



Abha Highlands

Architectural Design Guidelines





FIG.1 **ABHA HIGHLANDS ARCHITECTURAL CHARACTER AREA**

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FIG.2 **ARCHITECTURAL CHARACTERS MAP OF KSA**

INTRODUCTION

Vision

Celebrate and preserve Saudi Arabia's rich architectural legacy inspired by culture, heritage and nature.

I.1 Guideline philosophy

The Architectural Design Guidelines (hence referred to as ADG) aim to foster progressive contemporary design that is rooted in the diverse geographic and cultural contexts of the Kingdom.

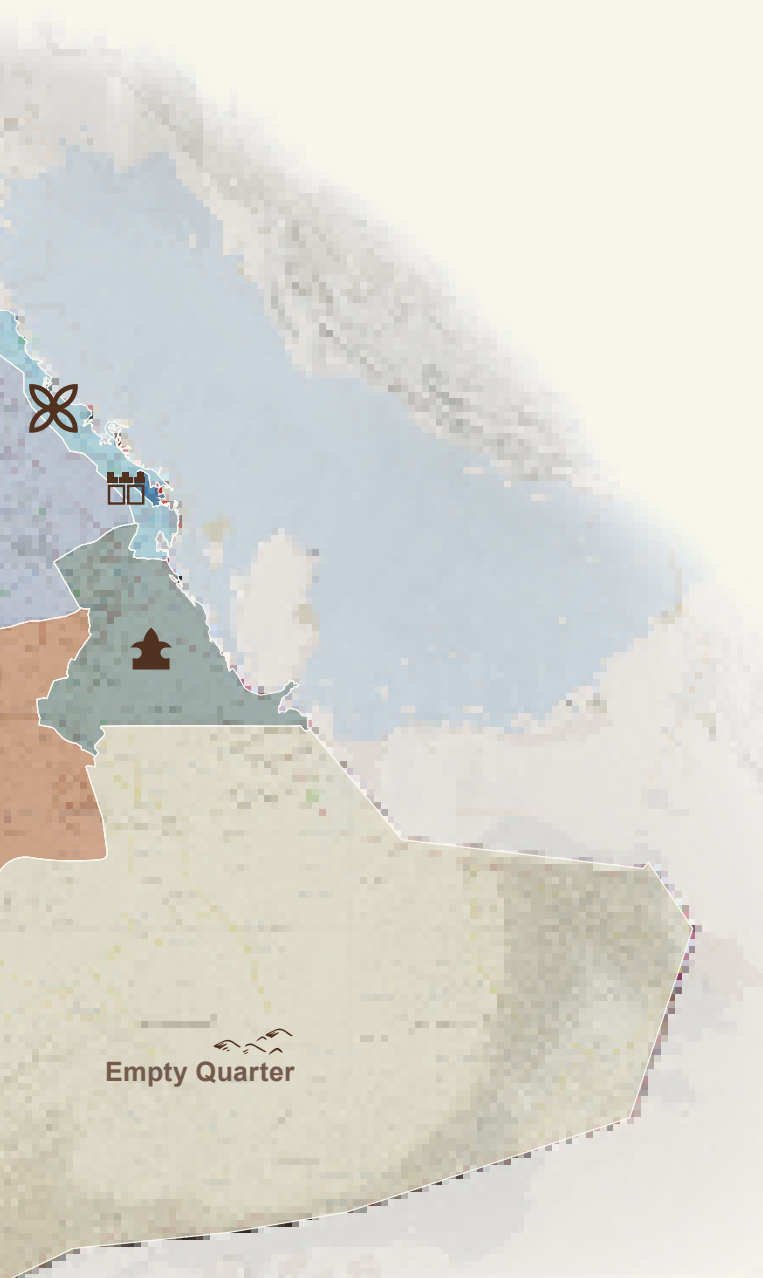
Its propositions are based on the study of historical precedent, taking inspiration from vernacular forms and the embedded knowledge shaped by generations of practice and experience.

The guidelines are forward-looking, intended for a wide range of contemporary development and suited for different levels of prescription. They aim to be succinct, well organized and useful: a positive resource for designers and easy to implement by planning authorities.

I.2 National context

This volume belongs to a suite of 19 documents, each exploring a different geographic context and describing a distinct architectural character within the Kingdom. Together they form a comprehensive portrait of the architectural heritage of the country.

Though application boundaries for the architectural character have been defined (fig. 2), influences may extend across boundaries. Designers are advised to consult adjacent architectural guidelines documents and confirm the status of their building context with facts on the ground.



1.3 **Abha Highlands**

Abha Highlands character area is located within the Sarawat mountain highlands in Aseer region. The character area, owing to the climate and occasional high precipitation rate, features unique vernacular architectural style distinguishing itself from the Sarawat mountains in the south western region of the Kingdom.

The main purpose of Abha Highlands ADG is to help raise the overall architectural design quality of built environment, especially in the expression of regional character of the Abha Highlands area, for the improvement of both architecture, and public realm design. Based on a regional character study identifying key heritage sites, natural environments as well as typical cultural landscapes, the guidelines are founded on an understanding of the traditions and heritage forming the character area's sense of style.

Most importantly, the guidelines seek to promote the creation of new and contextually inspired architecture for the Abha Highlands area respecting and fostering the character of the place.

They are also intended to promote a general excellence in landscape design and urban design, and intend to promote the development of an attractive, representative, and inviting public realm, with a generous and lush landscape environment.

The guidelines are developed with the following main goals:

- 1 **Celebrate Abha Highland's natural and cultural landscapes, a foundation of unique architecture for the character zone and its people.**
- 2 **Preserve open space and topography remarkable settings.**
- 3 **Safeguard the architectural heritage interrelated with the cultural landscape and enhance their relationship.**
- 4 **Create lasting connections between people and places with new development that respects and fosters the special character and heritage of the Abha Highlands.**
- 5 **Inspire the production of a more contextually rooted new architecture for the region.**



Abha City



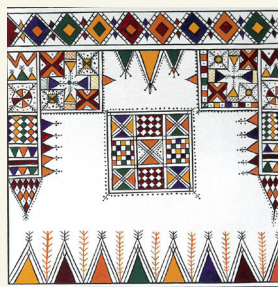
Dhahran Al Janub



Dhahran Al Janub



Al Namas



Al Qatt Al Aseeri



Sarat Abidah



Tanaumah



Tanaumah

FIG.3 ABHA HIGHLANDS

II Topography and landscape

Observations on the links between landscape, climate, culture and the architectural character of Abha Highlands.

II.1 Key information

The highland is 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 Juniperus 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.

II.2 Landscape

The ridge adjacent to escarpments, features a distinctive mosaic of fragmented juniper forests that descend the escarpment and appear to be intact and of high quality with 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 where soil is generally sand pans or gravel pans of granite origin and are typically impervious to water.

Southern ridge and highlands appear significantly altered by human activities. The landscape is generally flat and devoid of large topographic features, whilst the soil appears sandy with rocky boulder

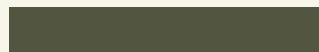
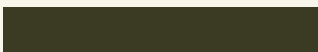
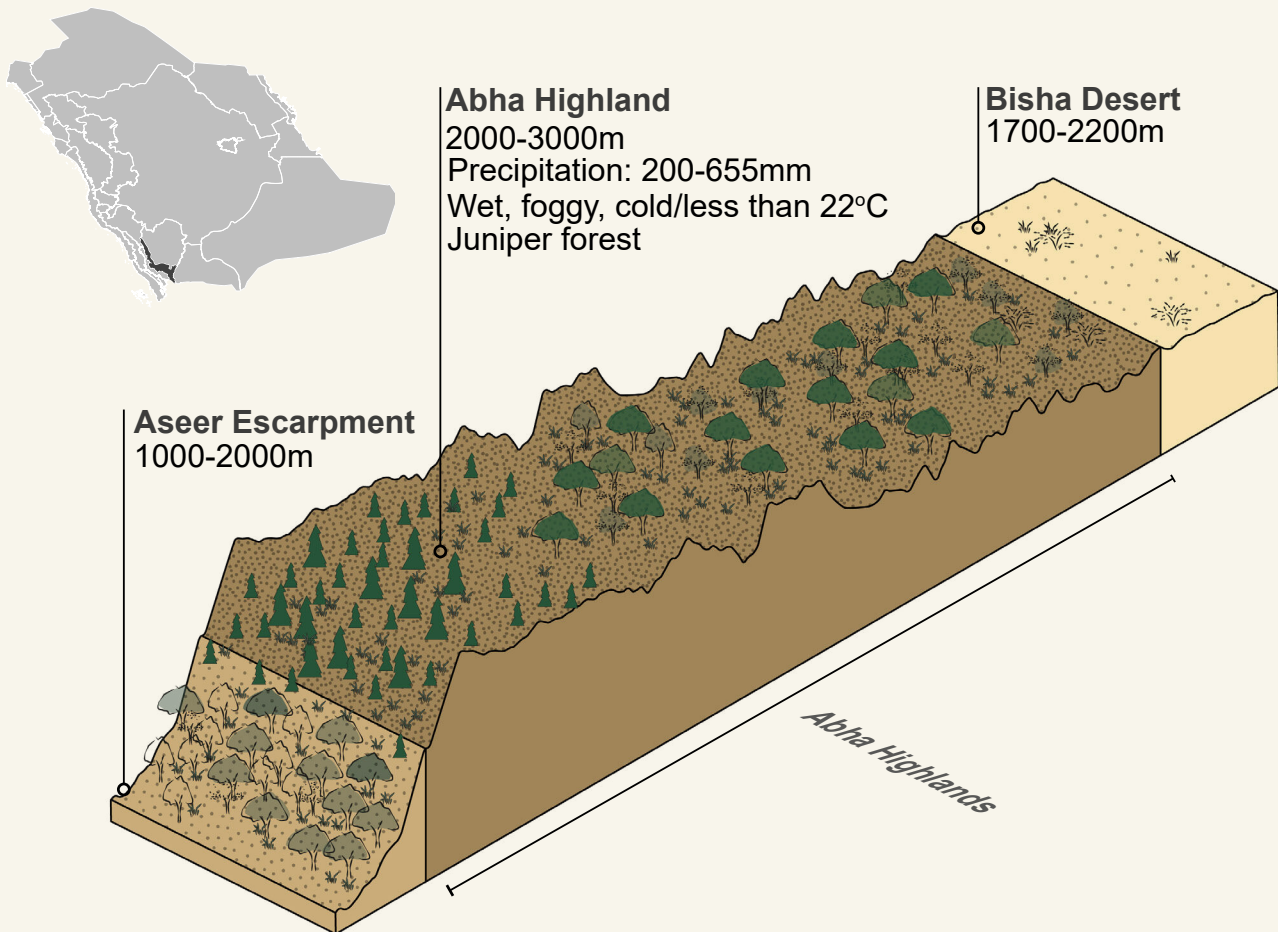
strewn areas and many wadi tributaries are evident. An area of fragmented juniper forest that appears to be intact and of high quality, is evident at the interface with the escarpments and includes a nature reserve. In the south, a secondary rocky plateau is evident with north facing low escarpments.

The northeastern side of the highlands features a gently 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.

Throughout the region, summers are long, arid and can reach 28°Celsius, whilst winters are short and dry with a drop down to 7°Celsius. Half of the year is mostly cloudy from May to October with high precipitation reaching 40mm in April and moderately comfortable even in high humidity in August.

II.3 Architectural influence

Within this environment, the areas occasionally hit by heavy rain (e.g., Abha, 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 Tanaumah and Dhahran Al Janub within the same zone uses stones and traditional mud bricks respectively as construction material.



Natural color palette

Wadi courses,
wadis

Steep
ridges
& hill-
sides

Agri-
culture
terraces

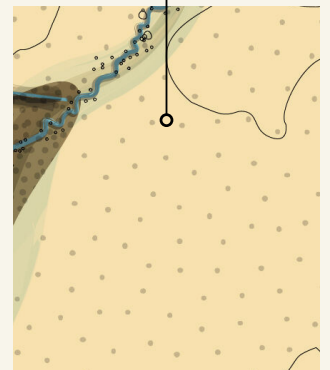
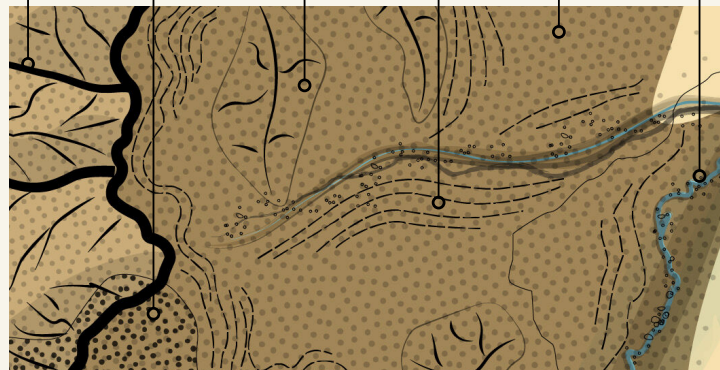
Rocky
hills

Wadi
farms

Plains

Water
courses,
inland
flow

Plains



Escarpments

Abha Highlands

Bisha Desert

FIG.4 ABHA HIGHLANDS LANDSCAPE FEATURES AND TOPOGRAPHY

III Overview of Abha Highlands Architecture

A summary of the existing character of traditional architecture and settlements in the Abha Highlands.

The varied and complex landscape of Abha Highlands with hard mountain ridges, valleys, low mountains, wadis and rocky features create natural boundaries that define different styles and settlement patterns.

The vernacular architecture styles prevalent in Abha Highlands are the Northern peaks (cities -Tanaumah, Al Namas), Cities in between peaks (Abha), Ahad Rafidah (cities - Ahad Rafidah, Sarat Abidah) and Southern peaks (cities - Dhahran al Janub).

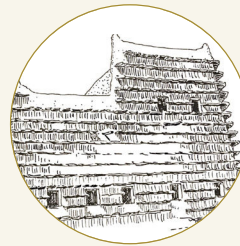
The sub zone of 'Cities in between peaks' and 'Ahad Rafidah', are areas that are occasionally hit by heavy rain and therefore showcase slate houses built up of stone (the lower part) and sun-dried mud courses (the upper part). Stone slates project out of the mud courses to protect the inhabitants from the frequent rainfall. These central sub zones are the most distinct and the dominant source of Abha Highlands Architecture.

The northern peaks sub zone with places like Tanaumah and Al Namas at the edge of Aseer Escarpments and Sarawat Mountains character zone respectively, share the construction techniques and materials with the respective character zones such as exclusive use of stones or use of plaster walls.

Southern peaks with cities like Dhahran al Janub, uses traditional mud bricks as construction materials and sharing influences with character zone of Najran and Bisha Desert.



FIG. 5 Abha Highlands heritage sub zones



Cities in between peaks



Ahad Rafidah
Sarat Abidah

FIG. 6 Abha Highlands dominant vernacular architecture styles



Northern peaks



Southern peaks

FIG. 7 Northern and Southern peaks heritage styles of Abha Highlands



Abha
Cities in between peaks



Ahad Rafidah



Sarat Abidah

FIG. 8 Abha Highlands dominant vernacular architecture styles



Al Namas - Northern peaks



Dhahran Al Janub - Southern peaks

FIG. 9 Northern and Southern peaks heritage styles of Abha Highlands

III.1 **Abha Highlands - vernacular architecture overview**

Traditionally, the settlements of Abha Highlands of the Sarawat mountains were designed for the purpose of hiding and protecting from the attacks of enemies as well as adapting to the climatic conditions.

III.2 **Settlement character**

In general, a compact settlement pattern is formed with narrow, zigzagged alleys and hierarchy of open spaces. Wadi villages are loosely composed with street hierarchy while houses on hill tops of Abha Highlands are tightly grouped with inner alleyway system.

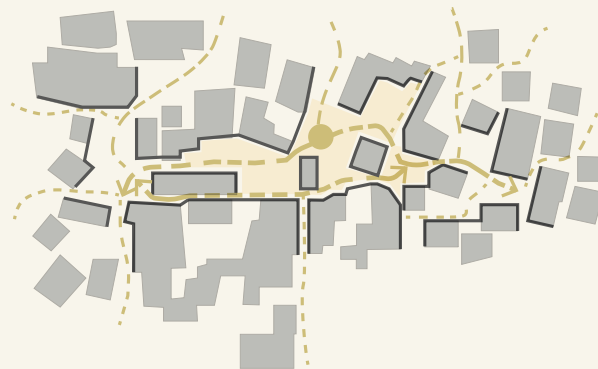


FIG.10 Settlement pattern with compact houses and hierarchy of open spaces in Abha Highlands

The houses are arranged generally in compact clusters, introverted type, generally built around courtyard(s) for micro-climate and privacy reasons.

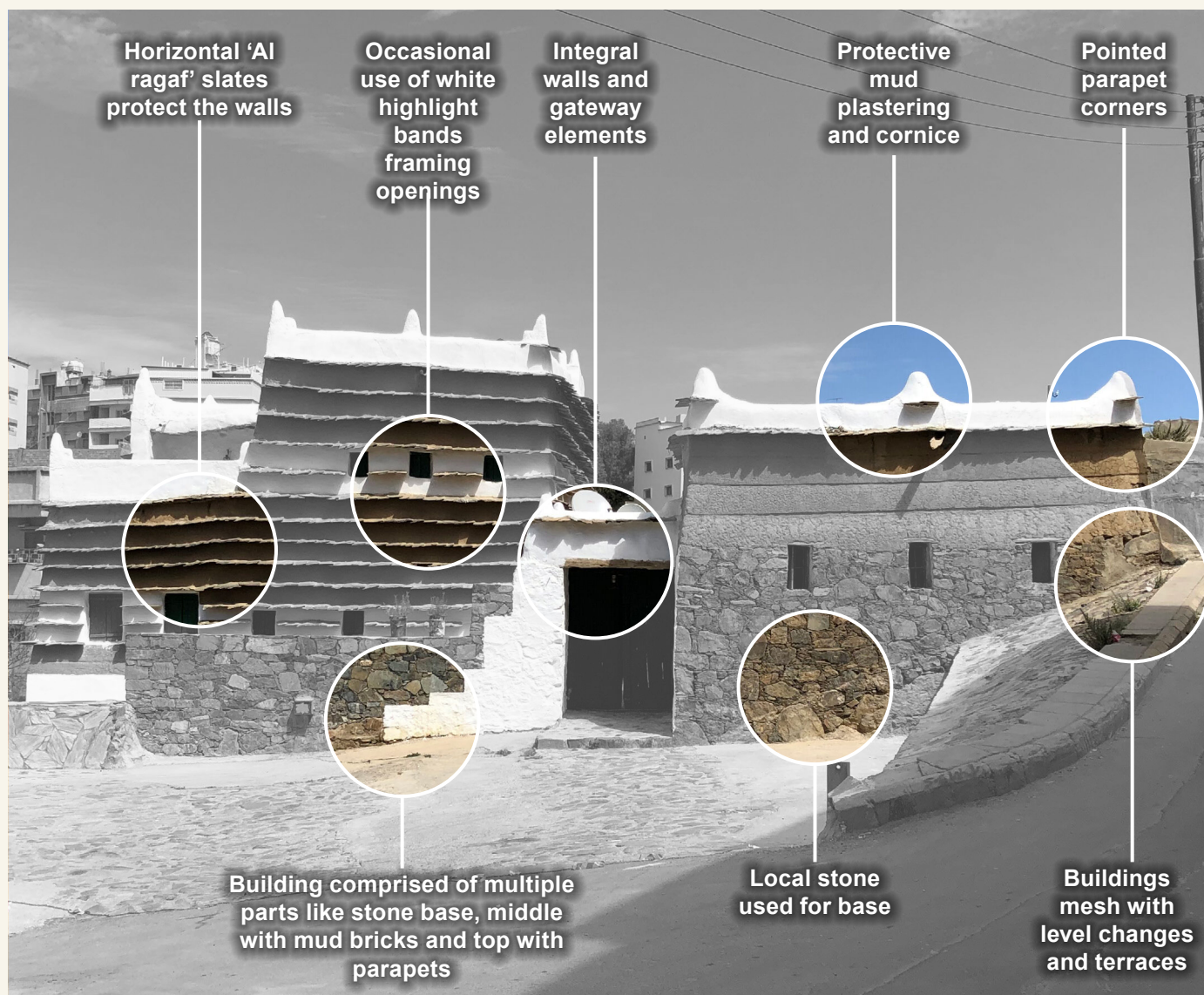


FIG.11 **TRADITIONAL SETTLEMENT IN ABHA**

The clusters usually have common spaces forming a hierarchy of open spaces. Productive landscapes usually surround the built settlement. Towers are strategically placed for defense purposes.

Household community in traditional architecture follows a patrilineal descent system and evolves by the development in kinship structure. This encourages space expansion, creating primary and secondary households along with a shared space connection between the two households. Multi-household community creates a safer and more fortified structures.

III.3

Architectural character

The dominant, typical vernacular architecture and settlement patterns in this region are made of traditional construction materials such as local sand stone and mud houses built with slates.

Slates houses had limited small and high positioned openings and were placed on the walls for ventilation, lighting and defense purposes.

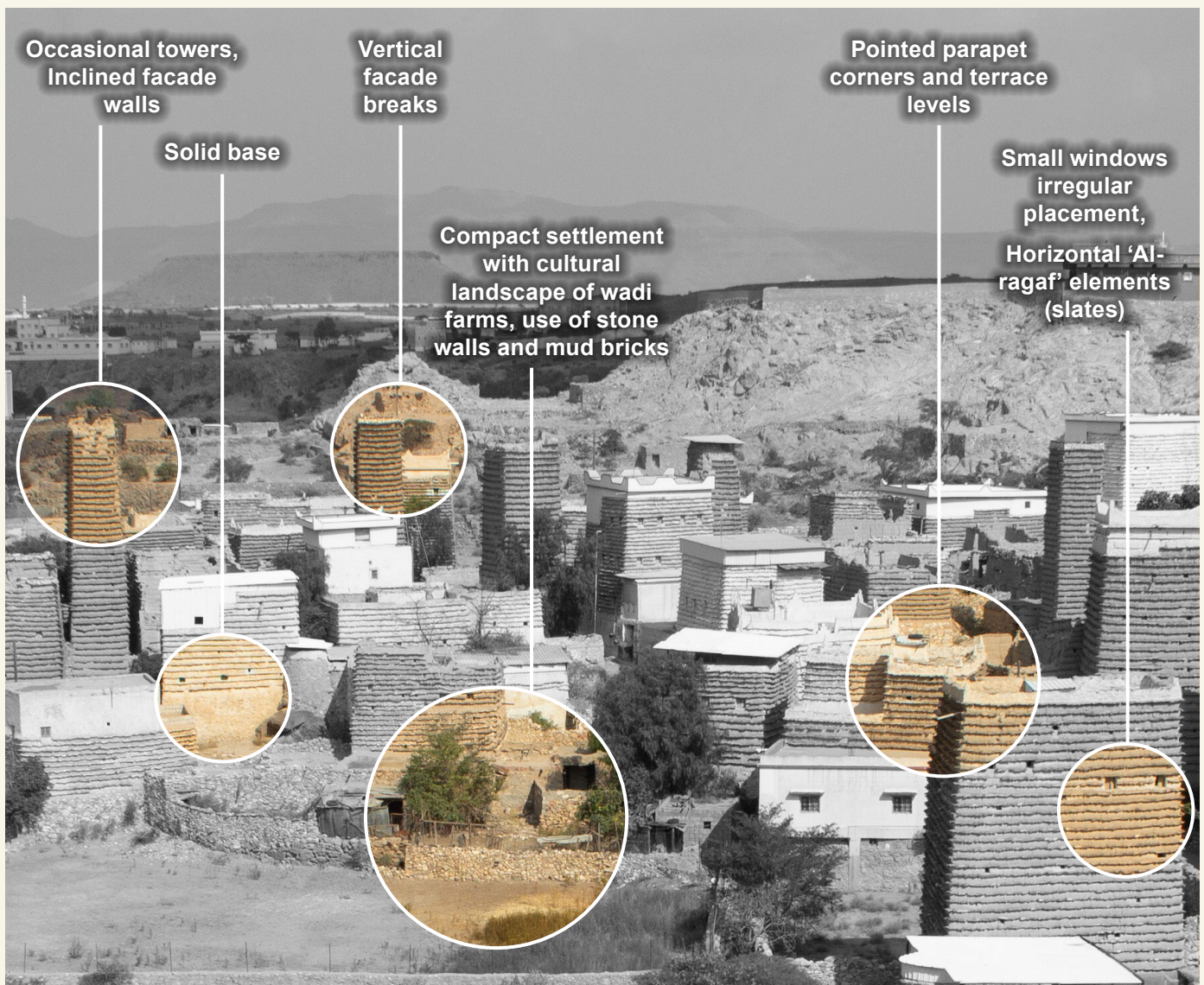


FIG.12 **TRADITIONAL SETTLEMENT IN SARAT ABIDAH**

IV **Analysis of Abha Highlands Architecture**

The evidence and formal analysis upon which the guidelines are based.

To find objective characterizations of the vernacular architecture in Abha Highlands, elevation studies were conducted to assess overall building proportions and the solid-to-opening ratio of building facades. A sample of representative buildings, including a range of different use types were selected for each character to arrive at meaningful ranges for each statistic.

IV.1 **General typologies**

Vernacular buildings typically comprise simple, strong geometries, often ranging primarily from 2 to 4 story structures with towers rising up to 5 stories near the escarpments.

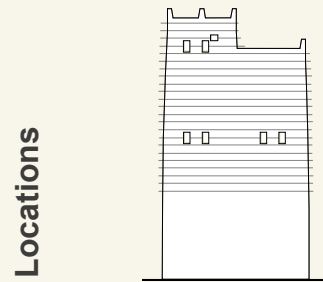
IV.2 **Verticality**

Generally, strong vertical proportions, indicated by a width-to-height ratio between 1:0.7 to 1:1.85, are characteristic of the vernacular architecture in the region.

IV.3 **Solid to opening ratio**

The facades are articulated with rows of slate, and with minimal openings. The 3-8% opening percentage substantiate this observation. Vertical layering of the facade to express base, middle and top, is a distinctive feature of the highlands.

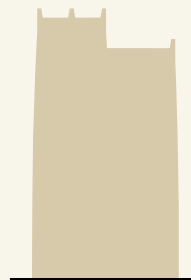
Vertical massing Minimal facade openings



Locations

Sarat Abidah

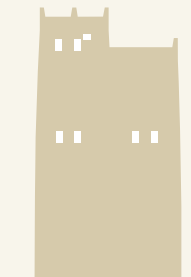
Width-to-height Ratio



1:1.85

Max. 5° wall inclination
angle on upper part

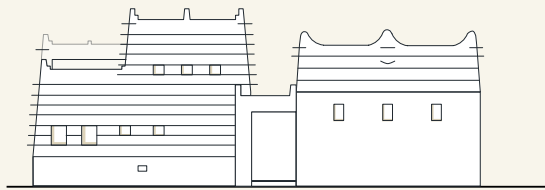
Facade Analysis



Facade area: 45 sqm
Masonry: 42 sqm
Timber: 3 sqm
6.7% void

FIG.13 **VERNACULAR FACADE STUDIES**

Horizontal massing, attached volumes with breaks, small facade openings



Abha



1:0.82

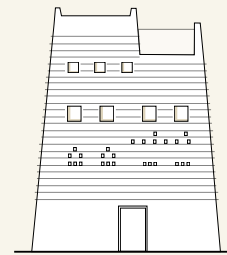
1:0.82

Max. 5° wall inclination
angle on upper part



Facade area: 50 sqm
Masonry: 47 sqm
Timber: 3 sqm
6.4% void

Vertical volumes with vertical facade breaks, small facade openings

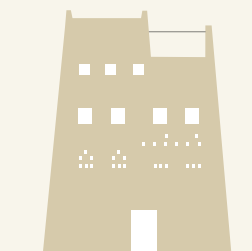


Ahad Rafidah



1:1.28

Max. 5° wall inclination
angle on upper part



Facade area: 39 sqm
Masonry: 36 sqm
Timber: 3 sqm
8% void

IV.4 **Building grouping patterns**

Introverted house types built around courtyard(s) for micro-climate and privacy reasons.

Soft and simple but articulated, sculptural, defensive building forms of two to four stories high.

Buildings of medium size and mass composed with facades breaks and clustered together.

Massing broken into vertical volumes with gently tapered walls mostly on the upper part, with an inclination angle between 1.5° and 5° .

Compact massing with flat roofs.

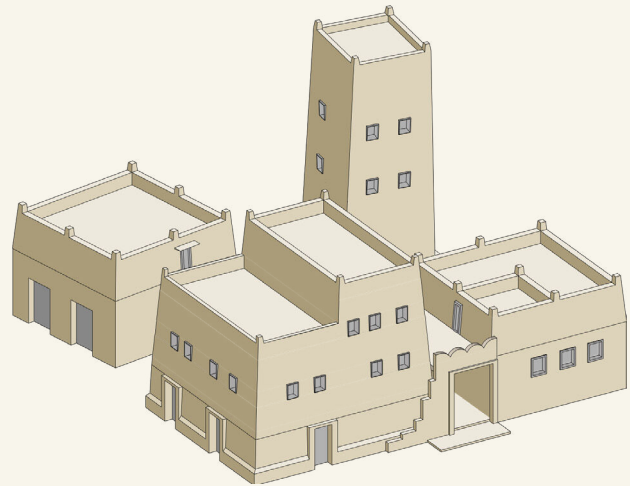


FIG.14 Building grouping patterns

IV.5 **Vertical emphasis**

Prominent vertical massing with a general development of three to four stories high and gently tapered walls with a maximum inclination angle of 5° .

Houses may reach up to six stories high near escarpments.

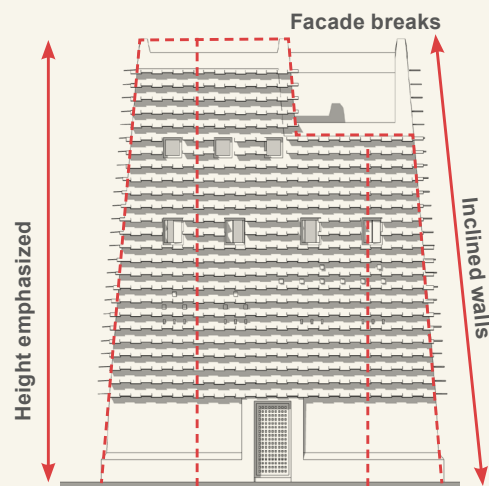


FIG.15 Prominent vertical massing

Vertical facades with breaks accentuating verticality.

IV.6 **Tripartite articulation**

Facades are articulated with a clear base, middle and top. This distinction between base and middle is expressed most clearly through the use of distinct material and articulation.

Top: parapets articulated with pointed corners or stepped crenelations.

Middle: small windows and horizontal facade articulation with use of material and projecting stone slates at equal intervals.

Base: the construction of houses consists of 2-2.50m high stone foundations, using adobe construction techniques.

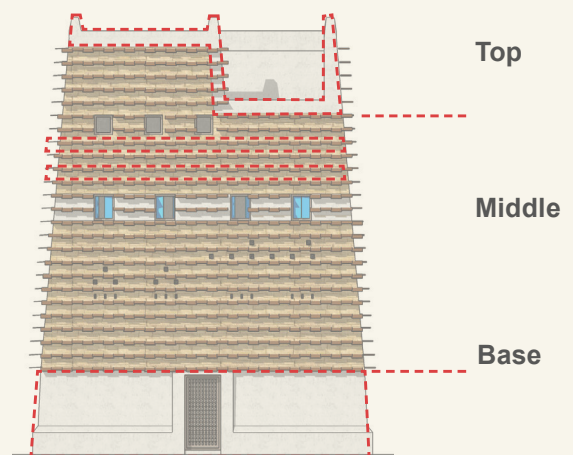


FIG.16 Tripartite articulation

Architectural elements in top, middle and base parts of the building.

IV.7 Varied symmetries

Analysis indicates a varied palette of opening types. Common openings include rectangular and square shapes.

Limited small and high positioned openings are placed on the walls primarily for air circulation and light while maintaining privacy, generally in localized symmetry.

Defense openings are functional and are placed in irregular pattern.

Variation also brought through facades breaks either with material change or massing.

IV.8 Special features

Al-ragaf element - 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. This horizontal layering is distinct feature of Abha Highlands.

Local art - 'Al Qatt Al Aseeri' is used for decorative patterns for highlighting special elements like windows or entrances.

Windows have wooden shutters painted with bright colors.

Common materials used are local stone / plaster for base, mud plaster / bricks for the facade and white plaster for parapets.

IV.9 Roof character

Flat roofs with parapets articulated with pointed corners or stepped crenelations.

Articulation also in form white painted parapet walls.

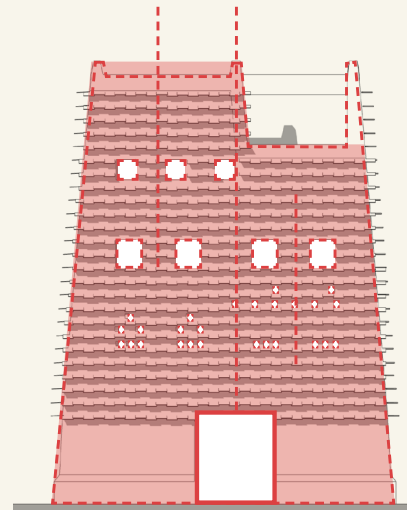


FIG.17 Windows with/without placement pattern
Small window openings occurring in regular pattern. Defense openings are irregular.

1. Articulated parapets
2. Rows of slate 'Al Ragaf'
- Highlighted windows
3. Solid base

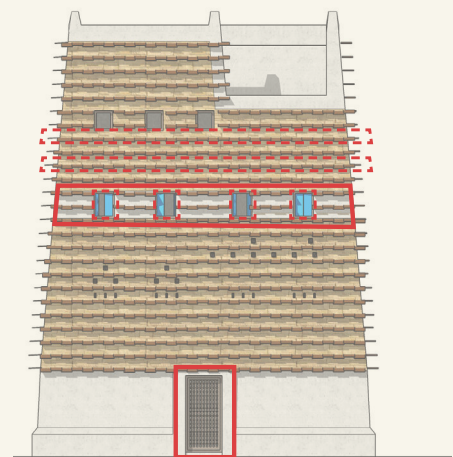


FIG.18 Special features of Abha Highlands
Al Ragaf elements with highlighted windows and window shutters form special feature of the highlands.

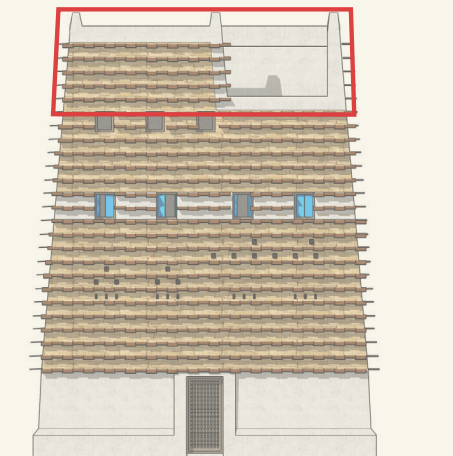


FIG.19 Roof character

V Evolution

The connection of contemporary design with traditional forms to strengthen the architectural character of a place.

V.1 Connecting past to future

The guidelines aim to provide architectural roots for contemporary buildings so that they connect to their historical context, draw upon their local culture and reflect the spirit of a place.

At the same time, a balance between continuity and innovation is needed. Advances in construction technology, material science, patterns of development and specifications for new building uses require buildings that can accommodate these changes while preserving the essence of local architecture.

V.2 Connecting environment to form

The guidelines also aspire to connect buildings to their geography. Physical context has traditionally influenced the materials available, the patterns of development and the climate response required from architecture.

These environmental constraints have created a matrix of related, regional building typologies. The guidelines aim to provide a layer of stylistic influence to accentuate these regional building types into distinct characters that can be gathered into a diverse yet related national 'family portrait' of architectural character across the Kingdom.

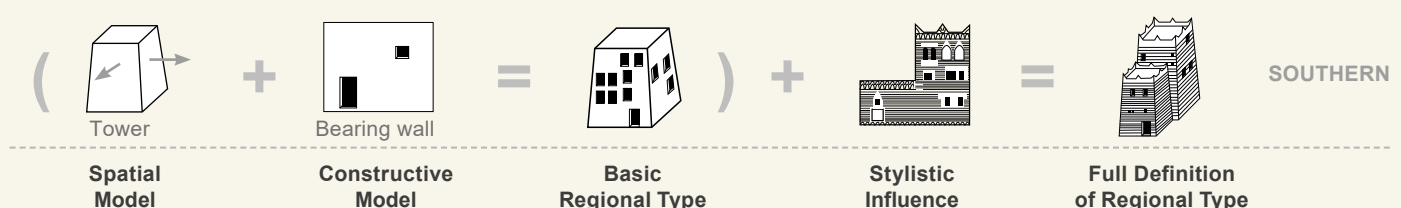
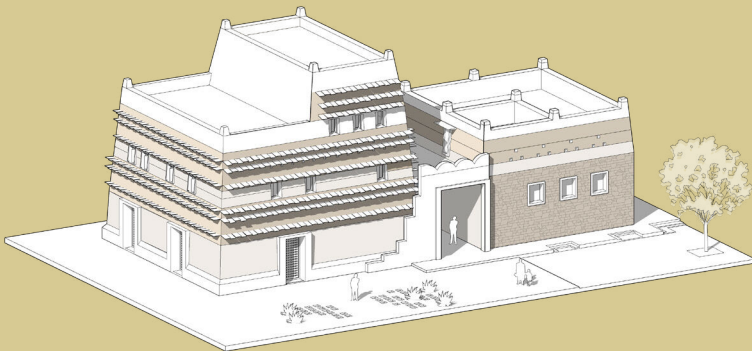


FIG. 20 Character equation for the Abha Highlands (after Ishteeaque & Al-Said 2008)



Traditional building

TRADITIONAL

The massing and design of the new building should foster the architectural character by adopting in a sensible way the traditional forms and patterns, elements and decorations, materials and colors.

Walls with tapering geometric profile, small openings, articulated parapets, distinct top middle and base, locally specific materials like stone and earth walls with projecting slates. Accent around openings and integral art.



Transitional building

TRANSITIONAL

The form and style to be adopted for transitional style should distill the most essential qualities and character giving architectural elements, such as the use of appropriate material and color palette and interpretation of dominant architecture features.

Materials and colors sympathetic to traditional style, grounded base, integral windows. Interpretation of horizontals, traditional patterns, proportions and rhythms of architectural elements, balance of volumes.



Contemporary building

CONTEMPORARY

The form and style of contemporary style should distill the essential qualities and values of vernacular architecture in a new and ever contemporary expression.

Abstraction of geometric planes and forms, adapting to a range of building types and increased daylighting. Balance of volumes, interpretive use of patterns, screens and setbacks for shade.

FIG. 21 Evolution of styles

VI **How to use the guidelines**

The guidelines have been organized to present the rules of architectural character in a clear, efficient and useful way.

VI.1 **Chapter organization**

The first chapters sort the guidelines into different dimensions that help define architectural character:

- 1 **Key features** - The most essential qualities for the architectural character.
- 2 **Composition** - The rules by which buildings are shaped and elements are related to one another.
- 3 **Elements** - The individual parts that are the building blocks of the architectural character.
- 4 **Material and color** - The prevalent materials used and color range found within the architectural character.
- 5 **Pattern** - Common motifs and patterns used in the traditional craftsmanship and material culture of the character.

These chapters are followed by two sections focused on guideline implementation:

- 6 **Applying the architectural character** - Guidance for the proper interpretation and use of architectural character in new buildings.
- 7 **Worked examples** - Design studies that illustrate the use of architectural character at different scales and strengths.

The document concludes with:

- 8 **Public realm** - An overview of public realm character in Abha Highlands.

VI.2 **Guideline formatting**

Individual guidelines are formatted graphically to make them more useful:

- 1 **Chapter number and heading** - Guidelines are gathered into major categories for ease of reference.
- 2 **Guideline number and heading** - Guidelines are given a unique 2-digit decimal number and heading for ease of reference and to provide precision in enforcement.
- 3 **General description** - Descriptive text to introduce the guideline topic.
- 4 **Guideline actions** - Instructions clearly identifying the actions to be taken by designers. Each action is numbered for ease of reference and to provide precision in enforcement.
- 5 **Rationale** - Set in colored text and highlighted by a side bar are the objectives and reasons for the guideline. This gives the applicant an opportunity to propose designs that meet the rationale through alternative ways. Alternatives require the approval of the relevant local authority.
- 6 **Illustrations** - Illustrations, photos and diagrams that help explain the guidelines. They are examples only: where contradictions arise between illustrations and guideline text, the text shall overrule the illustration.

The items above correspond to the figure on the facing page.

Link to the
Contents page

Abha Highlands Architectural Design Guidelines

1 Chapter number
and heading

2 Composition

In contemporary parameters, the different compositional elements of layout, open space, massing, design, and facades described in chapter 1 should translate into the following provisions.

2 Guideline
number and
heading

2.1 Townscape groupings

Guidance for layout aims to achieve and contribute to factors like topography of site and its context, figure ground qualities, and public realm.

3 General
description

- 1 Human-scale, socio-cultural and family values, with different levels of privacy should be fostered in the design.
- 2 Spatial enclosures should be promoted to achieve a sense of place with a clear hierarchical variety of open spaces.
- 3 Walkable and non-car dominated environments with attractive public realm should be prioritized.
- 4 Land use should promote a mix of uses.
- 5 Large blocks (>100m in any direction) should in general be avoided, or provide mid-block passages for walkability.

A permeable block structure with mix of uses is essential to create a walkable and vibrant urban space.

4 Guideline
actions

2.2 Relationship to landscape

- 1 Conservation and enhancement of environmental and cultural resources on site should be prioritized.
- 2 Built form should respect the natural terrain. Flattening of slopes should be avoided.
- 3 In general, usable open space should be provided within the plot oriented toward the public frontage.

5 Rationale

To respect and respond to the natural landscape context, climate and environment.

22 GUIDELINES



FIG. 26 Permeable fabric with hierarchy of open spaces, mixed uses, and continuous pedestrian network should be encouraged

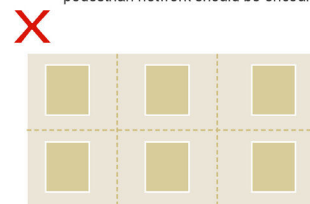


FIG. 27 Large blocks / consolidated blocks without pedestrian permeability should be discouraged



FIG. 28 Built form respecting the natural terrain to be encouraged; large flattening of sites should not be permitted

6 Illustrations

FIG. 22 Typical guideline structure

GUIDELINES

1 Key features

The form and style of contemporary Abha Highlands architecture should distill the essential qualities, key features and the values of vernacular architecture.

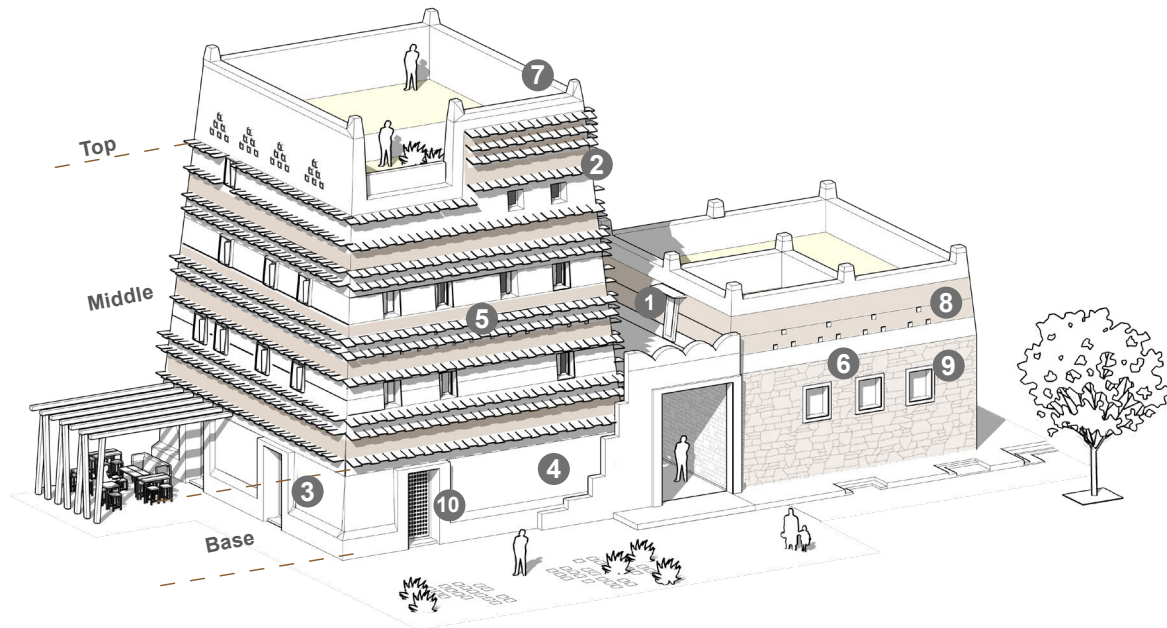


FIG. 23 Abha Highlands key features

Key features:

- 1 Compact massing with strong geometric shapes, tapering towards top and flat roofs.
- 2 Clear horizontal articulation, of 'Al Ragaf' elements. Horizontal articulation also emphasized by color banding and decorative elements.
- 3 Well ordered, balanced, clear, yet evenly transitioned distinct base, middle and top part of the building.
- 4 Solid external walls with base grounded to the street. Low window-to-wall ratio: largely solid areas of wall with small windows.
- 5 Facades with localized symmetrical composition, use of volumes bringing variation through vertical accentuation.
- 6 Openings with simple geometries with colored shutters, occasionally highlighted with distinct bands.
- 7 Flat roofs with articulated parapets, usually painted white. Articulation usually supporting privacy requirements.
- 8 General palette of beige, brown, and white.
- 9 Intensified and/or contrasting colors reserved for accentuating important elements, such as entries, or openings.
- 10 Typical colors and patterns used in Al Qatt al Aseeri art form used for decoration and highlights.

1.1

Character summary

The design of vernacular architecture distinguishes itself from the neighboring styles with three distinct building zones namely, base, middle and top. The articulation of the three zones is based on the functions, user group, culture and the materials.

The base is solid with only entrance openings, middle zone features windows, architectural elements for defense and climate protection, the top features articulated parapets for the purpose of defense and privacy.

The other key feature is the 'Al Ragaf' element. Stone slates project out of the mud courses to protect from the rain, while forming strong horizontal articulation. Massing is tapering towards the top with a maximum angle of 5 degrees. Openings are in form of small windows not exceeding more than 10% of the overall facade surface.

Contemporary architecture in Abha Highlands may be achieved by re-interpreting in an innovative way vernacular forms and patterns, architectural elements and decorations, and materials and colors while retaining the values of the local culture.



FIG. 24 Vernacular architecture in Abha



FIG. 25 Vernacular architecture in Ahad Rafidah

2 Composition

In contemporary parameters, the different compositional elements of layout, open space, massing, design, and facades described in chapter 1 should translate into the following provisions.

2.1 Townscape groupings

Guidance for layout aims to achieve and contribute to factors like topography of site and its context, figure ground qualities, and public realm.

- 1 Human-scale, socio-cultural and family values, with different levels of privacy should be fostered in the design.
- 2 Spatial enclosures should be promoted to achieve a sense of place with a clear hierarchical variety of open spaces.
- 3 Walkable and non-car dominated environments with attractive public realm should be prioritized.
- 4 Land use should promote a mix of uses.
- 5 Large blocks (>100m in any direction) should in general be avoided, or provide mid-block passages for walkability.

A permeable block structure with mix of uses is essential to create a walkable and vibrant urban space.

2.2 Relationship to landscape

- 1 Conservation and enhancement of environmental and cultural resources on site should be prioritized.
- 2 Built form should respect the natural terrain. Flattening of slopes should be avoided.
- 3 In general, usable open space should be provided within the plot oriented toward the public frontage.

To respect and respond to the natural landscape context, climate and environment.

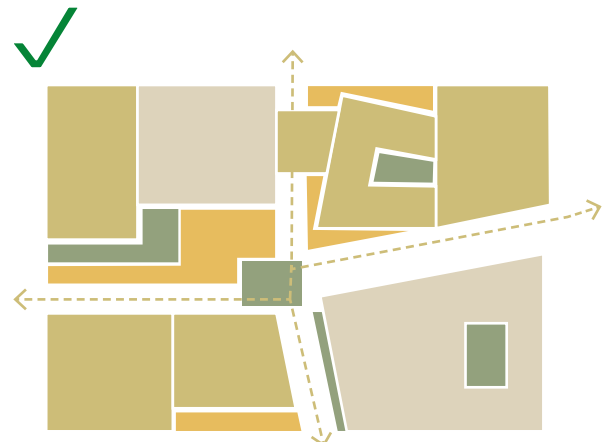


FIG. 26 Permeable fabric with hierarchy of open spaces, mixed uses, and continuous pedestrian network should be encouraged

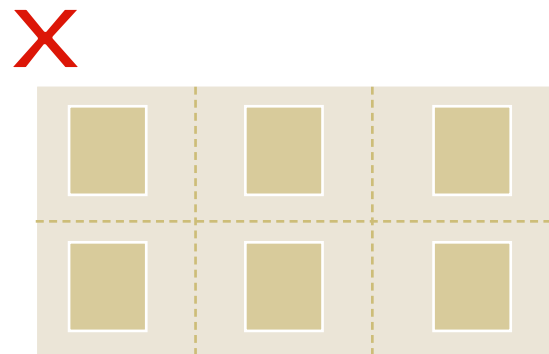


FIG. 27 Large blocks / consolidated blocks without pedestrian permeability should be discouraged



FIG. 28 Built form respecting the natural terrain to be encouraged; large flattening of sites should not be permitted

2.3 Vertical building forms

Building form guidelines aim to contribute to the contemporary interpretation of factors like scale of buildings, heights and proportions.

- 1 Generally, building massing should adopt vertical form with balance of horizontals, responding to the immediate context of the highlands, while also fostering human scale.
- 2 Forms should be compact with strong geometric shapes with occasionally inclined massing (max. 5 degrees) for vertical forms, and provide a well-balanced variety that adds to the skyline.
- 3 Large building massing should be avoided; typically, larger floor plates should be broken by means of full breaks and/or recessed to introduce variation and foster human scale.

To retain the typical vertical form of traditional settlements.

2.4 Flat roofs

Roofscape guidelines significantly contribute to the character of the place through contemporary interpretation of roofline, views and skyline.

- 1 Building massing should be designed to have flat roofs. Varied roof line can be created with stepped conjoined units and varying heights.
- 2 MEP equipment, utilities, delivery, refuse containers, and other types of utilities should always be screened by parapets or located underground / internalized.

To maintain the traditional flat roof forms.



FIG. 29 Masses broken into horizontal and vertical volumes to achieve human scale and variation in skyline



FIG. 30 Large monolithic building blocks, non contextual roof profiles should be avoided

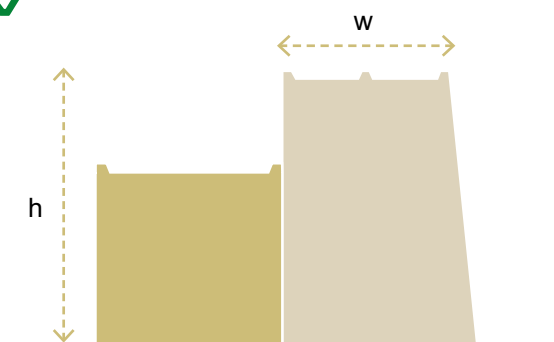


FIG. 31 Width to height ratio and full facade breaks promoting verticality

2.5 Asymmetrical frontages

The guidance for elevations and frontages aims to achieve and contribute to the contemporary interpretation of factors like, use of traditional facade elements, ratio of solid and openings/voids, placement patterns, relationship to street, orientation for quality of light and shadow, and privacy requirements.

- 1 Frontages are generally asymmetrical in articulation and placement of openings. Localized symmetry should be maintained in the placement, size, rhythm and patterns of the openings, interpreting the general asymmetry of houses from the vernacular architecture.
- 2 Facade design should be integral to all public sides (i.e. with the same level of design quality and a consistent treatment).
- 3 Facade design should always ensure privacy of neighboring residential buildings.
- 4 Large-scale symmetry should be reserved for only the most important of civic and religious buildings.
- 5 Facade should provide axial alignments of window openings on different floors to establish hierarchy.
- 6 Generally, different materials or finishes should be used to define the base of the building.

To observe simple asymmetry defining the traditional architecture.

2.6 Simple openings

- 1 Generally, openings should consist of small to medium sized windows of simple geometry. Small ventilation windows may be used to bring variation to the facade.
- 2 Windows should be relatively square / rectangle with relatively balanced proportions.
- 3 Openings should have a maximum share of 30 to 50% of the overall facade surface,



FIG. 32 General asymmetrical facades with localized symmetry in opening placement

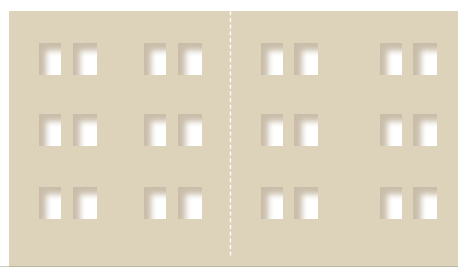


FIG. 33 Long monotonous facades, large scale symmetry without facade breaks should be avoided

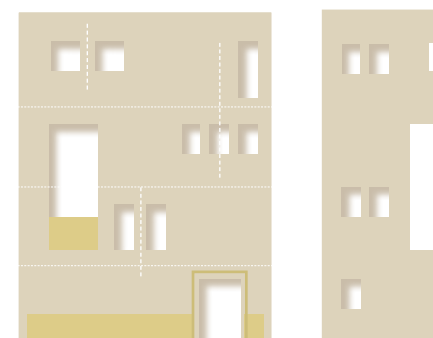


FIG. 34 Openings with simple geometries. Max. 30-50% openings. Loggias incorporated in facade design. Privacy for neighboring plots

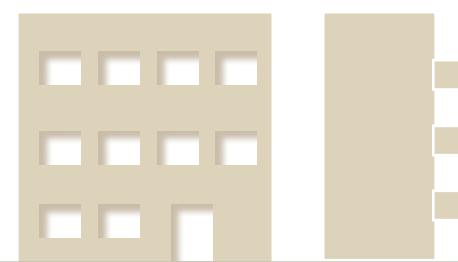


FIG. 35 Large openings, arranged in grid patterns, projected loggias should be discouraged

according to their solar and wind exposure.

- 4 Base, middle and top of the building should be defined with distinct tripartite banding with the use of openings, articulation and use of materials.
- 5 Loggias may be incorporated in frontages and should be preferred over abutting balconies.

To observe the distinct tripartite character of the Abha highlands.

2.7 Solid facades

- 1 Generally, facades should express external solid walls that are grounded to the street level.
- 2 Buildings should have solid facades with recessed / punched openings.
- 3 Main entrance to the building / group of buildings may be highlighted using large openings and articulations.
- 4 Ground floor facade treatment should provide a solid grounded base, foster a high-quality interface between the building and the street, with active frontages.
- 5 Facade materials should be hard-wearing and robust.

Design of ground floors should express the architectural intent and character of the place.

2.8 Horizontal features and patterns

- 1 The middle part of the building facade should interpret and reflect the horizontal banding of the vernacular architecture with the use of shading structures, opening patterns, materials.
- 2 Patterns and art form of Al Qatt Al Aseeri should be used in balanced proportions to highlight features.

To highlight the character of the Abha highlands while creating attractive facades.



FIG. 36 Facades divided in three parts - top, middle and base. Grounded solid base with inclined walls towards the top

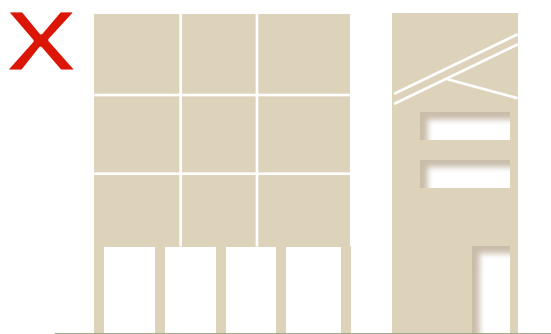


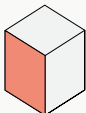
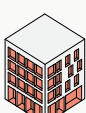
FIG. 37 Large openings at base, thin columns, blank, non-integral facades, facades not respecting privacy, should be avoided

3 Elements

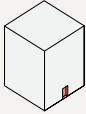
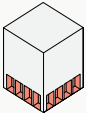
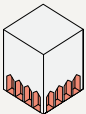
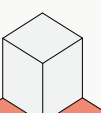
The individual parts that are the building blocks of the Abha Highlands architecture.

TAB. 1 Abha Highland architectural elements

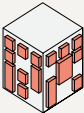
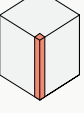
GENERAL ELEMENTS

	Key characteristics	Massing broken into vertical volumes with gently tapered walls mostly on the upper part, with an inclination angle between 1.5° and 5°. Refer to source in section “1 Key features” on page 20 for detailed key characteristics.
	Facade proportion	Human scale massing and design of the new building that responds to context and history, have a compact form, strong geometries, facades promoting verticality with a balance of horizontal volumes.
	Window-to-wall %	Openings should generally not exceed 30-50% of the overall facade surface and propose a similar window-to-wall % to the heritage site, if located adjacent to it.
	Opening proportions	Opening proportions should interpret the traditional character of openings in the region / heritage site, intended use as well as the environment. Refer to expanded guideline “3.3 Windows and openings” on page 31.
	Composition	Depending on overall building size, the base may be characterized by as much as the first 1 - 3 stories of the building above ground. For taller buildings, stepping the massing at lower floors may help establish a sense of horizontality at street level.

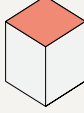
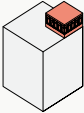
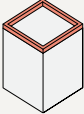
BASE ELEMENTS

	Entrances	Entries should be recessed from the building facade and well proportioned for a pedestrian scale. They should be well defined, clearly visible, and universally accessible from the sidewalk. Vehicular entrances should be placed at the back of the building. Refer to expanded guideline “3.2 Doors and entrances” on page 30.
	Shop fronts	Active frontages between ground floor and main street should be emphasized. Solid base with simple geometry openings is encouraged with occasional use of colonnades. Use of different material for base, in gradual transition with the overall facade materiality should be encouraged.
	Arcades	Arches should not be permitted. Occasional colonnades maybe allowed for active frontages.
	Curtilage	Curtilage: a small yard or court. Buildings’ exterior ground floors, particularly colonnades’ covered exterior area, should strive for material and design integration with the surrounding public realm. The transition from the public domain to the curtilage should be universally accessible, with no abrupt changes in level, single steps, or other trip hazards. By optimizing the micro climate around buildings, it is possible to ensure a favorable pedestrian experience.

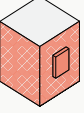
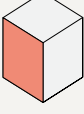
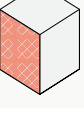
MIDDLE ELEMENTS

	Wall articulation	Regular breaks (generally at maximum 30 meters intervals) along building facade creating a visual rhythm along the streets with offsets, recesses, stepped facades, varying materials, colors and projections is recommended. Wall breaks should be a minimum of 1.5 meters deep and 3 meters in length and extend to at least 70% of the facade vertically. Facade articulation interpreting horizontal banding / projecting slates in sensible way should be encouraged.
	Windows and openings	Openings should follow a pattern and rhythm contributing to the character of the place, as well as designed for human comfort. Window and opening design are subject to a large number of compositional guidelines. Refer to expanded guideline "3.3 Windows and openings" on page 31.
	Projecting elements	Projecting features should reference historic examples, if used, being appropriately sized for the rooms they serve. For Abha Highlands, projecting elements such as balconies should be generally discouraged, or should be well integrated within the massing. Al-Ragaf elements (projecting slates) used for weather protection and articulation.
	Recessed elements	Recessed elements are set inwards from the building facade; they extend access or perception of the public realm inside the plot boundary. This may include: recessed entrances, colonnades, overhangs and chamfered corners.
	Shutters and shading	Shading may be achieved by recessing openings from the facade by providing perforated or latticed screens. Should adapt to the vernacular language. Complementary color palette may be used to highlight shutters as special feature, based on the vernacular language.
	Corner features	Building corners should be well defined, positively contribute to the public realm and help pedestrian movement.

TOP ELEMENTS

	Roofscape	Active, accessible roof space is encouraged. Roofscapes should be used as amenity space and to incorporate sustainability and green roof measures.
	Rooftop elements	The rooftop room on vernacular buildings often constituted half or a quarter of the floor space; from the outside would be a continuation of the external walls. Rooftop rooms derived from vernacular architecture are encouraged. Temporary fabric shading also permitted. Rooftop elements usually, should not extend more than 33% of the frontage.
	Parapets	Parapets should be horizontal, and typically low in height. Parapets may be articulated, not necessarily duplicated based on the vernacular style, or feature as extension of external walls.

OTHER ELEMENTS AND ORNAMENTATION

	Materiality	Materials should match the local character area zone and reference the near-by heritage; be consistent in nature, minimum 50% of facade should feature one material. Excessive layering of multiple materials and generally, use of low quality materials is discouraged. See expanded guideline "4 Materials and Colors" on page 32.
	Colors	Generally, approximately 70% of facade should be in one light earth tone color. Complementary colors, integrated in design composition may be used to highlight features, generally up to 30% of total facade surface. See expanded guideline "4 Materials and Colors" on page 32.
	Pattern	Local art and patterns should be integrated in design composition, generally up to 10% of total facade surface. See expanded guideline "5 Patterns" on page 36.

Top



Parapet articulations



Pointed parapet wall corners



Variation of pointed parapet



Vertical strips

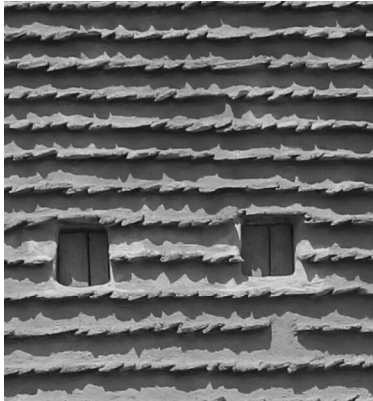


Flat roofs with horizontal banding

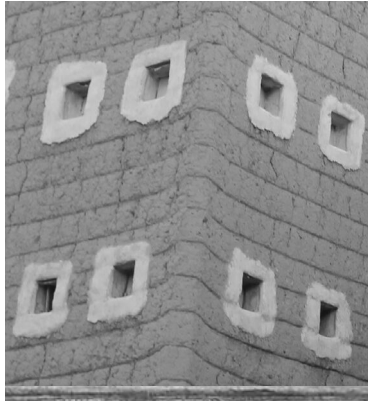


Flat plastered rooftops

Middle



Al Ragaf elements - horizontal layer of projecting slates



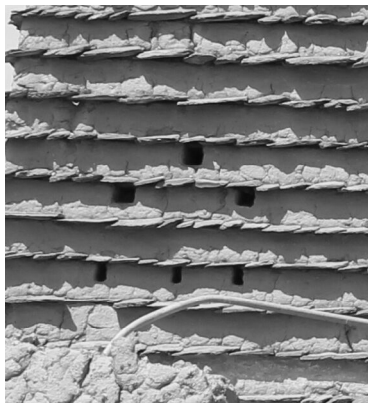
Highlighted small openings



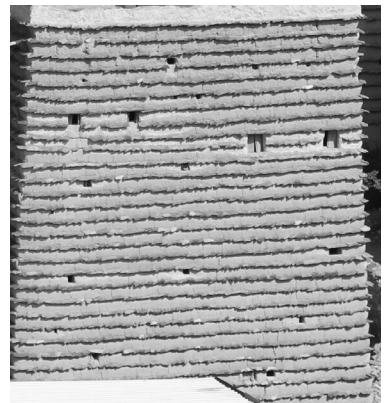
Horizontal bands highlighting openings



Simple openings



Defense openings



Variation in openings

FIG. 38 Examples for top, middle, base, ornamentation and other elements

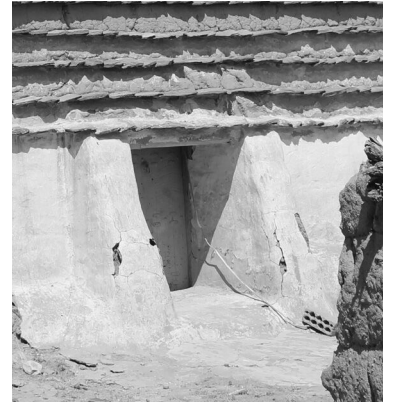
Base



Wide entrance with wooden shutters



Simple geometries



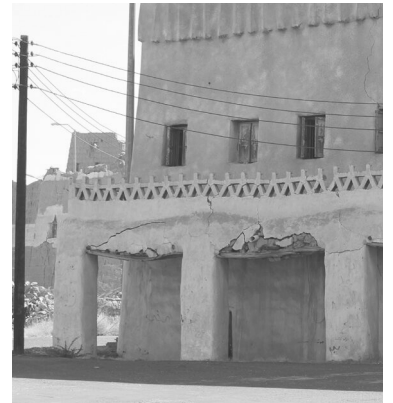
Door with buttress



Highlighted gateway with articulated top

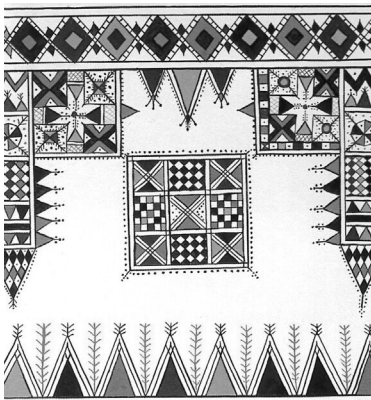


Highlighted gateway with pointed corners

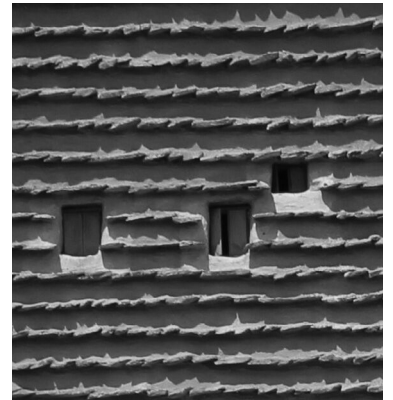
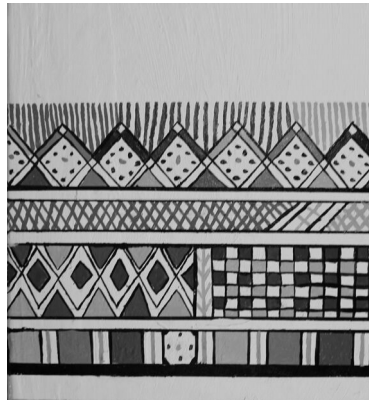


Active frontage with articulated parapet

Ornaments and other elements



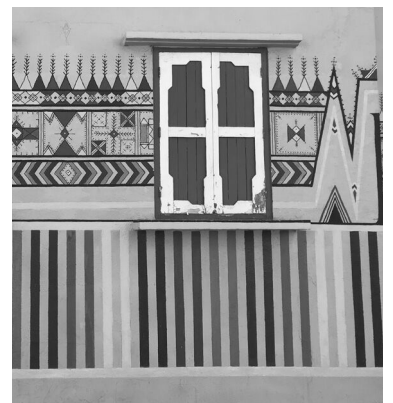
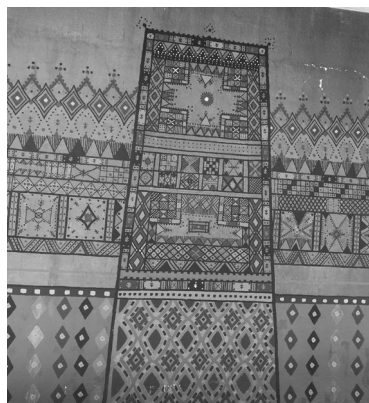
Patterns and colors used in local art



Horizontal band pattern



Patterns and colors used in local art



3.1 General details and considerations

Details and construction techniques guidance provides standards and guidelines for use of traditional elements, provisions to translate these details to contemporary parameters, types and percentage of elements on the facade, protection and enhancement of traditional building features. Elements depicted should be used as starting points for interpretation rather than direct copying.

- 1 In general, architectural elements like the rooftop elements, openings, entrances, and construction techniques should express a plain, simple and elegant style.
- 2 A vocabulary of architectural details should celebrate or re-interpret the traditional architectural elements, as per identified in Section 1.
- 3 Traditional architectural elements should be combined with contemporary and new technologies in an innovative way.
- 4 Contemporary architectural elements and construction techniques should be appropriately selected to respond to climatic conditions as per identified in Section 1 (i.e. shading strategy and use of non-reflective surfaces, wind directions, rain harvesting, green roofs).
- 5 Contemporary adaptation of traditional building techniques and materials, should be proposed (i.e. limestone, mud colored plaster, beige metal/ high-pressure laminate HPL cladding).

Architectural elements are the unique details and component parts that working together with specific construction techniques form the architectural style of buildings.

3.2 Doors and entrances

- 1 Generally, doors and entrances should consist of simple orthogonal geometry.
- 2 Door width-to-height proportion are 1:2 - 1:3.
- 3 Door shutters and entrances may be highlighted using colors and local art patterns from Al Qatt Al Aseeri art form.

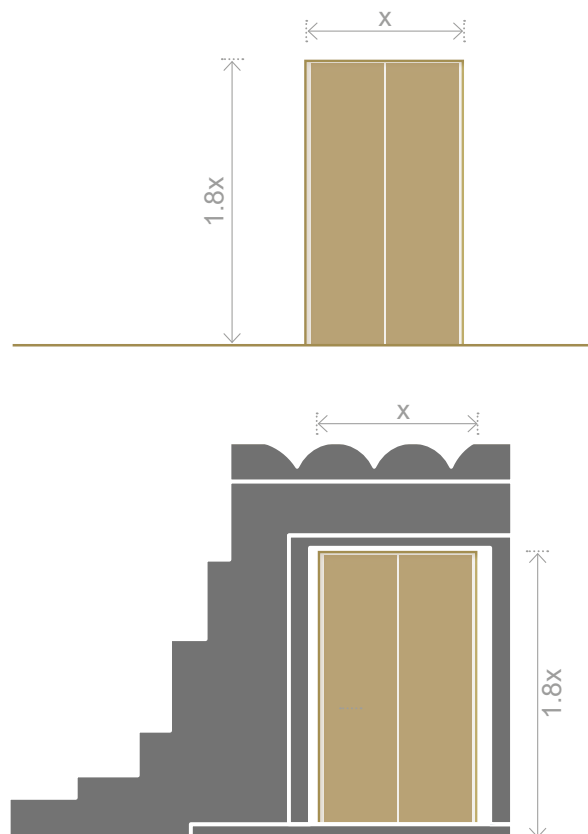


FIG. 39 Traditional door elements proportions

3.3 Windows and openings

- 1 Openings should be articulated with change in materiality and/or color, often as white or lighter colored surrounds that differ from the main facade.
- 2 Opening surrounds may be recessed or projected from the main facade to increase compositional layering and the play of light on the facade.
- 3 Generally, openings should consist of small windows of simple geometry.
- 4 Generally, traditional windows have the proportion of 1:1.2 - 1:2.
- 5 Informal groupings; alignments related to interior room layouts rather than external facade composition.
- 6 Projecting horizontal elements to shade the windows.
- 7 Locally symmetric and aligned openings are preferred. To generate bigger orders and levels of hierarchy on the facade, windows on different floors should adopt axial alignments.

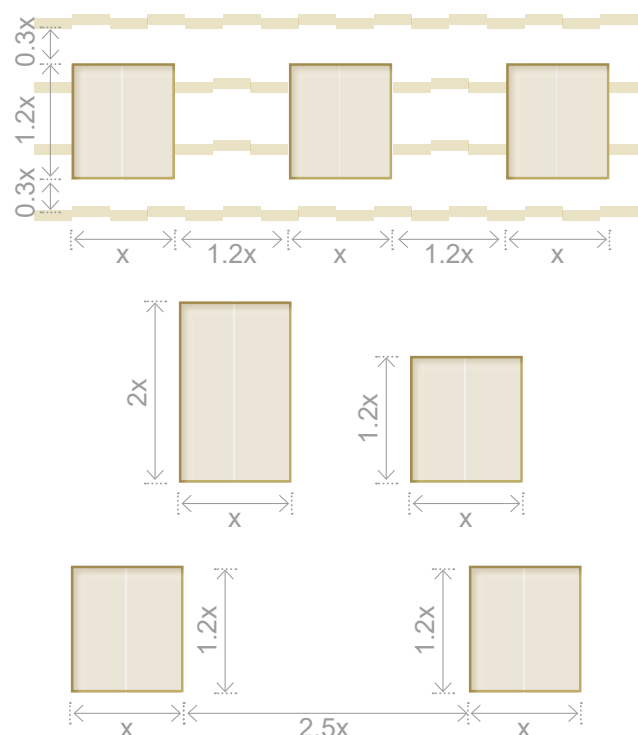


FIG. 40 Traditional window elements proportions

3.4 Roofscape

The traditional roofscape of the Abha Highlands is characterized by the use of parapets and distinct materials.

- 1 The roofscape may feature articulated parapets and/or articulated roof elements. It should clearly define and articulate roof top with distinct materials and/or features.
- 2 The traditional parapets are generally pointed or with stepped articulation with the proportion as shown in the figure.
- 3 The parapet design is recommended to preserve the values of traditional architecture, promoting privacy, height for defense to promote verticality and screening for contemporary buildings.

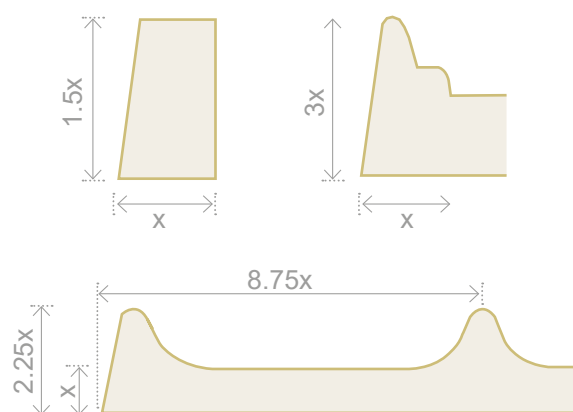


FIG. 41 Traditional parapet elements

Contemporary interpretation of architecture through factors like ratio of solid and openings / voids, proportion and size of openings maintain the traditional architectural source of the Abha Highlands region.

4 Colors and materials

The skillful interpretation, application and interplay of light, shadows and colors, so characteristic of Abha Highlands traditional architecture, can convey additional meaning and contribute to providing a rich and contextual experience of the space.

In contemporary parameters the use of colors for new buildings should focus on:

- 1 A limited spectrum of natural colors and materials to be preferred.
- 2 Limited use of complementary colors may also be used for public realm, hardscape and softscape elements.
- 3 For all public frontages, typically, 60% to 70% range of the project's colors palette to be composed of light gradations of earth tones, with a maximum of 30% to 40% of the total composition reserved for stronger gradations and complementary colors.
- 4 Intensified and/or contrasting colors to be reserved for accentuating important elements, such as entries, arcades, openings and others. The range for intensified and/or contrasting colors should be maximum 5% of the total composition.
- 5 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.

Appropriate colors derived from the local landscape and heritage vernacular palette should be used to contribute to an esthetically pleasing, and distinctive while more uniform urban environment.

RAL Color codes

RAL codes are part of a universal color-matching system used to provide consistency in architectural finishes. It is recommended that teams verify colors with a physical fan deck. For more information visit www.ral-farben.de/en/



FIG. 42 Abha Highlands color palette

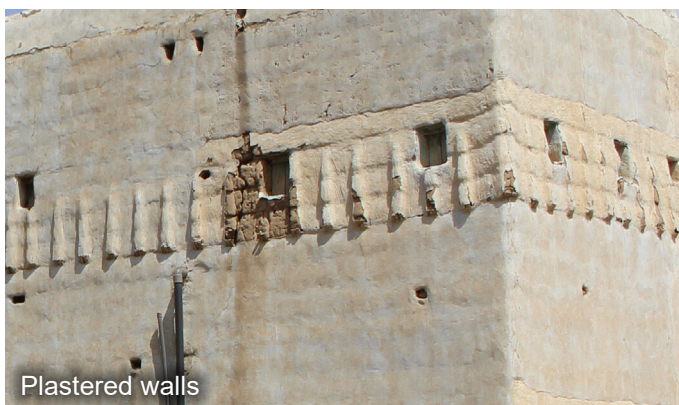


FIG. 43 Abha Highlands colors and materials mood board

In contemporary parameters the use of construction materials and finishes should focus on:

- 1 Generally, materials finishes and colors treatment should be integral to all sides of the building and particularly along public frontages.
- 2 Solid materials and clear shaped geometries should be preferred.
- 3 Use of locally available traditional materials should be preferred.
- 4 Materials should convey a sense of quality and durability and that are able to retain their appearance over time.
- 5 High-quality durable materials should be used particularly for public facades. Since the lower part of a building, typically the first 4 levels, has the greatest visibility at ground level and while driving, its materials should be of enhanced quality and durability.
- 6 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.
- 7 Generally, the use of min. 40% of facade treatment with one consistent material should be required.
- 8 Generally, the use of metal cladding and curtain walls should be limited to max. 20% of the total facade area.

Material and finishes should aim to achieve and contribute to the Abha Highlands architecture through factors like quality of new materials, hierarchy, proportion and palette of materials responding to the local context.

Recommended materials

Recommended materials are those durable and quality materials that give the building a sense of authenticity, weight, texture, and mass, such as:

- Local stone / natural stone.
- Colored concrete.
- Terra cotta.
- Mud brick (full or face brick).
- Rammed earth.
- Cementitious panel siding.
- Green walls.
- Smooth plaster.
- Terrazzo.
- Robust stone veneer.
- Low reflectivity clear glass.
- Limited use of high-quality metal panels.
- Durable tensile fabric for shading structures.

Discouraged materials

Use of low-quality building materials and elements are discouraged, such as:

- Metal cladding.
- Colored and mirrored glass.
- Plywood siding, T-1-11 plywood siding.
- Vinyl siding.
- Thin layers of stone or unit masonry that appear veneer-like.
- Corrugated plastic sheets.

From the tradition



Location: Dhahran Al Janub



Location: Tanaumah



Location: Ahad Rafidah



Plastered stone



Local stone



Stone slates



Rammed earth

Contemporary interpretation



Natural stone



Sandstone



Adobe



Terrazzo

Earth base



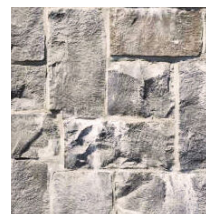
Plaster



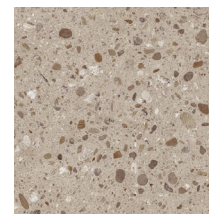
Compressed bricks



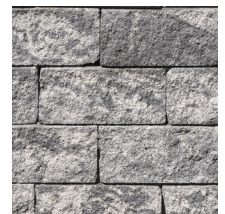
Mud bricks



Diorite



Terrazzo



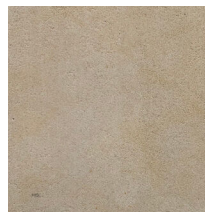
Soapstone



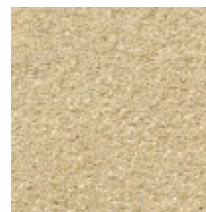
Shell limestone



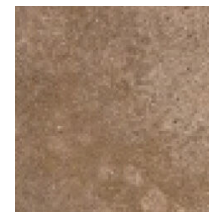
Shell limestone



Concrete



Pigmented concrete



Pigmented concrete

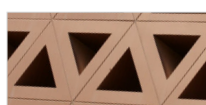


Lime washed plaster

Other materials limited to 10% - 20%



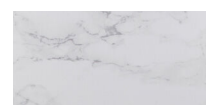
Palm wood



Metal cladding



Tensile fabric



Marble



Travertine

FIG.44 **ABHA HIGHLANDS - RECOMMENDED MATERIALS**

5 Patterns

Common motifs and patterns used in the traditional craftsmanship and material culture of the Abha Highlands.

Traditional patterns help to express the region's character and preserve its socio-cultural values, customs and traditions.

Al-Qatt Al-Aseeri is a traditional art that is characteristic of Aseer region. Perfect murals, geometric motifs, patterns and choice of colors derived from the picturesque Aseer nature are characteristic features of this art-form. This was typically used for interior decorations. Al-Qatt art was also recognized by the UNESCO Intangible Heritage List in 2017.

The motifs and patterns vary according to different geographical locations through Aseer.

Stripes, triangles, squares along with palm leaves and flower shaped motifs are commonly used in Abha Highlands.

- 1 Al-Qatt Al-Aseeri using the traditional color palette and motifs may be represented through use in facade treatment, public realm and hardscape elements.
- 2 Art pattern should 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 to theme public realm elements.
- 3 In general, the range for decorative patterns should be between 10%-20% of the total facade area.

Patterns inspired from Aseer's Al-Qatt Al-Asiri traditional paintings are used prominent in ornamentations in the Abha Highlands.

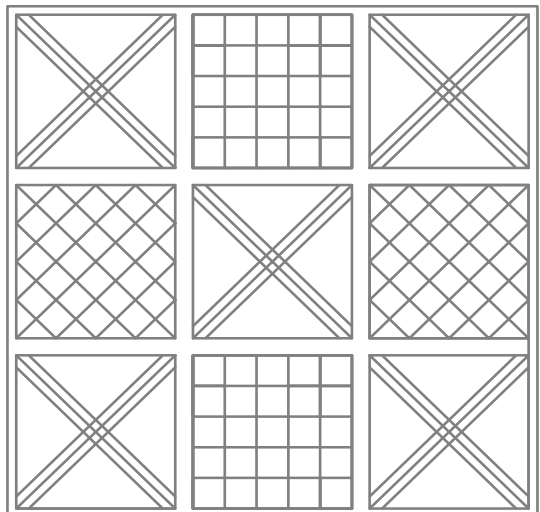
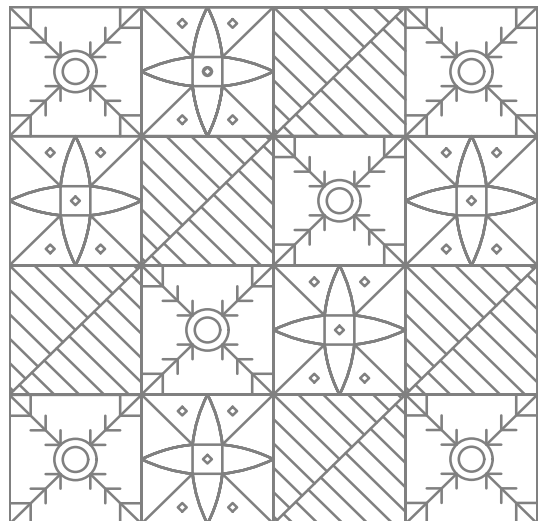
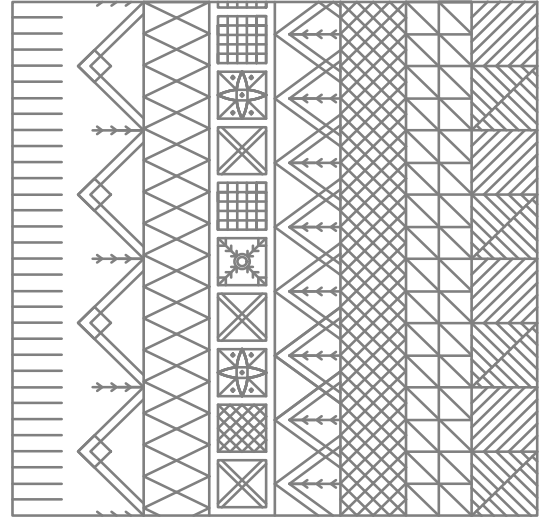


FIG. 45 Example of abstraction of decorative patterns and motifs



FIG. 46 Traditional patterns present in Abha Highlands

6 Applying the architectural character

Guidance for the careful interpretation and application of architectural character to contemporary developments.

6.1 Interpretation

Good application of architectural character does not mean direct copying of historical examples. Their contemporary use should involve interpretation: a selective emphasis of characteristics to create meaning and beauty in its new context. Designers can selectively use formal characteristics such as:

- Color (hue, tonality, tint).
- Shape (figure, outline, 2-D geometry).
- Form (volume, 3-D geometry).
- Texture (physical surface quality).
- Line (verticals, horizontals, diagonals, zigzags, curves, dashes, etc.).
- Value (lightness to darkness).

Interpreted elements can be further transformed in the way they relate to one another. Designers can play with compositional rules such as:

- Balance (equality or harmony of parts).
- Contrast (difference of parts).
- Emphasis (strengthening of parts).
- Movement (change, directionality).
- Pattern (repetition, symmetry).
- Rhythm (even and uneven spacing).
- Unity/variety (degrees of variation).

Designing with architectural characters is an interpretive art, an effort to express the spirit and essence of the original architecture in new yet familiar ways.

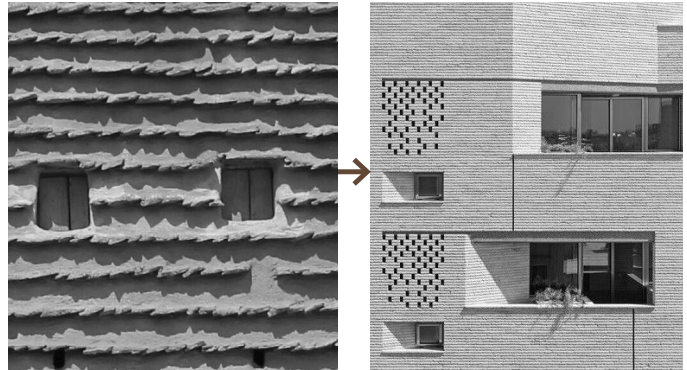


FIG. 47 Example of building material abstraction



FIG. 48 Example of window shape abstraction

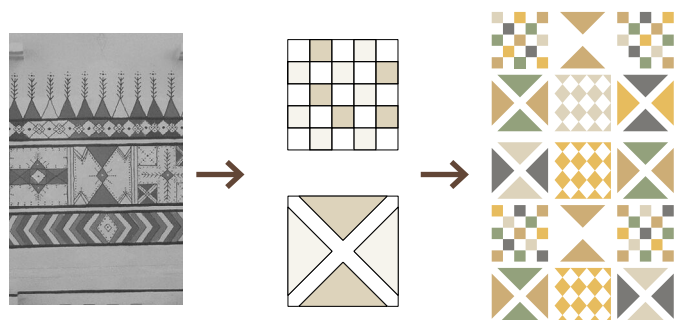


FIG. 49 Example of pattern abstraction

To encourage contextually sensitive contemporary design.

6.2 Scaling

Architectural characters often come from historical building types of a particular size. When applied to new developments of a dramatically different size, the original character can become distorted or repeated in a way where their quality and craftsmanship are reduced.

When applying architectural characters to new developments, designers should:

- 1 Be sensitive to the challenges of large project sizes. Break down building massing into smaller, more diverse and interesting massing that can better fit traditional elements of architectural character.
- 2 Observe the way elements are related to one another and to interior layouts in the source examples of architectural character.
- 3 Avoid mechanical repetition of elements without a clear design intention.
- 4 Respect the proportion, size and construction logic of the original architectural elements.
- 5 Do not scale and distort small elements into oversized graphic features that ignore the principles behind the use of the original element.
- 6 Pay special attention to building elements visible from the public realm, especially at the ground floor. The closer the element is to the public, the greater the fidelity and quality it should be. Conversely, elements farther away from public view may be more highly abstracted.

To successfully apply elements of traditional architectural character to large contemporary buildings.

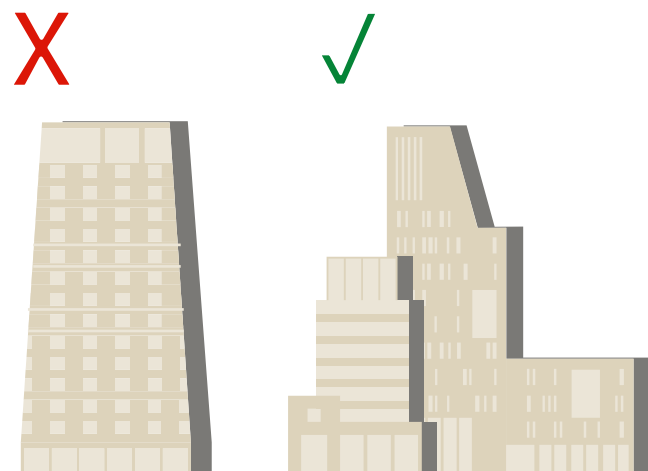


FIG. 50 Break down building massing to better fit traditional architectural elements

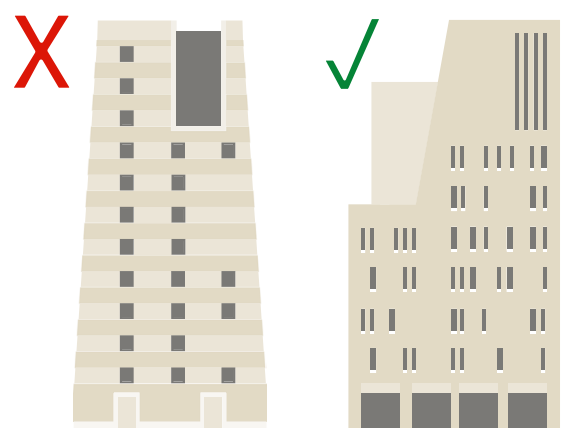


FIG. 51 Do not scale and distort smaller elements into oversized graphic features

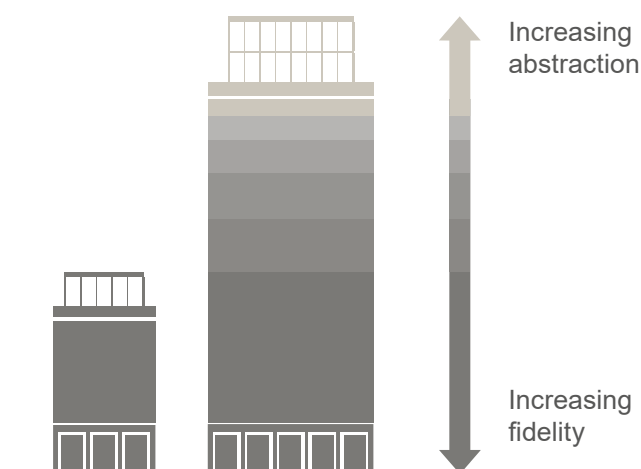


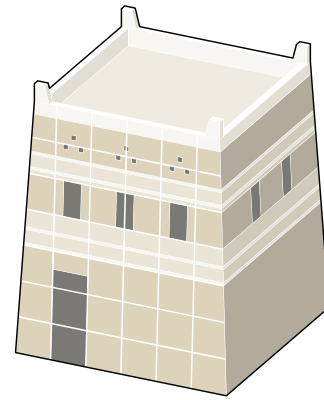
FIG. 52 Pay attention to building elements near the public realm, especially at the ground floor

6.3 **Functionality**

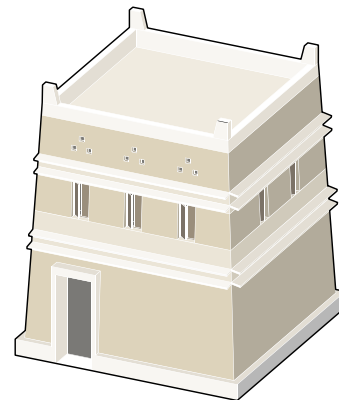
Architectural elements should perform functionally like their traditional counterparts, and not be applied superficially like graphic signage.

- 1 Architectural elements should be purposeful, contributing to the climatic or technical performance of a building for example: shutters should be operable, providing shading and privacy.
- 2 Architectural characters should not be applied in a superficially like wallpaper on an unrelated building form.
- 3 Architectural elements should not employ material fakery for example: the use of one material that pretends to be another.
- 4 Ornamental architectural elements are permitted where they strengthen the character and improve the quality of the building.

To maintain the functionality of architectural elements.



Superficial features



Functional features for example shading devices

FIG. 53 Example of functional architectural elements

6.4 **Adaptation**

The application of traditional architectural characters to new building types requires sensitive adaptation.

- 1 Precious materials from the original may need to be substituted with suitable replacements.
- 2 Some architectural elements may need to be adapted for new building systems or methods of construction.
- 3 Some new building systems may clash with an architectural character, and should be avoided (for example: large space frames, spider-joint glazing, and large areas of curtain wall).

To apply architectural character through contemporary means.

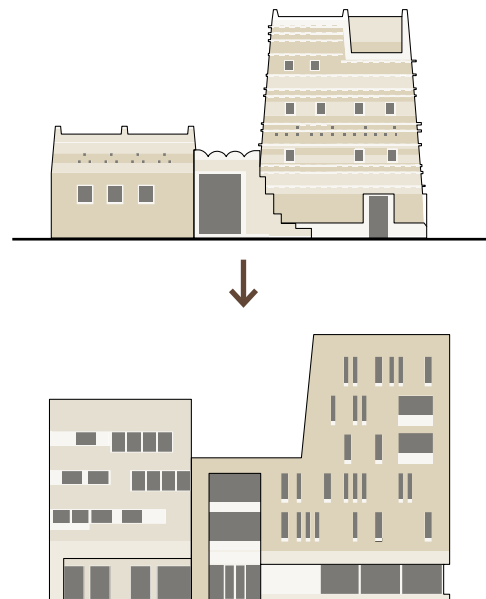


FIG. 54 Adaptation of traditional architectural elements to a contemporary building

6.5

Mixing

Architectural characters are part of living cultures that continually grow and change. The boundaries defining architectural character areas should be understood as provisional, open to influences from all around, rather than as fixed borders. This invites the possibility of styles and character strengths mixing together in large projects, and particularly in sites located on the edge of two or more character areas.

- 1 In large projects, when the project site is located at the edge of two or more character zones, the adjacent characters can influence the project by mixing the characters in different buildings, while prioritizing one above the other based on an analysis of the local context.
- 2 Avoid mixing more than one character within a single building; instead, the mixing should occur across different buildings depending on their location within the project and their functional use.
- 3 When mixing characters, the permitted style (traditional, transitional, or contemporary) should be taken into consideration based on the specified level.
- 4 Exercise informed creativity. Do not slavishly copy architectural characters.

To propose a clear method for the mixing and blending of architectural characters in large projects.

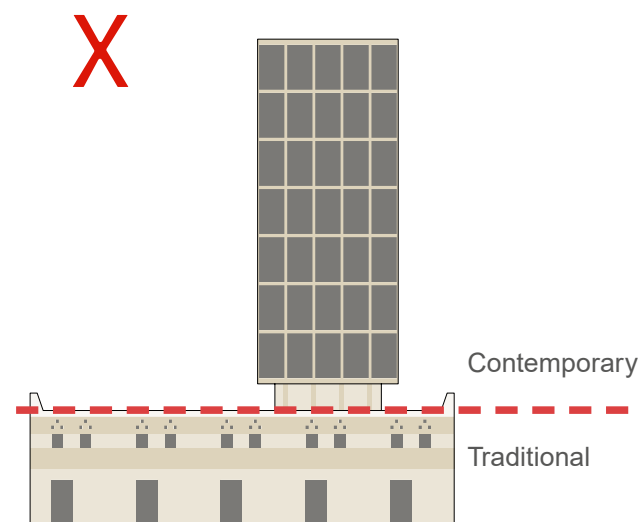


FIG. 55 Do not create hard breaks between mixed sources



FIG. 56 Create gradual transitions between mixed sources and strengths of character application

7 Worked examples

This section provides examples for three styles, ranging from traditional, transitional to contemporary, for Abha Highlands character zone, showcasing application of key compositional elements as described in chapter 1.

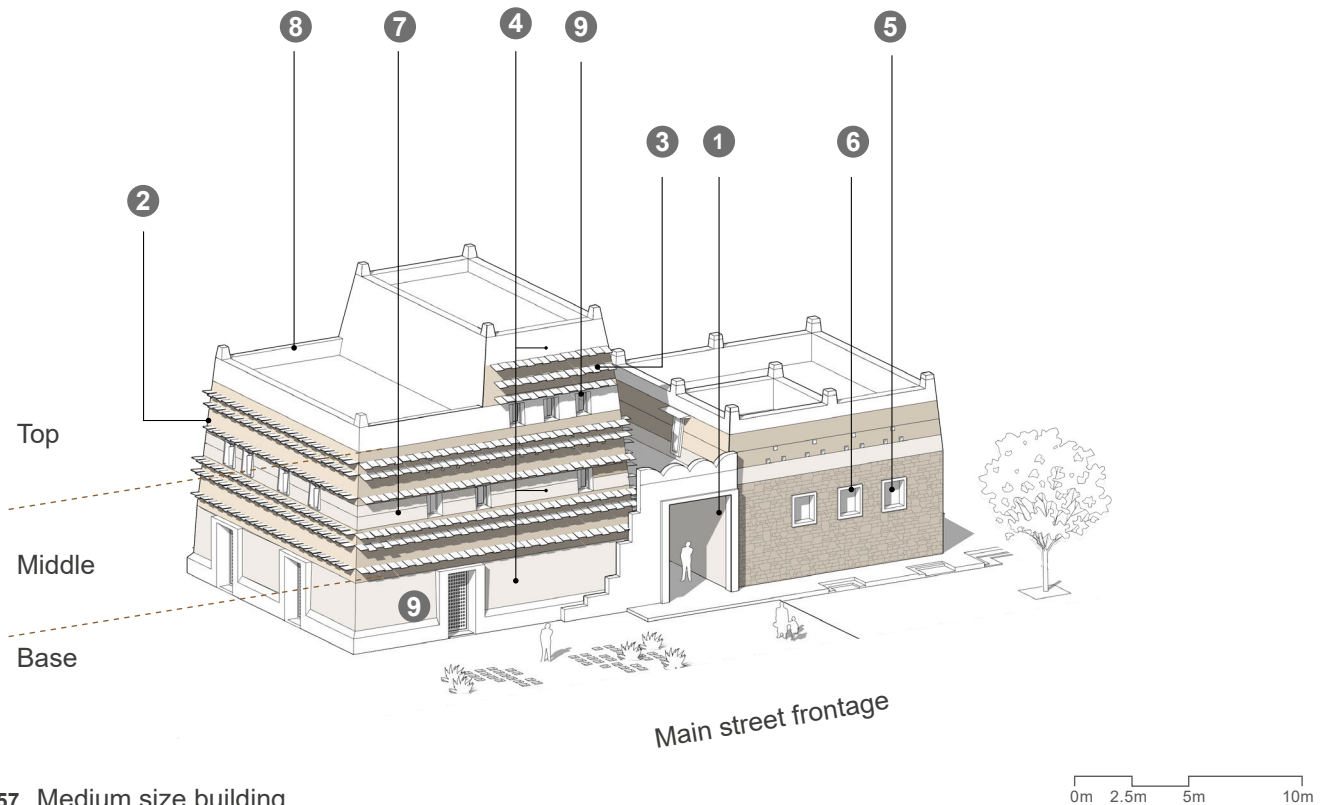


FIG. 57 Medium size building

7.1 Traditional

The massing and design of the traditional style buildings should foster the heritage character, by adopting in a sensible way traditional forms and patterns, traditional architectural elements and decorations, traditional materials and colors.

The form and style of traditional architecture should be sensitive and sympathetic to the existing heritage asset and should help reinforce its local character.

- 1 All key compositional features of traditional architecture should be applied for the traditional style of architecture.
- 2 Compact massing with strong geometric shapes, tapering towards top with a max. angle of 5 degrees and flat roofs.
- 3 Clear horizontal articulation, of 'Al Ragaf' elements - projecting slates. Horizontal articulation also emphasized by color banding and decorative elements.
- 4 Well ordered, balanced, clear, yet evenly transitioned distinct base, middle and top part of the building.

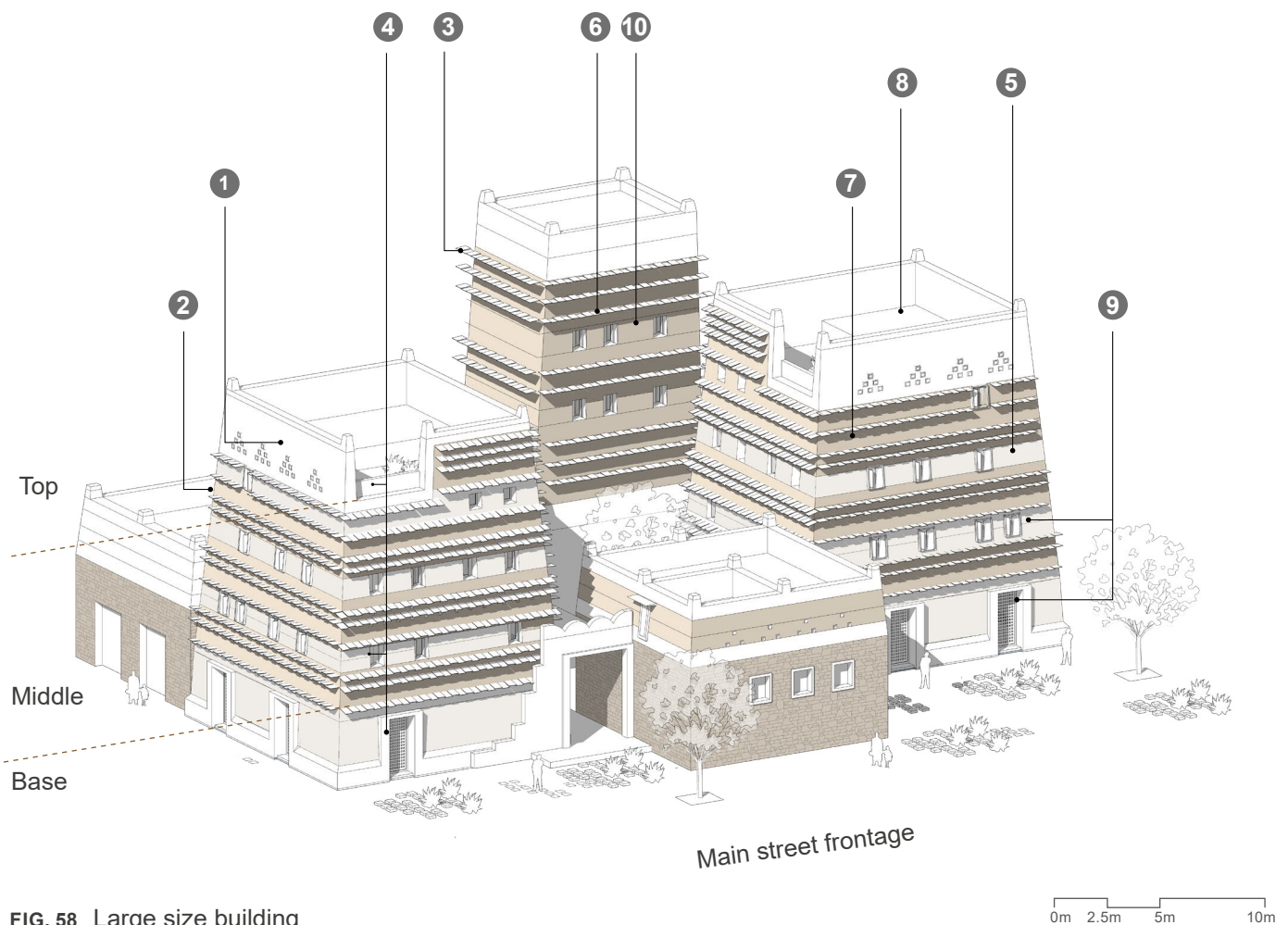


FIG. 58 Large size building

- 5 Low window-to-wall ratio: largely solid areas of wall with small windows.
- 6 Facades with general localized symmetrical composition, use of volumes bringing variation through vertical accentuation.
- 7 General palette of beige, brown, and white using locally available materials. Base is generally distinct in the use of material or finishes.
- 8 Flat roofs with articulated parapets, usually painted white. Articulation usually supporting privacy requirements.
- 9 Typical colors and patterns used in Al Qatt al Aseeri art form used for decoration and highlights.
- 10 Large buildings in traditional style should not exceed more than 4-5 stories, respecting the traditional typologies.
- 11 Generally, traditional style should be proposed only in heritage districts, adjacent to heritage building, or for building of special significance.

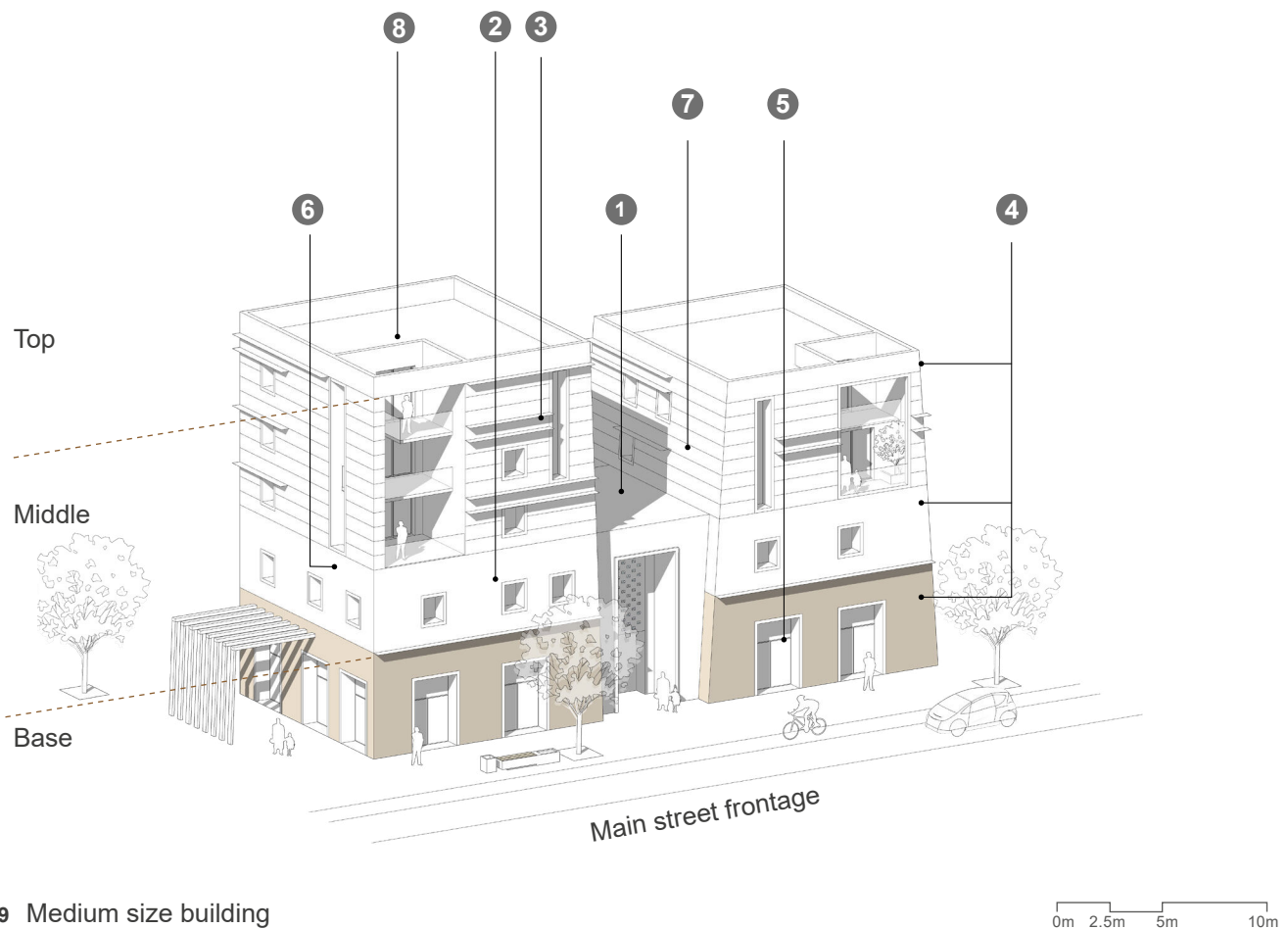


FIG. 59 Medium size building

7.2 Transitional

The form and style of transitional style should distill the essential qualities and values of vernacular architecture, addressing the need of new ways of living, yet reflect a strong character; respecting and celebrating the local character and traditions; providing a sense of belonging.

The form and style to be adopted for transitional style should distill the most essential qualities and character giving architectural elements, such as the dominant features and use of appropriate material and color palette.

- 1 Compact massing with strong geometric shapes, and flat roofs.
- 2 Grounded facades with moderate sized openings. Max. 30-50% openings of the overall facade surface. Loggias should be integrated within the facades.
- 3 Interpretation of projecting horizontals and inclined facades as shading devices, articulation and use of new materials.
- 4 Well ordered, balanced, clear, yet evenly transitioned distinct base, middle and top part of the building.

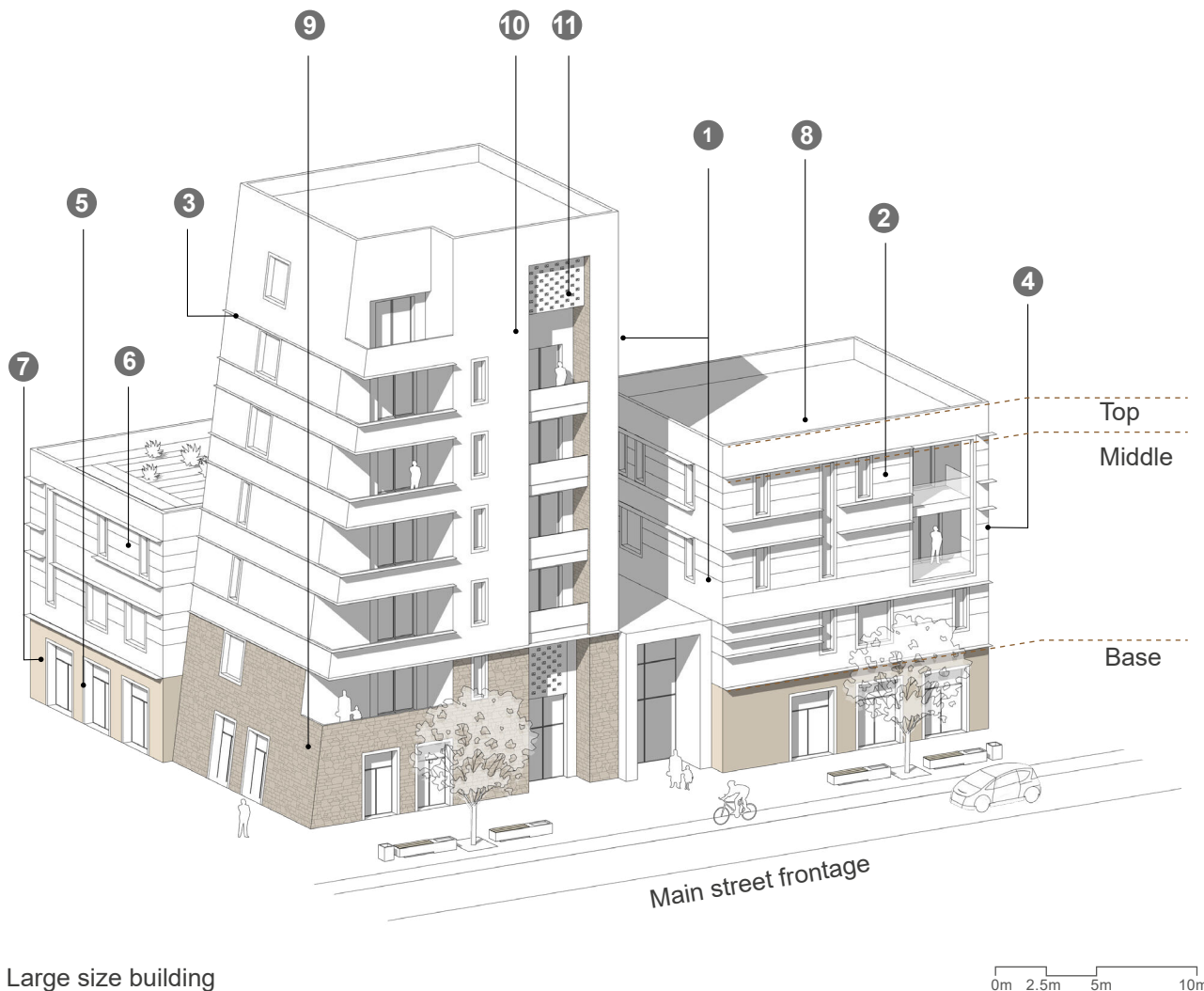


FIG. 60 Large size building

- 5 Integrated shopfronts, shutters and screens maintaining the solid base character. Perforations and patterning in surfaces.
- 6 Facades with general asymmetrical composition, localized symmetry in opening placement, use of volumes bringing variation through vertical accentuation.
- 7 General palette of beige, brown, and white using recommended palette of materials, colors and finishes. Use of distinct material for base is recommended.
- 8 Flat roofs with articulated parapets, supporting privacy requirements and hiding rooftop equipments.
- 9 In tall buildings, height of podium should establish street wall and reinforce the human scale and character of the area.
- 10 Tall buildings / towers shall be tall, slender structures that enhance the skyline; large, elongated, boxy or slab like floor plates should be avoided.
- 11 Articulation of top zone should positively contribute to the skyline and design may be used to create landmarks.

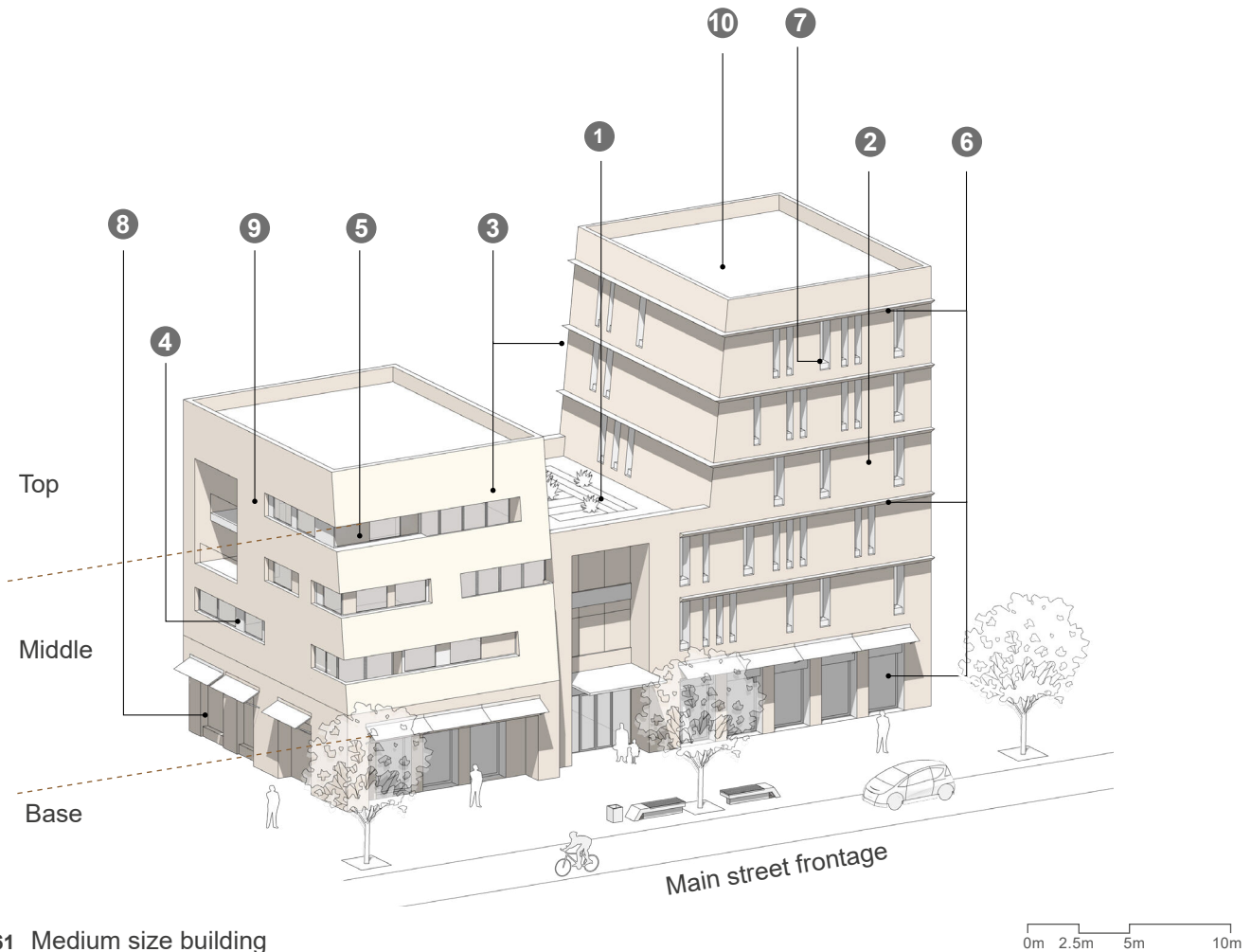


FIG. 61 Medium size building

7.3 Contemporary

The form and style of contemporary style should distill the essential qualities and values of vernacular architecture in a new and ever contemporary expression.

It should address the need of contemporary living yet respect and celebrate the local natural character and traditions; providing a unique character to the built form and a sense of belonging.

Contemporary style may be achieved by re-interpreting in an innovative way traditional forms and patterns, traditional architectural elements and decorations, traditional materials and colors.

- 1 Compact massing with strong geometric shapes, and flat roofs.
- 2 Grounded facades with moderate sized openings. Max. 30-50% openings of the overall facade surface.
- 3 Generally, the use of max. 2 architectural compositional motives for the design derived from the sources is recommended.
- 4 Simplified detailing and accents.
- 5 Interpretation of horizontal elements is recommended as shading devices or horizontality accentuated with window placement pattern and rhythm.

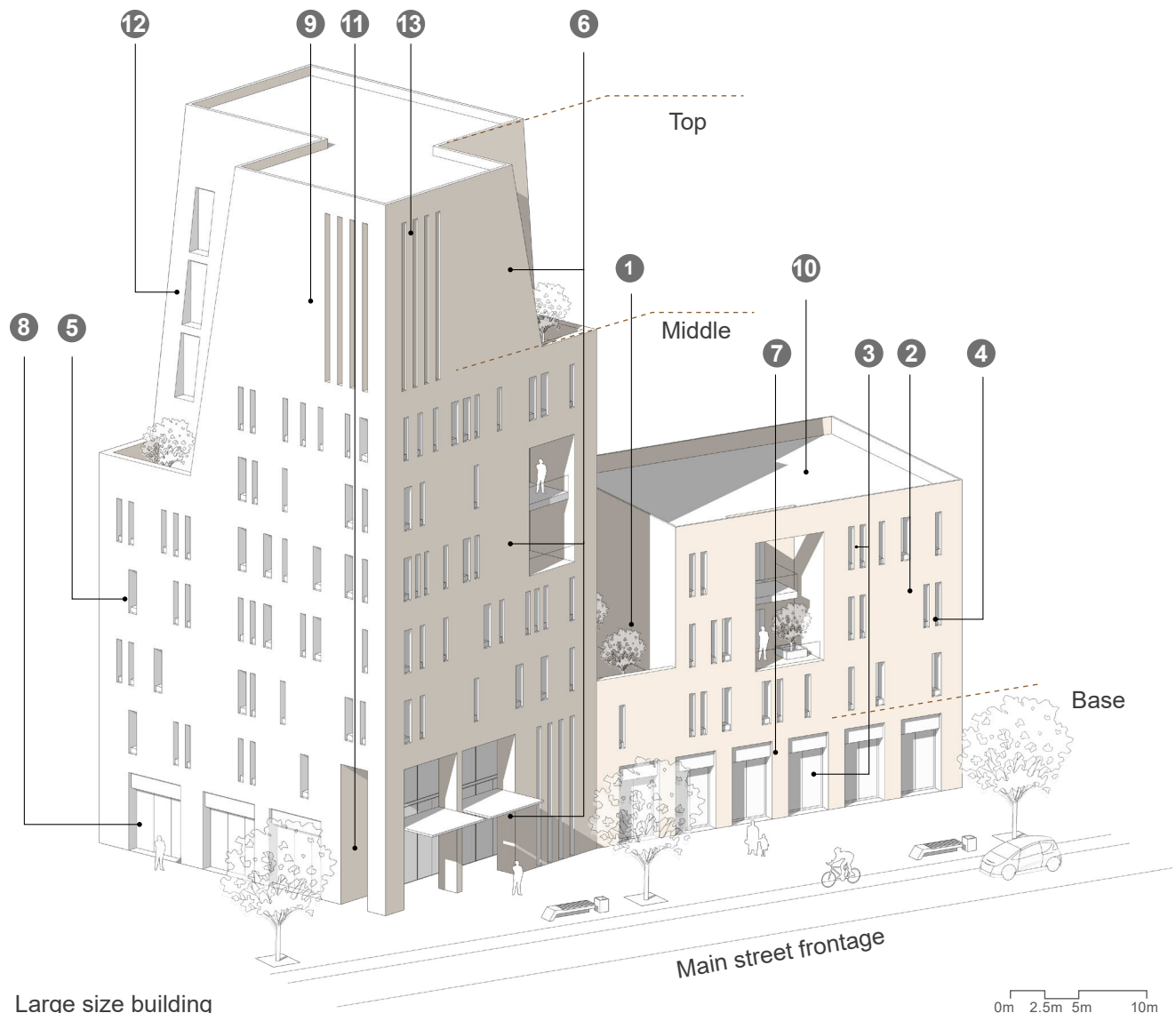


FIG. 62 Large size building

- 6 Well ordered, balanced, clear, yet evenly transitioned distinct base, middle and top part of the building.
- 7 Facades with general asymmetrical composition, localized symmetry in opening placement, use of volumes bringing variation through vertical accentuation.
- 8 Active frontages maintaining the grounded and distinct base character.
- 9 General palette of beige, brown, and white using recommended palette of materials, colors and finishes.
- 10 Flat roofs with articulated high parapets, supporting privacy requirements and hiding rooftop equipments.
- 11 In tall buildings, height of podium should establish street wall and reinforce the human scale and character of the area.
- 12 Tall buildings / towers shall be tall, slender structures that enhance the skyline; large, elongated, boxy or slab like floor plates should be avoided.
- 13 Where design of the tower is unique, top zone may not be required. Articulation of top zone should positively contribute to the skyline and design may be used to create landmarks.

8 Public realm

An overview of public realm character in Abha Highland.

8.1 Overview

The focus of the public realm guidelines within this document is to strengthen local character by identifying and enhancing distinct characteristics of public realm in Abha Highland. It is meant to provide high-level principles and recommendations to be further developed in masterplans and public realm strategies within the Character Area.

These guidelines are not intended to be a comprehensive technical resource. For this the designer should consult the National Public Realm Design Manual prepared by the Ministry of Municipal and Rural Affairs and Housing, and support the five key principles identified in it.



- 1 Human scale
- 2 Pedestrian mobility
- 3 Sustainability
- 4 Culture and heritage
- 5 Visual appeal

FIG. 63 National Public Realm Design Manual and its five key principles

This chapter is organized as follows:

- **General character** - a narrative summary and photographic overview of the qualities of public realm found in the character area.
- **Types of public space** - a selection of spatial types that provide the built environment distinctive character.
- **Materials** - a summary of hardscape character for the area.

- **Planting** - a summary of softscape character for the area.
- **Street furniture** - suggestions and precedents for suitable street furniture.
- **Lighting** - high-level lighting principles for the enhancement of the public realm.
- **Signage** - high-level signage principles for the enhancement of the public realm.
- **Parking** - high-level parking design principles for enhancement of the public realm.
- **Worked examples** - visualizations that illustrate the combined intentions of the public realm guidelines.

Together the sections above aim to give a broad overview of public realm that will reinforce the character of Abha Highlands.

8.2

General character

The adjacent photographs summarize the typical characteristics of public realm and local landscape in Abha Highlands. As set out in the introduction, the character area is characterized by the meeting of the Sarawat Mountains with the Bisha Desert and Najran architectural character areas in the south of the Kingdom.



FIG.64 PUBLIC REALM ELEMENTS

8.3 **Types of public space**

Abha Highland's public realm is characterized by tightly grouped settlement patterns with narrow alleyways (Zuqaqs) and small internal courtyards for micro-climate and privacy, these are interlaced with a hierarchy of common (community) spaces (Baraha or larger Saha) for social interaction.

The hierarchy of the public realm is distinguished by its scale, attributes, and relationship with predominant land uses and topography. Collectively these spaces create a diverse public realm which contributes to the community for both residents and visitors alike and reinforces the distinct architecture of the area.

The following plan illustrates a typical hierarchy of urban spaces and streets in the Abha Highlands. The following categorizations are considered the principal typologies:

- **Street:** primary routes which define the edges of smaller settlements, mediating between green oasis areas, and buildings.
- **Zuqaq:** local alleys, generally narrow and of varying width and footfall which connect spaces and streets across settlements.
- **Baraha:** local public open space, usually found in a residential neighborhood. Often appear as a widening of streets and the confluence of several streets.
- **Saha:** larger local open space with a public function, such as public gatherings or markets.

Specific areas might include additional variations in these typologies, reflecting local scale, character and use. Parks and recreation areas should also be provided.

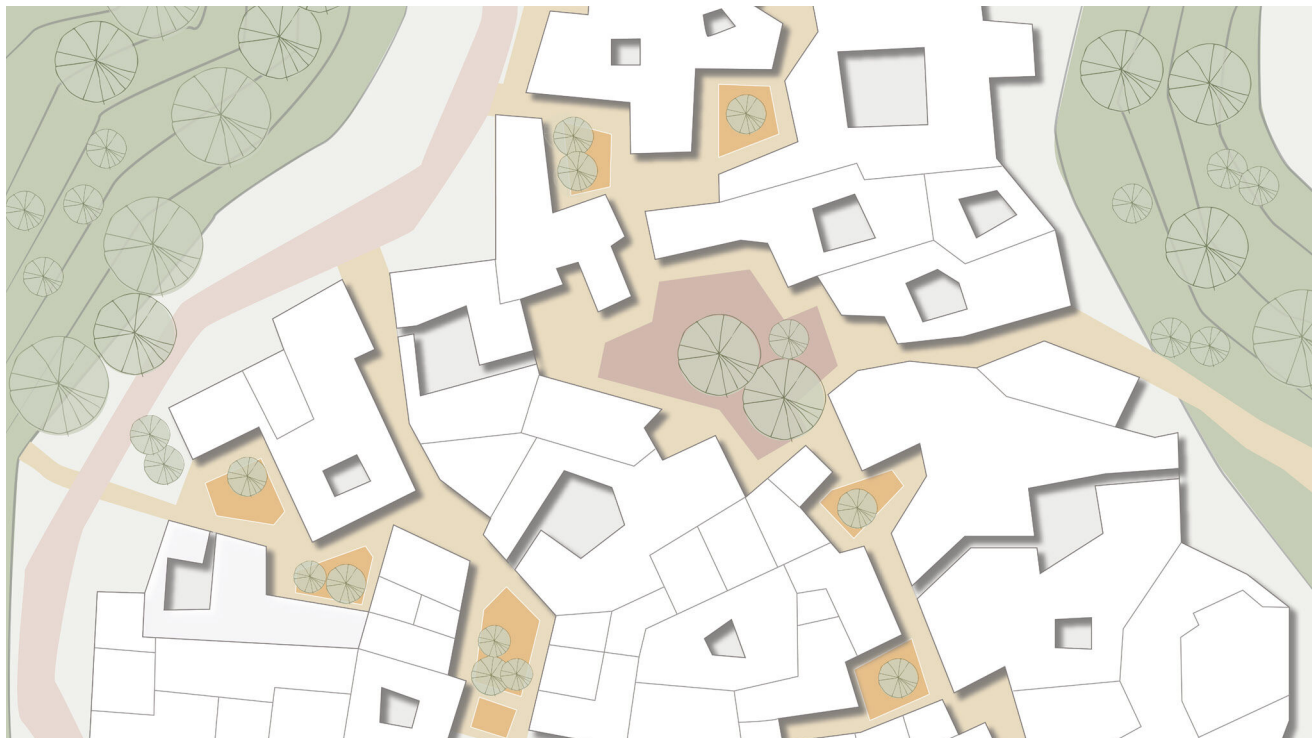


FIG. 65 Typical settlement pattern

 Street	 Saha	 Cultural landscape
 Zuqaq	 Private courtyards	 Trees
 Baraha	 Buildings	 Terraces

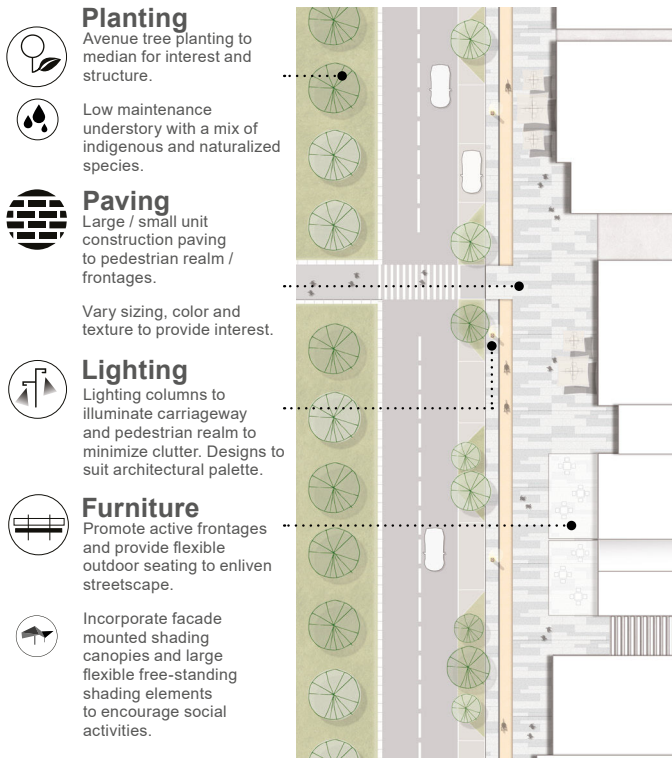


FIG. 66 Street
Vehicle corridor with adjacent pedestrian realm

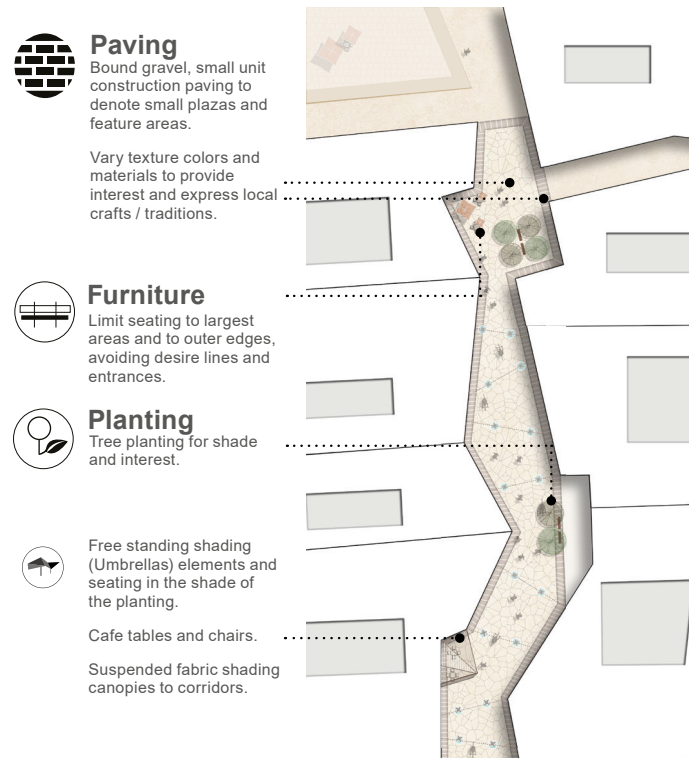


FIG. 68 Zuqaq
Pedestrian realm, no vehicular access or shared access

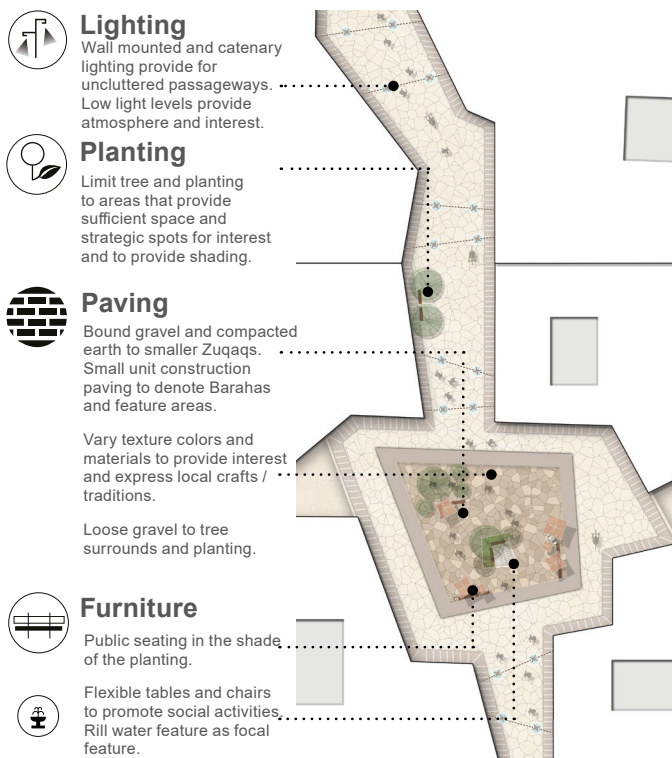


FIG. 67 Baraha
Pedestrian realm, no vehicular access or shared access

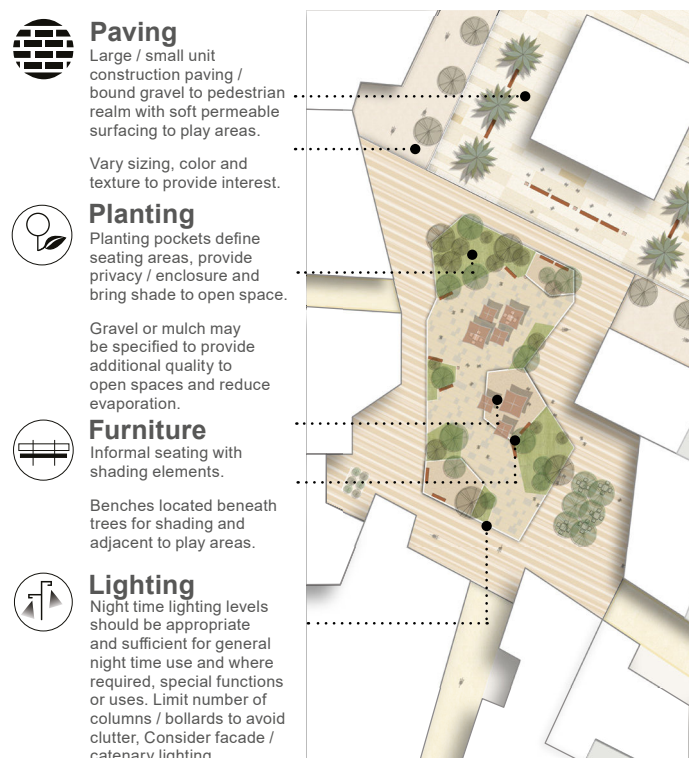


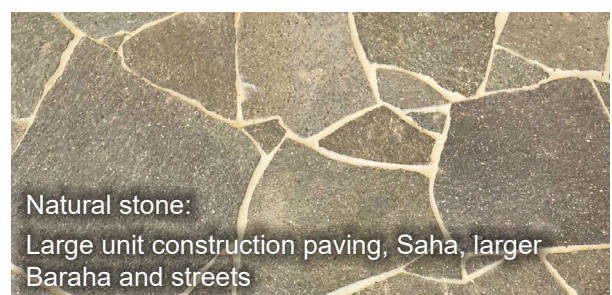
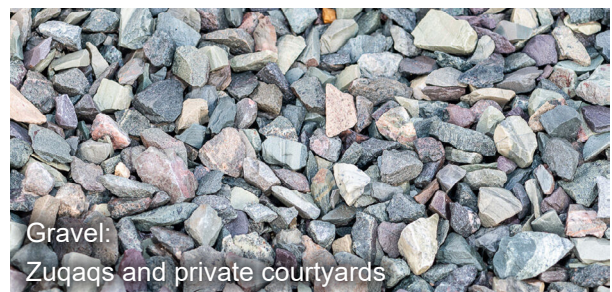
FIG. 69 Saha
Pedestrian realm, no vehicular access or shared access

8.4 Materials

The materials palette for Abha Highlands has been designed to be simple and sensitive to the existing character of the area.

Key considerations

- 1 Select locally sourced KSA materials with low embodied carbon and high content of reused or recycled aggregates (for non-natural materials).
- 2 Areas with higher footfall demand paving should have a higher specification and durable materials, fit for purpose, minimizing the need for regular repair and replacement.
- 3 Re-use materials where possible formed from waste material.
- 4 Deliver materials to site using sustainable means of transport, where possible.
- 5 Select materials that are robust and have longevity and that can be easily cleaned, repaired, and sourced – so high-quality materials can be replaced like for like. Maintain a nominal extra supply of materials to enable quick replacement of damaged or missing units.
- 6 De-pave where possible to improve the micro-climate and use suitable sands / aggregates or suitable hydro zones in place of non-permeable paving.
- 7 Materials should provide varying textures within a simple color palette to compliment the area's architectural character.
- 8 Employ subtle changes to paving to highlight difference between typologies.
- 9 Make good and renovate existing streetscapes, ensuring materials are replaced only when necessary to minimize carbon footprint.
- 10 Using a larger paving format to emphasize more prominent routes.
- 11 Consider incorporating special patterns or textures to emphasize important places or spaces.



8.5

Planting

Tree and shrub planting should complement the overall character of the Abha Highlands area, helping to define places and enable planting habitats through sustainable methods.

Key considerations

1 Water must:

- Be considered carefully, responding to the local micro-climate and water availability.
- Use drought tolerant species and consider Xeriscapes principles to minimize water consumption.

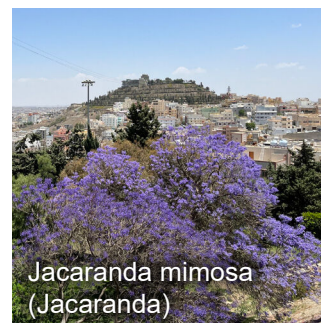
2 Trees should:

- Adopt, informal arrangements, avoiding overly linear (unless forming street avenues), or formal / block type compositions.
- Only be planted where shade can be best utilized for pedestrian comfort and interest.
- Make a characterful contribution to the quality of routes and spaces. Consideration should be given to how a tree is seen and how trees can be used as wayfinding markers and frame important views and routes.

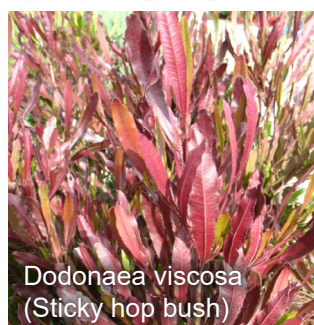
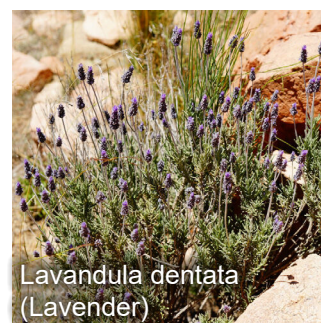
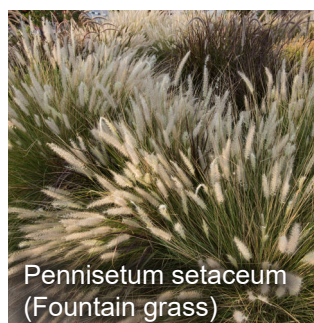
3 Planting should:

- Be limited to Xeriscape solutions within urban areas, mainly in gathering spaces (Saha / Baraha). Contribute to maintaining and enhancing wadi corridors, using multi-layered, informal planting where appropriate, comprising a variety of indigenous species. Minimize ornamental planting outside urban areas.
- Consider additional habitat value such as fruits for birds.
- A varied mix of indigenous and naturalized species will help create an appropriate response to rural or urban applications.

Trees



Shrubs



8.6 Street furniture

Street furniture should be carefully selected to provide continuity and co-ordination, limiting clutter. Colors and style of furniture should blend into the context rather than stand out as features. In general, the design of street furniture should explore opportunities to utilize local materials, respond to the local landscape and cultural heritage and celebrate local crafts, traditions, and skills.

Key considerations

- 1 Be distributed evenly across all areas with reference to space types above.
- 2 Not obstruct pedestrian movement, cycle paths nor clutter public open spaces.
- 3 Consider color and material consistency.
- 4 Be integrated into the public realm, flexible and movable where required.
- 5 Feel ephemeral and informal, acknowledging the historic condition of street furniture in the region.
- 6 Consider accessibility with seating distributed at suitable intervals and have suitable heights and have backs or armrests.
- 7 Be of high quality, coherent, and rationalized to minimize street clutter.
- 8 Have a co-ordinated appearance, with a consistent materials and color palette to compliment character of the public realm.
- 9 Avoid duplication by rationalizing and combining elements.
- 10 Be easily maintained and repaired with easily available / replaceable components.
- 11 Be retained and renovated / improved where existing furniture has heritage value.
- 12 Boundary walls should contribute to the landscape character and scale and contribute to the character and setting of the space.



FIG. 70 Vehicular bollards using reconstituted stone and local materials. Qasr Al Hukm, Riyadh, KSA



FIG. 71 Retaining boundary walls, and seating elements utilizing local natural stone, Salam park, Riyadh, KSA

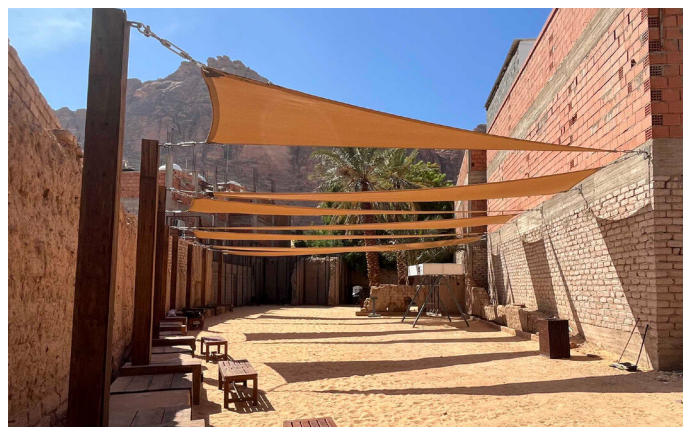


FIG. 72 Colors and materials of shading and furniture elements in harmony with setting in AlUla KSA

8.7 Lighting

A coordinated lighting strategy should create an appropriate and distinctive atmosphere for different areas to reinforce Abha Highland's architecture. Lighting should not be distracting, the focus should always be on the setting, mood or character and quality of the space and buildings.

Key considerations

- 1 Light levels should be kept as low as possible to minimize light pollution and adverse effects on ecology and habitats.
- 2 Utilize lighting to increase overall safety and enjoyment at night.
- 3 Provide lighting and light levels that are appropriate to patterns of use, character, and context.
- 4 Utilize lighting temperature to reinforce difference between routes and to define contrast between character areas.
- 5 Sensitive highlight historic buildings, mosques and public buildings / spaces after dark, subtly revealing their architecture without over-use of light.
- 6 Utilize lighting that is appropriate to scale and context of routes and spaces - e.g. lower mounted lights on smaller lanes and in historic conditions to highlight textures.
- 7 Utilize contemporary lighting elements which are low energy, low heat, and dust resistant with a long life expectancy.
- 8 Manage private light spill, light pollution, or trespass - particularly over-lighting of shopfronts on souqs and streets - producing diffuse, soft and warm light.
- 9 Design of lighting fixtures should be authentic to the area - simple, sensitive to the setting, not historically pastiche or using imported historic forms.
- 10 Introduce a lighting control system that allows variable light levels.



FIG. 73 Luminaries mounted on building facades at consistent heights reducing unnecessary street clutter. Cairo Egypt



FIG. 74 Contemporary lighting elements and ground lighting complementing the context. Greenwich Peninsula, London, UK



FIG. 75 Led lighting integrated in paving as a special design / wayfinding feature. Iserlohn, Germany

8.8 Signage

Signage and public information system design, including materials, should respond to the character and environmental elements within the Abha Highlands area.

Signage elements should be seen as part of a wider strategy that seamlessly integrates with the furniture, lighting elements and landscape, reflecting and complimenting the hardscape materials palette.

Key considerations

- 1 Should include a combination of unified and integrated elements that are simple, concise, legible, and consistent that help and orient people to find their way, educate, entertain or to provide relevant information.
- 2 These can include, landmarks, points of interest, sculptural designs integrated with architecture, materials, landscape, lighting, furniture, and digital information.
- 3 Robust, flexible, and hard wearing with high quality durable finishes which adopt sustainable processes.
- 4 Allow for upgrading / updating and possible customization - e.g. special events.
- 5 Consider minimizing the amount of visual clutter by keeping fittings and support elements to a minimum by utilizing lighting columns, buildings and other structures in lieu of standalone columns and supports.



FIG. 76 Example of a signage family illustrating how contextual elements of traditional patterns and colors could be expressed within the lighting and signage elements



FIG. 77 Contextual wayfinding utilizing local materials. Tuwaiq palace, Riyadh, KSA



FIG. 78 Example of how the region's contextual arts and crafts may be reflected in lighting and signage fixtures, expressing the local textile / weaving traditions. Dubai Expo 2020, UAE

8.9

Parking

Parking areas are divided into two distinct groups, off-street parking which is predominantly private and on-street parking which is dedicated to public parking.

Consideration of parking layouts within the public realm can be designated into three types:

Perpendicular parking

Parallel parking

Angled Parking

The design of parking areas should be integrated into the overall design of the public realm, considering, requirements of the user, pedestrians, urban mobility, landscape, and hardscape elements.

Key considerations

- 1 Consideration shall be given to the needs of all users, with design solutions for ease of accessibility to parking for the physically impaired.
- 2 Clear legible, defined, and safe pedestrian links between parking areas and adjacent destinations should be planned.
- 3 The screening of large areas of parked cars shall be considered, with trees, hedging and landscape berms helping to minimize views of parked cars.
- 4 Consider introducing planting in regular parking spaces, to break up the expanse of cars and introduce shading.
- 5 Large canopy trees should be considered for the shading of vehicles.
- 6 Consider adopting sustainable urban drainage solutions for surface storm water runoff. The use of permeable surfacing materials and bioswales to parking medians with suitable planting should be encouraged.



FIG. 79 Example of parking & pedestrian route improvements with private development setback area



FIG. 80 Example of an attractive pedestrian realm, incorporating parking, pedestrians and planting



FIG. 81 Shaded parking areas with trees and tensile structures. Riyadh, KSA

8.10 Public realm worked examples

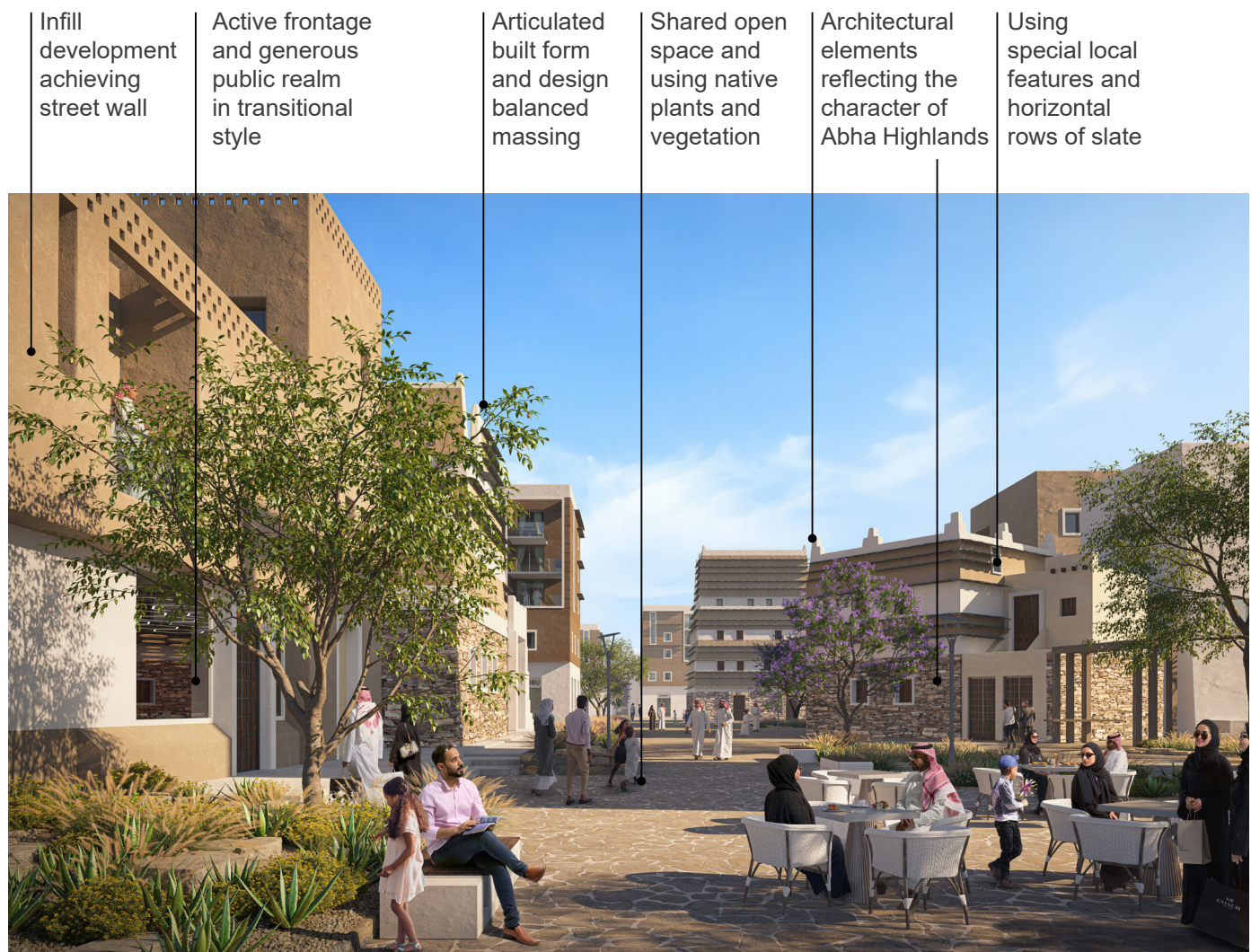


FIG. 82 Proposed view of heritage plaza in Abha Highlands

The above illustrations are an example of a holistic vision for a heritage district and a main street in the urban center in Abha Highlands, with displays of attractive public realm, active frontages, restoration of heritage buildings, contemporary interpretation of contextual architecture elements, high standard architectural materials and finishes, a color palette reflecting the local context, use of local art and patterns, and the enhancement of natural features.

- 1 Whilst the materials and colors should be limited within the spectrum of the natural context of the Abha Highlands, complimentary colors and contemporary patterns may be used to highlight destinations, routes and to help reflect adjacent architectural elements.
- 2 Transitional / contemporary building massing should respond to the immediate context and to the history of the place fostering human scale.
- 3 Progression of privacy, in open space design, from private to public and the relationship between spaces should be dependent on the local culture of the place.

Contextual landscape elements	Articulated built form and design with local materials	Architectural elements displaying the character of Abha Highlands	Implementation of complete streets	Landmark tall building adding character to the skyline	Attractive public realm
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FIG. 83 Proposed view of modern plaza along living street in Abha Highlands

- 4 Vegetation palettes in traditional zones to primarily reflect the contextual indigenous planting, including diversity, naturalistic arrangements, and coverage.
- 5 Hard paved areas should contribute to character and ensure functionality as well reflecting the material and color palette of the adjacent architecture and built form. Paving materials, unit size, textures and laying bond can express a contemporary or traditional design rationale and provide additional interest through variety and inclusion of art.
- 6 Primary paths may be accented with boulevard planting and trees such as

Jacaranda and Albizia, used to highlight destinations or points of interest and importance. Softscape design in contemporary urban areas shall be predominantly indigenous species with a percentage of ornamental planting to provide variety and interest.

The main aspiration in promoting a more contextual driven architectural character is to produce building form and spaces reflecting the learnings from tradition, enhancing the proper character of the place, and thus creating a sense of belonging.

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