

# Eastern Najdi

## Architectural Design Guidelines





**FIG.1 EASTERN NAJDI ARCHITECTURAL CHARACTER AREA**

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-   
 Northern Najdi
-   
 Central Najdi
-   
 Tabuk Coast
-   
 Madinah Rural
-   
 Inner Madinah
-   
 Hejazi Coast
-   
 Taif Highlands
-   
 Sarawat Mountain
-   
 Aseer Escarpment
-   
 Tahuma Foothills
-   
 Tahuma Coast
-   
 Farasan Islands
-   
 Abha Highlands
-   
 Bisha Desert

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 Guidelines 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.

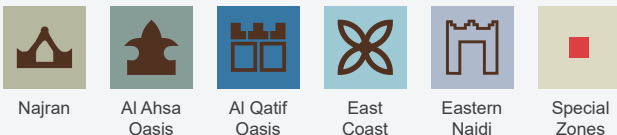
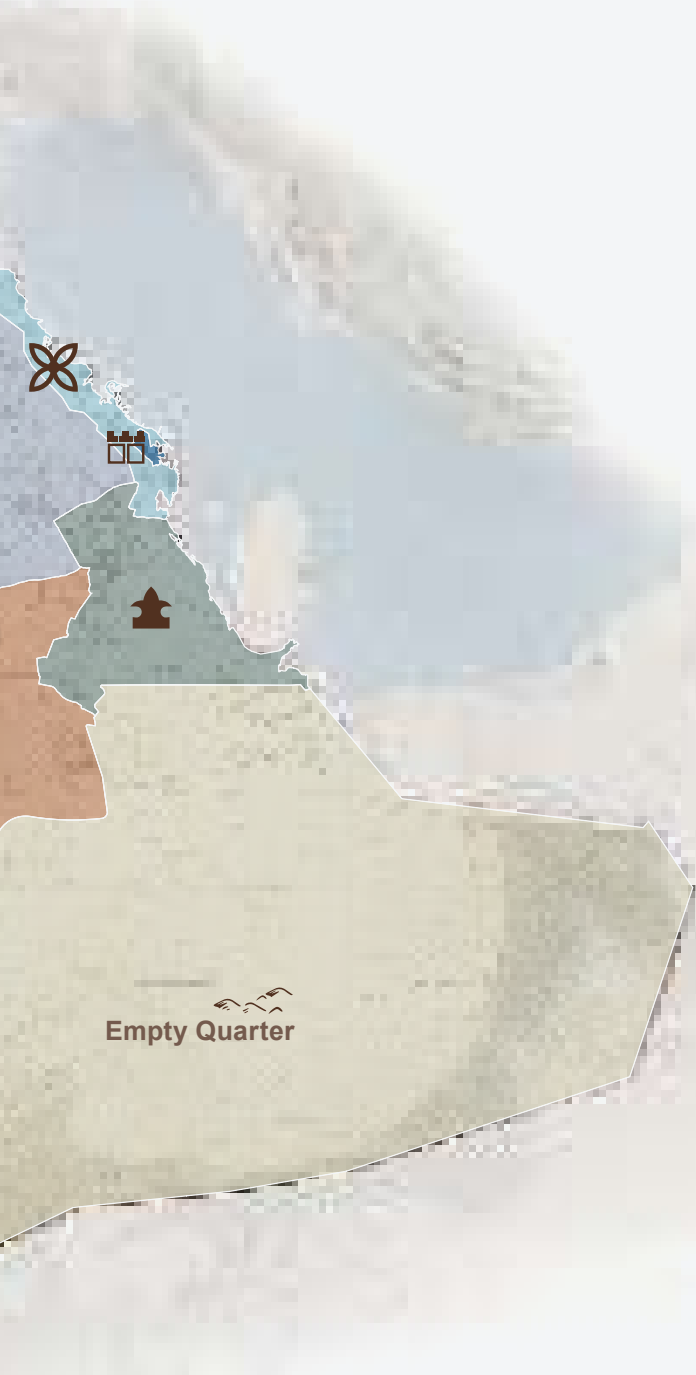
Its propositions are based on the study of historical precedent, taking inspiration from vernacular forms and the embedded knowledge shaped by generations of practice and experience.

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 **Eastern Najdi**

The focus of this publication is the Eastern Najdi area, which constitutes the eastern stretch of land between the vast Najdi plateau and the east coast of the Kingdom of Saudi Arabia, which intersects with the northern half of the Eastern Region province. Its location on the plateau alongside Ad Dahna desert, its richness in wadis, and its water wells - especially in Qaryat Al Ulya - all shaped the region's natural landscape and its built historical trajectory.

Prior to the 20th century, the urban fabric consisted mainly of settlements along pilgrimage routes to Mecca and its proximity to water sources. Existing settlements of the traditional Eastern Najdi are organized around courtyards that historically exist in harmony with the natural landscape. The region's architectural style manifests in minimally-ornamented buildings crowned by double-stepped parapets; this style came as a response to resource limitations imposed by the economic or natural factors of the region.

Significant landmarks such as the King Abdul Aziz Palace in and Fort Hafar al Batin sit majestically in Eastern Najdi as a token of the region's rich heritage and settlement continuity throughout time.



FIG.3 EASTERN NAJDI

## II Topography and landscape

Observations on the links between landscape, climate, culture and the architectural character of the Eastern Najdi.

### II.1 Landscape

The Najdi rocky plateau slopes toward the east from an elevation of 1,360 meters in the west, reaching 750 meters at its easternmost limit. The Eastern Najdi area is located to the east of Ad Dahna desert, a corridor that stretches more than 100 kilometers in a narrow arc shape. The desert constitutes a band of mountains made of reddish sand, especially in its northern section. The Ad Dahna's southern end follows the Jabal Tuwaiq's arc as it curves westward, and, at its southernmost point, it joins up with the Rub al Khali desert. On the eastern side of Ad Dahna, the rocky As Summan plateau stretches about 120 kilometers wide and drops in elevation from around 400 meters in the west to about 240 meters in the east. As Summan plateau's surface is primarily barren and eroded by isolated buttes and ancient river gorges. The area is covered with gravel or sand and is featureless.

Wadi Al Batin, which extends from Kuwait 700km into the Kingdom of Saudi Arabia, passes through the Eastern Najdi region before it continues its way to Central Najdi, where it is known as Wadi Al Rummah. This alluvial fan is likely responsible for the formation of Al Dibdibah gravel plain, one of the most notable topographic landmarks, and is located in the north of this section of the region.

### II.2 Climate

The average temperature in the Eastern Region province is around 30° Celsius, with temperature lows at around 22° Celsius and highs at about 36° Celsius. In the city of Hafar Al Batin, winters are rainy and chilly, while summers are sweltering and dry. The temperature there rises from 15° Celsius in January to a maximum of roughly 42° Celsius in August-September. As for the average annual rainfall, it is usually recorded to be between 20 and 55mm.

### II.3 Culture

Eastern Najdi's water resources have provided the main impetus for settlement in the region. Qaryat Al Ulya's water well has been historically linked to and the basis for settlement in the city. The area is a center for agricultural production, particularly wheat.

The key settlement and city to the north of the Eastern Region, Hafar Al Batin lies in what is now a dry river bed, but was established around the strategic digging of wells along the pilgrimage route to Makkah.

### II.4 Architectural influence

The region's topography and landscape influenced its architecture in terms of building design and materials used. Settlements were designed inwardly, around courtyards as a way of modulating temperature amid the heat. Another way the warm climate influenced vernacular architecture is through the adoption of small geometric fenestrations on façades to ensure ventilation. In terms of materials used, local earth, providing considerable thermal mass, was widely used in construction.

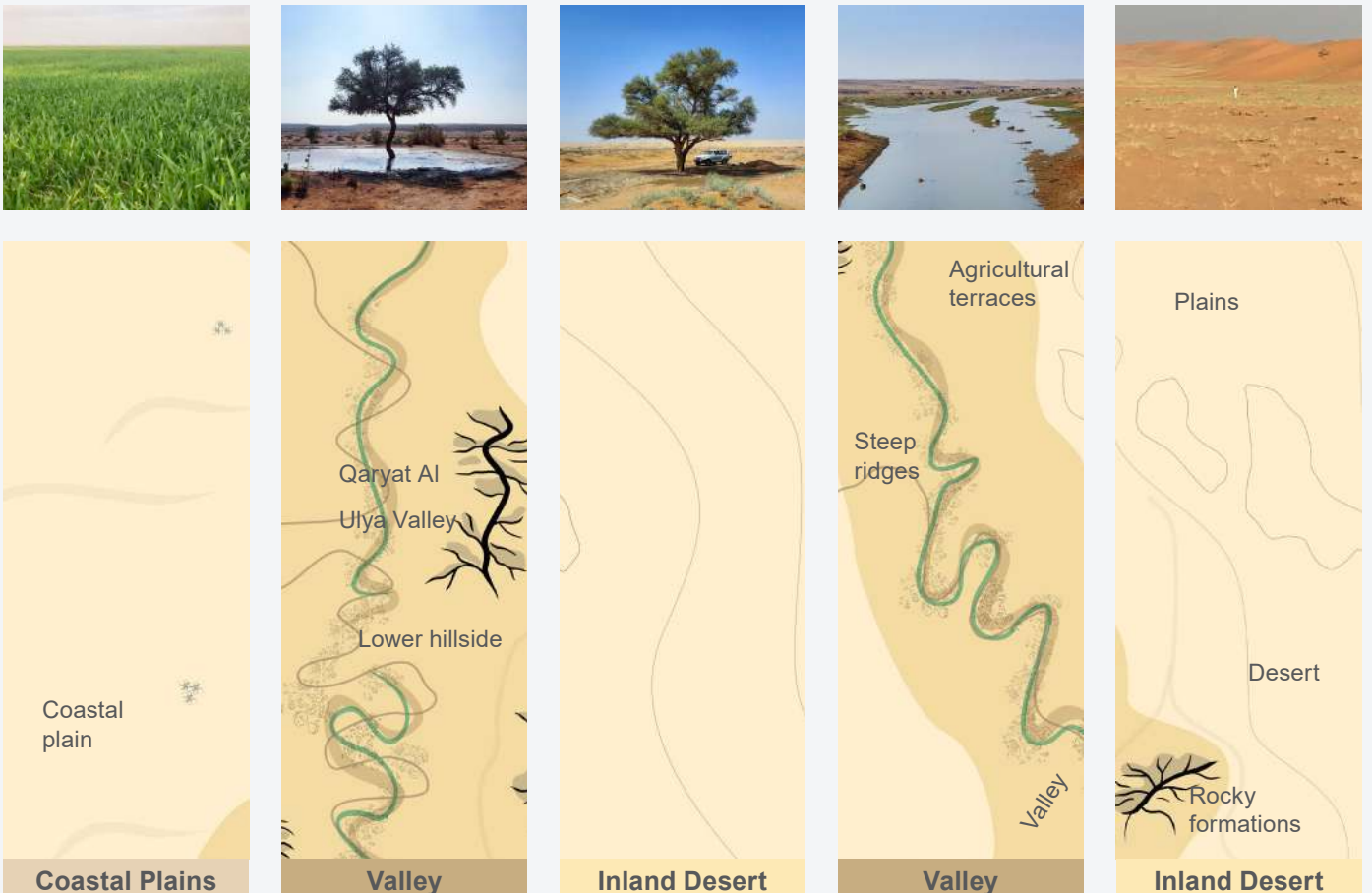
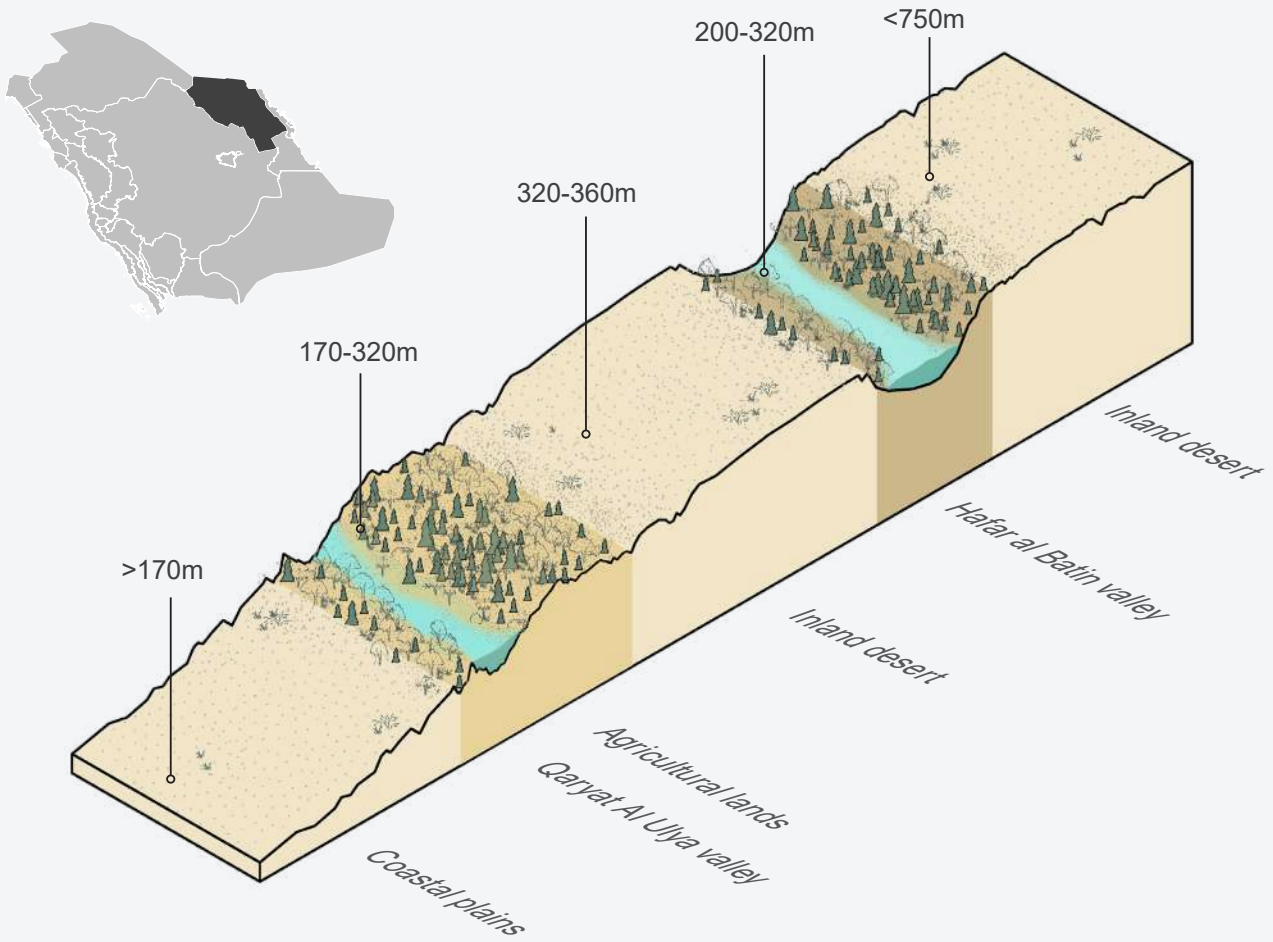


FIG.4 EASTERN NAJDI TOPOGRAPHY

### III Overview of Eastern Najdi Architecture

A summary of the existing character of traditional architecture and settlements in the Eastern Najdi.

#### III.1 Architectural character

Triangulated parapets, stone columns, small upper openings, and prominent peep-holes above doors are some of the particularities of the local style aimed to ensure ventilation, privacy, and lookouts.

Doors in the traditional Eastern Najdi

house were usually made of tamarisk wood, and were colored and ornamented. Belts of plastered triangles pointing down also distinguish traditional Eastern Najdi architecture.

The Eastern Najdi architecture is characterized by its earthen style and its defining characteristics include thick walls of mud and hay, and opaque façades. The roof was often built with tamarisk wood layered with palm fronds and then covered with the same mixture of mud and hay. Wood was also used for lintels and door frames.

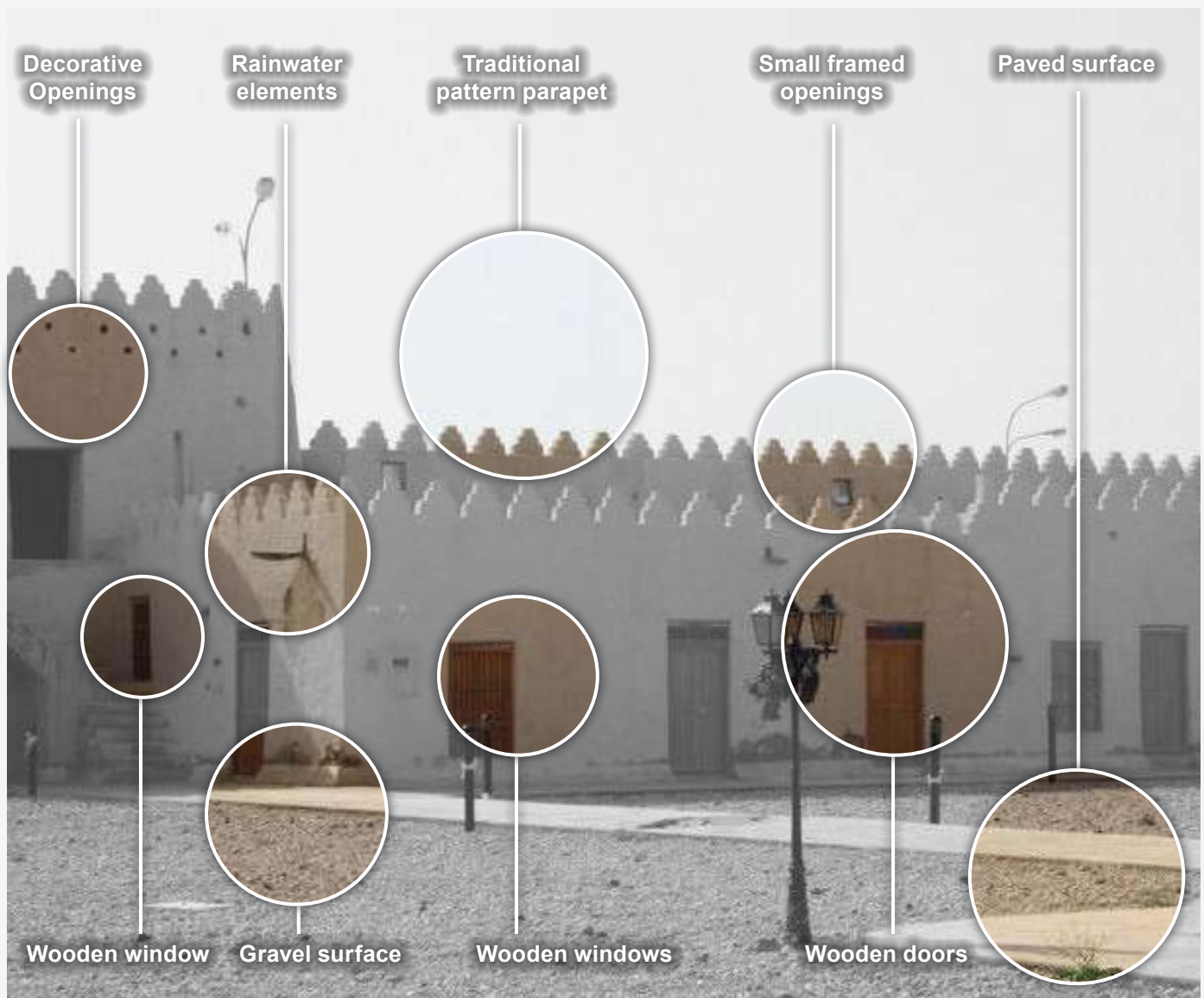


FIG.5 TYPICAL BUILDING FORM, QARYAT AL ULYA

### III.2 Settlement character

The Najdi building traditionally consisted of an introverted layout organized around courtyards, with shared walls between adjacent structures. There existed a horizontal, rather than top-down, hierarchy, as well as procession between public to private spaces. On the facing walls of individual settlements, which look out into public streets, the sizes of windows, entrances, and other apertures share a minimum vantage to the private interior. Courtyard spaces were framed as areas for private or public use and responded to their adjacent surroundings to provide room for several encounters

and functions. The streets were also designed with a clear discernment between private spaces and those that are communally shared.

Built to respond to the environment, the open-air courtyards aided in regulating the temperature. Air from the envelope's exterior was drawn through apertures to the interior court. This helped to displace the warm air collected in the court up and beyond the dwelling's skyline. Furthermore, streets were designed to be narrow, providing shade, and act as wind corridors to help with cooling and removing excess heat.

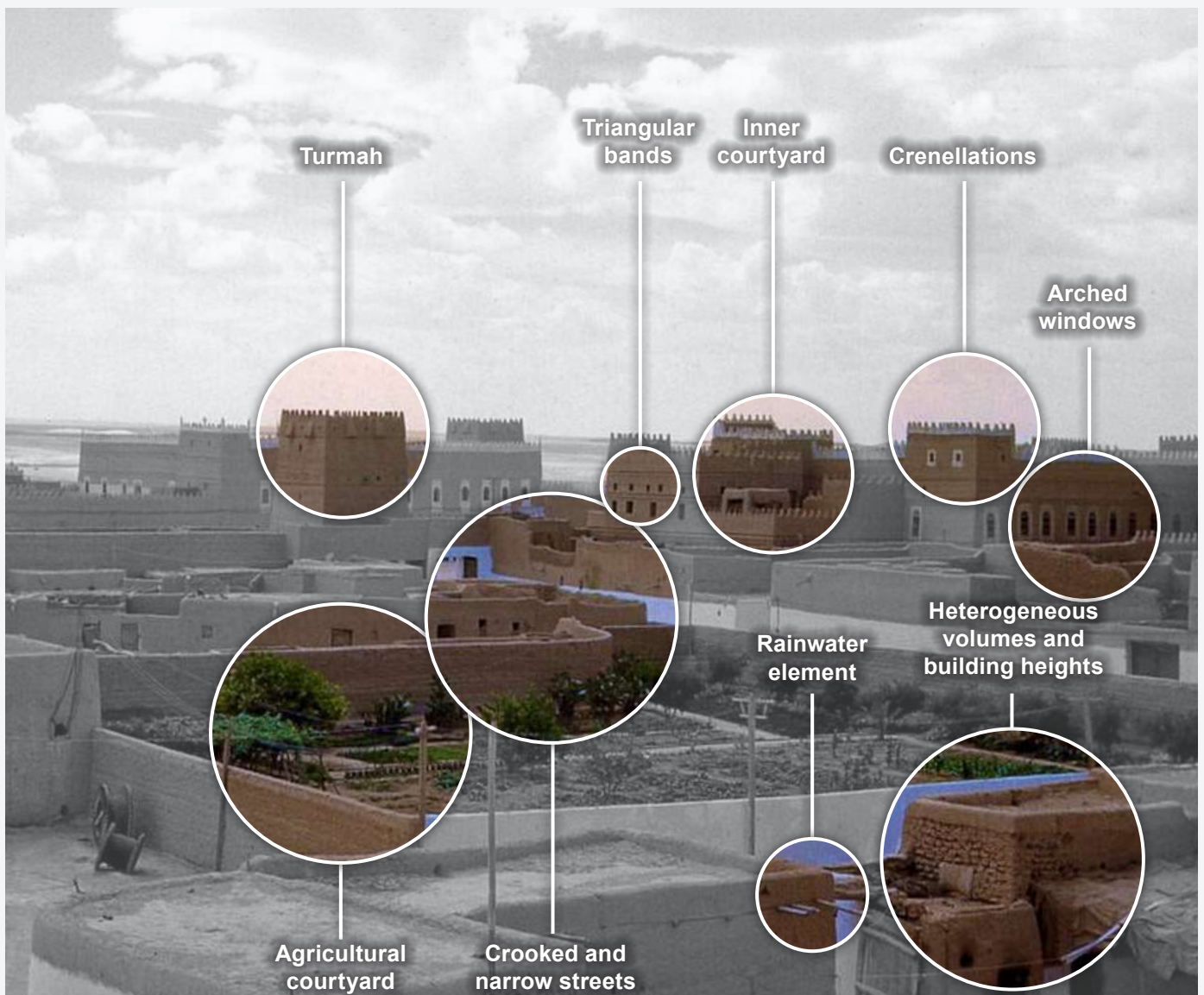


FIG.6 SETTLEMENT FORM, HAFAR AL BATIN

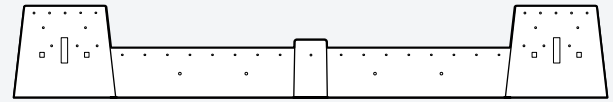
## IV Analysis of Eastern Najdi Architecture

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

### IV.1 General typology

Traditional Eastern Najdi buildings are normally built with earth, characterized by minimally-ornamented façades crowned by parapets.

Locations



King Abdul Aziz Palace

### IV.2 Aspect ratio

The first type of vernacular architecture is marked by a relatively proportionate and slightly horizontal ratio, indicated by a width-to-height ratio of 6:1. A second type, represented by buildings such as the Al Aali Palace and Fort Hafar al Batin, is marked by strong horizontal proportions indicated by a width-to-height ratio between 3 to 3.5:1. These proportions reflect the horizontal hierarchy and procession between public to private spaces that characterize traditional Najdi buildings.

Width to Height Ratio



6:1

### IV.3 Solid-to-void ratio

The façades are mostly closed, with walls taking on the appearance of a surface with punched openings; with a 1.4% opening percentage in the façade of King Abdul Aziz Palace, while others have void ratios that, whereas low, are in the range between 7.5% and 11.8%.

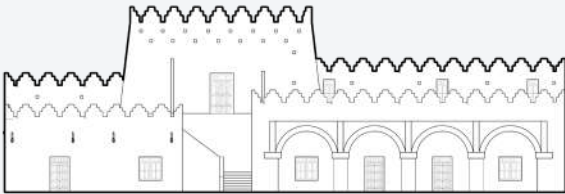
Façade analysis



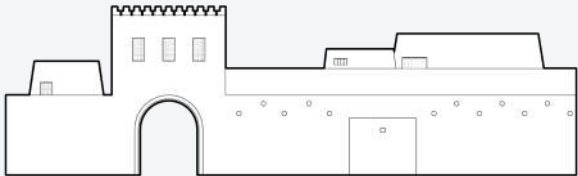
Façade area – 237 sqm

1.4% void

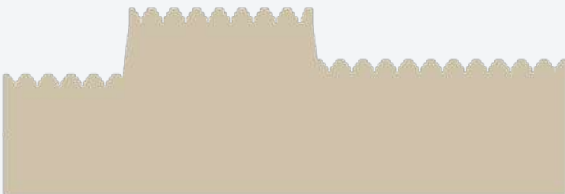
### Vernacular façade studies



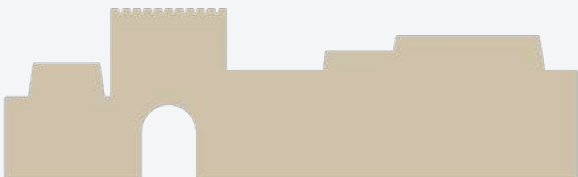
Al Aali Palace



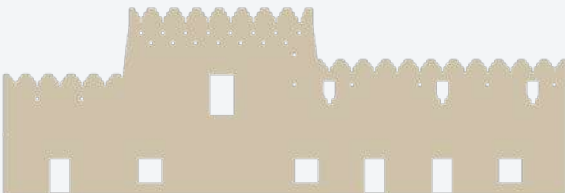
Fort Hafar Al Batin



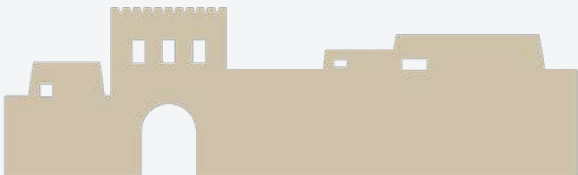
3:1



3.5:1



Façade area – 407 sqm  
11.8% void

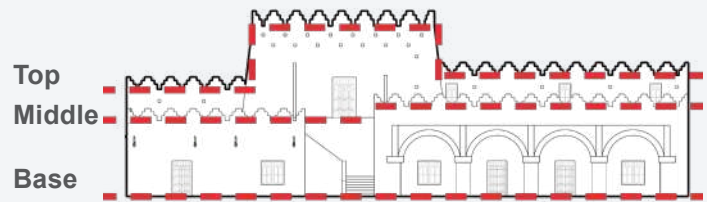


Façade area – 336 sqm  
7.5% void

#### IV.4 Tripartite articulation

Tripartite articulation is a typical feature of Eastern Najdi buildings. It has to do with three storey levels and more the incorporation of a distinct base, middle, and top. Façades are typically split into three separate tiers with their own particular character:

- the base - the link to the street.
- the middle - the main body.
- the top - where the building meets the sky.



##### Tripartite articulation

Façades are typically split into 3 separate tiers base, middle, and top.

#### IV.5 Façade depth

Façades are usually split into planes of different depths, often with height variations. This three-dimensional aspect adds a dynamic element to the building through the perception of different levels of natural light on the façade.

The Levels of natural light diminish with distance from the façade which adds more dimension to the building.

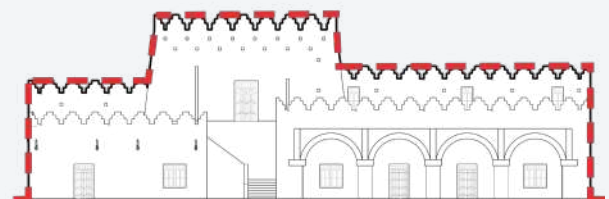


##### Façade depth

Eastern Najdi buildings have façades with multiple volumes which provide them with depth.

#### IV.6 Variation in heights

In Eastern Najdi, traditional buildings often have slight height variations, typically in the top or from the top portion of the building. These varied structures act as an exterior mirror to the function of an interior habitable space. Generally lower floors are wider, and tiered or multi-floor design comprise of multiple heights.



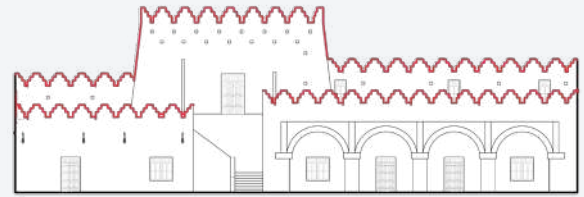
##### Variation in heights

Façades typically demonstrate a variation in height based on habitable spaces and their functions.

## IV.7 Ornamentation

Similar to typical Najdi buildings, decorative parapets or banding, more predominantly triangulated crenelations occupy the top portion of the façade. Additional characteristics include small fenestrations along the upper parts of the walls, allowing light and air into the building without exposing its interior spaces, and sometimes serving as a mechanism for defense in observation towers.

Typical Najdi vernacular buildings are considered to feature rather basic ornamentation elements. Apart from triangulated parapets and fenestrations, façades feature very few decorative elements.

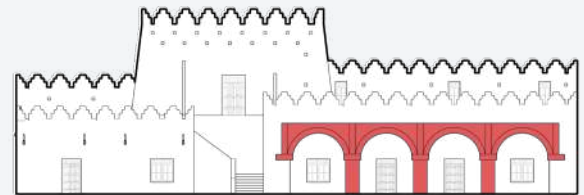


### Ornamentation

Most façades have finely detailed repeating and alternating elements.

## IV.8 Arcades

Vernacular architecture in Eastern Najdi is characterized by arches repeated across the buildings' segments. Arcades are often positioned along the frontal plane of a façade as a protruding element.



### Arcades

Façades in this region demonstrate the characteristic of arcades in their buildings.

TAB. 1 Najdi regional character comparison

ARCHITECTURAL CHARACTER	Opening percentage	Use of stone	Arches	Use of arcades	Ornamentation frequency
CENTRAL NAJDI	2 - 25%	At base plinth	Squared and pointed arches	Medium	High
NORTHERN NAJDI	0.7 - 25%	Ground floor and above	Squared and pointed arches	Low	Medium
EASTERN NAJDI	1.4 - 11%	Low to zero	Semicircular arches	High	Low

## 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.

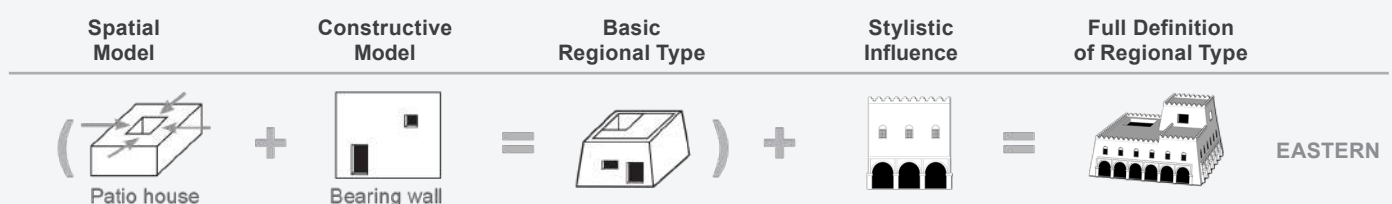
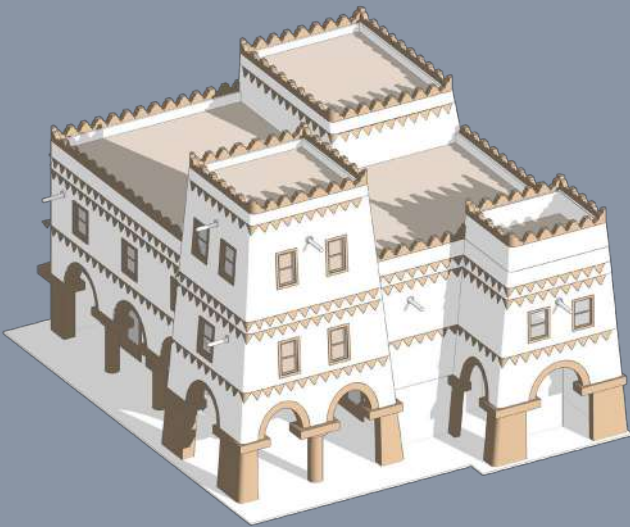


FIG. 7 Character equation for the Eastern Najdi

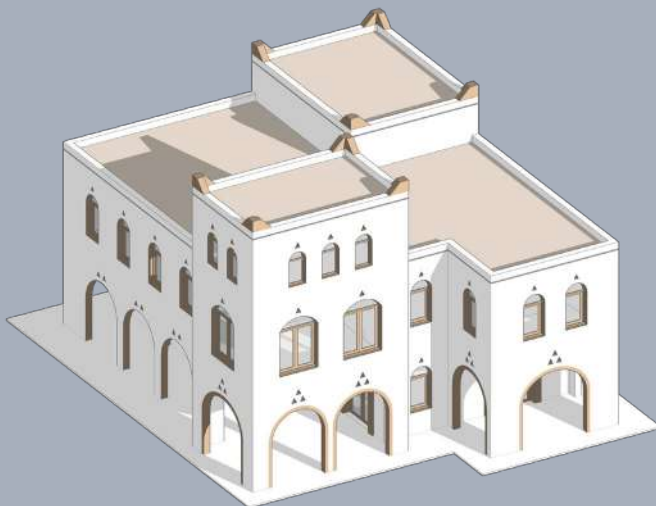


Traditional style

## TRADITIONAL

Thick earth walls and façades with repeated and alternated elements.

Shaded arched colonnades, with small openings, triangular crenelated and geometric fenestrations.

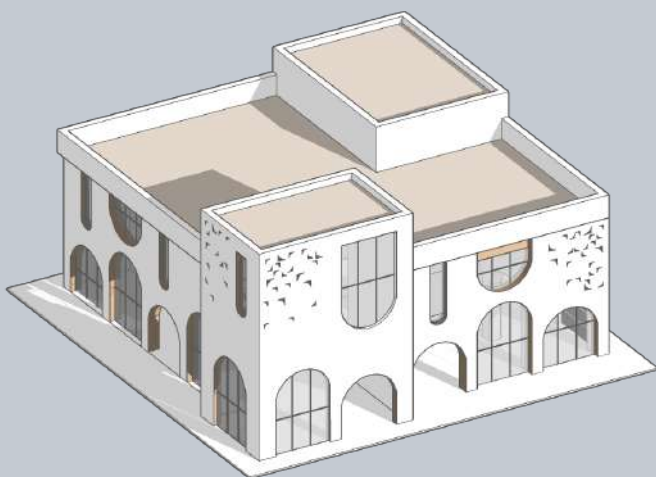


Transitional style

## TRANSITIONAL

Smooth planes in earth tones, integral small windows and monumental openings.

Reinterpretation of arched colonnades with increased openings.



Contemporary style

## CONTEMPORARY

Transition to more organic forms with a reinterpretation of arched elements.

Adapting to a range of building types with increased daylight.

## 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 characteristics 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 local 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 style 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 Eastern Najdi.

### 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

1 Chapter number and heading

2 Guideline number and heading

3 General description

4 Guideline actions

5 Rationale

☰ **Eastern Najdi** Architectural Design Guidelines

## 2 Composition

The rules by which buildings are shaped and elements are related to one another.

The aesthetic of a building derives from the relationship between its different architectural elements. These can be calibrated by implementing the following guidelines:

### 2.1 Asymmetry of the façade

Asymmetry is a key feature of the design in buildings across Eastern Najdi, thus:

- 1 Building façade and overall composition should express large-scale asymmetry and solid volume.
- 2 Different groups or portions of the buildings, such as structures with varying heights, however are symmetrical. The style combines both.

**To ensure that the façade corresponds and is in dialogue with the architectural traditions of the region.**

### 2.2 Grouping of elements

Grouping sections of openings together to clearly delineate the differences along the facade is characteristic of Eastern Najdi.

- 1 Grouping should be formed by pairs of windows on the upper level and pairs of arcades on the base level.
- 2 Incorporate arcades and protruding elements of the structure together.

**To sustain the consistency of the visual banding style across traditional and contemporary development.**

20 GUIDELINES

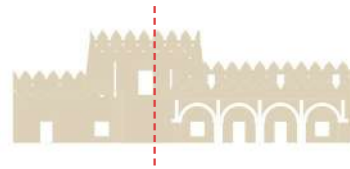


FIG. 13 Asymmetry throughout the form



FIG. 14 Legible grouping of elements

6 Illustrations

FIG. 8 Typical guideline structure

# GUIDELINES

## 1 Key features

The most important attributes essential for conveying the architectural character of the Eastern Najdi.

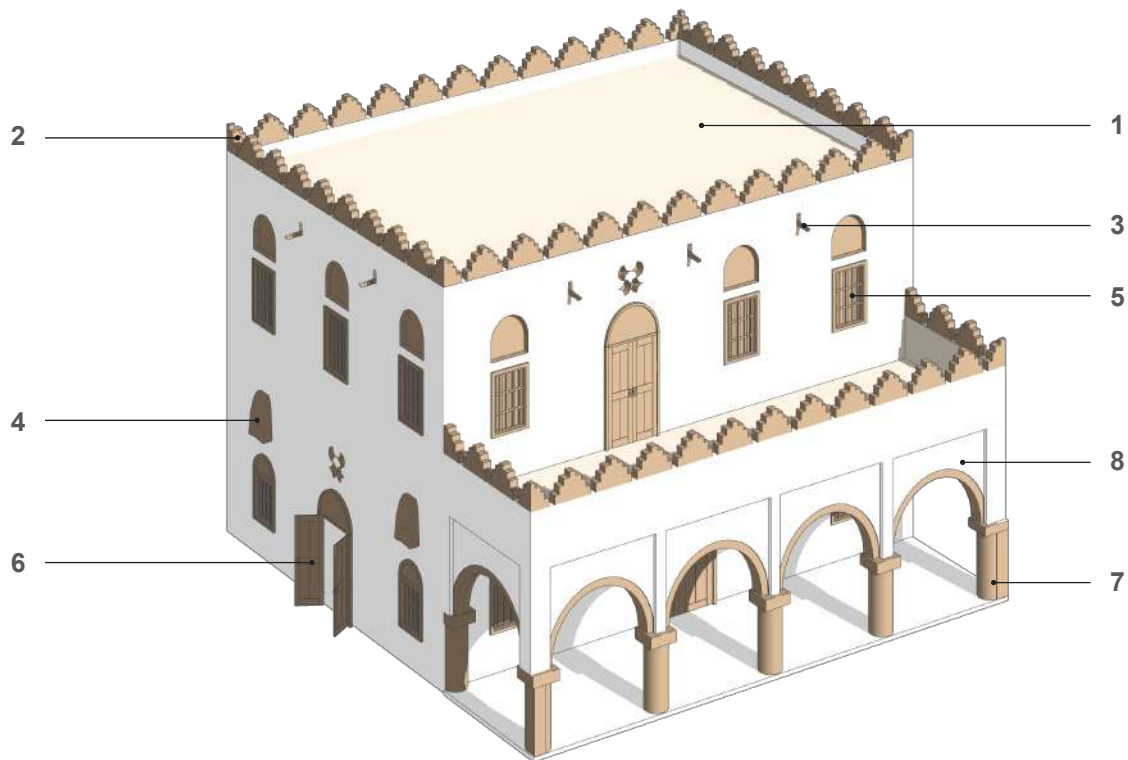


FIG. 9 Eastern Najdi key features

### Key features:

- 1 Rooftop pavilions: In Eastern Najdi, rooftop pavilions usually have a low percentage of façade opening.
- 2 Stepped crenelation: Carved from mud and occasionally covered with white lime plaster as a color accent.
- 3 Mizab: A small thin structure mounted on the roof, throughout the parapet for rainwater drainage.
- 4 Eastern Najdi turmah: longer and thinner than the ones found in the Central and Northern Najdi.
- 5 Traditional windows: Made with local wood, ornamented, and with minimal framing.
- 6 Traditional doors: Frameless and unornamented.
- 7 Arcades: consist of either semicircular or flat arches and their columns generally do not present any ornamentation on any of their edges.
- 8 Grouping: The building's form should reflect a grouping of elements for cohesion. For example, a slight recessed border around each arch of the arcades.



Qaryat Al Ulya

FIG. 10 Al Aali Palace



Qaryat Al Ulya

FIG. 11 Al Aali Palace



Qaryat Al Ulya

FIG. 12 Examples of Eastern Najdi architecture

## 1.1 Character summary

In this area, the main architectural distinction is the pattern to façade composition, which usually includes a high frequency of apertures and triangle patterns.

The first characteristic is the use of parapets. In the East of the Najdi plateau, parapets differ from the styles adopted in both Central and Northern Najdi. While the former uses parapets that consist of five levels and the latter are minimal and triangulated, parapets in Eastern Najdi consist of three levels only.

A second characteristic of Eastern Najdi buildings is the construction of rooftop pavilions and structures that typically have a low window-to-wall ratio – mainly small windows.

A third is the use of the Mizab, even though it is less used than in other regions of the plateau. The Mizab is a thin structure that extends out of the building's façade from the roof, intended for the collection and passage of rainwater.

A fourth characteristic of this regional style are fenestrations, uniquely distinctive as they depict botanic patterns rather than raw geometric motifs.

Unlike other Najdi regions, ornamentation in Eastern Najdi does not use frames around windows. Windows are not painted. However, ring handles on doors can be of decorative nature.

Finally, in the Eastern Najdi region, semi-circular and flat arches can be found in buildings. However, the columns used to support the arches have simplified capitals in both styles, and they complement the external façade. Eastern Najdi columns are known for their unornamented simplicity.

## 2 Composition

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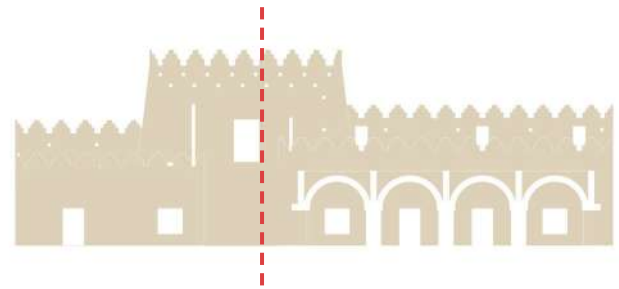


FIG. 13 Asymmetry throughout the form

### 2.2 Grouping of elements

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**To sustain the consistency of the visual banding style across traditional and contemporary development.**

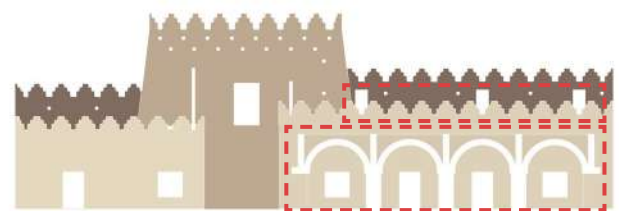


FIG. 14 Legible grouping of elements

### 2.3 Width-to-height ratio

Employ the prescribed proportions to maintain a cohesive understanding of traditional structures.

- 1 The width-to-height ratio of the overall building should be around 3:1 to 6:1, so the building is wider than it is high.
- 2 The proportions of the secondary groups can be followed to assemble the final width-to-height ratio of the overall structure.

**To ensure that the proportions of the building embody the essence of traditional sources.**

### 2.4 Ornamentation

Use regional specific ornamentation. Avoid distorting the typical character of Eastern Najdi buildings, as this could undermine their architecture.

- 1 Façades should include very few decorative elements compared to the Central Najdi style.
- 2 Arches should be configured in groups, mainly on the ground level.
- 3 Doors and windows should be simple, wooden framed, and with no geometrical patterns or ornamentation.
- 4 Ring handles can be on doors with natural geometric motifs.
- 5 Turmahs and mizabs (rainwater overflow) should play important roles in the composition of the façade.
- 6 Small orthogonal fenestrations should be provided just below crenelations.
- 7 Columns on the external façade should have simplified capitals.
- 8 Interior columns may have decorated capitals.

**To ensure that the ornamentations reflect the style of the Eastern Najdi architecture and distinguish it from other Najdi regions.**

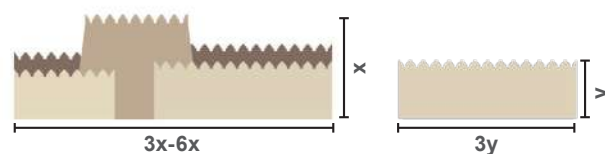


FIG. 15 Width-to-height ratio of whole structure is 3:1 to 6:1

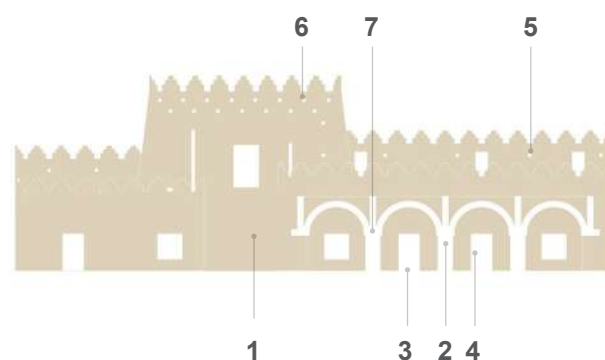


FIG. 16 Ornamentation guidelines

## 2.5 Entrances and articulation

Main entrances are typically differentiated by some element.

- 1 Arcades should be positioned along the frontal plane of a façade as a protruding element, or flush with the building line
- 2 The doorways behind the arcades should be simple and orthogonal.
- 3 More traditional buildings feature wooden shutters, whereas contemporary structures use more glass.
- 4 The main entrance is articulated underneath a shaded arcade.

**To build transitional spaces between private and public spheres.**



FIG. 17 Colonnade verandah before entrance doorway

## 2.6 Roofscape and rooftop elements

The roofscape, including parapets, form a distinctive component in Eastern Najdi. The design of new buildings should incorporate:

- 1 Crenelations should be part of the roofscape in the traditional.
- 2 Triangulated three-stepped crenelations can be adopted.
- 3 In larger buildings there are various levels of habitable rooftop areas.

**To ensure that roofscape and skyline follow historically-sensitive designs.**

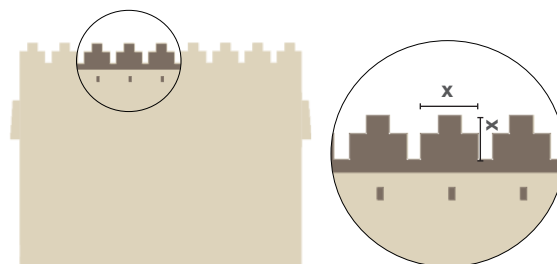


FIG. 18 Stepped crenelations on the roofs

## 2.7 Solid façades

Per traditional architecture, facades feature a mixture of openings, proportionally less to the wall.

- 1 Under arcades there should be larger entrance openings.
- 2 Upper and middle bands should consist of small-scale openings.
- 3 Opaque façades with fewer openings should be adopted at a ratio of 70% solid façade and 30% openings.
- 4 Contemporary designs feature more glass and more openings.

**To design the openings of façades building upon the region's traditional architecture.**



FIG. 19 70% solid

## 2.8 Geometry of the components

Organize side facades, openings, and decorations with cohesive use of various geometric shapes.

- 1 Simple orthogonal doorways should be adopted.
- 2 The shape of the windows should be rectangular or include semicircular arched fenestration attached to the rectangle.
- 3 Longer and thinner trapezoidal shaped turmahs should be included in the façade.

**To ensure that the scale and proportions of the opening show solid façades which harmonize with the character of the area.**

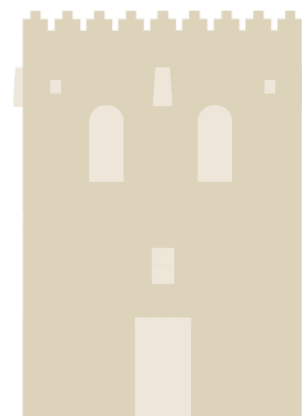


FIG. 20 Wall articulations

## 2.9 Secondary frontage

With protected openings, all facades should ensure to maintain privacy.

- 1 Façades should have minimal openings towards the street side.
- 2 Smaller square or circular fenestrations to be provided closer to the top wall to ensure light and ventilation for the interior.
- 3 The base levels should comprise fewer windows / higher placed to avoid any direct line of vision from the street.
- 4 Variations in setback from perimeter line allow for increasing levels of privacy from the street.

**To design for domestic privacy following a traditional architectural approach.**

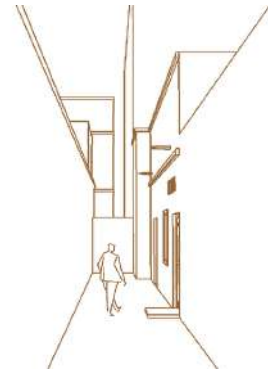


FIG. 21 Secondary frontage

## 2.10 Narrow streets

Clustering buildings together in accordance with traditional building habits is important to maintain the organic integrity of the neighbourhood.

- 1 Group buildings together to create narrow streets. Arranging them in clusters can create public and private spaces. .
- 2 Buildings are tightly positioned and never go over three stories in traditional development.
- 3 Organic street grid patterns should be adopted.

**To design a city grid which builds upon historical urban traditions.**

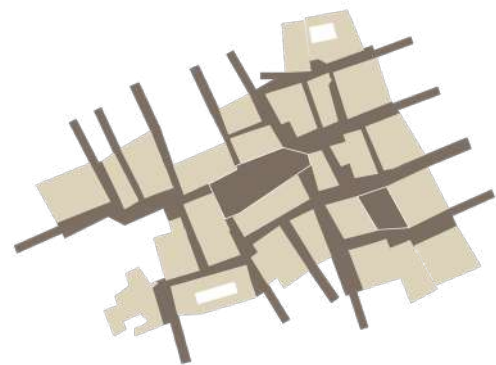
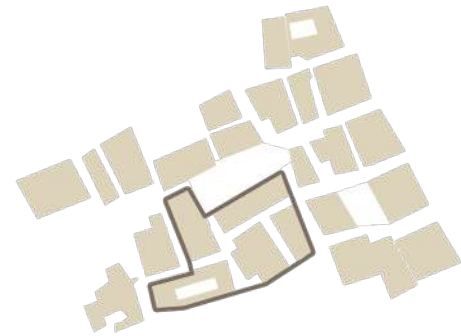


FIG. 22 Narrow streets

## 2.11 Building cluster and courtyards

While maintaining areas for privacy, sharing a courtyard between new buildings facilitates interconnectedness and socialization.

- 1 The Najdi building typology should feature an introverted layout centred around courtyards and shared walls between neighbouring buildings.
- 2 Public and private functions as well as environmental factors should be considered while designing the shared courtyards.



Cluster 1

FIG. 23 Building Cluster

**To distinguish clearly between private and public spaces by observing existing spatial arrangements.**

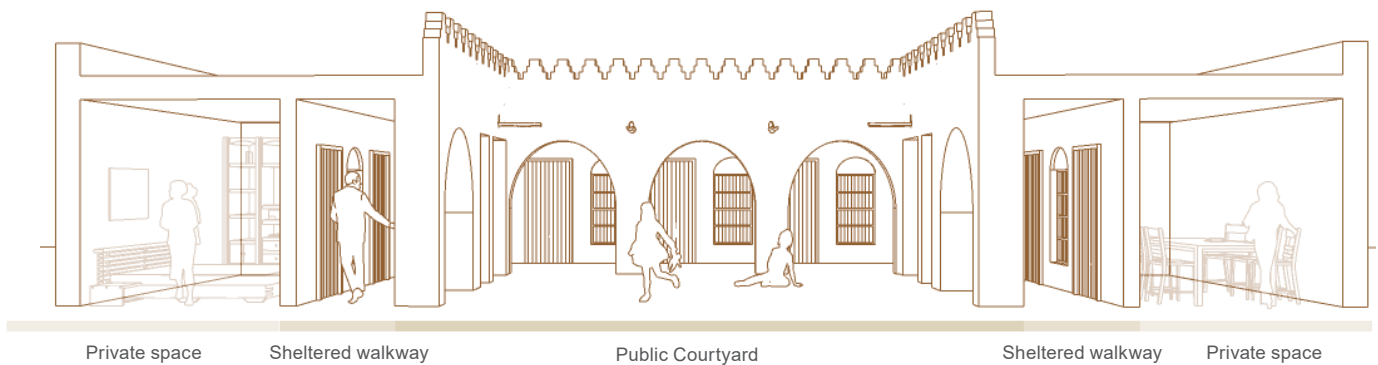


FIG. 24 Public courtyards

### 3 Elements

The individual parts that are the building blocks of the Eastern Najdi architecture.

TAB. 2 Eastern Najdi architectural elements







#### GENERAL ELEMENTS

	<b>Key characteristics</b>	Refer to “1 Key features” on page 18
	<b>Façade proportion</b>	Traditional Eastern Najdi buildings should be defined by marked horizontal proportions indicated by a width-to-height ratio between 1.3:1 and 2.6:1. These proportions reflect the horizontal hierarchy and procession between public to private spaces that characterize traditional Eastern Najdi buildings when it comes to low-rise, mid-rise residential and mixed-use buildings.
	<b>Window-to-wall %</b>	Some buildings should be highly opaque with a 7.5% opening ratio, while others should have more open façades with up to 13.1% of the façade’s surface consisting of windows or doors. The window openings on the ground floor should generally be limited and narrow compared to entrances on the base, and windows ones on the upper floors.
	<b>Opening proportions</b>	The façade’s composition should comprise of symmetrical elements and structures in various groups, meanwhile the entire building structure is asymmetrically aligned. Openings should be generally vertical with width-to-height ratios ranging between 1:3 to 1:5 for doors, 1:1.5 for windows, and a proportion of 1:1 for attic windows.
	<b>Composition</b>	Tripartite articulation is a typical feature of Eastern Najdi buildings, highlighting the hierarchical elements of a building’s elevation. Façades should generally be split into three separate tiers, base, middle, and top, each with its own distinct character. Most of the examples found are one-story buildings that incorporate all the tiers in a single level.




#### BASE ELEMENTS

	<b>Entrances</b>	Main entrances should not exceed the ground floor story in height, consist of semicircular or flat arches, and can be recessed from the main wall. Traditional doors should be made of tamarisk and local palm trunks with iron metal used for the chains and ring handles. The wood should not be ornamented and the door should not have any frame surrounding it; the ring handles can be shaped with geometrical motifs. See “3.2 Doorways and entrances” on page 31.
	<b>Shop fronts</b>	Retail or commercial façades should typically be located at the ground level and should only include rolling shutters when carefully integrated with the architecture (e.g., they are recessed, co-ordinated).
	<b>Arcades</b>	Colonnades and arcades should usually run along the ground floor. They should consist of shaded semicircular arched colonnades that include small openings as well as triangular crenelated and geometrical fenestrations.
	<b>Curtilage</b>	Urban furniture, lighting, green areas, and water features should be integrated into the surrounding areas of the building. These elements should emphasize the Eastern Najdi style by using locally sourced materials, Najdi patterns, native plants, or Najdi architectural features and details that merge into the main façade.




## MIDDLE ELEMENTS

	<b>Wall articulation</b>	Tripartite articulation should be adopted while showing different characters for the base, middle, and top tiers. Fenestration bands can be used to identify the separation line between levels. See expanded guidelines “3.1 Tripartite articulation” on page 30
	<b>Windows and Openings</b>	See expanded guidelines “3.3 Windows and openings” on page 32.
	<b>Projecting elements</b>	The entrance bays can project in front of the main façade and arcades can be added outside the building plot. However, this should not adversely affect circulation or safety in the public realm. Some elements such as triangular bands, opening frames, shading structures, turmahs, or Mizabs should be distinctive features that project outwards from the main wall.
	<b>Recessed elements</b>	Recessed entrances, arcades, or overhangs should be set inwards from the building façade, extending the access or perception of the public realm inside the plot boundary.
	<b>Shutters and Shading</b>	Shutters should follow the vernacular language as illustrated within this section, such as ornamentation and the use of timber. Projecting metal awnings should not be used.
	<b>Corner features</b>	On narrow or busy street intersections, corners should be chamfered and rounded at the junction of two exterior walls at the base to improve pedestrian flow. Note that this feature derives from Jeddah, but has uses in other regions for ameliorating traffic.

## TOP ELEMENTS

	<b>Roofscape</b>	All rooftops should generally be flat and, unlike other Najdi regions, they should not be accessible nor used as an amenity space. See expanded guidelines “3.4 Roofscape perimeter & parapet detail” on page 33
	<b>Rooftop Elements</b>	Rooftop pavilions or structures can be covered or exposed and should give direct access to the roof terrace. This area can become a gathering space that provides privacy and ventilation. Note that there may also be buildings which do not employ a rooftop pavilion in the Eastern Najdi region, and are single-storey.
	<b>Parapets</b>	They should be either crenelated or flat. They should also become an extension of the external walls above the roof level and should usually be covered with white gypsum plaster.

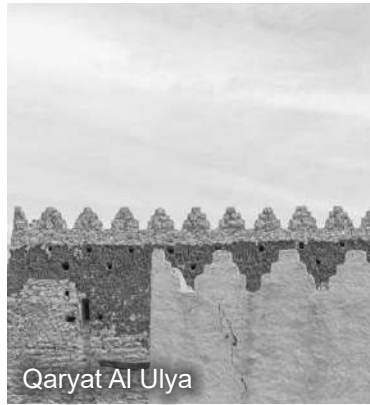
## OTHER ELEMENTS AND ORNAMENTATION

	<b>Materiality</b>	See expanded guideline “4 Colors and materials” on page 34.
	<b>Color</b>	See expanded guideline “4 Colors and materials” on page 34.
	<b>Pattern</b>	See expanded guideline “5 Patterns” on page 36.

Top



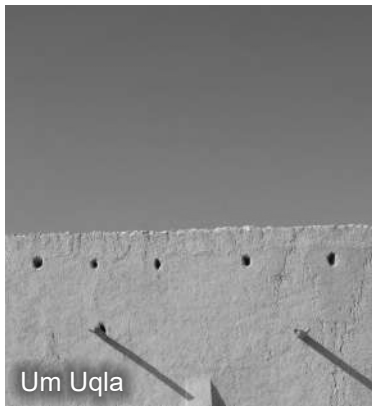
Qaryat Al Ulya  
Crenelated stone parapet



Qaryat Al Ulya  
Crenelated stone parapet



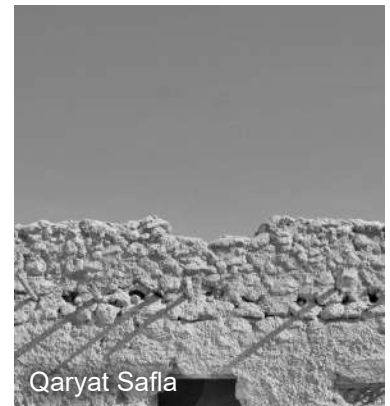
Qaryat Al Ulya  
Crenelated parapet



Um Uqla  
Simple parapet

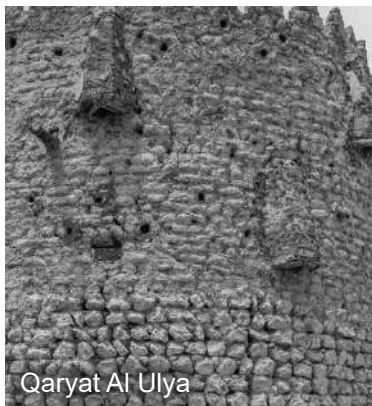


Sahaf Village  
Simple parapet with mizab



Qaryat Safla  
Stone parapet with mizab

Middle



Qaryat Al Ulya  
Typical stone based turmah



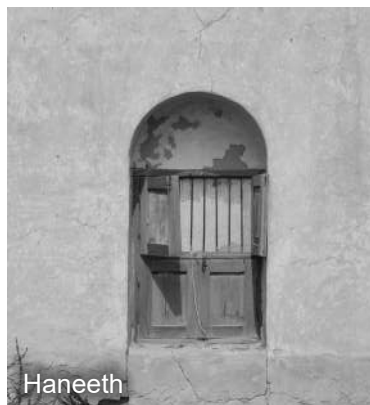
Qaryat Al Ulya  
Ground floor window opening



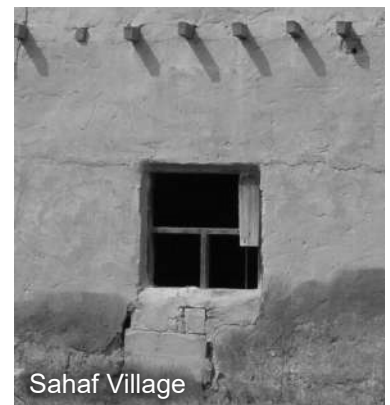
Qaryat Al Ulya  
Wall niche



Um Uqla  
Typical mud based turmah

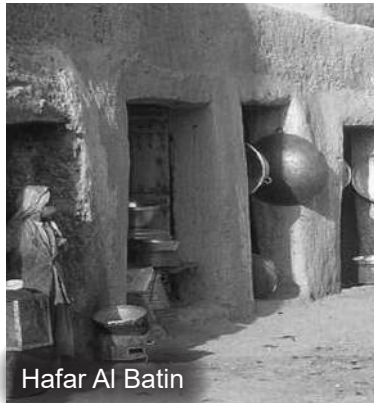


Haneeth  
Arched window opening

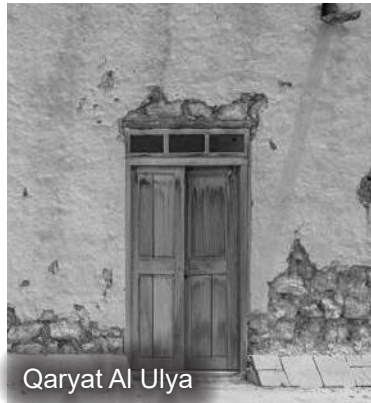


Sahaf Village  
Square window opening

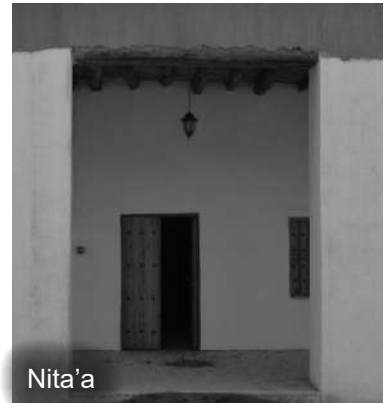
Base



Hafar Al Batin  
Typical shop fronts



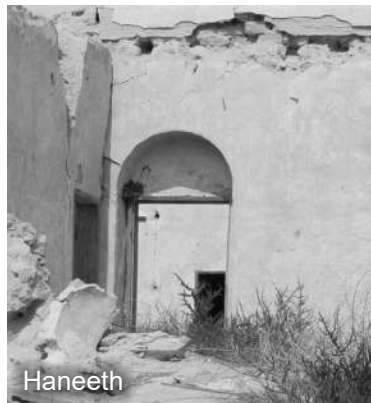
Qaryat Al Ulya  
Simple wooden door



Nita'a  
Entrance with arcade



Qaryat Al Ulya  
Traditional arch details

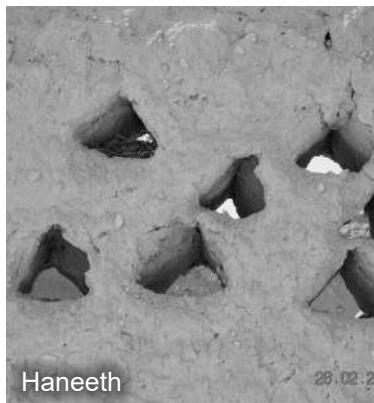


Haneeth  
Typical arched openings

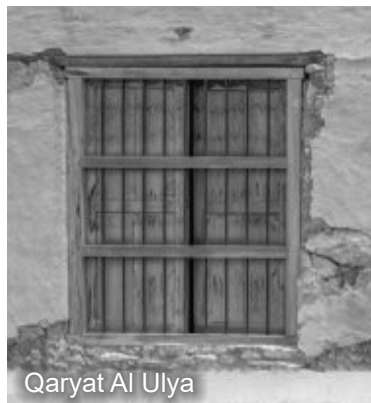


Um Uqla  
Wooden double door

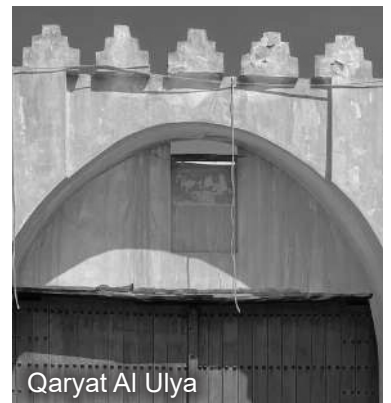
Ornaments and other elements



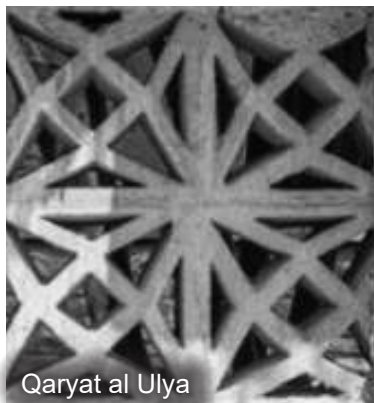
Haneeth  
Triangular fenestrations



Qaryat Al Ulya  
Wooden window detail



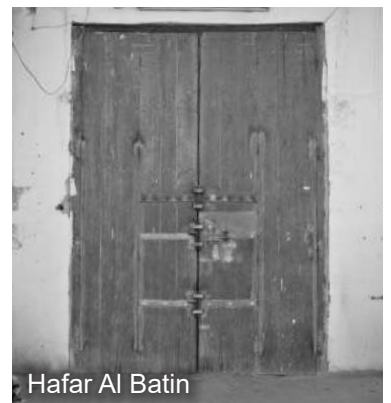
Qaryat Al Ulya  
Door frame detail



Qaryat al Ulya  
Façade patterns



Rafha  
Ornamented entrance



Hafar Al Batin  
Wooden door

### 3.1 Tripartite articulation

Tripartite articulation is a typical feature of Najdi buildings that highlights the hierarchical elements of a building's elevation; façades are typically split into three separate tiers of the base, middle, and top, each having its own distinct character.

- 1 The top section of the building should include various decorative and fenestration elements that address the roofscape of the building. Openings should be articulated with no change in materiality and/or color from the main façade.
- 2 The number of openings in the Eastern Najdi style should be small as landmark buildings have a void percentage ranging between 1.4 and 11.8%, meaning fewer openings than Central and Northern Najdi where opening percentages can go as high as 25% and 12.4% respectively.
- 3 Openings should be symmetrical only in groups or in elements of the structure. Windows on different floors use axial alignments (i.e. attic windows and smaller openings centered above larger ones) to create order and levels of hierarchy in the façade.
- 4 Middle openings should be smaller in scale in comparison to the rest of the façade and pair with the base's elements.
- 5 Doors should have a width-to-height proportion ranging between 1:3 and 1:5, vertical windows generally a proportion of around 1:1.5, and attic windows, which sit horizontally, a more suitable proportion of around 1:1.

Elements depicted here should be a starting point for interpretation rather than direct duplication.

**To evoke the character and presence of Eastern Najdi buildings.**

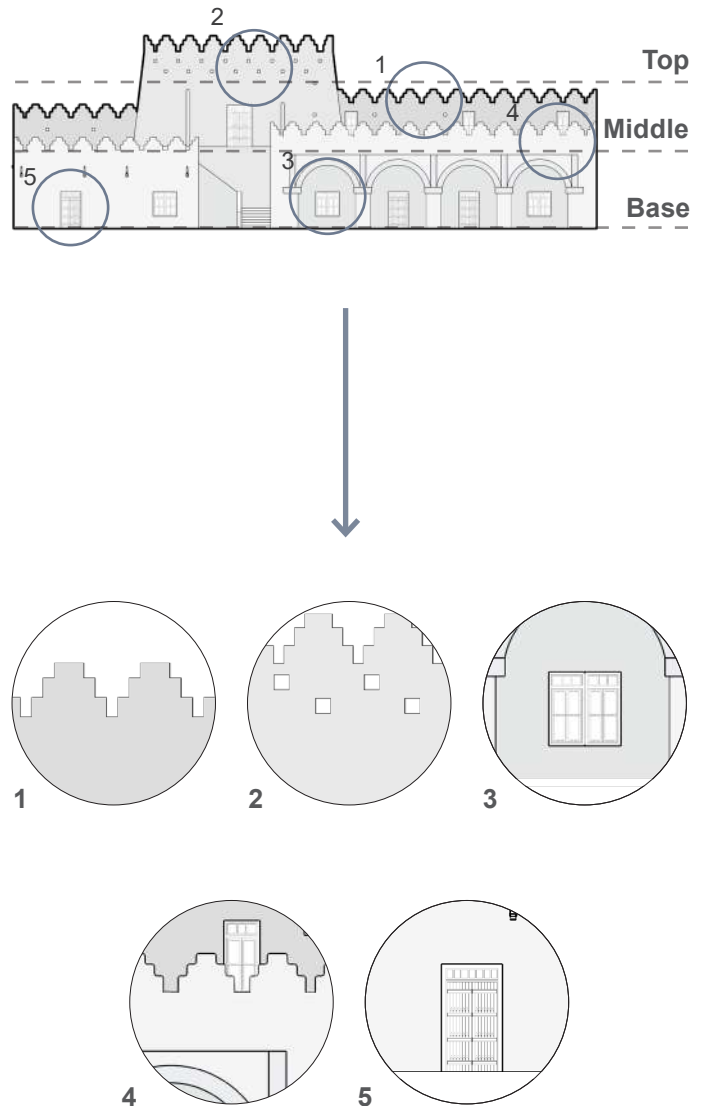


FIG. 25 Tripartite articulation elevations

### 3.2 Doorways and entrances

Façades and openings in the Eastern Najdi include fewer decorative elements than those in the Central Najdi style.

Characteristics include the following:

- 1 Informal groupings; the doors' alignment should correspond to the program and layout of the rooms' interior rather than to the composition of the external façade.
- 2 Doors should:
  - Be made of timber and wooden framed.
  - Typically flush with the façades.
  - Include ring handles with natural geometrical motifs.
- 3 Simple orthogonal openings should be adopted.
- 4 Doors should be generously scaled.

Elements illustrated here should be used as a starting point for interpretation and not simply duplicated.

**To evoke the character and simplicity of decorative elements of Eastern Najdi doors.**

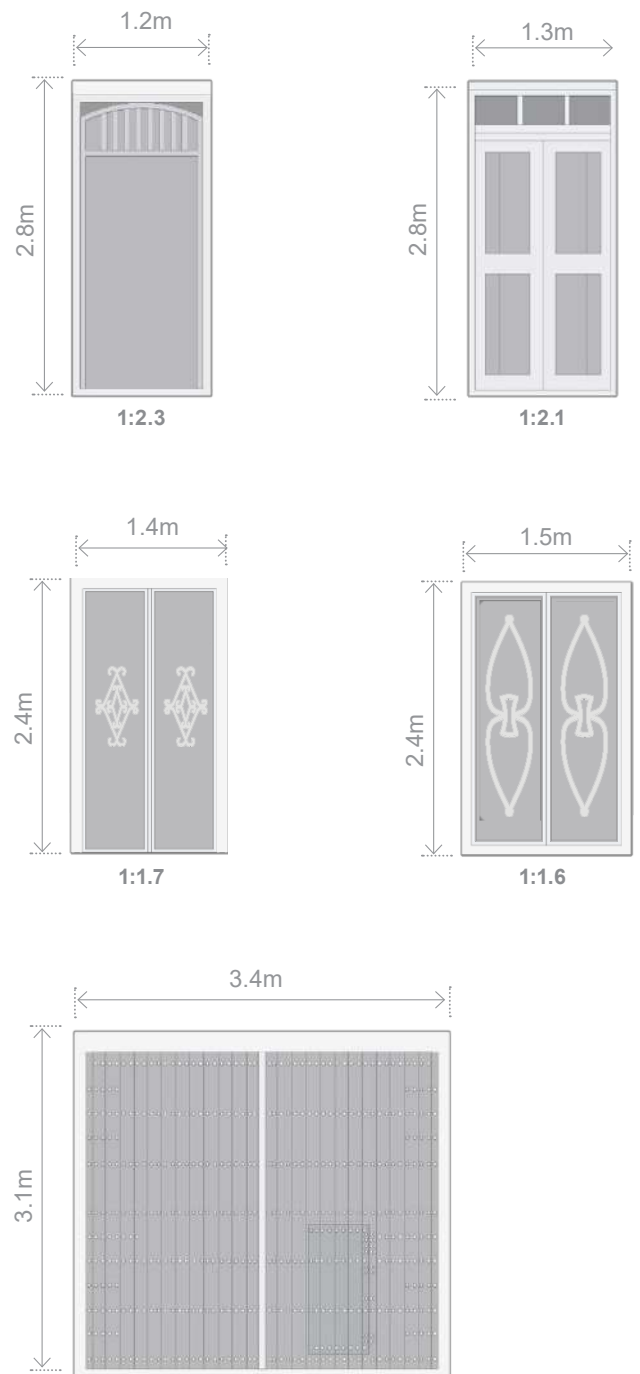


FIG. 26 Traditional door elements

### 3.3 Windows and openings

Architectural elements that characterize traditional architecture, as extrapolated from Qaryat Al Ulya and Hafar al Batin, include crenelations, triangular bands, fenestrations, doors, and windows.

Characteristics include the following:

- 1 Informal groupings; the windows' alignment should be determined by the interior layout, rather than the façade's composition.
- 2 Traditional windows should:
  - Be made of timber. (more contemporary versions feature more glass.)
  - Typically flush with the façades.
  - Not painted and may include geometrical patterns carved in the wood.
- 3 Simple openings should figure in solid walls with both arched and flat tops.
- 4 No gypsum frame should figure on the external wall.
- 5 Upper floors should generally have more openings than ground floors.
- 6 Middle-floor openings should be generous in scale allowing views of the street through screened openings.

Elements illustrated here should be used as a starting point for interpretation and not simply duplicated.

**To evoke the built history of the Eastern Najdi region through traditional windows and opening.**

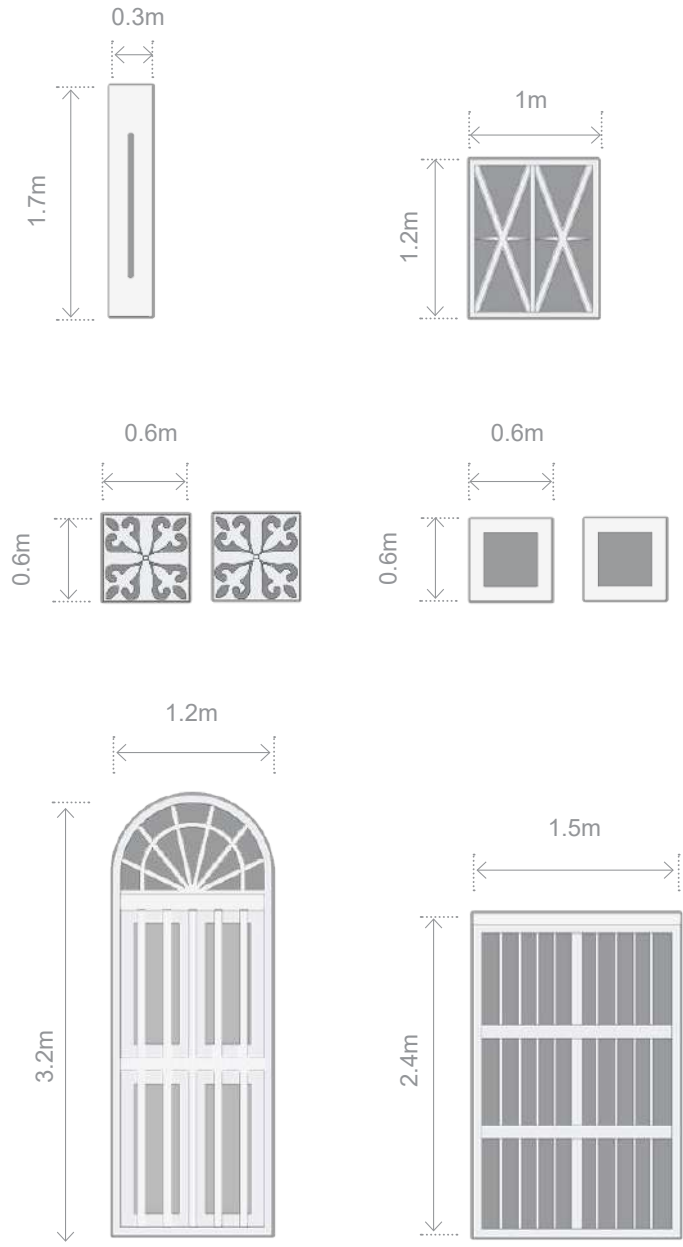


FIG. 27 Traditional window elements

### 3.4 Roofscape perimeter & parapet detail

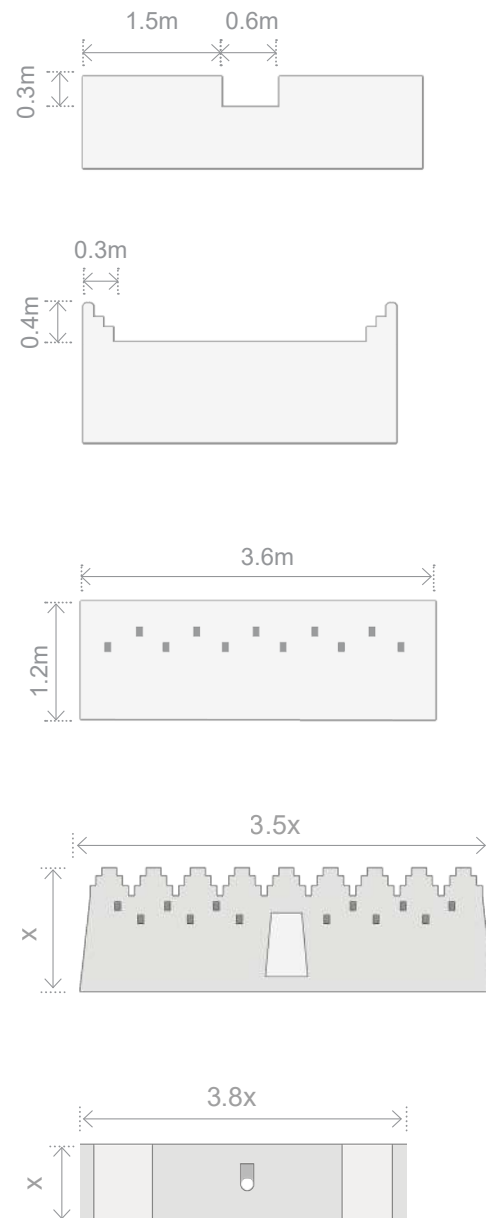
The traditional roofscape of the Eastern Najdi region is characterized by stepping rooflines and inhabitable roof terraces.

Elements of the roofscape include the following:

- 1 Façades should run up flush into tall crenelated terraces that provide privacy between terraces and buildings.
- 2 Crenelations, which are intended to provide privacy for the resident, should be made from mud and are usually covered with white lime plaster.
- 3 Fenestrations, which are small geometric openings in a traditional Najdi façade, should be adopted to provide ventilation and lighting as well as act as a medium for privacy and surveillance.

Elements illustrated here should be used as a starting point for interpretation and not simply duplicated.

**To create functional inhabitable roof spaces which are screened from each other and neighbouring buildings.**



**FIG. 28** Traditional roofscape perimeter and parapet detail

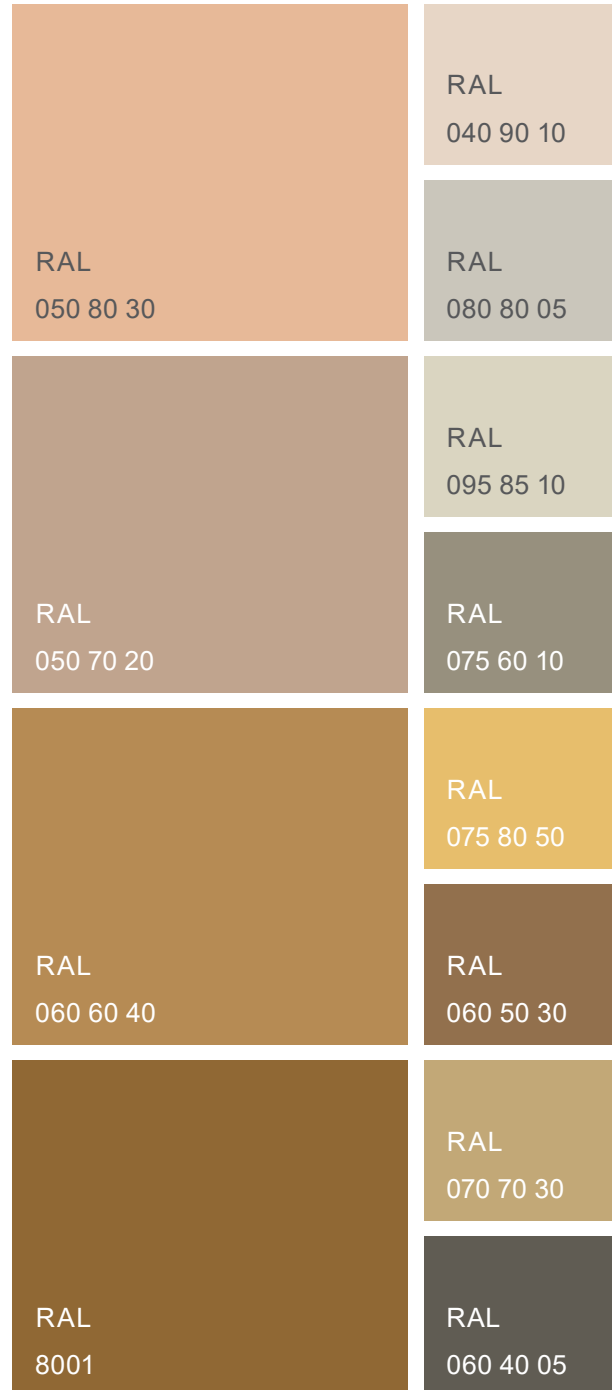
## 4 Colors and materials

The prevalent materials used and color range found within the architecture of Eastern Najdi.

Utilizing a unified material and color scheme strengthens the architectural character and contributes to a harmonious and unique urban aesthetic. The following recommendations should be applied in the Eastern Najdi architectural character:

- 1 Align the chromatic scale of buildings with the surrounding landscape by matching the hues of different natural elements and materials within the immediate environment.
- 2 Use earth tones as primary colors for the building's palette, and layer with assorted lighter or darker colors as secondary or accent colors.
- 3 Base colors are used on walls and should be chosen in correlation with the hues of sand and stones specific to each site. Color examples include shades of beige and brown with either earthy yellow hues or light pink undertones echoing the sunset sky.
- 4 Use gradients of the base hues as secondary colors on recessed sections of the building. Integrate accent colors by using lighter, brighter or darker tones in contrast with the neutrals to highlight particular architectural elements.
- 5 Prioritize the use of natural and locally-sourced construction materials such as clay, stone, tamarisk wood and palm materials.

**To integrate prevalent materials used and color range found within the architecture of the Eastern Najdi region strengthening the local architectural character.**



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



Layered mud parapets



Mud wall



Textured plaster



Mud wall



Plaster wall



Wooden door



Stone and mud walls



Mud wall



Flagstone pavement



Stone finish

FIG.29 **COLORS AND MATERIALS**

## 5 Patterns

Common motifs and patterns used in the traditional craftsmanship and material culture of the Eastern Najdi.

The Eastern Najdi region has a rich cultural heritage of traditional geometric patterns that reflect the local architecture and environment. These patterns are inspired by Islamic traditions and each element has a specific meaning. For example, triangles can represent mountains or peaks, but are also associated with consciousness, knowing, and learning. Other patterns are usually Arabesques representing plantlife. Patterns and symbols are often used to reflect the traditional tribal lifestyle and the harsh desert environment.

- 1 Traditional motifs should be extracted and abstracted from their traditional patterns to form elementary motifs.
- 2 Each motif should be re-interpreted in the first instance by repeating it, thus forming a new geometric pattern.
- 3 The newly created patterns should then be further re-interpreted in a second instance by abstracting it, rendering it a simpler version yet still inspired by its predecessor.
- 4 The final pattern created becomes easier to be applied in the context of new buildings.
- 5 Re-interpreted patterns should be used in the façades of new buildings whether in fenestrations or crenelations.

Patterns illustrated here should be used as starting points for interpretation and not simply duplicated from existing styles.

**To create spaces that embody continuity with patterns of traditional buildings, whether through the aesthetics of the façades in the exterior or the lighting effect that they create in the interior.**



FIG. 30 Patterns abstraction



Metal door (Hafar Al Batin)



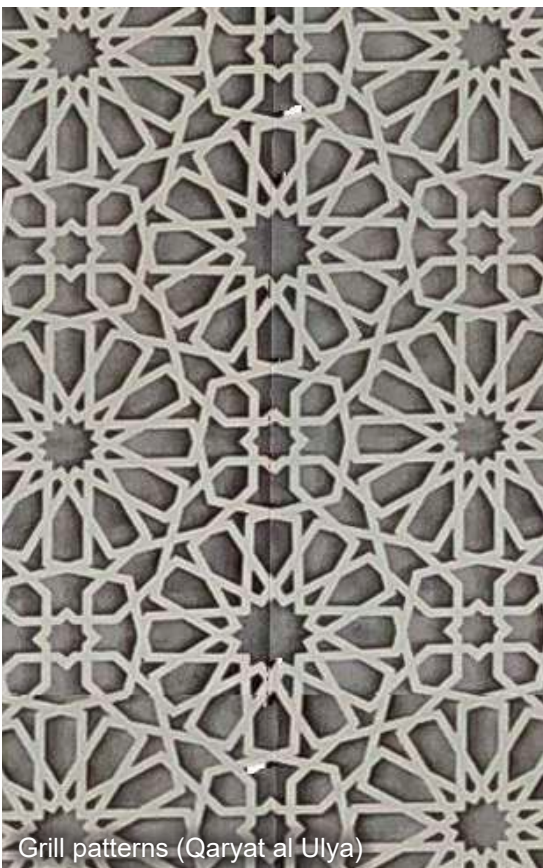
Parapet patterns (Qaryat al Ulya)



Parapet patterns (Qaryat al Ulya)



Najdi traditional rug (Qaryat al Ulya)



Grill patterns (Qaryat al Ulya)



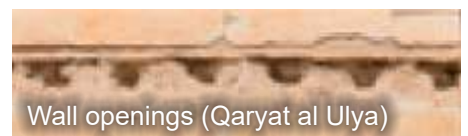
Parapet patterns (Qaryat al Ulya)



Arches (Qaryat al Ulya)



Opening patterns (Qaryat al Ulya)



Wall openings (Qaryat al Ulya)

FIG.31 PATTERNS

## 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.

**To encourage contextually sensitive contemporary design.**



FIG. 32 Example of building form abstraction\*



FIG. 33 Example of window shape abstraction\*

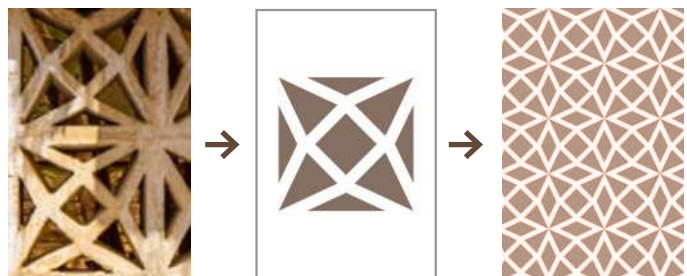


FIG. 34 Example of pattern abstraction\*

\*Note: Diagrams in this chapter are for explanation of design concepts only. The examples are taken from a variety of sources, and do not form part of the definition of the Eastern Najdi architectural character.

## 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 massings 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.**

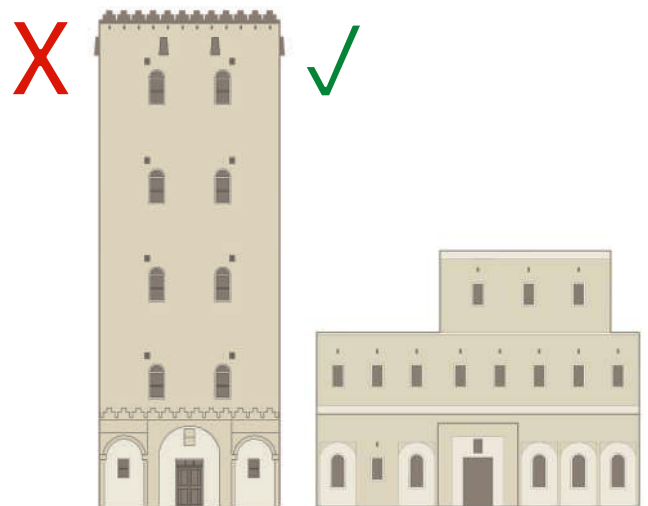


FIG. 35 Break down building massing to better fit traditional architectural elements\*

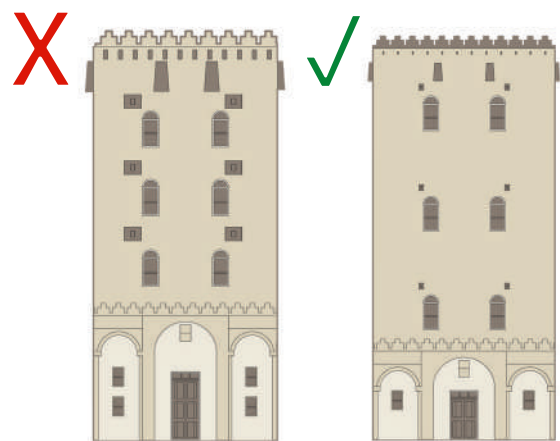


FIG. 36 Do not scale and distort smaller elements into oversized graphic features\*

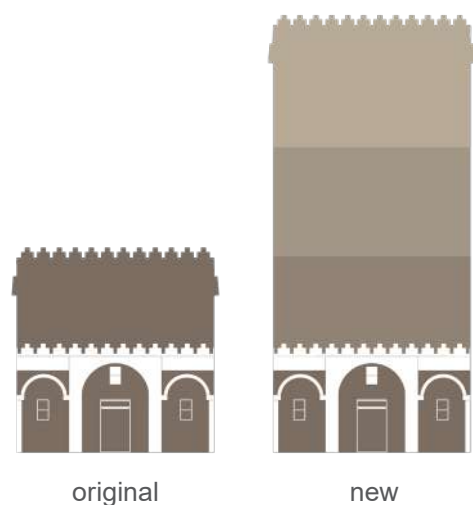


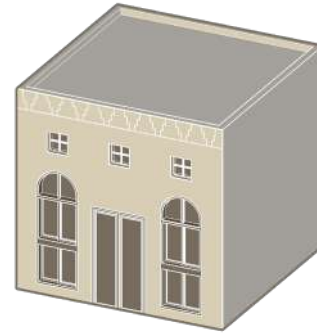
FIG. 37 Pay attention to building elements near the public realm, especially at the ground floor\*

### 6.3 Functionality

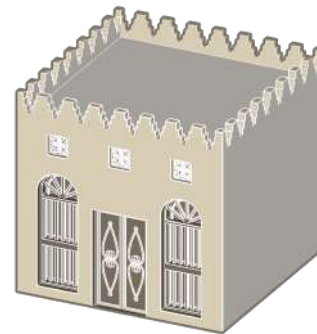
Architectural elements should perform functionally like their traditional counterparts, and not be applied superficially like graphic signage.

- 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 arcade and window screens



Functional arcade and window screens

FIG. 38 Example of functional architectural elements\*

### 6.4 Adaptation

The application of traditional architectural styles 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.**

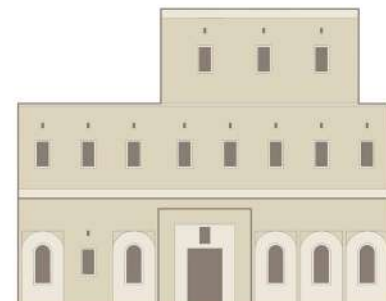
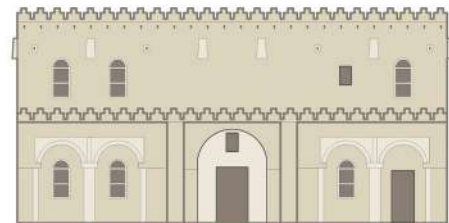


FIG. 39 Adaptation of traditional architectural elements to a contemporary building\*

\*Note: Diagrams in this chapter are for explanation of design concepts only. The examples are taken from a variety of sources, and do not form part of the definition of the Eastern Najdi architectural character.

## 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 scale projects, particularly in sites located on the edge of two or more characters.

- 1 In large scale projects, when the project site is located at the edge of two or more characters, 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 scale projects.**

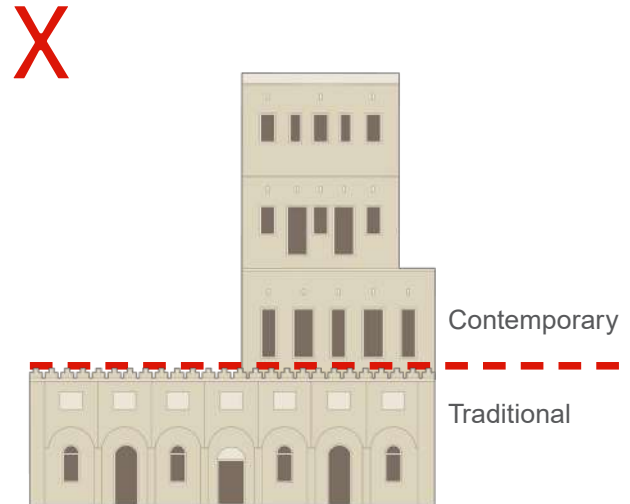


FIG. 40 Do not create hard breaks between mixed sources\*

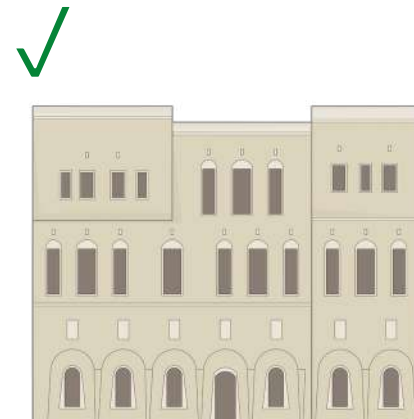
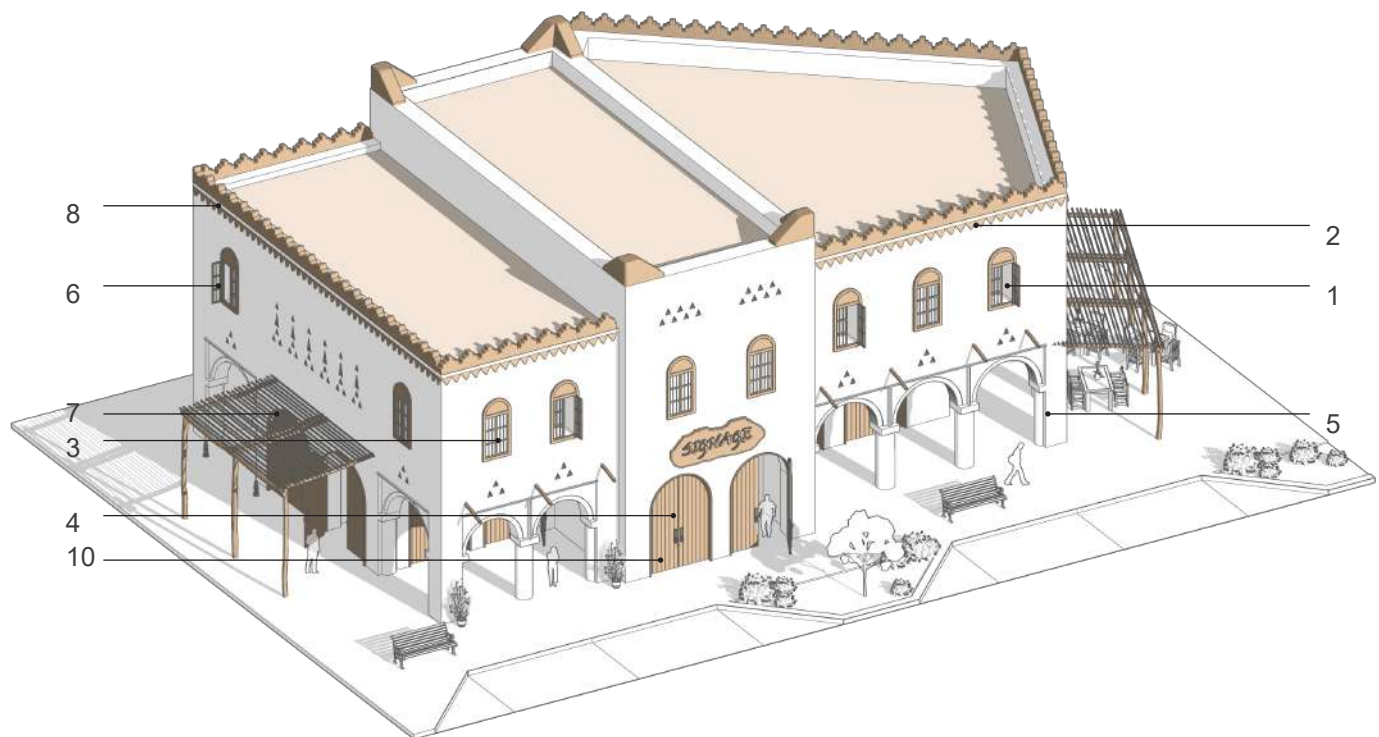


FIG. 41 Create gradual transitions between mixed sources and strengths of character application\*

## 7 Worked examples

A set of design studies illustrating the application of the Eastern Najdi architectural character to buildings, at different strengths and scales.



0m 2.5m 5m 10m

FIG. 42 Small size building

### 7.1 Traditional

This worked example of the traditional style incorporates a robust and comprehensive application of sections 3-5 of the guidebook. The scenario emphasizes the distinctive characters of traditional Eastern Najdi architecture through the adoption of stepped crenellations, semicircular openings, and axial window alignment.

- 1 Window-to-wall ratio ranges between 10 and 15 %.
- 2 The facade is divided into three parts, where the middle is separated by combinations of fenestration bands.
- 3 Openings are aligned with those from other levels and share a vertical axis.
- 4 Entrances have semicircular openings with non-ornamented wooden double doors.

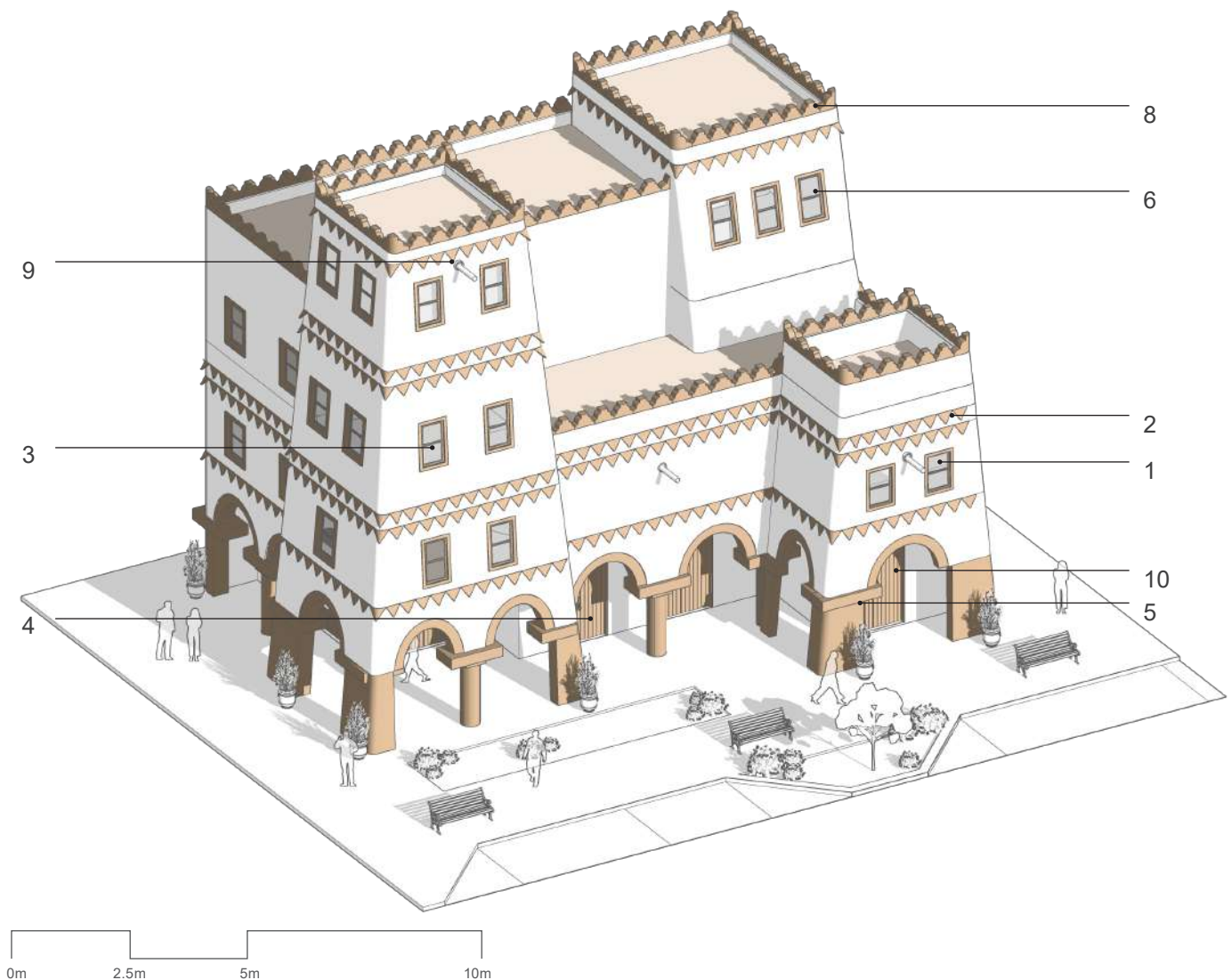
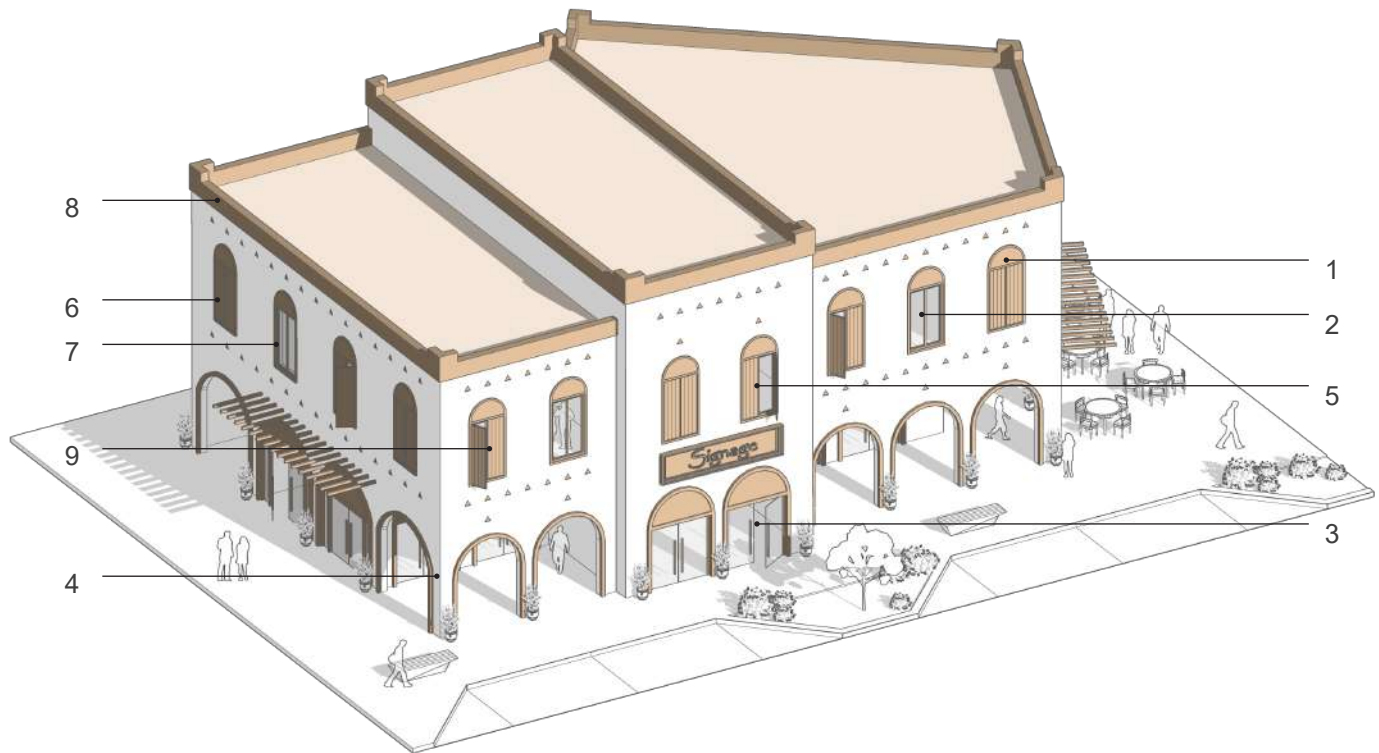


FIG. 43 Large size building

- 5 Arcades include timber-shaded semicircular arched colonnades with circular columns and small openings.
- 6 Windows are rectangular with a gypsum frame and also have semicircular arches.
- 7 Shading structures: should use timber.
- 8 On the roof, use of parapets of double-stepped crenelations with a triangular band running along the base or flat parapets with corner crenelations.
- 9 Projecting from the parapet is the mizab and turmahs on top of windows in the lower floors.
- 10 Wooden shutters should be used upon the entrance and various other openings.

**To create contemporary interpretations that connect and celebrate the built heritage of the Eastern Najdi region.**



0m 2.5m 5m 10m  
**FIG. 44** Small size building

## 7.2 Transitional

This worked example of the transitional style incorporates a robust and comprehensive application of sections 3-5 of the guidebook. Expanding on the main design features of the traditional building source, the scenario highlights the use of semiarched openings and frames while keeping a refreshed and more muted interpretation of the parapet and wall ornamentation.

- 1 Window-to-wall ratio ranges from 15 to 30 %.
- 2 The composition of the façade aligns openings with those from other levels and shares a vertical axis.
- 3 Entrance consists of a semicircular opening with a double door and a niche on top.

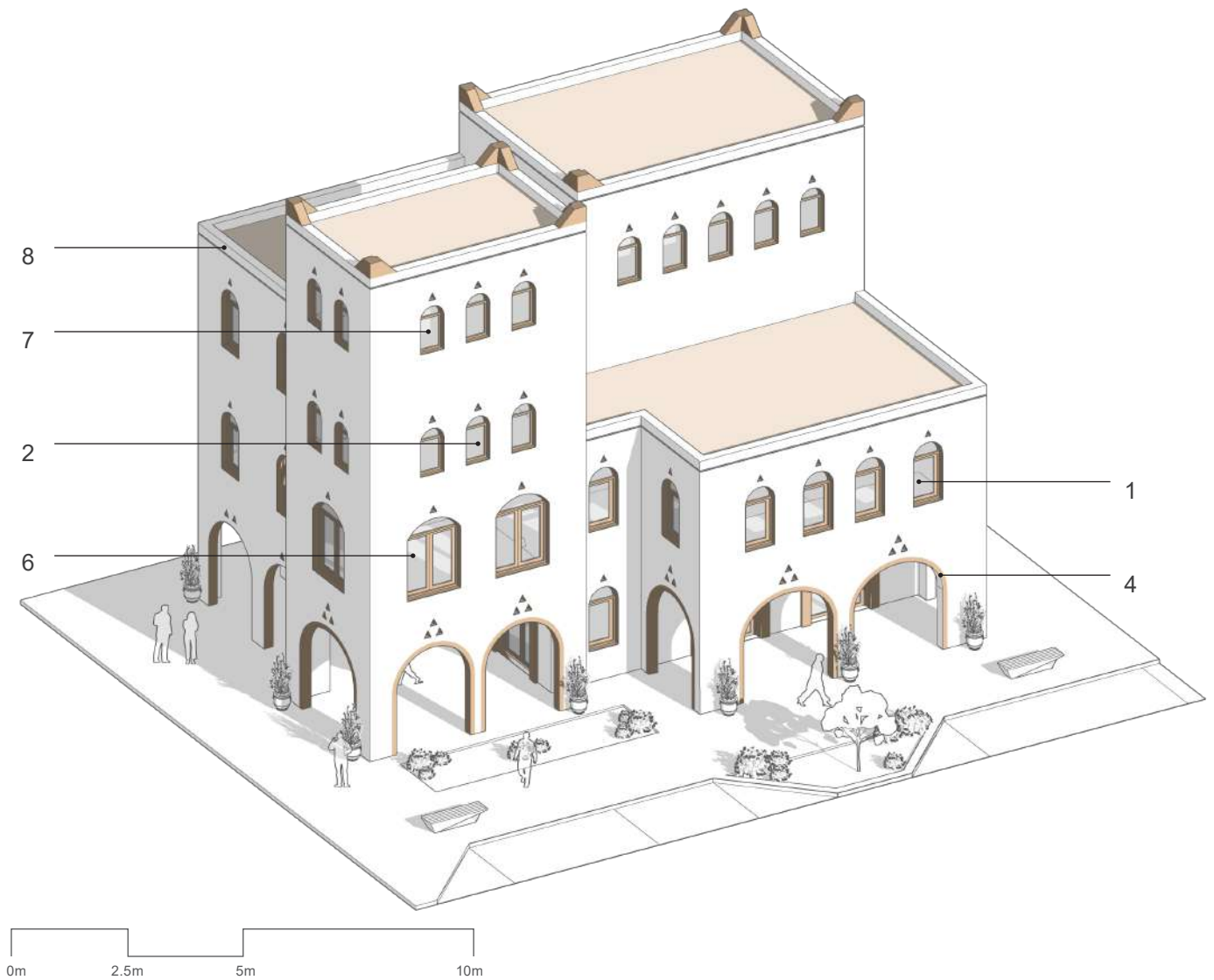
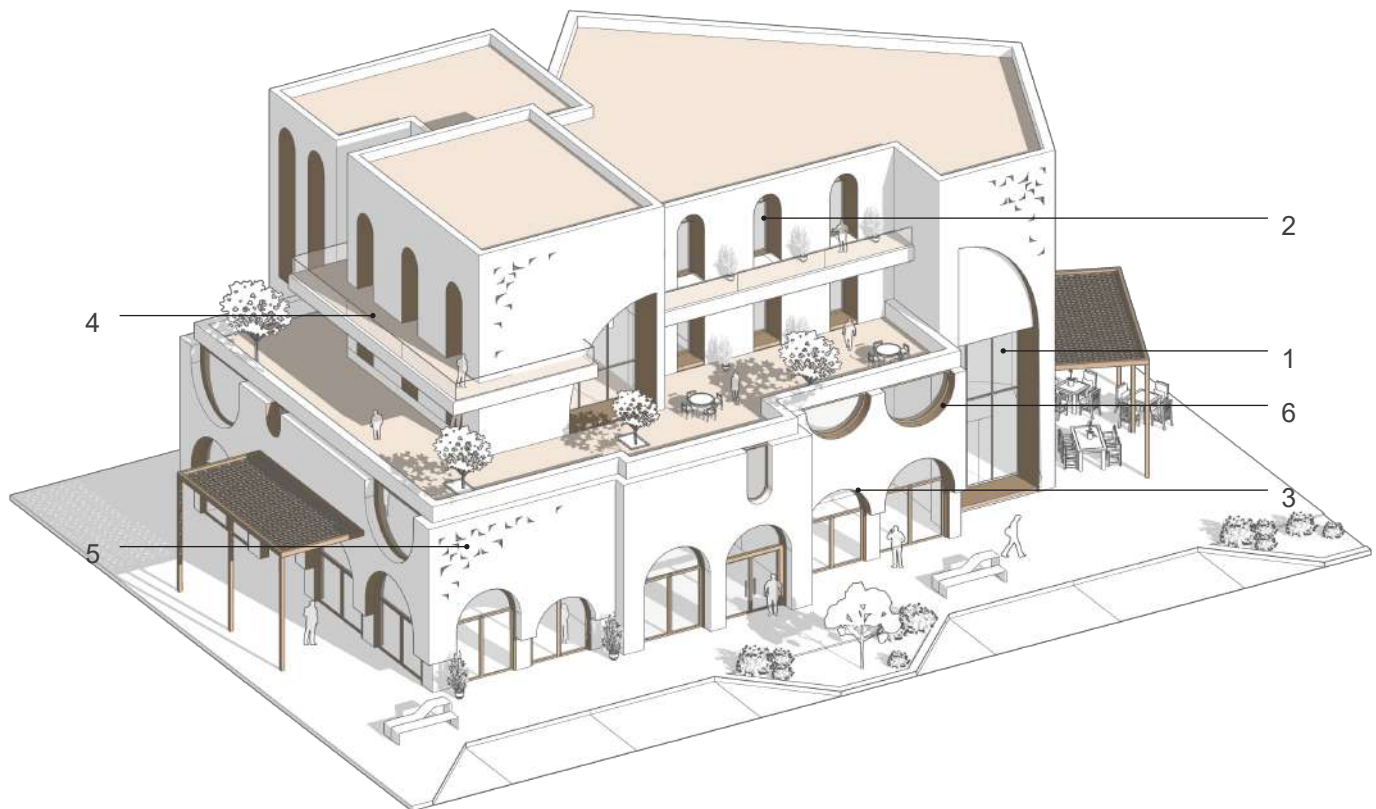


FIG. 45 Large size building

- 4 Arcades use semicircular arches with squared columns surrounded by gypsum frames projecting from the main façade.
- 5 Shutters and shading are made out of timber.
- 6 Windows include a semicircular arched niche attached to the top and a gypsum frame around the composition.
- 7 Vertical windows with proportions around 1:4.
- 8 Parapets are flat with or without crenelations for the corners.
- 9 Adopt minimal vertical linear patterns on window louvers.

**To embrace modern living through built architecture which connects with traditional sources.**



0m 2.5m 5m 10m  
**FIG. 46** Small size building

### 7.3 Contemporary

This worked example of the contemporary style incorporates a robust and comprehensive application of sections 3-5 of the guidebook. This scenario expresses contemporary living by embracing wider openings through new derivations of the region’s distinctive semi arched openings, the introduction of balconies and playful frontages.

- 1 Window-to-wall ratio: should consist of around 40 to 60% of the primary façade.
- 2 Across the façade, openings are aligned symmetrically across all of the building’s levels.
- 3 Arcades have semicircular arches on recessed and squared columns that are variously distanced, adding dimensionality to the composition. The arches can integrate items such as glass doors and timber louvers.

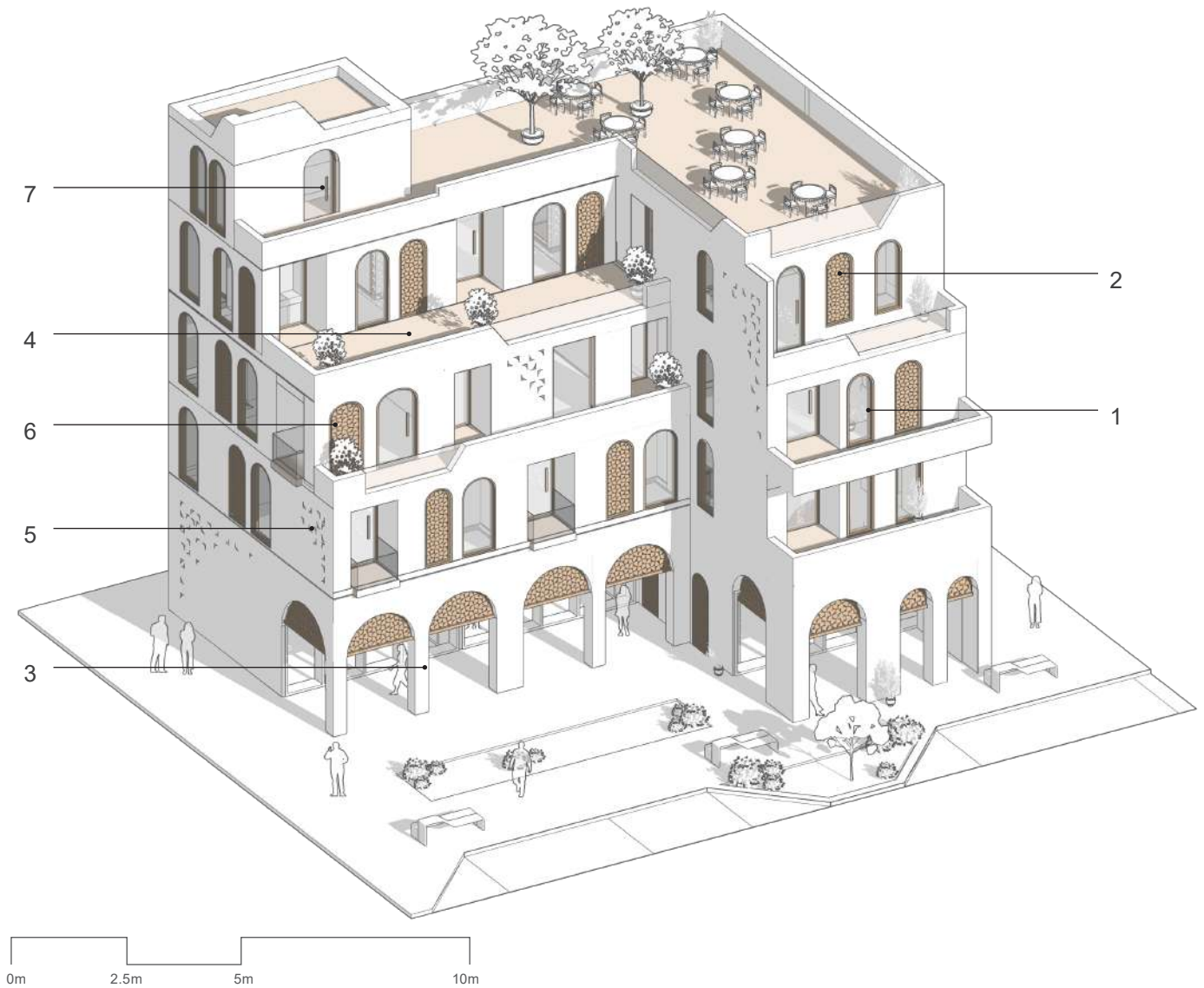


FIG. 47 Large size building

- 4 May include a sequence of openings in the upper levels that may be connected through a continuous balcony line.
- 5 Patterns: facades should present re-interpreted Najdi patterns in fenestrations, windows, and louvers of semicircular arches.
- 6 Windows and openings feature rectangular and semicircular arched openings.
- 7 Shutters can be used upon the entrance and various other openings, but are more typical of traditional designs. Instead, employ greater use of glass (combined with timber for framing).

**To develop slick and innovative designs which enhance on opportunities found in traditional styles.**

## 8 Public realm

An overview of public realm character in Eastern Najdi.

### 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 Eastern Najdi. It is meant to provide high-level principles and recommendations to be further developed in masterplans and public realm strategies within the Eastern Najdi.

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 Municipalities 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. 48 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 characteristic public realm found in the Eastern Najdi.
- **Types of public space** - A selection of spatial types that provide the Eastern Najdi distinctive character.
- **Materials** - A summary of hardscape

character for the Eastern Najdi.

- **Planting** - A summary of softscape character for the Eastern Najdi.
- **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 Eastern Najdi.

### 8.2 General character

The adjacent photographs summarize the characteristics of public realm and local landscape in the Eastern Najdi. As set out in the introduction, the area is known for its desert and gravel plateaus and its vernacular grouped architecture style built and connected around internal courtyards. Mud and hay are used as building materials of the region This introverted grouping provided a distinct public character for shaded and narrow alleys that organically evolved with the growth of settlement allowing for spaces for public gathering, such as town mosques and souks, nestled in-between the domestic sphere.



Baraha (Qaryat al Ulya)



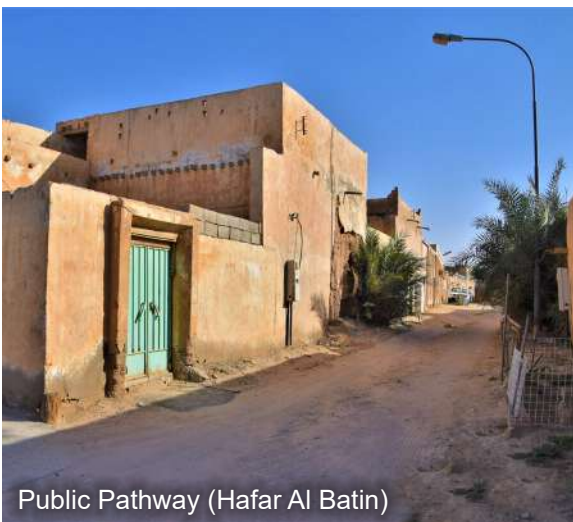
Entrance with feature elements (Qaryat al Ulya)



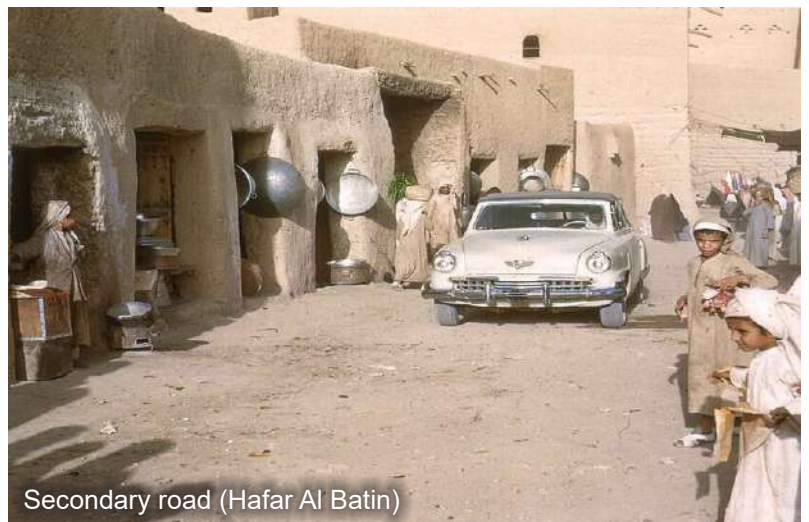
Colonnades (King Abdul Aziz Palace)



Public Square (Qaryat al Ulya)



Public Pathway (Hafar Al Batin)



Secondary road (Hafar Al Batin)

FIG.49 PUBLIC REALM AREAS AND ELEMENTS IN EASTERN NAJDI

8.3 **Types of public space**

Eastern Najdi public realm is characterized by a hierarchy of typical streets and spaces. These typologies are distinguished by their scale, character, and relationship with predominant land uses.

Together, these spaces create a diverse public realm which caters for residents and visitors alike, and contributes to the distinct architecture of the settlement.









The plan illustrates a typical hierarchy of urban spaces and streets in Eastern Najdi. The following spaces are considered to be the principal typologies:

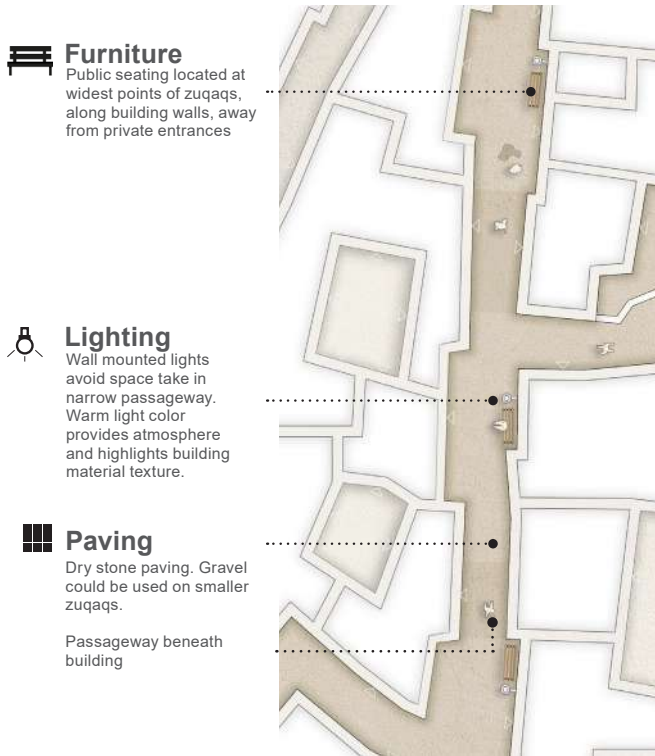
- Street: Primary routes which define the edges of smaller settlements, mediating between green oasis areas, and buildings.
- Saha: Larger local space which is more likely to include adjacent commercial uses.
- Baraha: Smaller local space, typically with a more residential character.
- Zuqaq: Local alleys of varying width and footfall which connect spaces and streets across settlements.

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

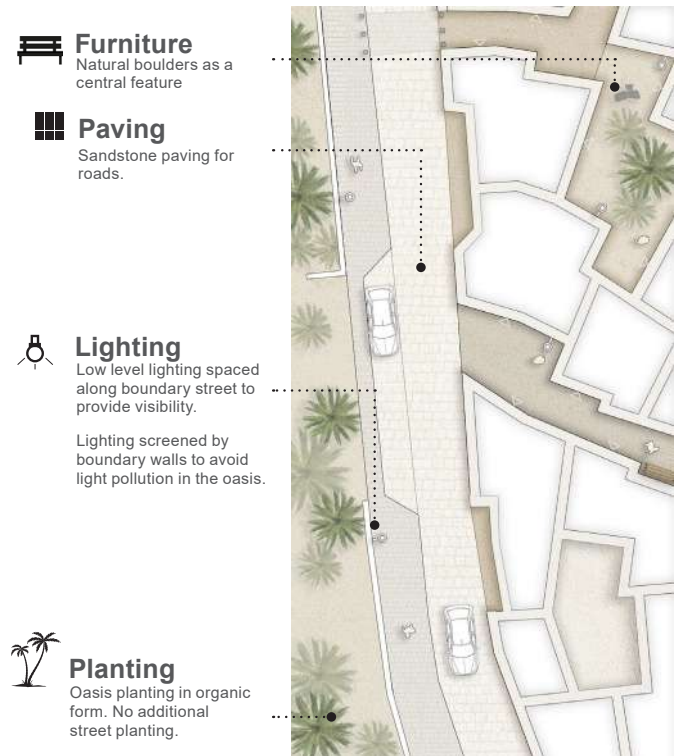


FIG. 50 Typical urban plan

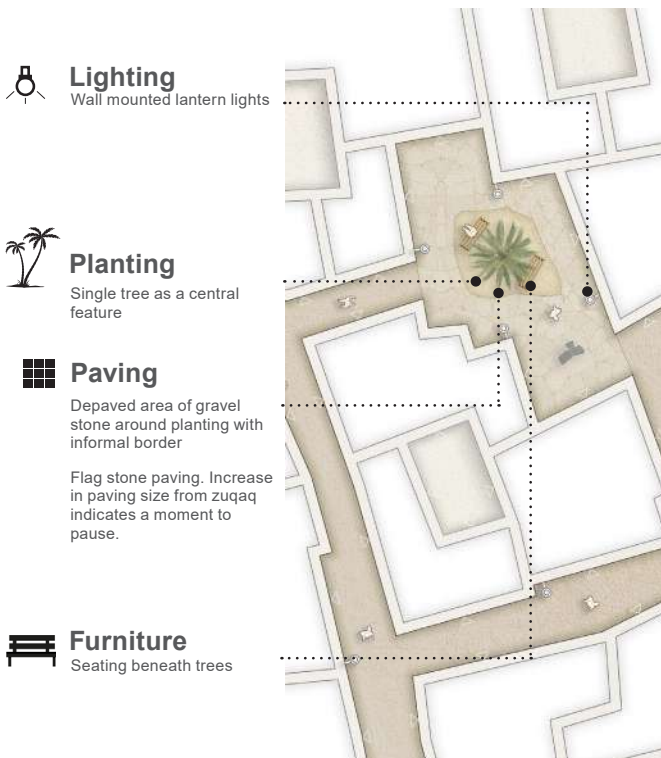
- |  |   |  |
|--|---|--|
|  Street |  Private courtyard |  Oasis            |
|  Zuqaq  |  Building          |  Oasis palm trees |
|  Baraha |  Boundary wall     |  |



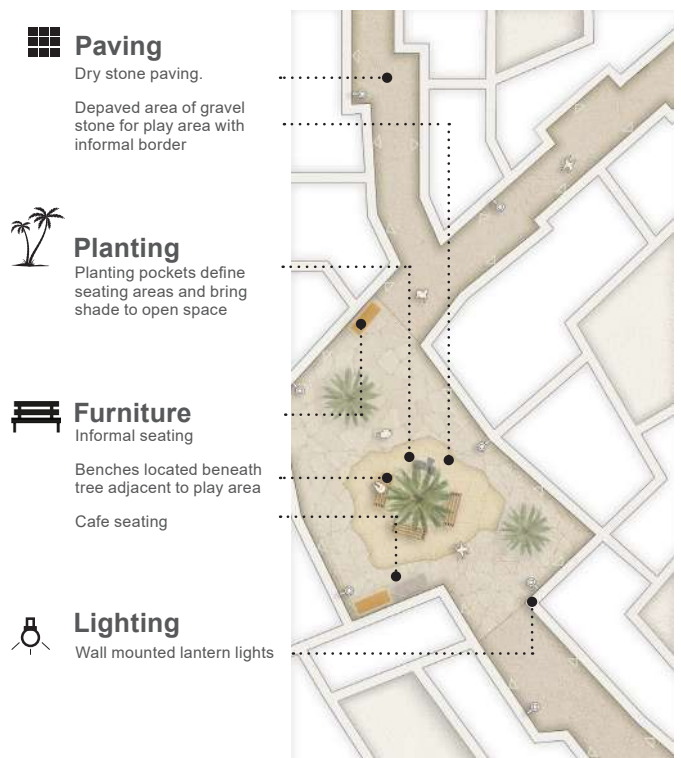
**FIG. 51** Zuqaq  
No vehicle access.



**FIG. 52** Street Oasis edge  
Vehicle access.  
Should allow connections to Oasis.



**FIG. 53** Baraha  
Trees should be used in baraha located close to the oasis. Baraha furthest from the oasis could use a canopy for shade.



**FIG. 54** Saha  
Varied seating types/ uses.  
Depaved area for play.

## 8.4 Materials

The suggested palette for materials to be integrated in the Eastern Najdi has been conceived to be simple and sensitive to the existing character of the area.

### Key considerations

- 1 Select locally sourced Saudi materials with low embodied carbon, such as tamarisk wood, mud, hay, and recycling aggregates from ruin sites or community waste.
- 2 Areas with higher footfall, such as souks and commercial areas or pedestrian walkways, need paving and should have higher specification and materials that are durable, minimizing the need for regular repair and replacement.
- 3 Select materials that have longevity and that can be easily cleaned, repaired and sourced – so high-quality materials such as granite or basalt and similar igneous rocks.
- 4 De-pave and rely less on concrete where possible to improve the microclimate and use suitable sands or aggregates in place of paving.
- 5 Materials should provide varying textures complementing the area's architectural character and color palette.
- 6 Employ subtle changes to paving to highlight difference between typologies
- 7 Map and discover existing streetscapes and ensure materials are replaced only when necessary to minimize carbon footprint.
- 8 Using a larger paving format to emphasize more prominent routes.
- 9 Consider incorporating special patterns to emphasize important places or spaces.

**To design public spaces which complement the material and environmental properties of the region.**



## 8.5 Planting

Tree planting should compliment the agricultural character of Eastern Najdi, building on existing planting traditions and fostering future-oriented sustainable practices.

### Key considerations

- 1 The tree landscape character should carefully calibrate and work with existing aquifers, rainwater, irrigation, and canal systems.
- 2 Rely less on importing new tree species, and source existing drought tolerant and saline water resistant as well as native and locally adapted species.
- 3 Adopt an informal layout, to avoid overly linear or formal planting for a characterful contribution to the quality of routes and spaces.
- 4 Be planted where shade can be best utilized or where shade is necessary to encourage using the public realm.
- 5 Consideration should be given to how a tree is seen and how trees can be used as wayfinding markers.
- 6 Planting should be relatively limited within the urban area, mainly found in baraha areas.
- 7 Enhancing the existing planting structure and multi-layering with a variety of palm species, fruit trees, fodder grasses, and additional habitat values such as fruits for birds.
- 8 Minimize understory and decorative planting should be minimized. If understory planting is necessary, it should be functional e.g. herbs or edible.

**To ensure that planting projects work with the existing ecosystem and provide multiple values for the public.**

### Trees



### Shrubs



## 8.6 Street furniture

Street furniture should be 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 find opportunities to use local materials, respond to the local landscape and cultural heritage, and celebrate local craft skills.

### Key considerations

- 1 Be distributed evenly across all areas with reference to space types above.
- 2 Not obstruct pedestrian movement nor clutter public open spaces.
- 3 Show a color and material consistency.
- 4 Be minimal in the public realm as traditionally was the case and potentially movable.
- 5 Feel ephemeral and informal, acknowledging the historic condition of street furniture in the region.
- 6 Give consideration to accessibility with seating distributed at suitable intervals and heights.
- 7 Be of high quality, coherent, and rationalized to minimize street clutter.
- 8 Avoid duplication by rationalizing and combining elements.
- 9 Be easily maintained and repaired with replaceable components.
- 10 Be retained and improved where existing furniture has heritage value.
- 11 Boundary walls should contribute to the landscape character and setting of the area.

**To provide thoughtful, inviting, and locally-relevant outdoor public furniture.**



FIG. 55 Seating



FIG. 56 Trash bin

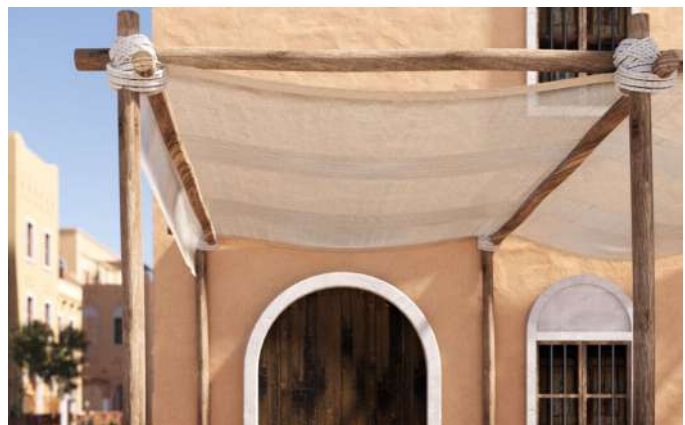


FIG. 57 Shading



FIG. 58 Planter

## 8.7 Lighting

Lighting fixtures are street furniture elements that enhance visibility and wayfinding at night. However, lighting design can also be utilized to highlight important buildings or parts of buildings.

### Key considerations

- 1 Type, texture, color and design of the lighting fixture must follow the architectural design language of the building.
- 2 Source and research existing and traditional lighting methods to innovate a modern take that is contextually relevant.
- 3 Lighting element placed on the floor should be decided carefully so it doesn't obstruct pedestrian mobility on the sidewalk.
- 4 The type, design, consistency and size of lighting fixtures can either degrade and disrupt a scenic area or rather enhance the architectural and urban setting.
- 5 The sequence and intensity of lighted areas must not be decided randomly as it guides the journey of pedestrians. Lighted areas draw people's attention and thereby determine the path that users walk.
- 6 The typical light color is white and yellow shades. Incorporating other colors should have a reasonable justification and used with care to not create visual pollution or degrade the quality of the space or building.

**To use lighting elements in enhancing the user experience and perception of building and public space.**



FIG. 59 Ceiling light



FIG. 60 Wall hanging light



FIG. 61 Free standing light



FIG. 62 Bollard

## 8.8 Signage

The main purpose of signage is to communicate a specific message to the public. Signage can be promotional to persuade customers into a commercial area and supports the orientation of members of the public in reaching their desired destination.

### Key considerations

- 1 Signage font, material and color should follow and complement the architectural design language of the building, and thus should be straightforward, simple in design, and accurately orient the public to the location.
- 2 Inconsistent and unregulated sizes, colors, heights and typography distort the character of a place and reduce the architectural value of buildings, contributing to the city's overall visual pollution. It should be carefully designed to maximize efficiency in conveying the message as well as maintaining the theme and character of the area.
- 3 The width and alignment of wall signage boards must be consistent across the building as well as across the entire street frontage in the area. The average width of wall signage boards should be 60cm with a maximum of 120cm.
- 4 Readability of signage depends on the distance it is viewed from. The maximum distance a signage is to be viewed from by a target receiver is from the opposite side of the street.

**To create a consistent visual language across the city and be effective for the orientation of members of the public.**



FIG. 63 Main signage



FIG. 64 Wall hanging signage



FIG. 65 Free standing signage



FIG. 66 Column signage

## 8.9 Parking

Street front parking is provided for customers of active retail frontages, visitors to access building entrances as well as for residents of a building. Undesignated parking spaces disturb the visual appeal of the district, but it also may affect public access.

### Key considerations

- 1 The width of parking lots must always be enough for easy parking for all sizes of anticipated vehicles. For this, parking angles are a necessary consideration to eliminate the negative impact of parking lots. Parallel spaces are also common.
- 2 Parking spaces for those with limited or hampered mobility should always be prioritized and provide easy access to main areas.
- 3 Parking must never become a physical obstacle that limits access to spaces. Parking must consider other vehicles such as bicycles and motorcycles as well as the navigation of pedestrians between the parking areas.
- 4 Parking spaces accompanied by shading structures and vegetation is an advantage as it helps protect vehicles from the climate.
- 5 Creating a planted buffer between the parking and the pedestrian sidewalk and/or the bike lanes is encouraged where possible.

**To ensure that parking spaces attend to multiple needs and work with their surroundings.**

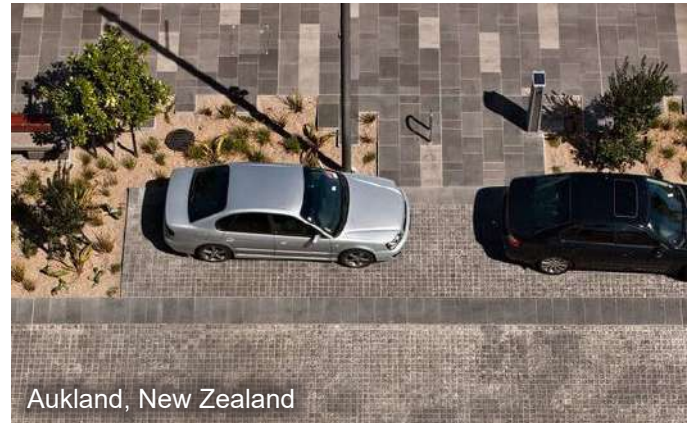


FIG. 67 Parking example



FIG. 68 Road side parking - Type 1



FIG. 69 Road side parking - Type 2

## 8.10 Public realm worked examples

Arcades repeated along ground floor in the buildings.

Local wood benches or sustainable durable materials which can be crafted locally.

Urban furniture with vernacular Najdi flavour.

Attractive public realm and active frontages.

Restored heritage buildings.



FIG.70 PROPOSED VIEW OF COMMERCIAL PLAZA IN EASTERN NAJDI

This worked example incorporates suggestions proposed in this section. The scenario presents a public realm adapted to the Eastern Najdi's built environment, which is defined by horizontal proportions, closed façades, and a characteristic procession between public and private spaces. The scenario is characterized by repeated arches that connect different building segments, both public and private.

- 1 Materials prioritize the use of natural and locally sourced materials such as clay, stone, tamarisk wood, and palm materials.
- 2 The color palette incorporate the hues of the surrounding sand and stone plateaus including shades of beige and brown with earthy yellow hues or light pink undertones echoing the sunset sky.
- 3 For landscape features stone or concrete

Multi-purpose green areas act as planting, shading and bench area.

Tall shrubs for screening become landscape buffer.

Minimal urban furniture incorporate metal accents.

Mosaic patterns with abstract najdi patterns.



FIG.71 PROPOSED VIEW OF COMMERCIAL PLAZA IN EASTERN NAJDI

finishes are incorporated to mirror the gravel plains as well as abstract mosaics for the flooring to expand on the fenestrations.

- 4 Accents of metal finish or locally sourced wood should be adopted as a second layer in urban furniture.
- 5 For lighting, hanging lanterns on external walls or wooden street lamps for the

are used to reinforce and supports the Najdi architecture through the built environment.

- 6 Large canopy trees act as shading and tall shrubs are used as become landscape buffers, meanwhile ornamental palm species and vernacular succulents serve as accents.

**To create public realms which connect with the built heritage of the region and express a strong sense of place.**

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