls the required stability. The 16-18 m high defense towers are constructed in similar way. • The mud stairs give the houses an added stability. 	 <p>Approx. 1.5% of the total facade area are openings</p> <p>Gently tapered walls on the upper part- angle approx. 1.5°</p> <p>2x</p> <p>x</p> <p>Elevation</p> <p>Plan</p>	 <p>Roof detail A</p>  <p>Opening type B</p> <ol style="list-style-type: none"> 1. Feed store room 2. Camel stall 3. Yard 4. Manure heap 5. Storage of woods

Typology	Facade & Layout Study	Dominant Features
<p>D.3. Sarwat Mountains Type III</p>  <ul style="list-style-type: none"> • Dwellings are mostly medium sized hamlets. • The defense system of the settlement implies a closely knitted pattern of building. • Most of the houses are two-three story. On the lower floor are stalls and feed rooms, on the first floor the food storage rooms and kitchen can be found and on the second floor are living- and bedrooms. 	 <p>Approx. 1.5% of the total facade area are openings</p> <p>Angle Max. 5°</p> <p>2x</p> <p>x</p> <p>Elevation</p> <p>Plan</p>	 <p>Roof detail A</p>  <p>Opening type B</p> <ol style="list-style-type: none"> 1. Living areas 2. Farmyard 3. Stalls 4. Guest- rooms (Added later) 5. Stall 6. Barn (Zullah) 7. Threshing-floor (djerin)

Typology	Facade & Layout Study	Dominant Features
<p>E.1. Inland Desert Type I</p>  <ul style="list-style-type: none"> Villages mostly consists of small sized hamlets. Dwellings are often clustered so closely that they present a nearly continuous facade. Horizontal volumes are predominant. Use of internal courtyard spaces create different levels of privacy. 	 <p>Approx. 15% of the total facade area are openings</p> <p>2nd F.L.</p> <p>Gently tapered walls on the upper part-angle approx. 3°</p> <p>1.5x</p> <p>1st F.L.</p> <p>x</p> <p>G.L.</p> <p>Elevation</p> <p>Plan</p> <p>Semi public space</p>	 <p>Roof detail A</p> <p>Opening type B</p> <p>Opening type C</p>

Typology	Facade & Layout Study	Dominant Features
<p>E.2. Inland Desert Type II</p>  <ul style="list-style-type: none"> Villages mostly consists of small sized hamlets of individual houses. Mud bricks are used extensively. 	 <p>Approx. 15% of the total facade area are openings</p> <p>2nd F.L.</p> <p>1/3 x</p> <p>x</p> <p>Gently tapered walls on the upper part stopping before the parapet</p> <p>1st F.L.</p> <p>x</p> <p>G.L.</p> <p>Elevation</p> <p>Plan</p> <p>Main entrance</p>	 <p>Roof detail A</p> <p>Opening type C</p>

1.4.2 Morphologies of Aseer

Settlements in Escarpment



Figure 106 Morphology in Rijal Alma traditional settlements

- *Rijal Alma heritage village mostly consists of small or medium sized hamlets.*
- *Houses are built in close proximity, with shared walls and outside areas. This also gives indication of the close relationships of extended families*
- *The urban form is determined by the topography of the site and the flooding risks of the valley. This explains the neighborhoods situated on either side of the principal street that runs along the base of the valley.*
- *Due to the steeply sloping ground, steps connecting the narrow terraces that traverse the slopes, is a common feature.*
- *The arena was the market for the town's public, social and commercial life.*



Figure 107 Rijal Alma heritage village

Settlements on Mountain Top

LEGEND

1. Historic settlement: residential and commercial, mixed use buildings
2. Non-historic buildings
3. Cultivated terraces
4. Movement passages
5. Public plaza



Figure 108 Morphology in Al Soudah traditional settlements

- The defense system of the settlement implies a closely knitted pattern of building.
- The layout of the settlement can be seen from plan, the passages sometimes are covered for defense purposes.
- This optimal defense system requires no defense tower. The houses are usually built of stone with flat roof-construction.
- Most of the houses are two story.
- On the lower floor are stalls and feed rooms, on the first floor the food storage rooms and kitchen can be found and on the second floor are living- and bedrooms.



Figure 109 Al Soudah old settlements

Settlements in Mountain Plateau



Figure 110 Morphology in Dhahran Al Janoub traditional settlements

- The traditional village of Dhahran Al-Janub is located above 2160 meters on a plateau formed by the Sarawat mountains. It lays along a meander of the Wadi Kutam.
- Due to more availability of space in a plateau (compared to escarpments and settlements of mountain tops) the hamlets are more spaced out and the streets often open up to occasional plaza like formations.
- The houses are made of mud-brick traditional construction methods and are mostly small sized hamlets.
- Productive landscape is adjacent to the village.



Figure 111 Dhahran Al Janoub old settlements

Settlements in Upper Slopes Overlooking Valley



Figure 112 Morphology in traditional settlements in upper slopes of Sarwat mountains

- Houses are clustered so closely together that they present a nearly continuous face to the outside world.
- The continuous facades are only interrupted by a few narrow streets.
- Generally the dwellings are two storied small/ middle sized hamlets, made of local materials like stone, wood etc.
- At their highest point, they are topped by one of the mighty defence towers that are so characteristic of the region.



Figure 113 Old settlements in upper slopes of Sarwat mountains

Settlements in Inland Desert



Figure 114 Morphology in Tabalah - traditional settlements of Beesha

- The houses are made of mud-brick traditional construction methods and are mostly small sized hamlets.
- Due to more availability of flat terrain the hamlets are more spaced out and well shaded alleyways often open up to occasional plaza like formations.
- Productive landscape is adjacent to the village.



Figure 115 Old settlements in Tabalah, Beesha



Location: Tanoumah, Aseer

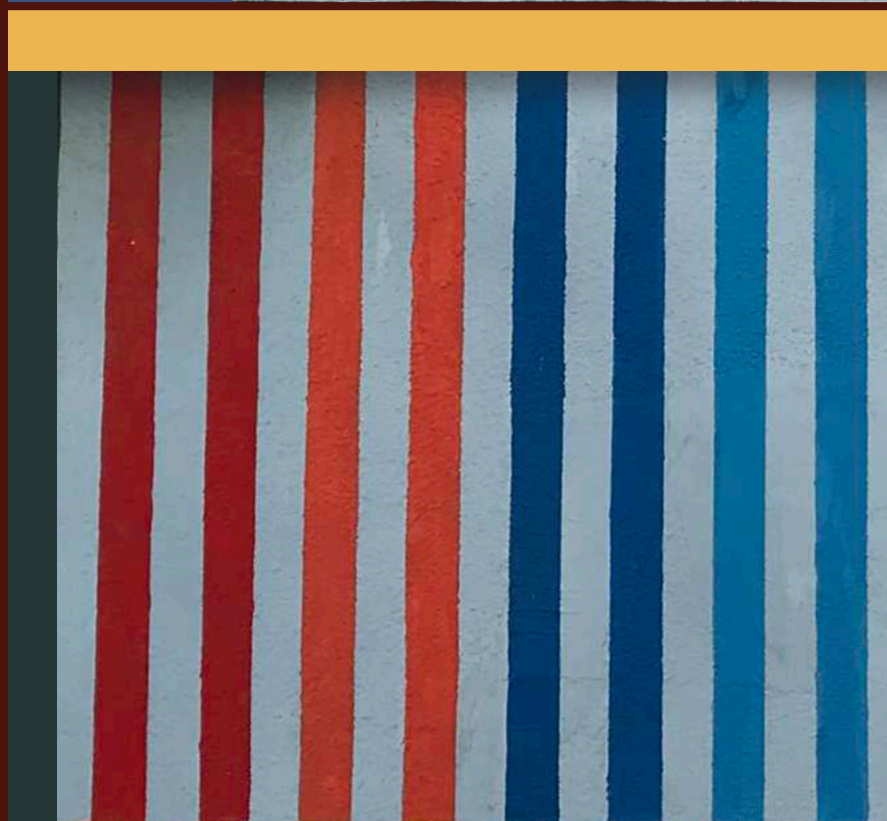
2 Guidelines for Aseer Architecture

New architecture when inspired by the heritage and culture of the place can lend a unique and distinct character, reinforcing the sense of identity of that place and of its people.

Based on the analysis presented in chapter 1, this section intends to provide elements of guidance to architects, designers and decision makers to foster the production of new and more contextual architecture for Aseer, balancing innovation with tradition, and promoting an elegant and always newly founded harmony between free imagination and conformity with tradition.

The section starts by describing the overarching principles defining Aseer architecture under the lens of urban design. Detail guidance is then provided for typical architectural compositional elements with reference to the specificity of the 5 natural environments for: layout and open space, massing and design, frontages and openings, construction techniques, materials and colors. Also, guidance is provided for architectural styles, technologies and materials that should be avoided as alien or deemed not sympathetic to the local context.

The last part provides elements of guidance to help decision makers in evaluating the importance for a project in expressing a contextual architecture approach.





2.1 Principles of Aseer Architecture

8 Urban Design Principles for Aseer Architecture

These guidelines define contemporary Aseer architecture as contextual urban design, a comprehensive set of guiding development principles for:

- **Open space and public realm**
- **Built form and architecture**

8 overarching urban design principles are presented with the overall goal of fostering the production of new and more contextual architecture for Aseer, balancing innovation with tradition, and promoting an elegant and always newly founded harmony between free imagination and the conformation of tradition.

The 8 urban design principles for built form and architecture, open space and public realm are presented alongside with the correlated general guidance elements.

Open Space & Public Realm

- 1** Respect, integrate, enhance and exhibit natural systems and features, climate and ecology, heritage and cultural landscapes.
- 2** Create places that are true to Aseer’s culture and identity and that are specific to the distinct environments of Aseer.
- 3** Develop attractive public realm and open space as civic and community backbone, providing a hierarchy and variety of open spaces.
- 4** Use cultural and social values as drivers to shape urban and rural spaces (i.e. create walkable communities).

Built form & Architecture

- 5** Respect and celebrate the past while bridging the future.
- 6** Nurture communities and local character.
- 7** Create new context and amenities to foster a high quality and representative environment.
- 8** Promote authenticity in combining Aseer traditional architectural elements within contemporary parameters.

Open Space: General Guidance

- Enhance community life.
- Create human-scale, high quality, pedestrian friendly public realm.
- Reflect local context in hard and soft scape treatment (i.e. local materials, native plants, sensitively designed topography).
- Respond to different climatic conditions (i.e. shading strategy and use of non-reflective surfaces, wind directions, rain harvesting, green roofs).
- Produce a contemporary design language celebrating the different local heritage, cultures and traditions of Aseer (i.e. different levels of privacy, integration of landscape).
- Create a rich dialogue with buildings functions and architecture.
- Protect native habitat and enhance with urban ecology principles.
- Incorporate SuDS and sustainability methods.



Built form & Architecture: General Guidance

- Propose a contextual and human scale massing of buildings with alternation of solid masses and openings.
- Respond to different climatic conditions (i.e. shading strategy and use of non-reflective surfaces, wind directions, rain harvesting, green roofs).
- Design a high-quality interface between the building and the street.
- Show a plain, simple and elegant style with sober exterior hiding abundance and art within.
- Propose an architectural vocabulary that celebrates the traditional sub-regional architecture of Aseer (i.e. tilted facades, windows details, typical facade elements, flat roofs, courtyards, artistic decorations).
- Use of building techniques and materials, or their contemporary adaptation, sympathetic to the 5 natural environments of Aseer.
- Foster the combination of traditional architectural elements with contemporary parameters and new technologies.



2.2 Typical Architecture Compositional Elements

This section provides detail guidance for Aseer typical architectural compositional elements with reference to the specificity of the 5 natural environments as presented in the previous section.

The different compositional elements are organized in:

- Layout and Open Space.
- Massing and Design.
- Frontages and Openings.
- Architectural Details and Construction Techniques.
- Materials, Colors and Art.

For each group specific guidance and standards are provided in the following section.



Layout & Open Space



Massing & Design



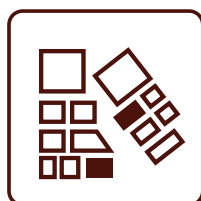
Frontages & Openings



Architectural Details & Construction Techniques



Materials, Colors & Art



Layout & Open Space

The guidance for layout and open space aims to achieve and contribute to the contemporary interpretation of Aseer architecture through factors like subdivision pattern and street layout, topography of site and its context, region specific landscape elements, protection and enhancement of natural features, uses, local culture and traditions and figure ground qualities.

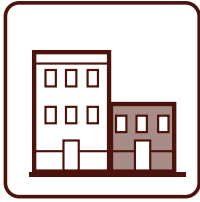
The general context for layout and open space in Aseer: safety, defense and productive landscapes have been decisive factors in shaping the layout of both Aseer villages and buildings. Villages were historically situated on a hilltop or near a wadi and were built to look defensive and fortress like. Typically, the wadi villages were loosely composed; the houses on the hills and in the desert were tightly grouped with a labyrinthine layout of covered paths. The layout was pedestrian oriented as cars were introduced only toward 1940's. The marketplace, the main open space of the time, was typically located outside the village for security reasons.



Massing & Design

Massing and design guidelines aim to contribute to the contemporary interpretation of Aseer architecture through factors like scale of buildings, heights and proportions, density, roofline, views and skylines, relationship to ground plane and streets and massing.

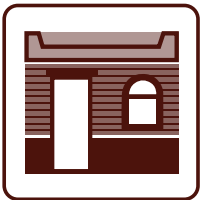
The general context for massing and design in Aseer: traditional constructions like farmhouses or in villages were typically small tower-like, conical or cubic shape buildings of 3 to 5 story. The bases of the buildings were sometimes larger than their upper parts, slopping of about 14%. The structures were generally mixed-use in nature allocating different functions in different levels. The massing was human scale, with a direct relationship to the ground and immediate context, and compact in form for economic efficiency.



Frontages & Openings

The guidance for frontage and openings aims to achieve and contribute to the contemporary interpretation of Aseer architecture through factors like ratio of solid and openings/voids, proportion and size of openings, relationship to street, design of facades based on orientation for quality of light and shadow, privacy requirements, horizontal and vertical ratio of facade elements and use of traditional facade elements.

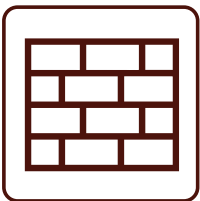
The general context for frontage and openings in Aseer: traditionally, windows occupied a small area compared to the total area of the frontage and were often absent at the ground floor and with low-rise doors.



Architectural Details & Construction Techniques

Architectural details and construction techniques guidance provides standards and guidelines for use of traditional elements, provisions to translate these details to contemporary parameters, type and percentage of elements on the facade, protection and enhancement of traditional building features and landscape.

The general context for architectural details and construction techniques in Aseer: typically made of mud bricks or clay in wadi regions, stone cut towers in escarpments, or stones used overlapping with clay layers, with the addition of the element of Al-Ragaf, particularly in the mountain region, which are consecutive cornice eaves emerging from the surface of the walls. Parapet articulation with pointed parapets, stepped parapet walls, use of different material as compared to the base of the building like plastered walls, are prevalent in most of the traditional styles of the 5 environments. Openings are generally highlighted with motifs/colors and local art. While windows are often small and rectangular; coastal plains display use of larger arch shaped openings.



Materials, Colors & Art

The guidance for materials, colors and art aims to achieve and contribute to the contemporary interpretation of Aseer architecture through factors like quality of new materials, proportion of materials and colors, material and color palettes responding to the traditional architecture and region, hierarchy of material use on floors and use of art in different elements.

The general context for materials, colors and art in Aseer: the materials used in traditional architecture of Aseer were dependent on the geography and local availability of stone and mud. Traditional buildings were typically made of mud bricks or clay or stones used overlapping with clay layers in wadi regions and inland deserts and stones in escarpments and mountainous regions. Local art patterns were used to highlight entrances, windows and also on the interior walls.



Layout & Open Space

In contemporary parameters the layout and open space factors described earlier and in the adjacent table for different regions, should translate in the following provisions.

Guidance

- Conservation and enhancement of environmental and cultural resources on site.
- Human-scale, socio-cultural and family values, with different levels of privacy.
- Walkable and non-car dominated environments. Parking should not be the dominant feature of the open space composition.
- Streets with attractive public realm encouraging non motorized transport.
- Propose a land use-responsive morphology promoting a mix of uses.
- Creating a sense of place by promoting spatial enclosure.
- Provide car free and attractive frontages.
- Planning should respect the natural terrain, climate and enhance the ecology.
- Provide variety and hierarchy of open spaces.
- Sustainability in all dimensions.

Standards

- Min.20% usable landscaped open space per plot shall be required.
- Large blocks (>120m in any direction) shall provide mid-block passages for walkability.

5 Natural Environments	Learnings from Traditional Typologies
Coastal Plains	<ul style="list-style-type: none"> • Openings on buildings mainly oriented towards northeast to bring in the breeze. • Internal courtyards with large openings.
Tuhama Plains	<ul style="list-style-type: none"> • Clustered houses together with narrow alleys and fewer open spaces. • Internal courtyards and terraces can function as open spaces within the housing cluster.
Escarpments	<ul style="list-style-type: none"> • Settlements are spread across valley areas and patterns differ based on the location within the topography. • Urban fabric in the hills is compact and buildings are adjacent without large spaces between them, with narrow winding alleyways.
Sarwat Mountains	<ul style="list-style-type: none"> • Compact settlement pattern form with narrow, zigzagged alleys and hierarchy of open spaces. • Introverted house types built around courtyard(s) for micro-climate and privacy reasons.
Inland Desert	<ul style="list-style-type: none"> • Compact house design with shared sidewalls (up to three sides) shading one another. • Massing is interspersed with internal courtyards for thermal comfort. The layout of buildings are distributed around one or more courtyards.



Attractive public realm



Internal courtyards providing privacy



Permeable and compact built form



Layout respecting the natural terrain

Figure 116 Layout and open space organization

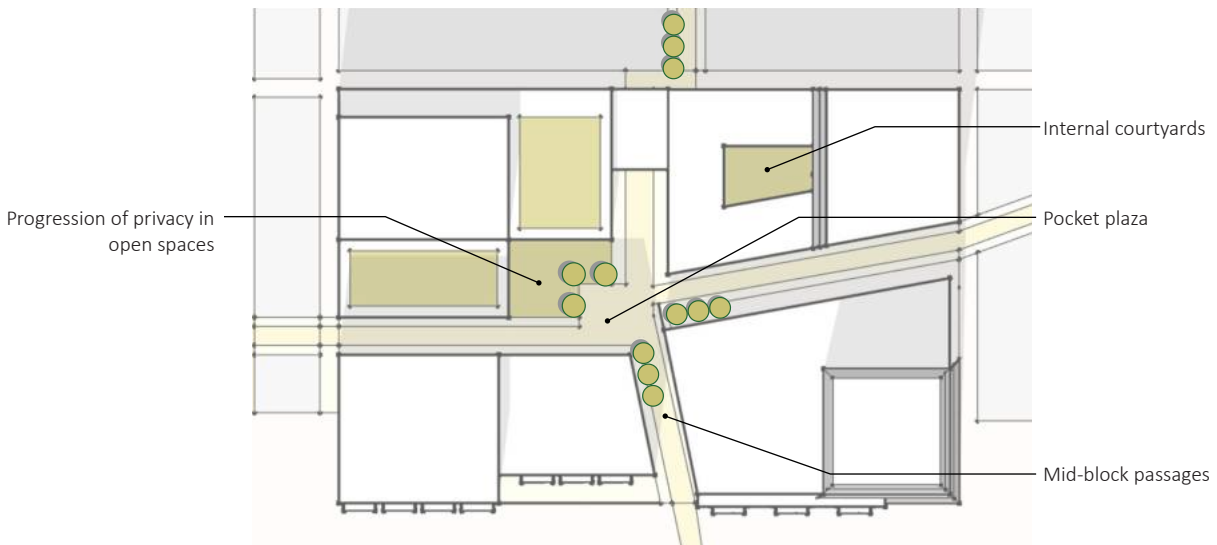


Figure 117 Building block layout articulation, human scale, use of rotated grids and mid-block passages



Figure 118 Indicative aggregate layout and open space



Massing & Design

In contemporary parameters the massing and design elements described earlier and in the adjacent table for different regions, should translate in the following provisions.

Guidance

The massing and design of new buildings should focus on

- Contextual and human scale massing that responds to the immediate context and to the history of the place.
- Compact form and strong geometric forms.
- Provide a well-balanced variety that adds to the skyline.
- Masses that are broken into horizontal and vertical volumes, with alternation of solid and openings.
- Flat roofs.
- A plain, simple and elegant style, with a sober exterior hiding abundance and arts within.
- An architectural vocabulary that celebrates the traditional sub-regional architecture as defined by the 5 natural environments.

Standards

- A compact form with a typical height of 4 story, also to correspond to immediate context shall be preferred.
- Avoiding large building massing; typically, floor plates larger than 40m shall be broken by means of breaks and/or recessed to introduce variation and foster human scale.

5 Natural Environments	Learnings from Traditional Typologies
Coastal Plains	<ul style="list-style-type: none"> • Massing broken into vertical volumes. • Soft and simple but articulated with openings. • Flat roofs.
Tuhama Plains	<ul style="list-style-type: none"> • Massing broken into horizontal volumes built on slopes using terracing. • Soft and simple but articulated, sculptural building forms. • Flat roofs.
Escarpments	<ul style="list-style-type: none"> • Massing broken into vertical volumes. • Flat roofs. • Balconies are provided on upper floors.
Sarwat Mountains	<ul style="list-style-type: none"> • Massing broken into vertical volumes. • Flat roofs. • Balconies are not used.
Inland Desert	<ul style="list-style-type: none"> • Massing broken into horizontal and vertical volumes. • Alternation of solid masses and openings. • Flat roofs.



Vertical and horizontal massing



Traditional elements to strengthen identity



Design respecting the natural terrain
Source: Sancaklar Mosque / Emre Arolat Architects, © Thomas Mayer



Strong geometries
Source: ASDA, Abha & Asir Urban Study

Figure 119 Massing and design organization

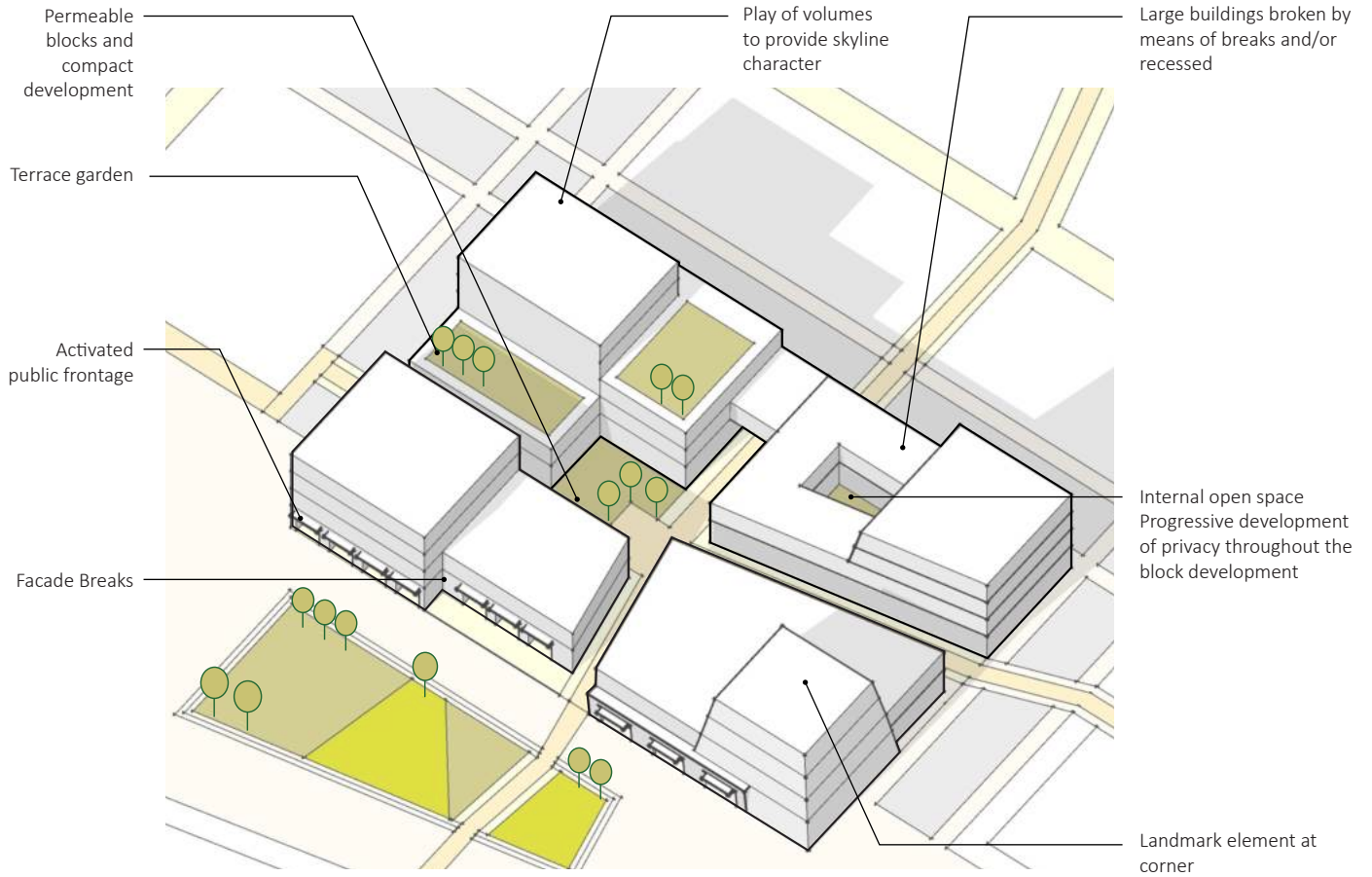


Figure 120 Massing articulation and playfulness, human scale, use of elongated solids alternated with voids



Figure 121 Indicative aggregate massing and design



Frontages & Openings

In contemporary parameters the frontage and opening factors described earlier and in the adjacent table for different regions, should translate in the following provisions.

Guidance

The frontages and opening of new buildings should focus on:

- External solid walls that are grounded to the street level.
- A facade design that is integral to all public sides (i.e. with the same level of design quality and a consistent treatment).
- A plain, simple and elegant style.
- Small windows of simple geometry.
- Facades that are articulated by finishes, breaks, material banding, recessed entries, fenestration pattern, projections.
- Horizontal and vertical breaks.
- An architectural vocabulary that celebrates the traditional sub-regional architecture (i.e. small windows, typical facade elements, flat roofs, courtyards).
- High quality interface between the building and the street, with active frontages between ground floor and main street to be emphasized.
- Design to ensure privacy of neighboring residential buildings.
- Screening spaces and devices to provide privacy and protection from the weather (i.e. sun, rain).
- Combination of traditional architectural elements with contemporary parameters and new technologies.
- Loggias to be incorporated in the frontages and preferred over abutting balconies.
- Occasional use of colonnades (sculptured columns) and recesses for pedestrian micro-climate comfort (specially in Inland Deserts).

5 Natural Environments	Learnings from Traditional Typologies
Coastal Plains	<ul style="list-style-type: none"> • Larger openings (often screened for privacy) oriented towards west bringing the gentle wind from the Red sea. • Openings do not cover more than 25-40% of the overall facade.
Tuhama Plains	<ul style="list-style-type: none"> • Colors used for highlighting the openings. • Larger openings oriented towards west and overall openings do not cover more than 25-40% of the overall facade.
Escarments	<ul style="list-style-type: none"> • Openings are highlighted with white plaster and decorative patterns to stand out in the dark masonry and stone wall. • Windows have wooden shutters painted with bright colors.
Sarwat Mountains	<ul style="list-style-type: none"> • Colors used for highlighting the openings. • Windows have wooden shutters sometimes painted blue or green.
Inland Desert	<ul style="list-style-type: none"> • Limited small and high positioned openings primarily for thermal comfort. Large openings facing the internal courtyards. • Arcades/colonnades are frequently used on ground floor for shading purposes.

- MEP equipment, utilities, delivery, refuse containers, etc. screened by parapets or located underground / internalized.
- Well-integrated building signage (i.e. form, proportion, scale, color, material, surface, size of sign and lettering).
- Landmark buildings/special use buildings may have special opening features subject to permission from the authorities.

Standards

- Generally, openings shall have a maximum share of 30 to 50% of the overall façade surface, according to their solar and wind exposure.
- Facade breaks shall be provided minimum every 40m of facade length.



Active street edge facades, material bands



Facades integral to all sides
Arlington Grove, ©Ross Honeysett

Figure 122 Facade frontages and openings organization



Figure 123 Façade articulation as process of carving out from solid elements - indicative facade design for Sarwat mountains environment



Source: Taller ACÁ + Little Coins



Source: ASDA, Abha & Asir Urban Study



Source: ASDA, Abha & Asir Urban Study



Source: ASDA, Abha & Asir Urban Study



Source: ASDA, Abha & Asir Urban Study



Source: Avenir Cornejo Architectes © T. Shimmura

Figure 124 Techniques for opening articulation



Architectural Elements & Construction Technique

In contemporary parameters the architectural elements and construction techniques described earlier and in the adjacent table for different regions, should translate in the following provisions.

Guidance

The architectural details and construction techniques of new buildings should focus on:

- A plain, simple and elegant style.
- Respond to different climatic conditions (i.e. shading strategy and use of non-reflective surfaces, wind directions, rain harvesting, green roofs).
- Using traditional building techniques and materials, or their contemporary adaptation (i.e. limestone, mud colored plaster, beige metal/ high-pressure laminate HPL cladding).
- A vocabulary of details that celebrate the traditional sub-regional architecture.
- Combining traditional architectural elements with contemporary and new technologies.
- Occasional use of colonnades along public frontages such as in Inland desert environment.

5 Natural Environments	Learnings from Traditional Typologies
Coastal Plains	<ul style="list-style-type: none"> • Arched windows are prevalent in this style of architecture. • Flat roofs with parapets articulated with pointed corners.
Tuhama Plains	<ul style="list-style-type: none"> • Naturally available stone placed diaper masonry where gaps are filled with chips of small rocks is a unique feature. • Flat roofs with white painted parapets articulated with pointed corners or stepped crenelations. • Water spouts.
Escarpments	<ul style="list-style-type: none"> • Occasionally, the parapets extrude out of the facade forming overhangs for openings. • Doors and windows highlighted with painted beams, colored shutters, white plaster and decorative motifs.
Sarwat Mountains	<ul style="list-style-type: none"> • Inclined walls with rows of slate inserted into walls at equal intervals is a unique feat. • Bunker style holes. Small number and narrow openings higher on external facade.
Inland Desert	<ul style="list-style-type: none"> • Elaborate parapets with stepped or pointed parapet walls.



Use of arcades (Coastal Plains)
Source: Segond-Guyon Architectes, @Studio Erick Saillet



Use of colonnades (Inland Deserts)



Articulated parapets



Colorful windows and opening frames

Figure 125 Massing and design organization



Figure 126 Elements of the traditions are used in a contemporary and innovative way to create an interesting skyline - indicative use of elements in Sarwat mountains environment



Source: Herzog & de Meuron, Tate Modern Switch House

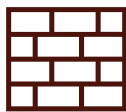


Source: ASDA, Abha & Asir Urban Study



Source: ASDA, Abha & Asir Urban Study

Figure 127 Contemporary interpretation of traditional elements of architecture- e.g. interpretation of Al-Ragaf style (horizontal elements) and use of motifs



Materials

Guidance

The use of construction materials for new buildings should focus on:

- Materials finishes and colors treatment that is integral to all sides.
- Solid materials and clear shaped geometries.
- Use of locally available traditional materials.
- Materials that convey a sense of quality and durability and that are able to retain their appearance over time.
- High-quality durable materials used for lower and upper floor public facades. Since the lower part of a building, typically the first 4 levels, have the greatest visibility at ground level and while driving, its materials should be of enhanced quality and durability.
- Changes of exterior color, texture or material may be used to reinforce the architectural formal idea and are best accompanied by changes in plane or occur at an inside corner (i.e. at vertical recesses, or horizontal step-backs), or accommodated via architectural detailing, such as gaps, or other changes in plane.

Standards

- Typically the use of min. 50% of facade treatment with one consistent material shall be required.
- Typically, the use of metal cladding and curtain walls shall be limited to 10% of the total facade area.

5 Natural Environments	Learnings from Traditional Typologies
Coastal Plains	<ul style="list-style-type: none"> • Stone, clay and gypsum plaster are materials used in coastal areas. • Typical colors are mainly shades of beige, brown, orange and white derived from locally available natural stone (black volcanic rock), sand and white coral from sea.
Tuhama Plains	<ul style="list-style-type: none"> • Combination of stone masonry and plastering is characteristic. • Typical colors of locally available natural stone, mainly shades of beige, brown and dark brown and complementary colors derived from the landscape of Tuhama plains and wadis.
Escarpmnts	<ul style="list-style-type: none"> • Local stone is dominant within the escarpments. • Typical colors of locally available natural stone, mainly shades of beige, brown and dark brown and complementary colors derived from the landscape of escarpments and wadis.
Sarwat Mountains	<ul style="list-style-type: none"> • Slate rows inserted into walls to protect from rain. • Typical colors of locally available natural stone, mainly shades of beige, brown and orange and complementary colors derived from the landscape of Sarwat mountains.
Inland Desert	<ul style="list-style-type: none"> • Typical colors are mainly shades of beige, brown and yellow derived from locally available natural stone, mud and sand. • Complementary colors derived from the landscape features of inland deserts like vegetation and boulders.



Limited use of contemporary frames matching color and material palette



Durable materials



Use of stone adhering color palette



Use of local materials in landscape design

Figure 128 Material usage and organization

Recommended Materials

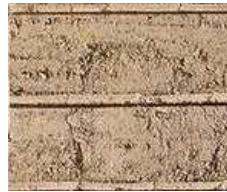
Guidance

Recommended materials are those durable and quality materials that give the building a sense of authenticity, weight, texture, and mass, such as:

- Precast concrete or poured-in-place concrete.
- Unitized ceramic panels.
- Limited use of high-quality metal panels.
- Mud brick (full or face brick).
- Rammed earth.
- Cementitious panel siding.
- Green walls.
- Smooth plaster.
- Tile.
- Terrazzo.
- Stone veneer.
- Low reflectivity glass.
- Durable tensile fabric for shading structures.
- Other durable, high-quality materials.



Local stone



Rammed earth

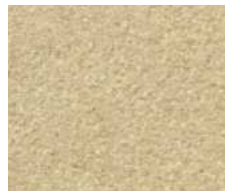
Compressed mud bricks

Adobe

Plaster



Shell limestone



Concrete



Limited use of metal cladding

Tensile fabric

Figure 129 Recommended materials

Discouraged Materials

Guidance

Use of low-quality building materials and elements are discouraged, such as:

- Plywood siding.
- T-1-11 siding.
- Vinyl siding.
- Thin layers of stone or unit masonry that appear veneer-like.
- Plaster.
- Stucco, and/or EIFS panelized systems.



Vinyl siding



EIFS paneling



Aluminum cladding



Poorly plastered surface



Corrugated sheets

Figure 130 Discouraged materials



Location: Tanoumish, Assam



Colors & Art

Guidance

The use of colors for new buildings shall focus on:

- A colors palette that is derived from the local traditional materials and nearby landscape as described for each of the 5 natural environments and sub-zones in chapter 1 of this document.
- Use of recommended earth tone color palette for building facades, walls, fences, shading structures and/or canopies.
- A limited palette to a spectrum of natural colors which perfectly harmonize with one another.
- A color palette deriving from the same color family (i.e. brownish and beige).
- Non-reflective surfaces avoiding glare.
- Extremely limited use of bright colors. Intensified and/or contrasting colors shall be reserved for accentuating important elements, such as entries, arcades, or openings.
- Proposing a contemporary interpretation of local art in the facade treatment, public realm and hardscape elements.
- Art pattern to reinforce the architectural formal idea, accentuate openings, entrance areas, for special architectural elements and to enhance a blank facades.

Standards

- For all public frontages, typically, 70% range of the project's colors palette shall be composed by maximum two gradations of earth tones, with a maximum of 20% of the total composition reserved for darker tones.

The following pages derive the earth tone and complementary tone color palette for the 5 natural environments.



Use of complementary colors (Max. 20%)



Use of complementary colors for highlight
Source: f+f architectes, © Camille Gharbi



Use of complementary colors for highlight
Source: R+D Studio, © Edmund Sumner



Use of complementary colors for elements
Source: Taller ACA + Little Coins, © Topofilia Studio - Doris Trejo



Use of local art for facade articulation



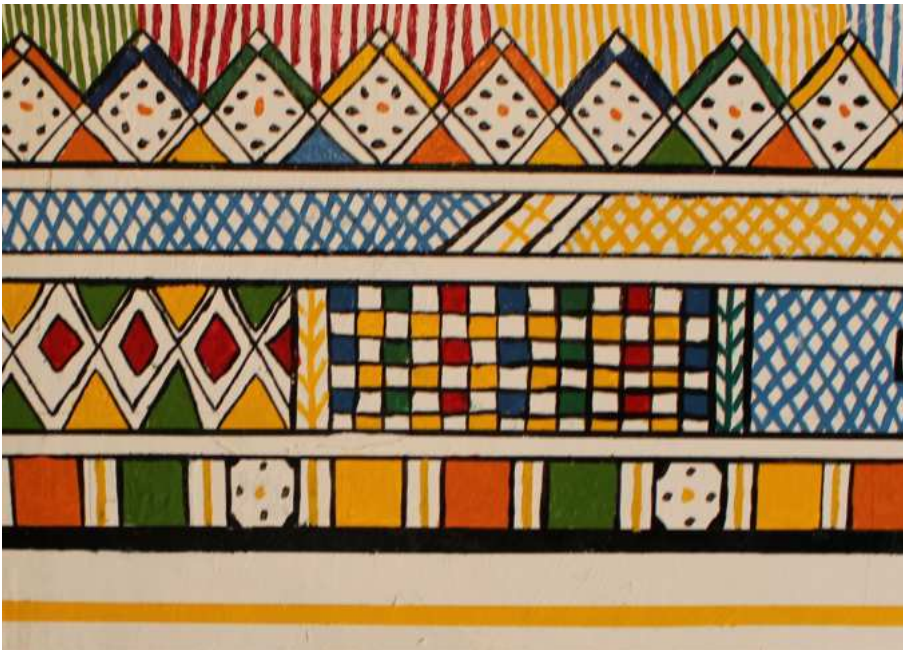
Traditional style of art in Abha city



Patterns, geometries and colors used in local art



Figure 131 Colors and art related organization



Colors and patterns used in local art



Use of landscape to derive complementary colors and using the same in facade articulation

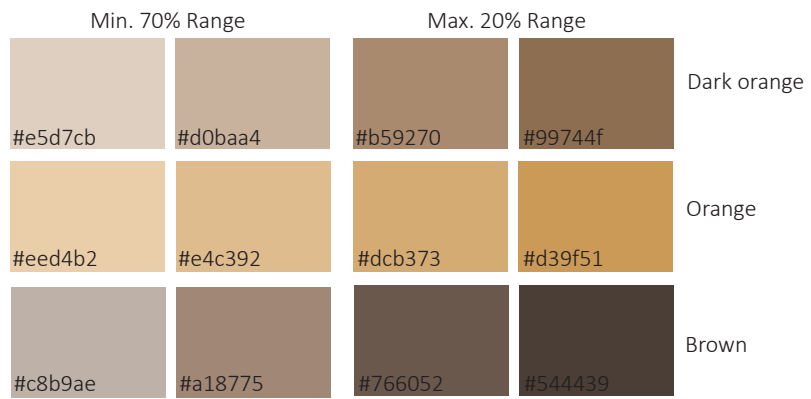
Figure 132 Use of local art styles and complementary colors derived from nature are recommended

Coastal Plains



Location: Al Birk

Earth Tone Color Palette



Location: Al Birk

Complementary Tone Color Palette

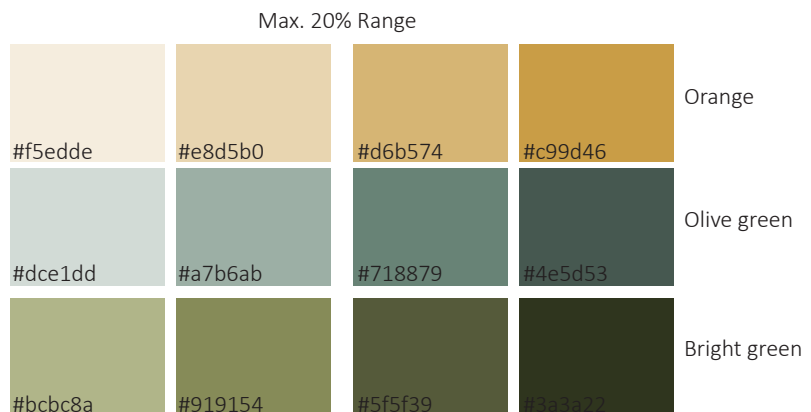
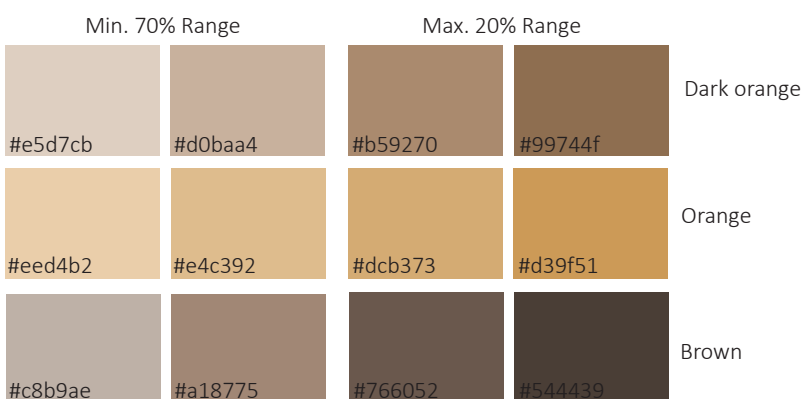


Figure 133 Recommended color palette - Coastal plains

Tuhama Plains



Earth Tone Color Palette



Complementary Tone Color Palette

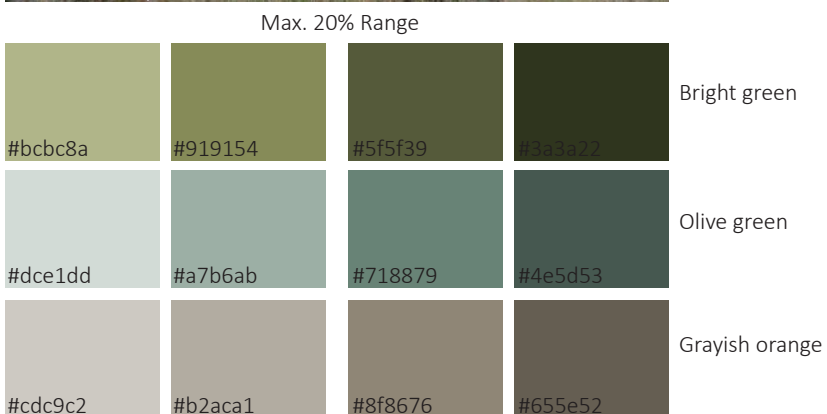
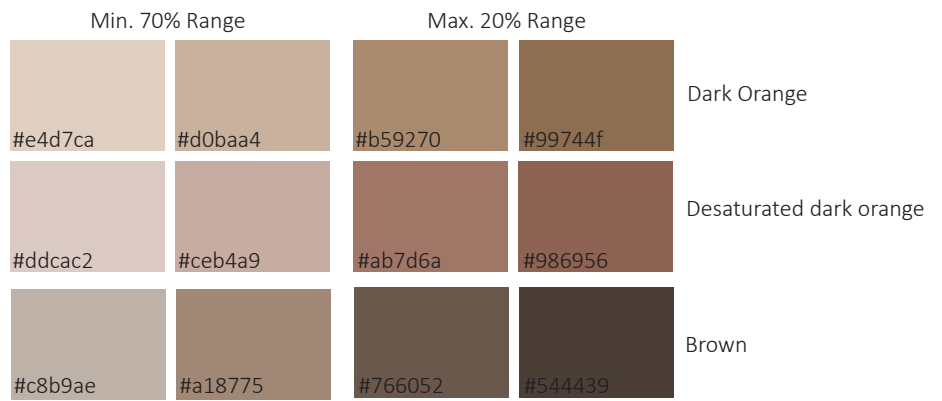


Figure 134 Recommended color palette - Tuhama plains

Escarpments



Earth Tone Color Palette



Complementary Tone Color Palette

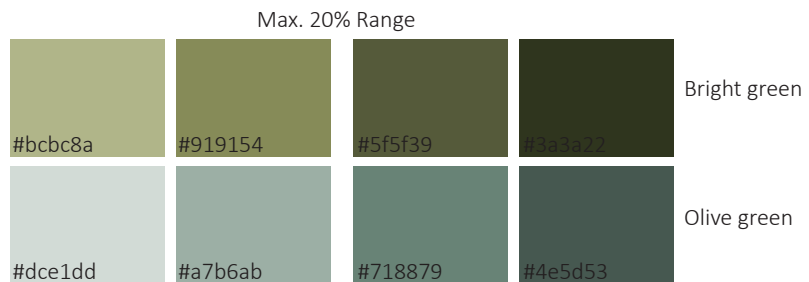


Figure 135 Recommended color palette - Escarpment

Sarwat Mountains



Location: Dhahran Al Janoub

Earth Tone Color Palette

Min. 70% Range		Max. 20% Range		
#efe8d9	#d5c3a2	#cab387	#b19251	Dark moderate orange
#dbcec5	#bda694	#9f7d62	#7c614c	Brown
#d2cfca	#b7b3aa	#9e988c	#756f63	Greyish orange
#c6ab8a	#b69267	#8c6b44	#6a5133	Dark orange



Location: Dhahran Al Janoub

Complementary Tone Color Palette

Max. 20% Range				
#c8cfd3	#9ca9b1	#70838e	#56656d	Navy
#dce1dd	#a7b6ab	#718879	#4e5d53	Olive green
#bcbc8a	#919154	#5f5f39	#3a3a12	Bright green

Figure 136 Recommended color palette - Sarwat mountains

Inland Deserts



Location: Tathleeth

Earth Tone Color Palette

Min. 70% Range		Max. 20% Range		
#e0d8c6	#d1c2a5	#c0ab85	#ae9464	Beige
#c6ab8a	#b69267	#8c6b44	#6a5133	Brown
#ecdfd3	#e4d3c0	#d3ba9d	#c2a079	Desaturated orange
#d7ad7b	#c78840	#7d5525	#553919	Dark orange



Location: Tathleeth

Complementary Tone Color Palette

Max. 20% Range				
#dce1dd	#a7b6ab	#718879	#4e5d53	Olive green
#bcbcb8a	#919154	#5f5f39	#3a3a22	Bright green
#cdc9c2	#b2aca1	#8f8676	#655e52	Grayish Orange

Figure 137 Recommended color palette - Inland desert

Al-Qatt Al-Aseeri

Al-Qatt Al-Aseeri is a traditional art that is unique to Aseer region. Perfect murals, geometric motifs and choice of colors derived from the picturesque Aseer nature are characteristic features of this art-form. Al-Qatt art was also recognized by the UNESCO Intangible Heritage List in 2017. The colors are prepared from colored materials extracted from natural ingredients to form a fine powder and then mixed with Arabic Gum to ensure longevity.

- Following are the traditional sources of major colors for Al-Qatt:
 - White gypsum used as a base.
 - Black color from charcoal with additional wax.
 - Red color from Meshiga stone
 - Blue color was derived from indigo
 - Yellow color was made from turmeric.
- The motifs and patterns vary according to different geographical Aseer locations.
- Stripes, triangles, squares along with palm leaves and flower shaped motifs are commonly used.
- Al-Qatt Al-Aseeri using the traditional color palette and motifs may be used in contemporary architecture to impart a strong sense of Aseer regional identity.

Standards

- In general, the range for intensified and/or contrasting colors and art shall be within 10%.



Max. 10% Range

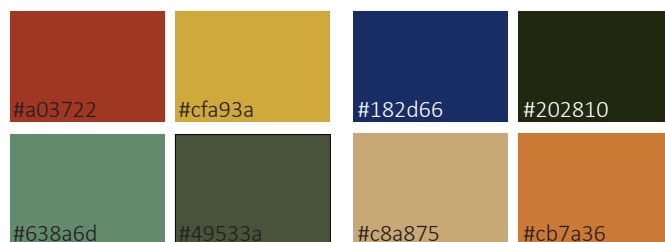


Figure 138 Traditional color palette - Al-Qatt Al-Aseeri

2.3 Architectural Elements to be Avoided

New Aseer contextual architecture will need to be more than a mere preservation of historic buildings and traditions of the past. It will need to avoid any unskillful use of neo-traditional architectural elements in contemporary building, not reflecting the genuine local identity and the spirit of the time.

Therefore, the following architectural trends cannot be considered as a genuine interpretation of Aseer contextual architecture and shall be generally avoided:

- Mere replicas of traditional historic and vernacular buildings.
- Transplant of modernism Western or Eastern styles, unrelated to Aseer local, social, economic, and environmental context.
- A neoclassic/modern eclectic and colorful style unrelated to Aseer local social, economic, and environmental context.
- Neo-traditional architectural elements or decorations not reflecting the genuine local identity of the 5 natural environments of Aseer and their sub-zones.
- Modern commercial style architecture featuring full-wall glazing, highly reflective, mirrored, heavily tinted and opaque glazing, or with extensive use of metal cladding.
- Glass facades and metal cladding should be generally avoided, minimized and used with environmental thoughtfulness.
- Non contextual bright colors not adhering to the color palette.
- Built form disregarding the natural terrain and topography with insensitive design like large retaining walls.
- Overbearing signage causing visual clutter.



Figure 139 Mere replicas of traditional architecture



Figure 140 Use of excessive glazing, aluminum cladding and inapt use of architectural elements



Figure 141 Bright colors not matching the color palette



Figure 142 Incorrect use of traditional elements & colors



Figure 143 Excessive glazing overwhelming the replica of traditional massing and design



Figure 144 Replica not reflecting the traditional style



Figure 145 Use of excessive glazing & cladding



Figure 146 Use of excessive glazing & cladding



Figure 147 Excessive use of cladding and inapt colors



Figure 148 High retaining walls



Figure 149 Chaotic facades with overwhelming signage

2.4 Examples of Guidelines Application to Different Building Types

A. Residential - Single Family

Example of typical single family residential typology in Abha city.



Proposed Compositional Elements



Layout and Open Space

- 20% of usable open space (landscaped area) is available within the residential plot.
- High level of privacy is ensured by an integrated approach on the orientation, positioning, and design of windows, other openings, shading elements and compound walls.
- Enclosure of compound walls/screens allows for ample private outdoor space and semi public space at front for social interactions.
- Automobile space is minimized along main frontage.
- Subdivision allows for high permeability, variety of block patterns, mixed use nodes and accessible network of open spaces.



Massing and Design

- Design elements combine traditional architectural elements with contemporary parameters.

- Massing is sculpted to avoid big bulky structures and to respond to immediate context.
- Large floor plates are broken down.
- The roof-line is well delineated.



Frontages and Openings

- Blank or purely utilitarian facades along public frontages are avoided.
- Compound walls are well articulated and not more than 3m in height.
- Openings have a maximum share of less than 50% of the overall facade area.
- Glass facades, reflective, mirrored, tinted and opaque glazing are not used.
- Utilities and mechanical equipment are screened from view and integrated in architectural design.



Architectural Details and Construction Techniques

- Horizontal and vertical architectural variations are applied to break down scale and massing. Alternation of different textures, colors, materials, and distinctive architectural treatment.



Materials, Colors and Art

- Min. 50% of facade treatment is of 1 consistent material.
- 70% range of the color's palette is composed of light gradations of earth tones, with a maximum of 20% of the total composition reserved for stronger gradations and complementary colors.
- Art pattern are used to reinforce the architectural formal idea, accentuate openings, entrance areas and architectural elements.



Figure 150 Example A- single family villa

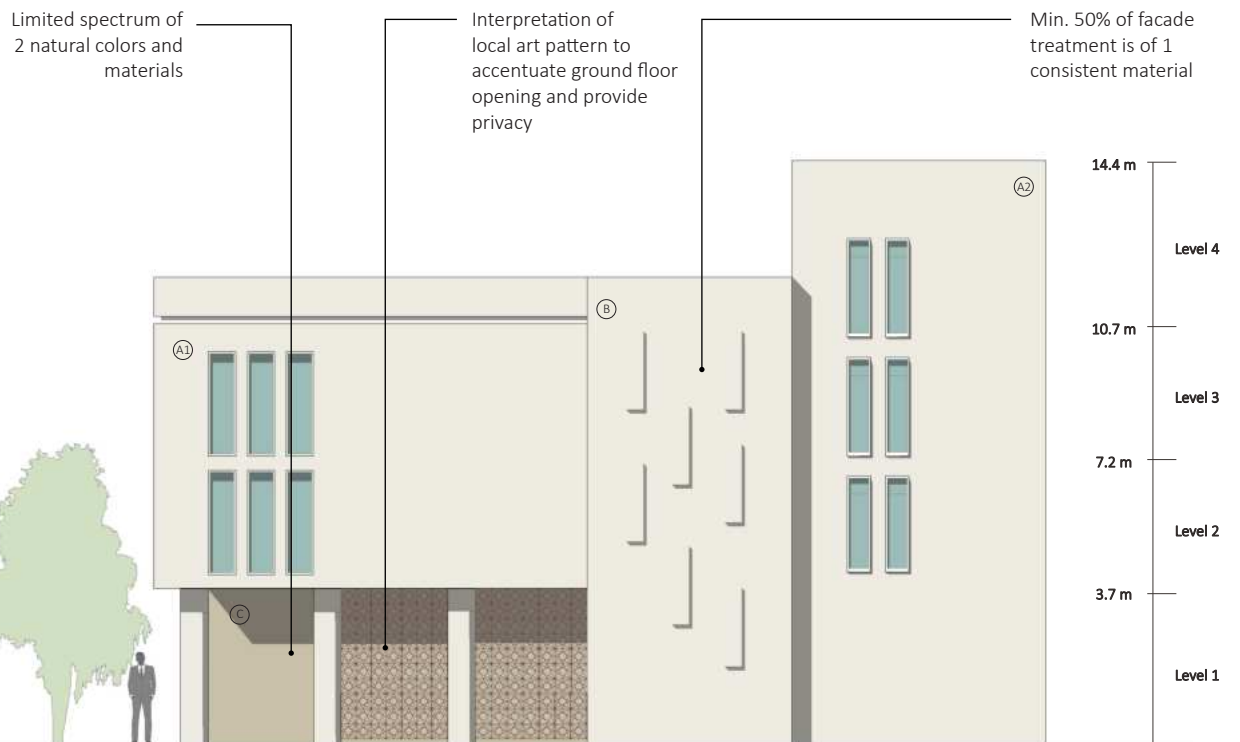


Figure 151 Example B- single family villa



B. Residential – Multifamily

Low-Rise / Mid-Rise

Example of typical multifamily residential typology in Abha city.



Proposed Compositional Elements



Layout and Open Space

- Minimum 20% of usable open space (landscaped area) is available within the residential plot.
- Medium to high level of privacy is ensured by an integrated approach on the orientation, positioning, and design of windows, other openings and shading elements.
- Layout promotes continuity of street frontages.
- Open space along the plot frontage acts as a transition and interaction space for the residents.
- Automobile space is minimized along main frontage.
- Subdivision allows for high permeability, mixed use nodes and accessible network of open spaces.



Massing and Design

- Design elements combine traditional architectural elements with contemporary parameters.

- Massing is sculpted to avoid big bulky structures and to respond to immediate context.
- Large floor plates are broken down.
- The roof-line is well delineated.



Frontages and Openings

- Blank or purely utilitarian facades along public frontages are avoided.
- Openings have a maximum share of 50% of the overall facade area.
- Glass facades, reflective, mirrored, tinted and opaque glazing are not used.
- Utilities and mechanical equipment are screened from view and integrated in architectural design.



Architectural Details and Construction Techniques

- Horizontal and vertical architectural variations are applied to break down scale and massing.
- Alternation of different textures, colors, materials, and distinctive architectural treatments.



Materials, Colors and Art

- A limited spectrum of natural colors and materials is used.
- Min. 50% of facade treatment is of one consistent material.
- 70% range of the color's palette is composed of light gradations of earth tones, with a maximum of 20% of the total composition reserved for stronger gradations and complementary colors.
- Intensified and/or contrasting colors are used for accentuating important elements, such as entries, arcades and openings.

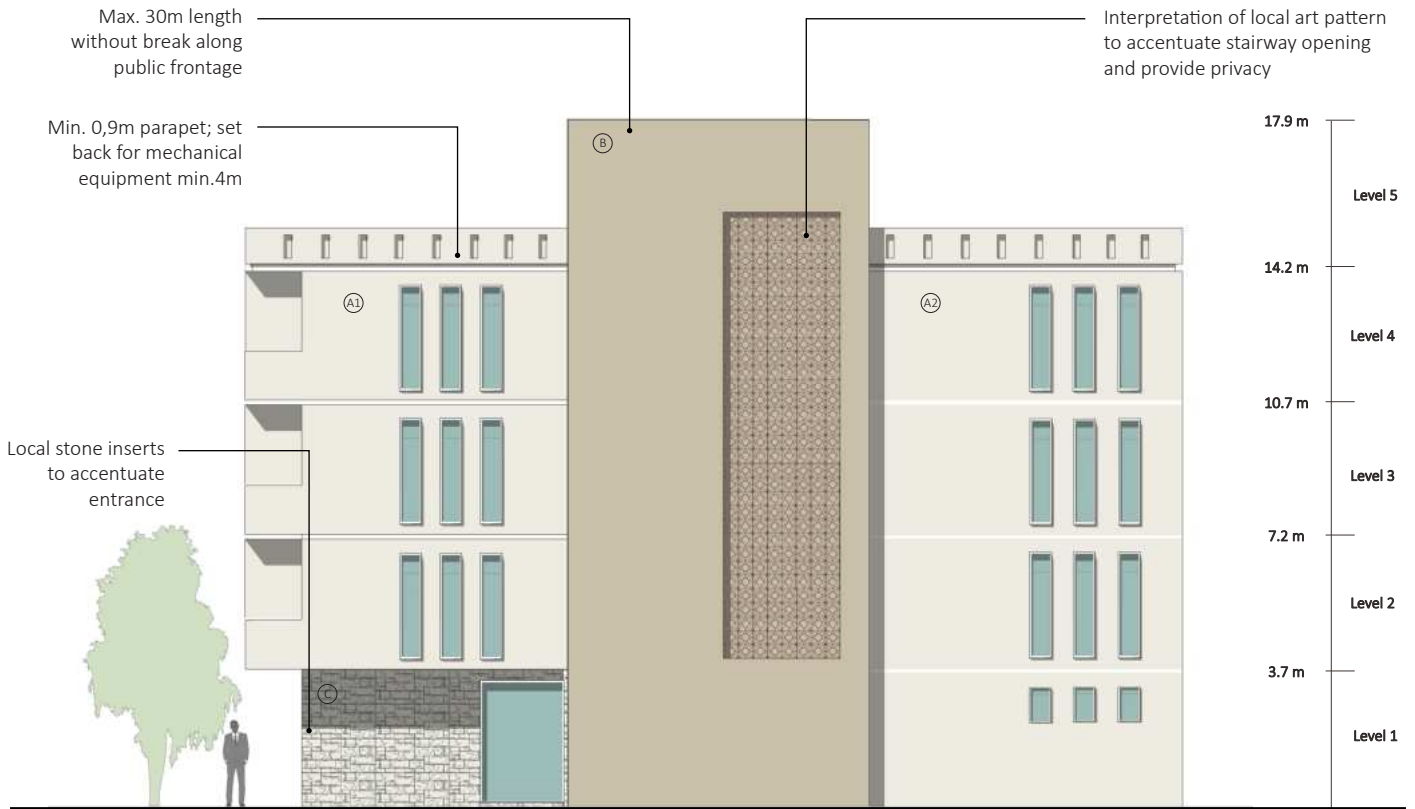


Figure 152 Example A- multi family house

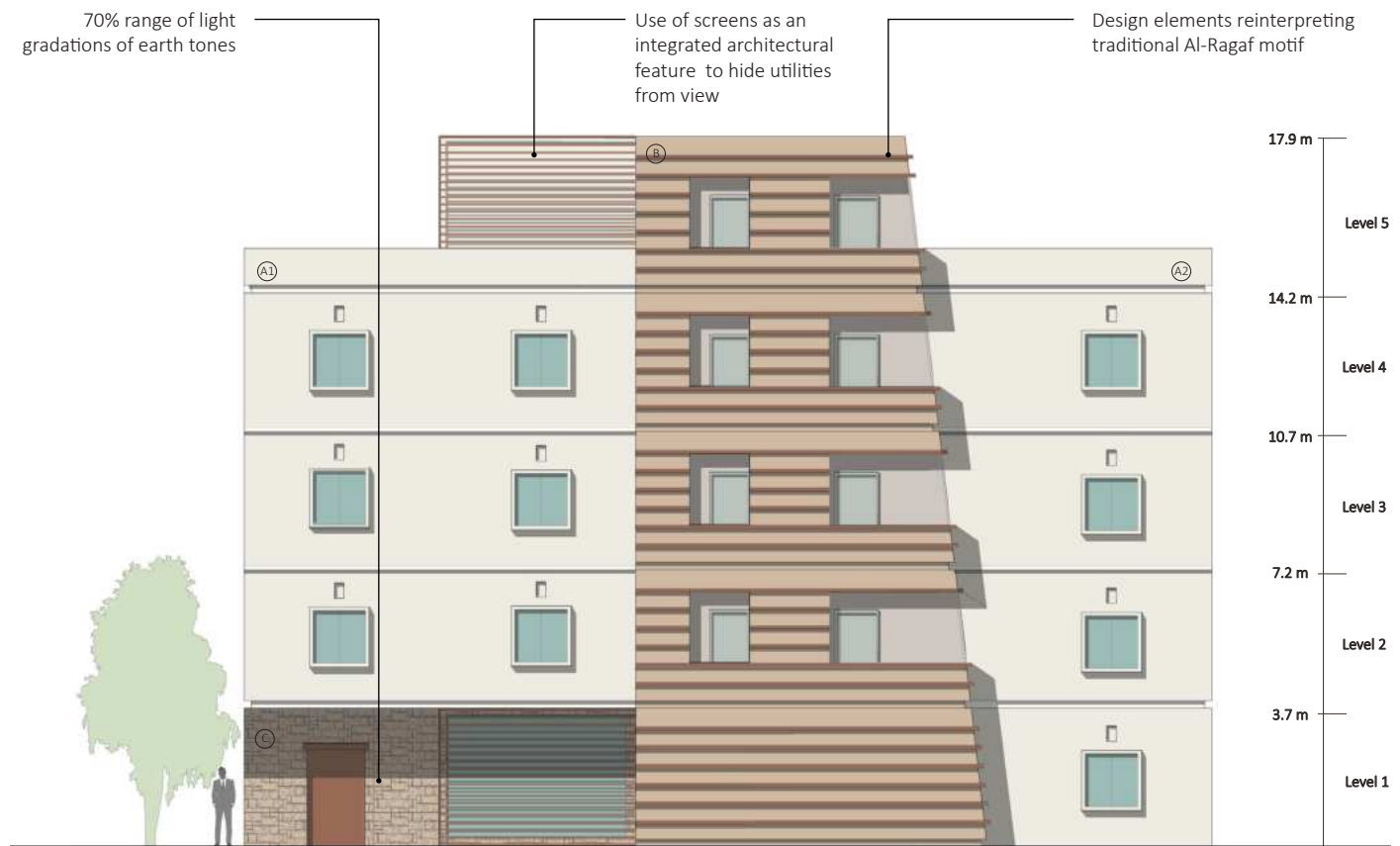


Figure 153 Example B- multi family house



C. Mixed-use Residential – Low-Rise / Mid-Rise

Example of typical low-rise mixed-use residential typology in Abha city.



Proposed Compositional Elements



Layout and Open Space

- Ground floor with retail is designed as an extension of the public realm.
- Minimum 20% of usable open space (landscaped area) is available within the commercial plot and oriented to add to the public realm.
- Medium to high level of privacy is ensured by an integrated approach on the orientation, positioning, and design of windows, other openings and shading elements.
- Layout promotes continuity of street frontages.
- Mix of uses and active ground floor frontages allow the public realm within the plot and along the street function as social spaces.
- Automobile spaces are minimized along main frontages.



Massing and Design

- Design elements combine traditional architectural elements with contemporary parameters.
- Large floor plates are broken down.
- The roof-line is well delineated.



Frontages and Openings

- Design treatment is integral to all public sides.
- Blank or purely utilitarian facades along public frontages are avoided.
- Openings have a maximum share of 50% of the overall facade area.
- Glass facades, reflective, mirrored, tinted and opaque glazing are minimized to less than 10% of total composition.
- Utilities and mechanical equipment are screened from view and integrated in architectural design.
- Signage is integrated in architectural design.
- Compound walls along main public frontages are discouraged.



Architectural Details and Construction Techniques:

- Horizontal and vertical architectural variations are applied to break down scale and massing.
- Interpretation of traditional architectural details/methods to allow active frontages like colonnades are used.
- Alternation of different textures, colors, materials, and distinctive architectural treatments provide scale and three-dimensional qualities, adding visual interest.



Materials, Colors and Art

- A limited spectrum of natural colors and materials is used.
- Min. 50% of facade treatment is of one consistent material.
- 70% range of the color's palette is composed of light gradations of earth tones, with a maximum of 20% of the total composition reserved for stronger gradations and complementary colors.



Figure 154 Example A- mixed-use residential building



Figure 155 Example B- mixed-use residential building



D. Mixed-use Commercial

Low-Rise / Mid-Rise

Example of typical low-rise mixed-use commercial typology in Abha city.



Proposed Compositional Elements :



Layout and Open Space

- Ground floor with retail is designed as an extension of the public realm.
- Minimum 20% of usable open space (landscaped area) is available within the commercial plot and oriented to add to the public realm.
- Progressive levels of privacy ensures privacy of neighboring residential buildings and allows social spaces within buildings. This is ensured by an integrated approach on the orientation, positioning, and design of facades.
- Layout promotes continuity of street frontages.
- Mix of uses and active ground floor frontages, landscaped setback and continuous public realm along streets allows for streets to act as social spaces.



Massing and Design

- Design elements combine traditional architectural elements with contemporary parameters.
- Large floor plates are broken down.
- The roof-line is well delineated.
- Landmark element at corners.



Frontages and Openings

- Blank or purely utilitarian facades along public frontages are avoided.
- Openings have a maximum share of 50% of the overall facade area.
- Glass facades, reflective, mirrored, tinted and opaque glazing are minimized to less than 10% of total composition.
- Signage is integrated in architectural design.
- Compound walls along main public frontages are discouraged.



Architectural Details and Construction Techniques

- Horizontal and vertical architectural variations are applied to break down scale and massing.
- Alternation of different textures, colors, materials, and distinctive architectural treatments provide scale and three-dimensional qualities, adding visual interest.
- Interpretation of traditional architectural details/methods to allow active frontages like colonnades are used.



Materials, Colors and Art

- Materials, finishes and color treatment is integral to all public sides of the building.
- A limited spectrum of natural colors and materials is used.
- High-quality local materials with solid and clear shaped geometries are used.
- Min. 50% of facade treatment is of one consistent material.
- 70% range of the color's palette is composed of light gradations of earth tones, with a maximum of 20% of the total composition reserved for stronger gradations and complementary colors.



Figure 156 Example A - mixed-use commercial building

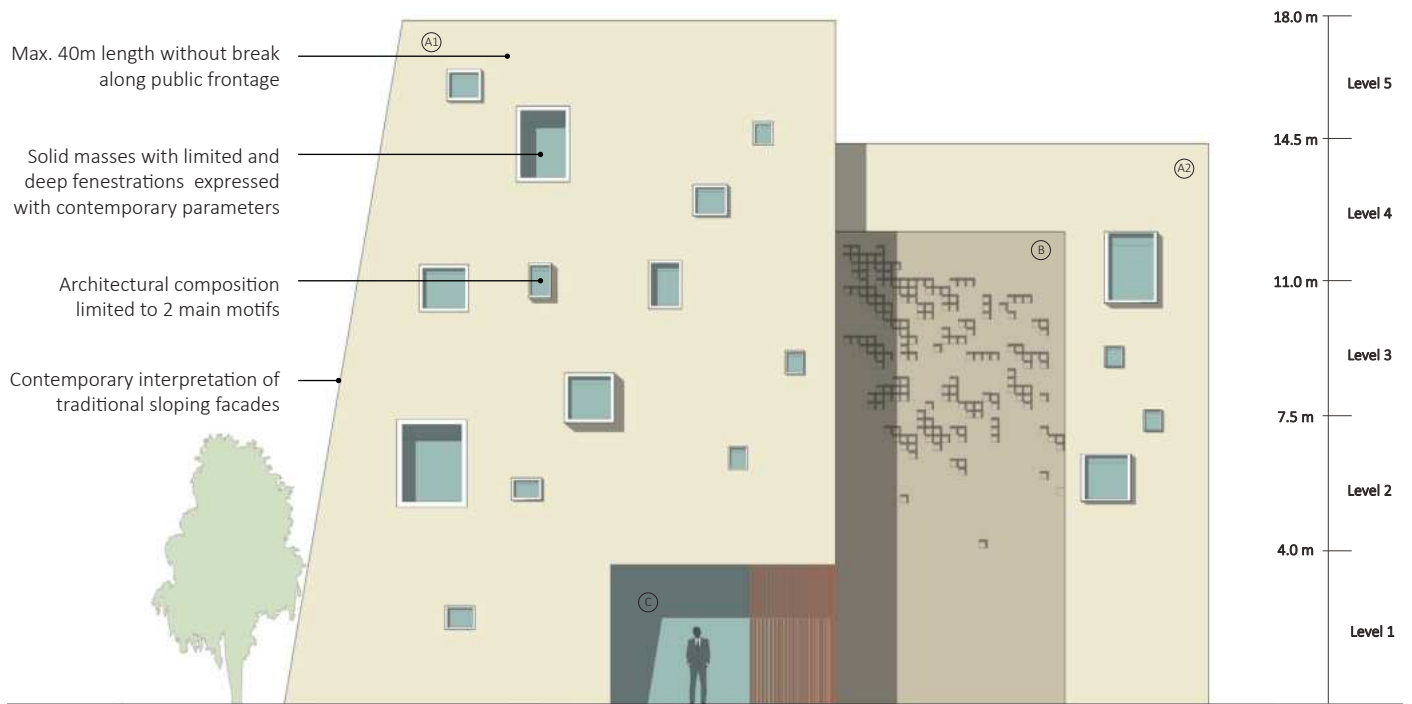


Figure 157 Example B - mixed-use commercial building



E. Commercial - Office

Example of new commercial/office typology in Abha city.



Proposed Compositional Elements



Layout and Open Space

- Ground floor is designed as an extension of the public realm.
- Minimum 20% of usable open space (landscaped area) is available within the commercial plot and oriented to add to the public realm.
- Automobile space is minimized along main frontages.
- Progressive levels of privacy ensures privacy of neighboring residential buildings and allows social spaces within buildings. This is ensured by an integrated approach on the orientation, positioning, and design of facades.
- Layout promotes continuity of street wall and frontages.
- Public realm within the setback and along the street function as social spaces.



Massing and Design

- Design elements combine traditional architectural elements with contemporary parameters.
- Large, elongated, boxy or slab like floor plates are avoided.



- Massing to enable contemporary interpretation of contextual building forms.
- The roof-line is well delineated.
- Tall elements are slender structure that enhance the skyline.

Frontages and Openings

- Blank or purely utilitarian facades along public frontages are avoided.
- Openings have a maximum share of 50% of the overall facade area.
- Glass facades, reflective, mirrored, tinted and opaque glazing are minimized to less than 10% of total composition.
- Utilities and mechanical equipment are screened from view and integrated in architectural design.
- Signage is integrated in architectural design.



Architectural Details and Construction Techniques

- Horizontal and vertical architectural variations are applied to break down scale and massing.
- Alternation of different textures, colors, materials, and distinctive architectural treatments.



Materials, Colors and Art

- Limited spectrum of natural colors and materials is used.
- Min. 50% of facade treatment is of one consistent material.
- 70% range of the color's palette is composed of light gradations of earth tones, with a maximum of 20% of the total composition reserved for stronger gradations and complementary colors.
- Intensified and/or contrasting colors are used for accentuating important elements, such as entries, arcades and openings.

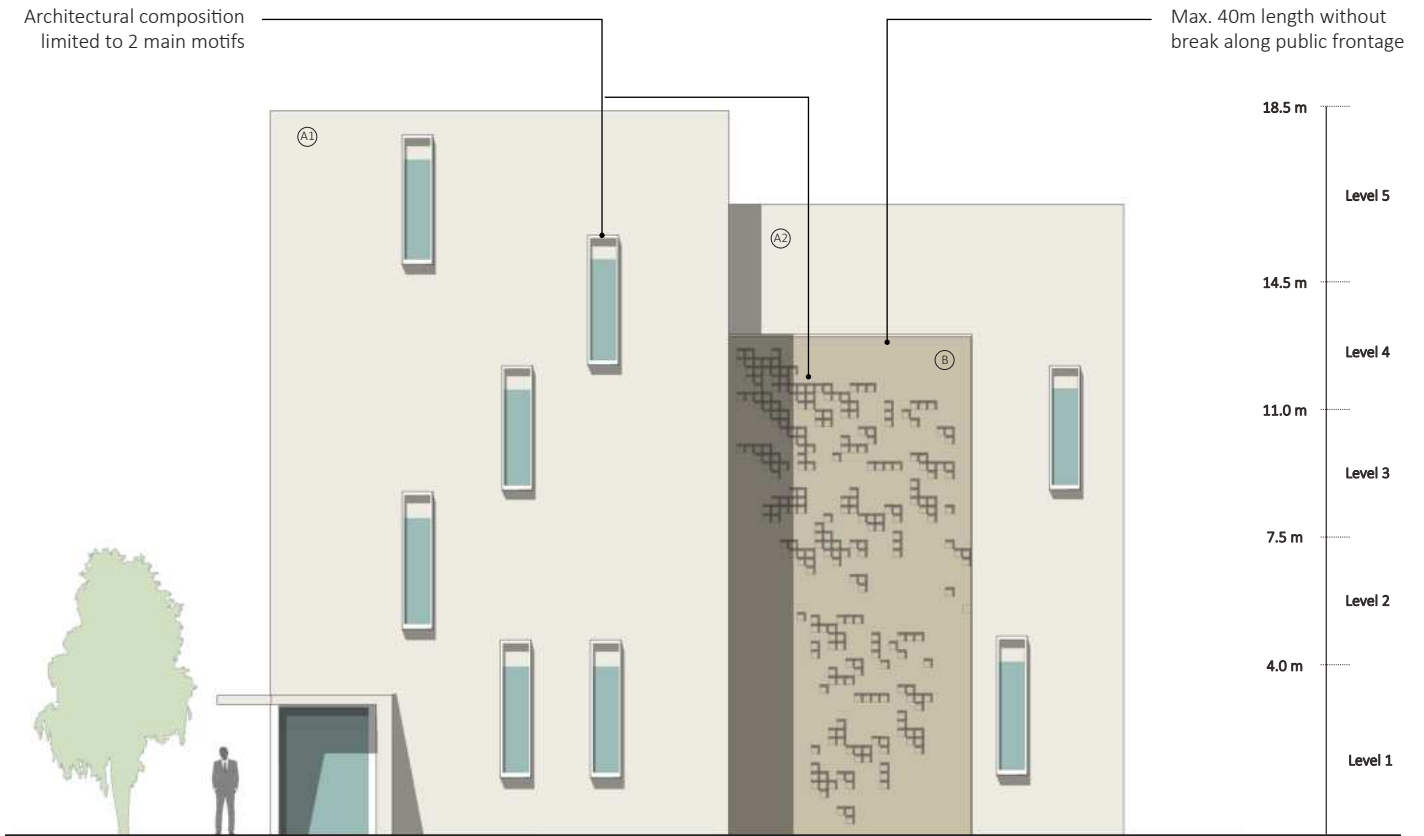


Figure 158 Example A - commercial office building

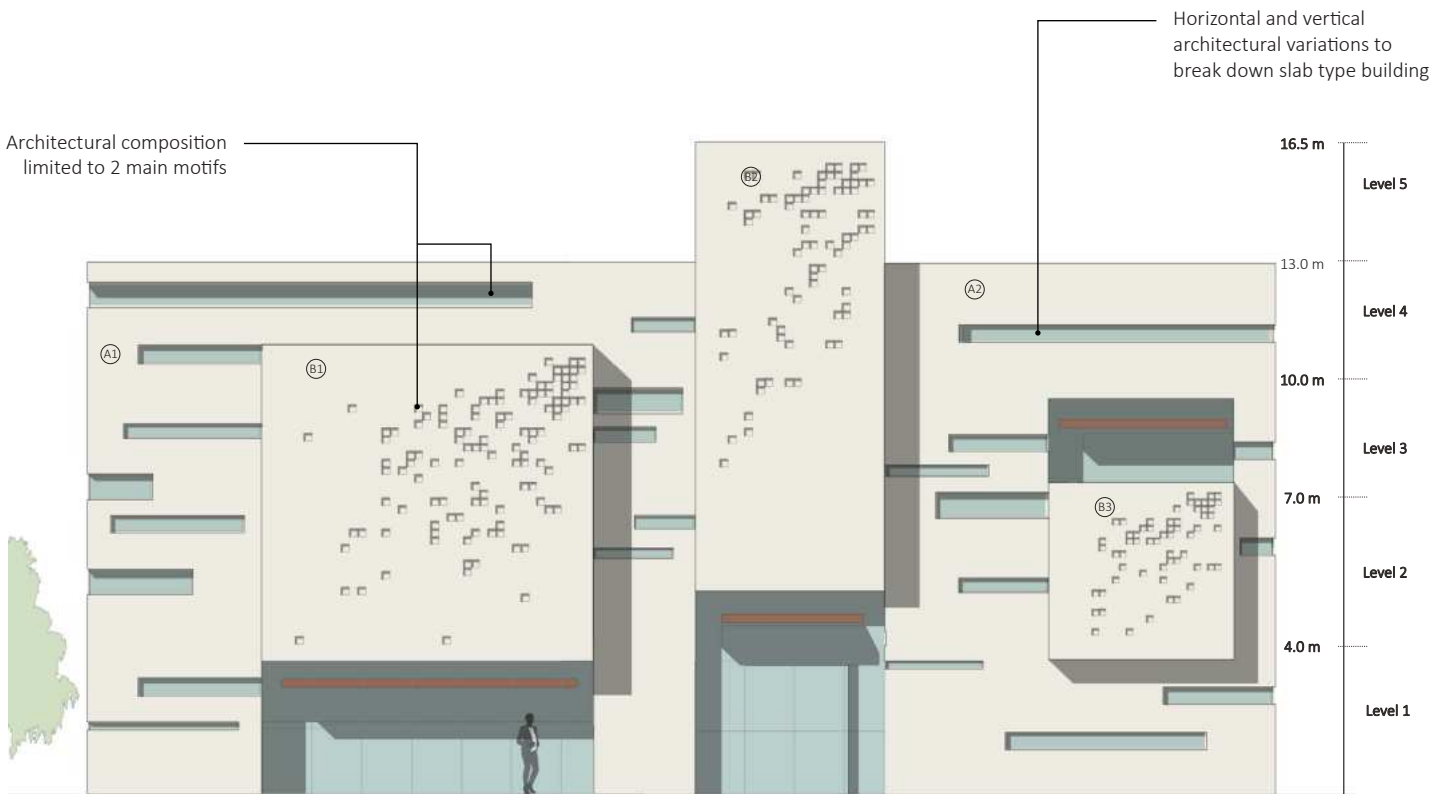


Figure 159 Example B - commercial office building



F. Civic Building - Mid Rise

Example of typical civic building typology (library) in Abha city.



Proposed Compositional Elements



Layout and Open Space

- Ground floor is designed as an extension of the public realm.
- Minimum 20% of usable open space (landscaped area) is available within the commercial plot and oriented to add to the public realm.
- Progressive levels of privacy ensures privacy of neighboring residential buildings and allows social spaces within buildings. This is ensured by an integrated approach on the orientation, positioning, and design of facades.
- Layout promotes continuity of street wall and frontages.
- Open spaces oriented along the frontages act as public realm within the setback and together with public realm along the street, function as social and activity spaces for civic buildings.
- Automobile space is not allowed along main frontages.



Massing and Design

- Design elements combine traditional architectural elements with contemporary parameters.
- Massing is sculpted to avoid big bulky structures and to respond to immediate context.
- Large, elongated, boxy or slab like floor plates are avoided.

- The roof-line is well delineated.
- Landmark element at corners.
- Tall elements are slender structure that enhance the skyline.



Frontages and Openings

- Openings have a maximum share of 50% of the overall facade area.
- Glass facades, reflective, mirrored, tinted and opaque glazing are minimized to less than 10% of total composition.
- Utilities and mechanical equipment are screened from view and integrated in architectural design.
- Signage is integrated in architectural design.
- Compound walls along main public frontages are discouraged.



Architectural Details and Construction Techniques

- Horizontal and vertical architectural variations are applied to break down scale and massing.
- Alternation of different textures, colors, materials, and distinctive architectural treatments.
- Highly representative elements are used to articulate the facades.



Materials, Colors and Art

- A limited spectrum of natural colors and materials is used.
- Min. 50% of facade treatment is of one consistent material.
- 70% range of the color's palette is composed of light gradations of earth tones, with a maximum of 20% of the total composition reserved for stronger gradations and complementary colors.
- Intensified and/or contrasting colors are used for accentuating important elements, such as entries, arcades and openings.



Figure 160 Example A - civic building



Figure 161 Example B - civic building



G. Commercial – Tall Building

Example of new commercial tall building typology in Abha city.



Proposed Compositional Elements



Layout and Open Space

- 20% of usable open space (landscaped area) is available within the plot.
- Progressive levels of privacy ensures privacy of neighboring residential buildings and allows social spaces within buildings. This is ensured by an integrated approach on the orientation, positioning, and design of facades.
- Layout of podium and tower promotes continuity of street wall and frontages.



Massing and Design

- Tall building is a slender structure that enhance the skyline.
- Large, elongated, boxy or slab like floor plates are avoided.
- Large floor plates are broken down.
- The roof-line is well delineated.



Frontages and Openings

- Main frontage is limited to a maximum of 30m.
- Design treatment is integral to all public sides.
- Blank or purely utilitarian facades along public frontages are avoided.
- Openings have a maximum share of 30 to 50% of the overall facade surface.
- Glass facades, reflective, mirrored, tinted and opaque glazing are minimized to a maximum 10% of total facade surface.
- Utilities and mechanical equipment are screened from view and integrated in design.



Architectural Details and Construction Techniques

- Horizontal and vertical architectural variations are applied to break down scale and massing. Alternation of different textures, colors, materials, and distinctive architectural treatments are encouraged.



Materials, Colors and Art

- A limited spectrum of natural colors and materials is used.
- Min. 50% of facade treatment is of one consistent material.
- 70% range of the color's palette is composed of light gradations of earth tones, with a maximum of 20% of the total composition reserved for stronger gradations and complementary colors.
- Intensified and/or contrasting colors are used for accentuating important elements, such as entries, arcades and openings.

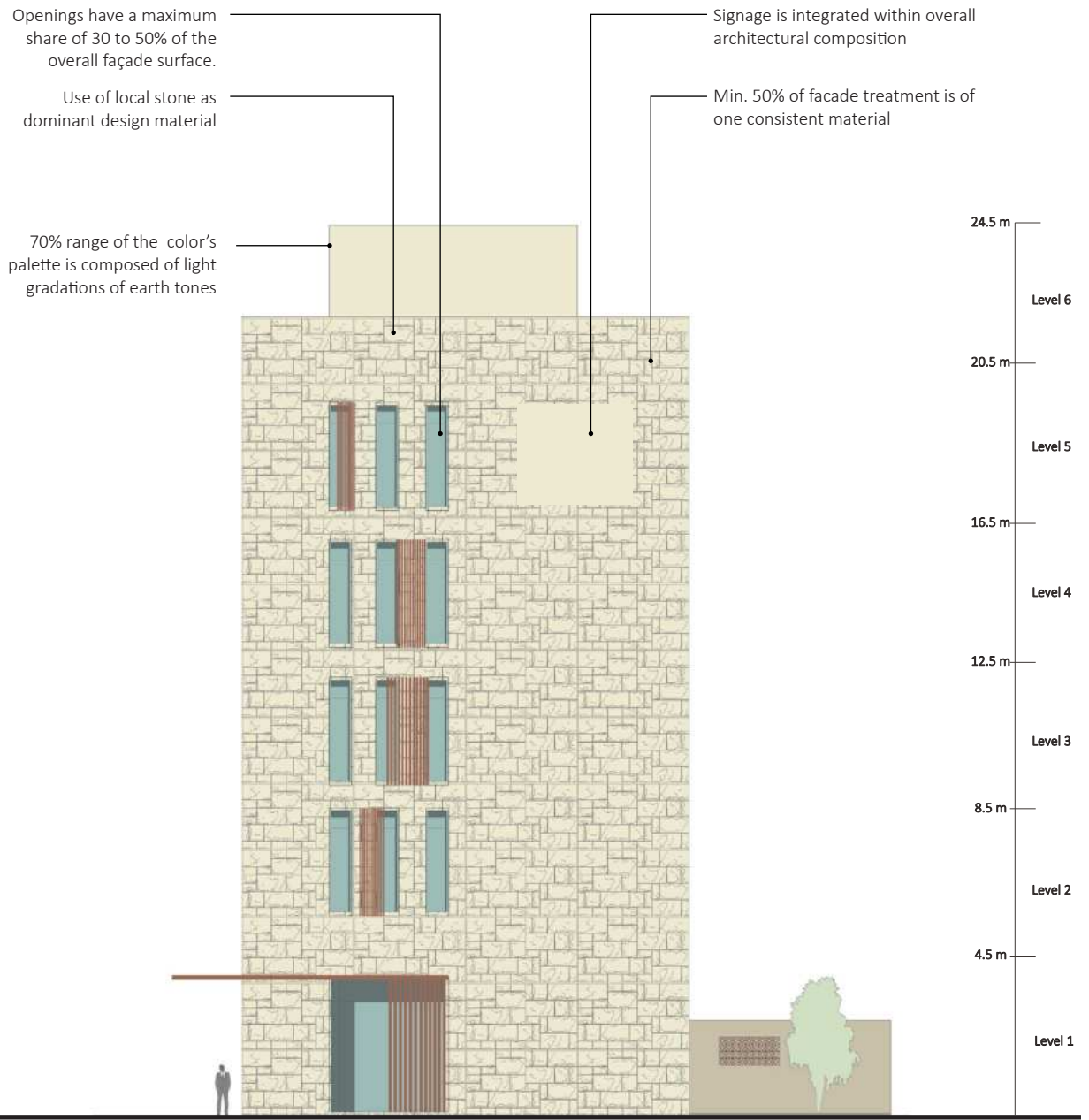


Figure 162 Example A- commercial tall building



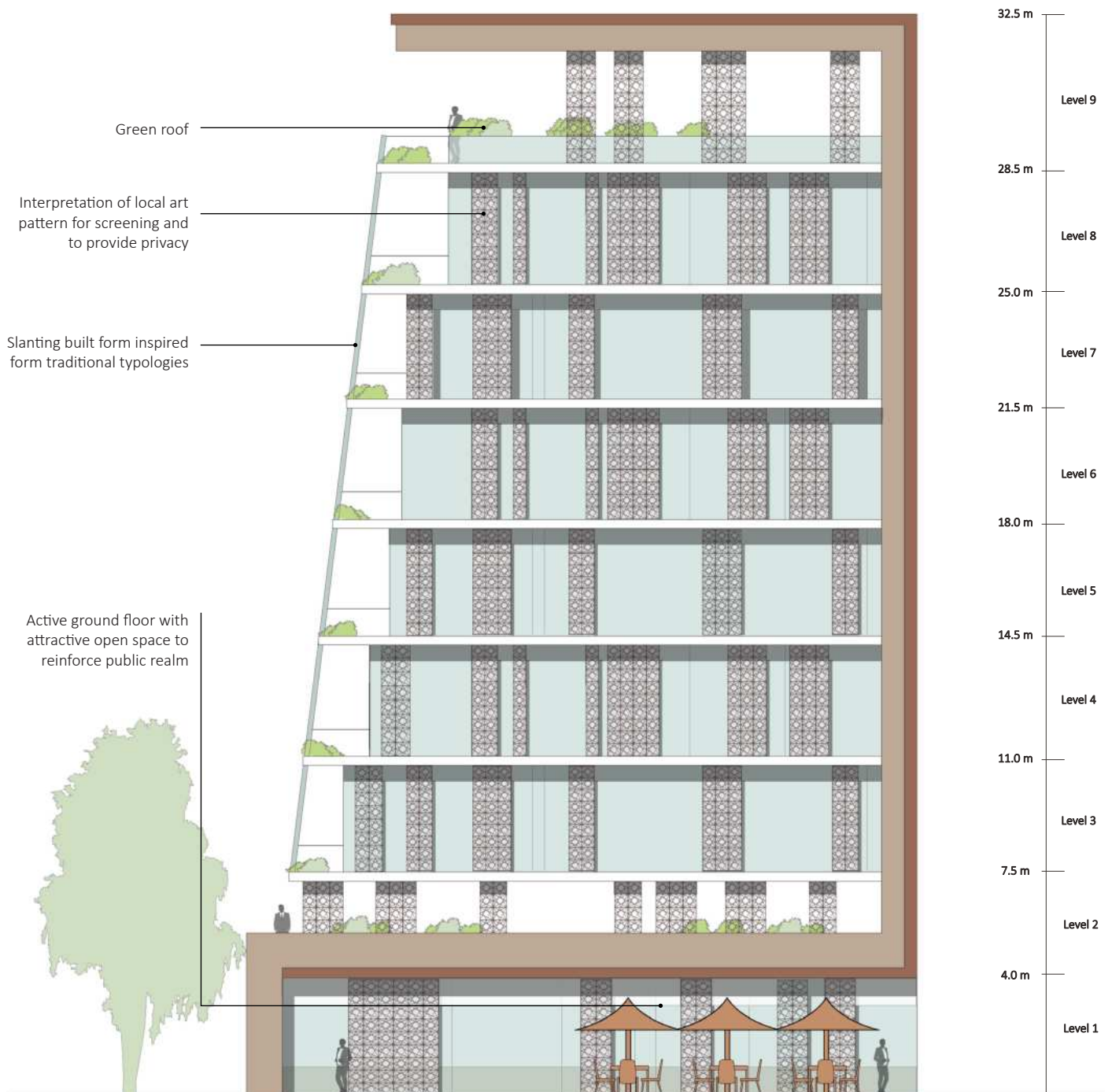
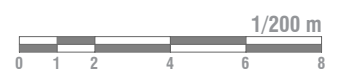


Figure 163 Example B- commercial tall building



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2.5 Applicability Matrix

The Aseer contextual approach to architecture described in the previous pages aims to promote an architecture that is more genuine to the identity of the region. However, this approach should not be applied everywhere and to any development with the same level of intensity. Rather, these guidelines propose a gradient approach of “attention to the site” with different levels of applicability. The different levels of attention shall be based on the prominence of the site’s location and on considerations regarding land use, building type and civic function.



Figure 164 Example for civic building using traditional elements in a contemporary manner

The level of attention to contextualism of any project within urban areas in Aseer, for example in the Abha metropolitan area, can be derived by the application matrix presented in this section.

The method is intended to help decision makers in evaluating the importance of a site under scrutiny regarding the contextual architecture discourse.

Applicability Matrix

The application matrix places in correlation the site’s land use and building typology with its location. The land use/building type – on the x direction, is derived by combining land uses and building typologies that are deemed relevant for the evaluation.

The location – on the y direction, is derived by combining information from Abha metropolitan area’s functional road hierarchy.

Visibility - in terms of number of people passing by a site on a daily bases (in most cases by car), is another key factor in determining the importance of a project for the applicability of contextual architecture.

The current 4 types of road functional classifications in Abha metropolitan area in order of importance for the visibility of a project are:

- Main Access road
- Arterial road
- Collector road
- Local road

The score from 1 to 5 of any project/site within any urban area in the Aseer region can be derived by the application matrix presented here. It highlights the most prominent locations, where the proposed architecture should pay particular attention to the context and its legacy, like the most public land uses and functions and most important corridors. It places in correlation the site's district, land use and/or building typology with its location based on the street typology; with public facilities being the highest priority land use in terms of visual and spatial treatment and major road being the highest relevant corridor for visual treatment priority due to its high visibility ratio. The rating system is described in the following page.

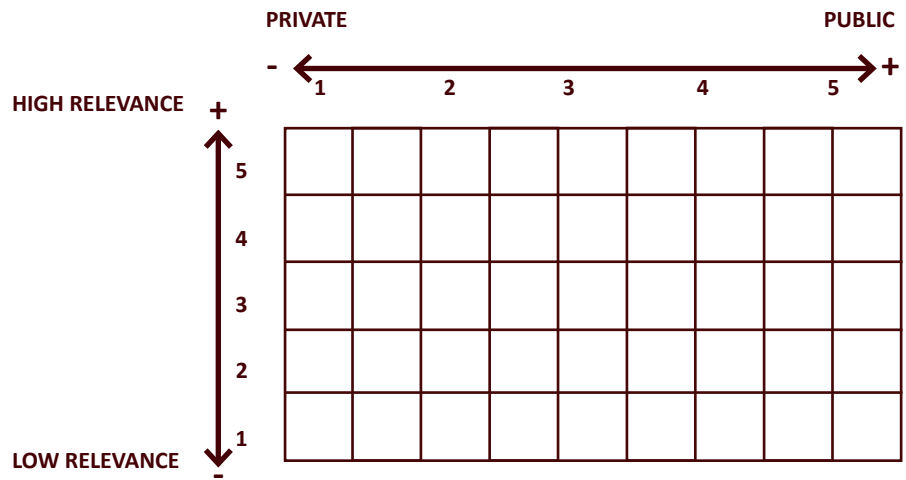


Figure 165 Visual treatment priority index

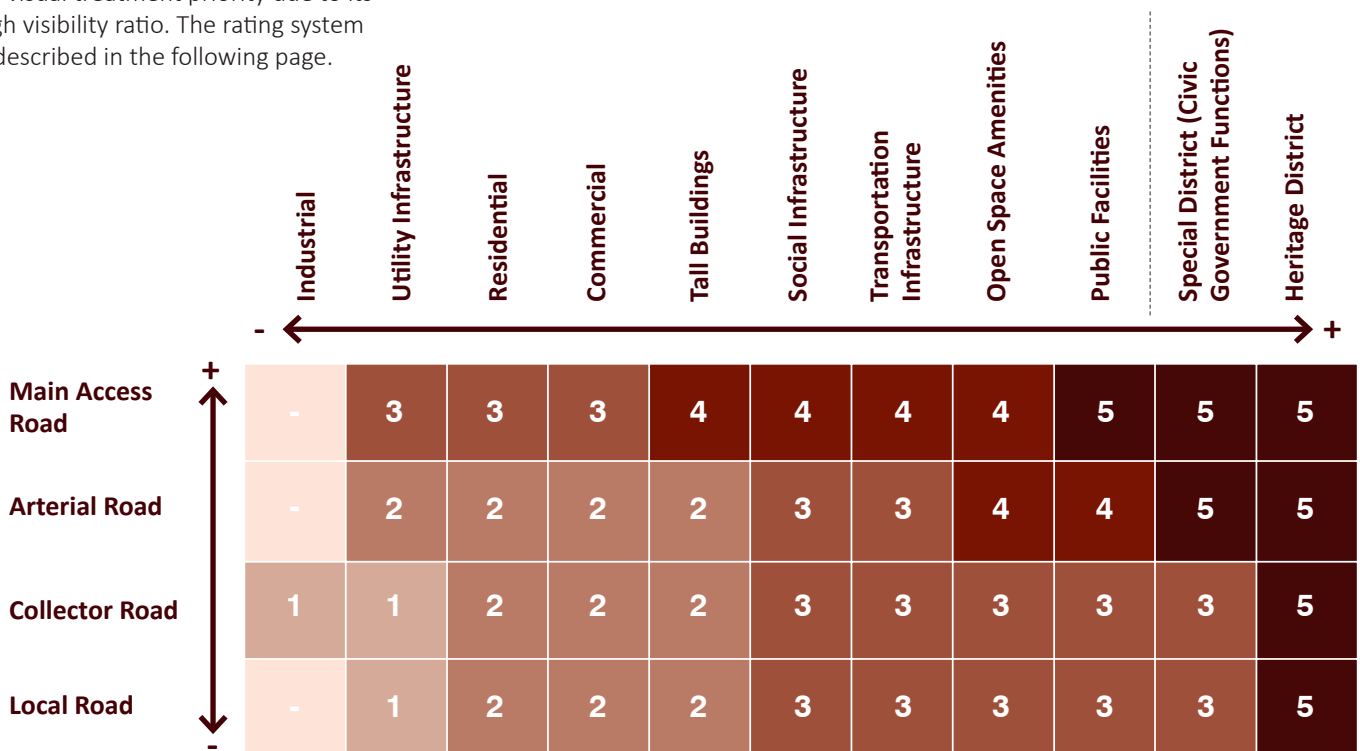


Figure 166 Application matrix for contextual architecture

Rating System

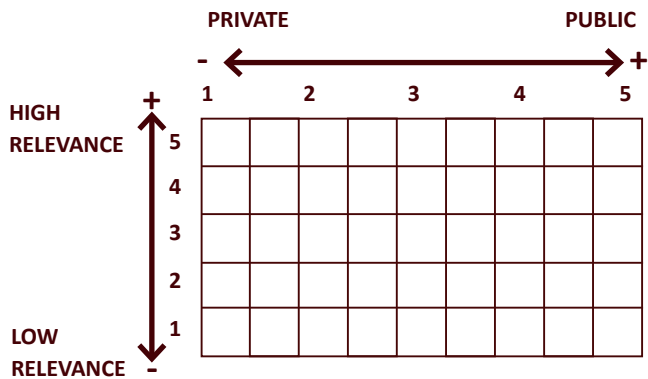
The diagram on the right defines a 5-tiered grading system going from basic principles of contextual urban design (#1), to maximum expression of Aseer Contextual Architecture Style (#5).

The number **1** rating is intended as the baseline level, in which sound Aseer architecture and open space principles, are applied to the project. This level addresses a large section of the built environment of public interest, or significance.

The number **5** rating is intended as applicable only to heritage districts and key signature projects, which should be instrumental to the civic functions and/or have an impact on the identity of the city as a whole.

The numbers **2, 3** and **4** rating constitute different levels of “attention to the site”, or importance, in-between category **1** and **5**.

The diagram on the right lays out the general principles to be applied within each ratings.



1



Baseline- at a minimum some Aseer Contextual Architecture principles are applied to the project, such as:

- Massing
- Materials and colors

2



Sound Aseer Contextual Architecture open space and some elements of building design principles are applied to the project, such as:

- Layout and open space
- Massing
- Materials and colors

3



4



5



Sound Aseer Contextual Architecture open space and some elements of building design principles are applied to the project, such as:

- Layout and open space
- Massing
- Facade and frontage design
- Materials and colors

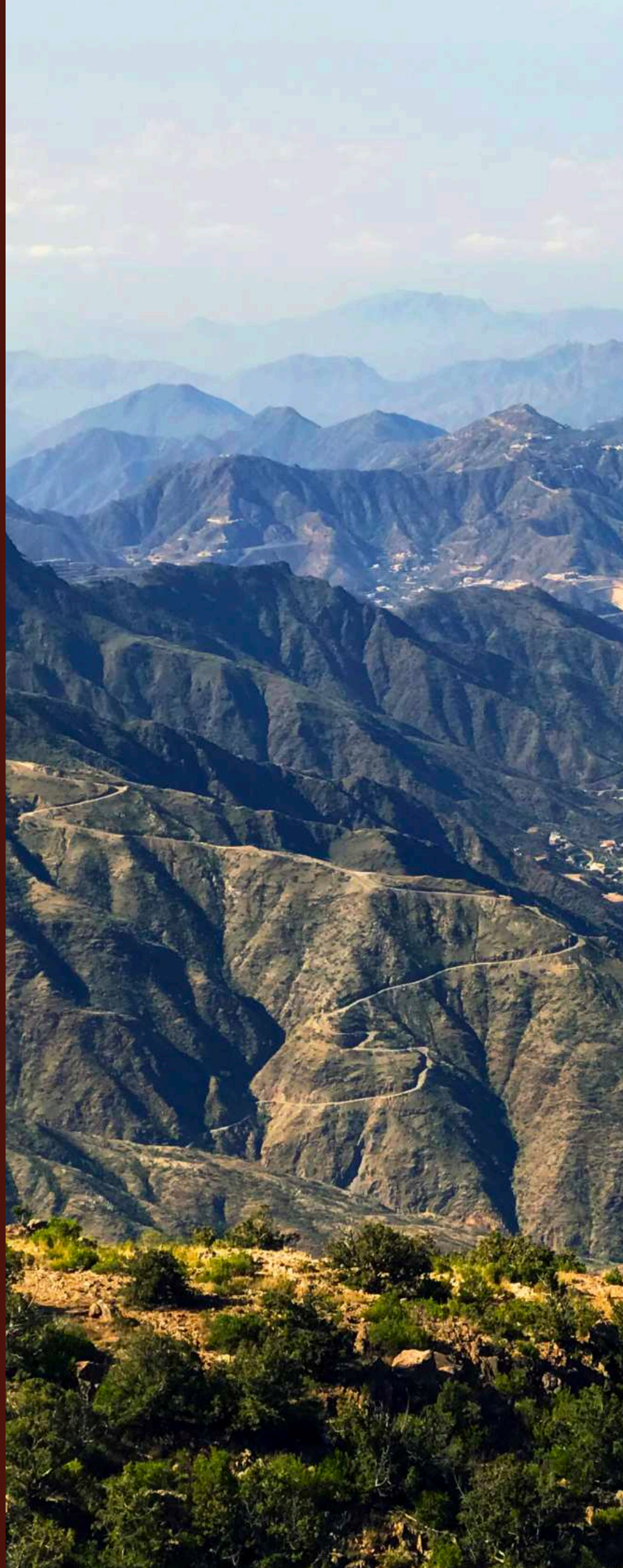
Rigorous Aseer Contextual Architecture open space, building design and architectural detail principles are applied to the project.

- Layout and open space
- Massing
- Facade and frontage design
- Architectural elements
- Materials and colors

Maximum expression of Aseer Contextual Architecture style applied to all aspects of the project.

- Layout and open space
- Massing
- Facade and frontage design
- Region specific interpretation of architectural elements and construction techniques
- Materials, colors and art

3 Appendices





3.1 References and Bibliography

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Location: Ahad Rafaidah

3.2 Sample Assessment Project: The Abha International Airport New Terminal

Project: Abha International Airport

Location: Abha City

Typology: Special Use - Airport

Following is a sample assessment of two design options for the new Abha International Airport Terminal based on these Aseer Contextual Architecture Guidelines. Assessment is proposed for layout, massing, built form, contemporary interpretation of contextual architecture, facade design, materials and colors, open space and public realm design, based on the documents/drawings submitted to ASDA.

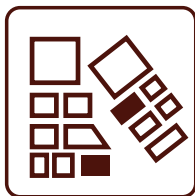
The assessment parameters are based on the 5 components described in the Aseer Contextual Architecture Guidelines

- Layout and Open Space
- Massing and Design
- Frontages and Openings
- Architectural Details and Construction Techniques
- Materials, Colors and Art



Figure 167 The Abha International Airport New Terminal design options

Assessment Parameters:



Layout & Open Space



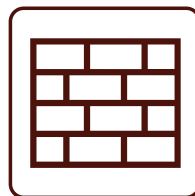
Massing & Design



Frontages & Openings



Architectural Details & Construction Techniques



Materials, Colors & Art



Figure 168 The Abha International Airport New Terminal: Option 1



Figure 169 The Abha International Airport New Terminal: Option 2

Option 1 Assessment

Layout:

- ✓ Parking lot is located at the side, hidden by landscape and not fronting the main public frontage.
- ✗ Parking lot lacks landscape treatment.
- ✓ Open space with representative landscape provided in front of the building.
- ▬ Axis emphasizing long formal views & strong edges is dominant.
- ▬ Vehicular infrastructure is massive and used as a highlight feature in the masterplan.
- ✗ Traditional replica of Aseer village/historic town appears too literal and the uses and accessibility are not clear.



Open space / Landscape:

- ✗ Scale of contouring for interpretation of terrace landscape is large and overbearing.
- ✗ Open space strategy (use, accessibility, softscape and hardscape palette) is not clear.
- ✗ RoW design with dedicated space for users is not clear.



Massing and Design:

- ✗ Variation in skyline is limited.
- ✓ Variation in heights provided by use of elements and roofing.



Frontage:

- ✗ Layering of numerous materials, colors, textures representing different languages from Aseer architecture leading to over layering/complexity of facades.
- ✓ Facade breaks are provided breaking monotony and fostering human scale.



Remarks: ✓ Positive ▬ Neutral ✗ Negative

Openings:

- ✓ Openings exceed more than 50% of the façade, shaded by cantilever roof and horizontal shading elements.
- ✓ Use of horizontal elements reduce the impact of glazing.



Architectural Elements / Features of additional Architecture:

- ✗ Excessive use of diamond and triangular geometries (roof, façade, landscape) are more representative of Najd architecture and not recommended, though existing also in traditional Aseer architecture.
- ✓ Use of alternative geometries prevalent in traditional Aseer architecture is recommended.
- ✓ Use of materials and elements for façade breaks.
- ✓ Use of inclined walls and horizontal lines (derived from slates inserted in walls) representative of Aseer architecture.



- ✓ **Material:** Façade materials and colors match the traditional palette of natural stone and earth used in Aseer architecture.
- ✗ Extensive use of aluminum cladding is not recommended.
- ✓ Consistency of facade material (min. 50% with one material).



- ✓ **Colors:** Façade colors coherent to the earthy and natural stone colors used in traditional Aseer architecture lending sober appearance.
- ✓ Colors derived from local art of Aseer used in roofing provides pleasant and vibrant interior space.



Remarks: ✓ Positive = Neutral ✗ Negative

Option 2 Assessment

Layout:

- ✓ Parking is not provided in front of the building, open space with representative landscape provided in front of the building.
- ▬ Axis emphasizing long formal views & strong edges is dominant. Organic and less symmetrical approach may be more appropriate for local context.
- ▬ Vehicular infrastructure is massive and used as a highlighting feature in the master plan.
- ✗ Traditional replica of Aseer village/historic town appears too deliberate and use and accessibility is not clearly provided.



Open space / Landscape:

- ✗ Scale of contouring for interpretation of terrace landscape is large and overbearing.
- ✗ Open space strategy (use, accessibility, softscape and hardscape palette) is not clear.
- ✗ RoW design with dedicated space for users is not clear.



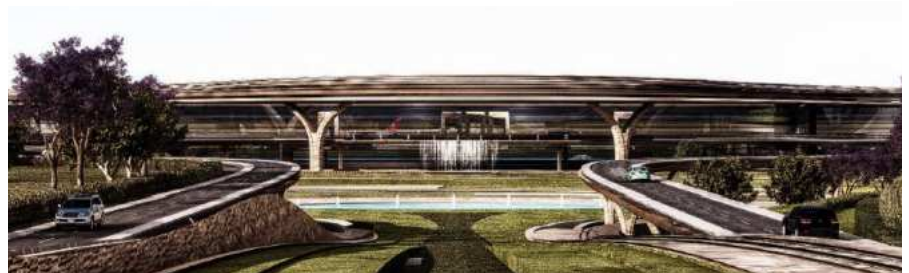
Massing and Design:

- ✗ Lack of variation in skyline.
- ✓ Horizontality of massing representing the stepped/terraced productive landscape (not natural contour as mentioned in proposal) is accentuated with the help of horizontal elements and free flowing design.
- ✗ Proposed roof design may not be perceivable from human eye level view within the project.



Frontage:

- ✗ Façade breaks are not provided leading to monotony and lack of human scale.



Openings:

- ✓ Openings exceed more than 50% of the façade, shaded by cantilever roof and horizontal shading elements.
- ✗ Excessive use of reflective glazing without any relief of other material.

**Architectural Elements / Features of additional Architecture:**

- ✓ Use of horizontal elements in overall massing and façade (derived from slates inserted in walls and terraced landscape) representative of Aseer architecture.
- ✗ Reference to traditional architecture features is too limited.
- ✓ Use of special elements or interpretation of traditional features is recommended for façade breaks and articulation.

**Material:**

- ✓ Façade materials and colors match the traditional palette of natural stone and earth used in Aseer architecture.
- ✗ Excessive use of glazing. Consistency of facade material (min. 50% with one material).
















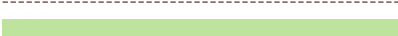
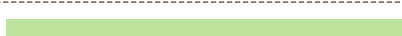
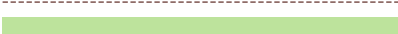
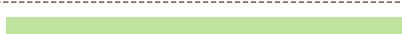


**Colors:**

- ✓ Façade colors coherent to the earthy and natural stone colors used in traditional Aseer architecture lending sober appearance.
- ✓ Use of colors derived from local art of Aseer is recommended to bring vibrancy.



Remarks: ✓ Positive = Neutral ✗ Negative

Assessment Results and Recommendations

Assessment  Satisfactory  Average  Improvement recommended	Option 1 	Option 2 
1. Layout		
2. Massing		
3. Frontage		
4. Openings		
5. Architectural Elements		
6. Material		
7. Colors		
8. Open Space / Landscape		
Recommendations	<ul style="list-style-type: none"> • Provide alternative to repetitive triangular geometries. • Reduce use of aluminum cladding. • Design open space treatment to foster human scale. • Landscape characters not limited to terraced farming. Other landscape features prevalent in Aseer region like wadis, wadi farming, escarpments, inland deserts and coastal landscape may also be considered. 	<ul style="list-style-type: none"> • Breaks in massing / façade to break monotony and foster human scale. • Reduce glazing to reduce the overbearing appearance of glass. • Design open space treatment to foster human scale. • Landscape characters not limited to terraced farming. Other landscape features prevalent in Aseer region like wadis, wadi farming, escarpments, inland deserts and coastal landscape may also be considered.

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AS+P