

# Central Najdi

## Architectural Design Guidelines





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



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## 2 Guidelines

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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.

### 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.

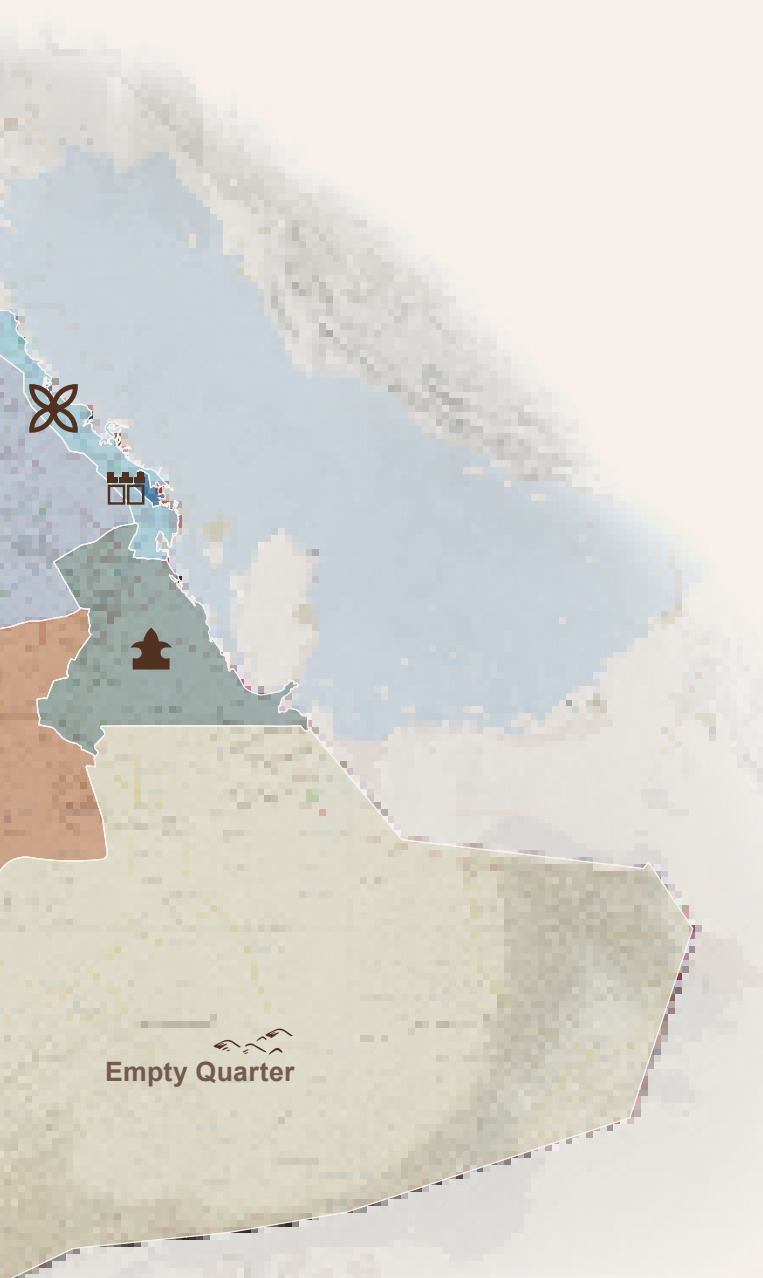
Its propositions are based on the study of historical precedent, taking inspiration from vernacular forms and the embedded knowledge shaped by generations of practice and experience.

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.

### 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.



### I.3 **Central Najdi**

The focus of this publication is the Central Najdi area, which forms the geographical heart of the Kingdom of Saudi Arabia. Central Najdi comprises different parts of the provinces of Tabuk, Hail, Madinah, Makkah, and the Eastern Region. Its location on the plateau alongside the Hijaz and Asir ranges, its richness in wadis, and its rich native flora have all shaped the region's natural landscape and its built environments.

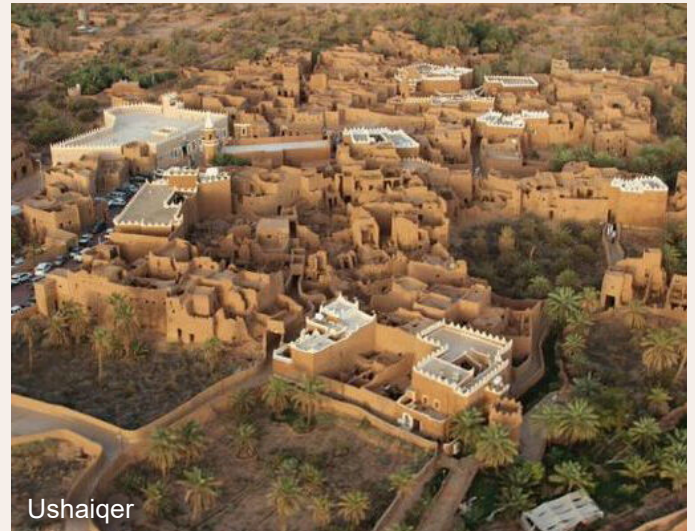
Prior to the 20th century, the urban fabric consisted mainly of settlements along pilgrimage routes to Mecca and proximity to water sources.

The region's settlements are organized around courtyards that historically exist in harmony with the diverse surrounding natural landscape, encompassing isolated mountains as well as desert areas. The traditional Central Najdi buildings are crowned by clearly detailed stepped parapets. Traditional mud buildings sit in harmony with the land as a token of the region's rich heritage and continuity throughout time.

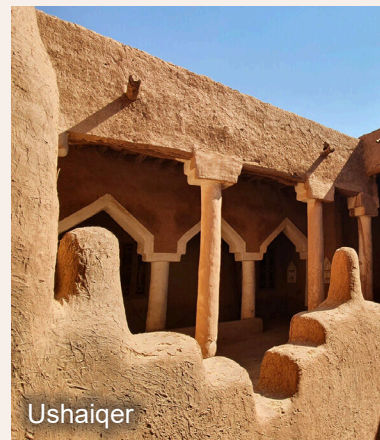




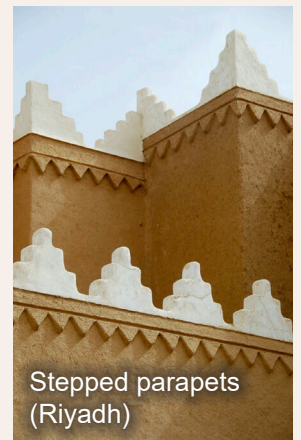
Al Musawkaf Market in Unaizah



Ushaiqer



Ushaiqer



Stepped parapets  
(Riyadh)



Qasr Al Murabba in Riyadh



Riyadh



Riyadh



Traditional wear



Tuwaiq Mountain

FIG.3 CENTRAL NAJDI



## II **Topography and landscape**

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

### II.1 **Landscape**

Central Najdi consists mainly of the Najdi rocky plateau that sits on the east side of the Hijaz and Asir ranges and slopes toward the east from an elevation of 1,360 meters in the west, reaching 750 meters at its easternmost limit. The plateau is scattered with isolated mountain groups as well as sandy deserts. Ad Dahna desert is the most notable one in Central Najdi, as it is a desert corridor located on the eastern limit of the region. The desert stretches more than 100 kilometers in a narrow arc shape forming a band of mountains made of reddish sand, especially in its northern section. A narrow mountain range, known as Jabal Tuwaiq, passes through the Najdi plateau and is an 800 km mountain range that cuts from Riyadh to Wadi Ad Dawasir.

The eastern areas of the plateau contain water-rich pockets scattered throughout. These are known as the distinct wadi ecosystems. Wadi Hanifah is Riyadh's most prominent wadi flowing from the north to the south of the capital. Wadi Al Rummah, stretching over 600 km across the heart of the Kingdom, starts from the northeast corner of the Qassim province, connecting to smaller wadis, to then disappear under the sand dunes only to reappear later and pour directly into the Arabian Gulf.

### II.2 **Climate**

The maximum summer temperatures go above 40° Celsius, and drop below 8° Celsius in the winter. The plateau's

western areas are more sparsely inhabited, as the elevated terrain and exposed climate provide a challenging environment for human settlement. For example, in summer, the prevailing winds originate from the north at high speed and high temperature, while in winter, a pleasant south wind prevails at low airspeed.

### II.3 **Culture**

The region's wadis have provided the backbone for both temporary and permanent human habitats for hundreds of years, and served as a source of agricultural and urban settlement. Furthermore, native plant species provide crucial support to communities to mediate the harsh environmental conditions: they offer shade during the peak heat season and store water in their root systems to protect against drought. The abundance of palm and acacia trees present today were used as wind barriers to protect the settlement from erosion and desertification.

### II.4 **Architectural influence**

The region's topography and landscape influenced its architecture in terms of building design and materials used. Domestic settlements were designed according to an inward-looking architecture around courtyards as a way of modulating temperature amid the heat. Streets were designed and built to channel wind for cooling, as well as to provide shade. Vernacular architecture entails the use of triangular arches at the main entrances to create shaded spaces that provide ventilation and climatic modulation. In terms of materials used, limestone, stone, and gravel which are native to the region were widely used in construction in addition to mud bricks to build fences and walls or as paving material.

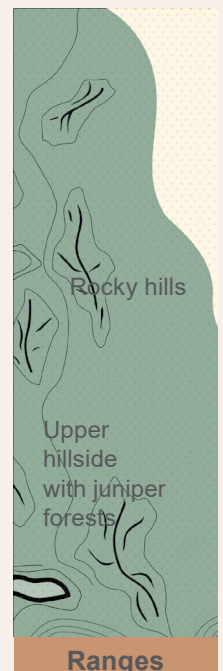
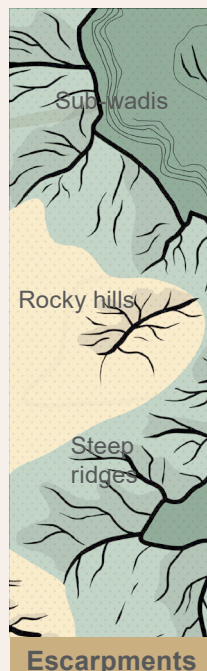
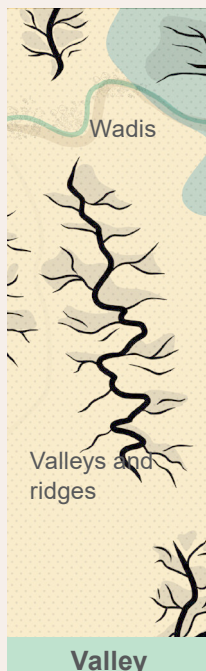
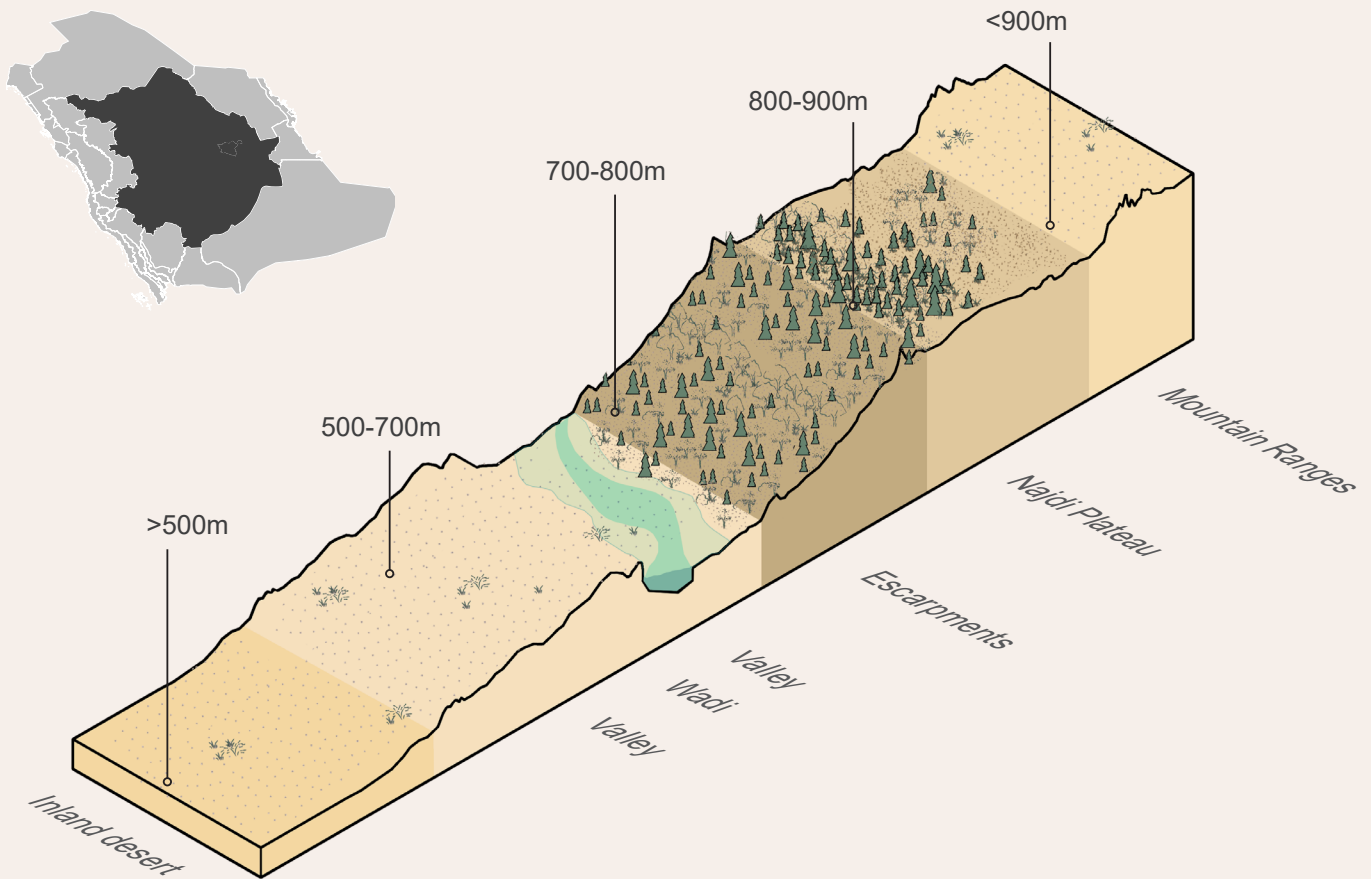


FIG.4 CENTRAL NAJDI TOPOGRAPHY



### III Overview of Central Najdi Architecture

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

#### III.1 Architectural character

Prominent in the entirety of the Najdi area is the use of sun-dried mud as construction material, a characteristic feature that can be found in buildings in cities such as Hail, Buraydah, and Riyadh. The use of earth can also be

found as cladding material. These earthen walls provide a significant thermal mass, working favorably with the climatic conditions of the Central Najdi area. Wood also features in traditional Central Najdi architecture, and is particularly used in the construction of roofs.

Compared to Northern Najdi, Central Najdi-style buildings are characterized by abundant ornamentations and more saturated façade colors. Stone columns, small upper openings, and prominent peepholes above doors are also some of the particularities of the style, at the same

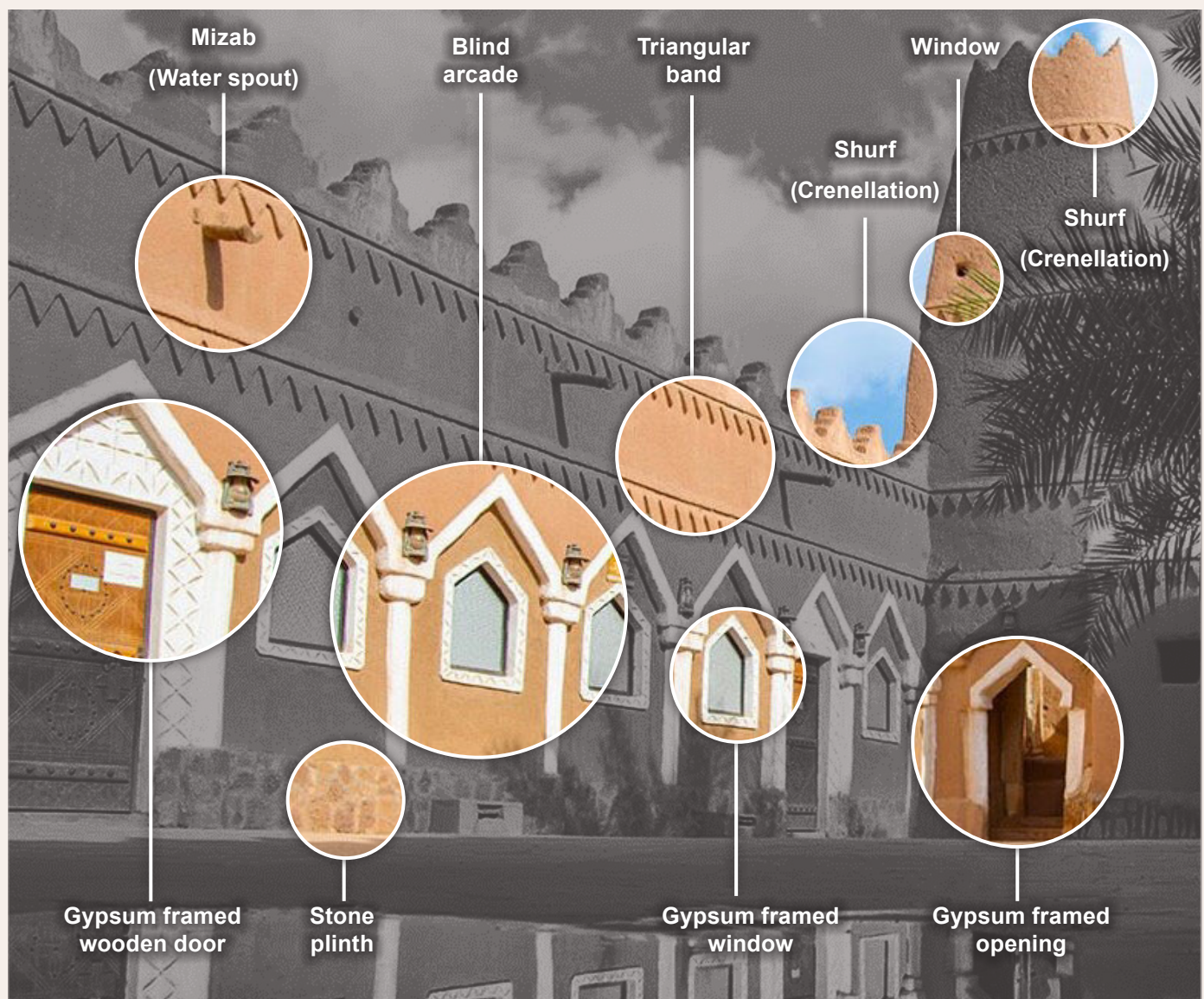


FIG.5 TYPICAL BUILDING FORM, USHAIQER, RIYADH



time these architectural elements ensure ventilation, protect the residents' privacy, and provide discreet lookouts into the street.

Central Najdi architecture's most visible traits are the unique shapes and colors used in buildings and their ornamentation. Accents of light colors and white gypsum are used to highlight architectural elements such as columns, parapets, and openings. The contrast between these white outlines and the saturated earthy tones of the walls naturally draws attention to the intricate and detailed sections of the façade, where ornaments set the rhythm.

Triangular shapes are almost inevitably used and repeated in most Central Najdi façades; the shape is found either in five-stepped triangulated crenelations, triangular decorative bands, or in the form of arches around entrances and openings, as observed in Ushaiger heritage village.

Another characteristic form are minarets and observation towers. These vertical structures have slanted walls for structural stability, which generates a distinctive conical shape extruded either from a circular plan, like the minaret of Uyun Al Jiwaa heritage village, or a square plan, like in Ushaiger heritage village.

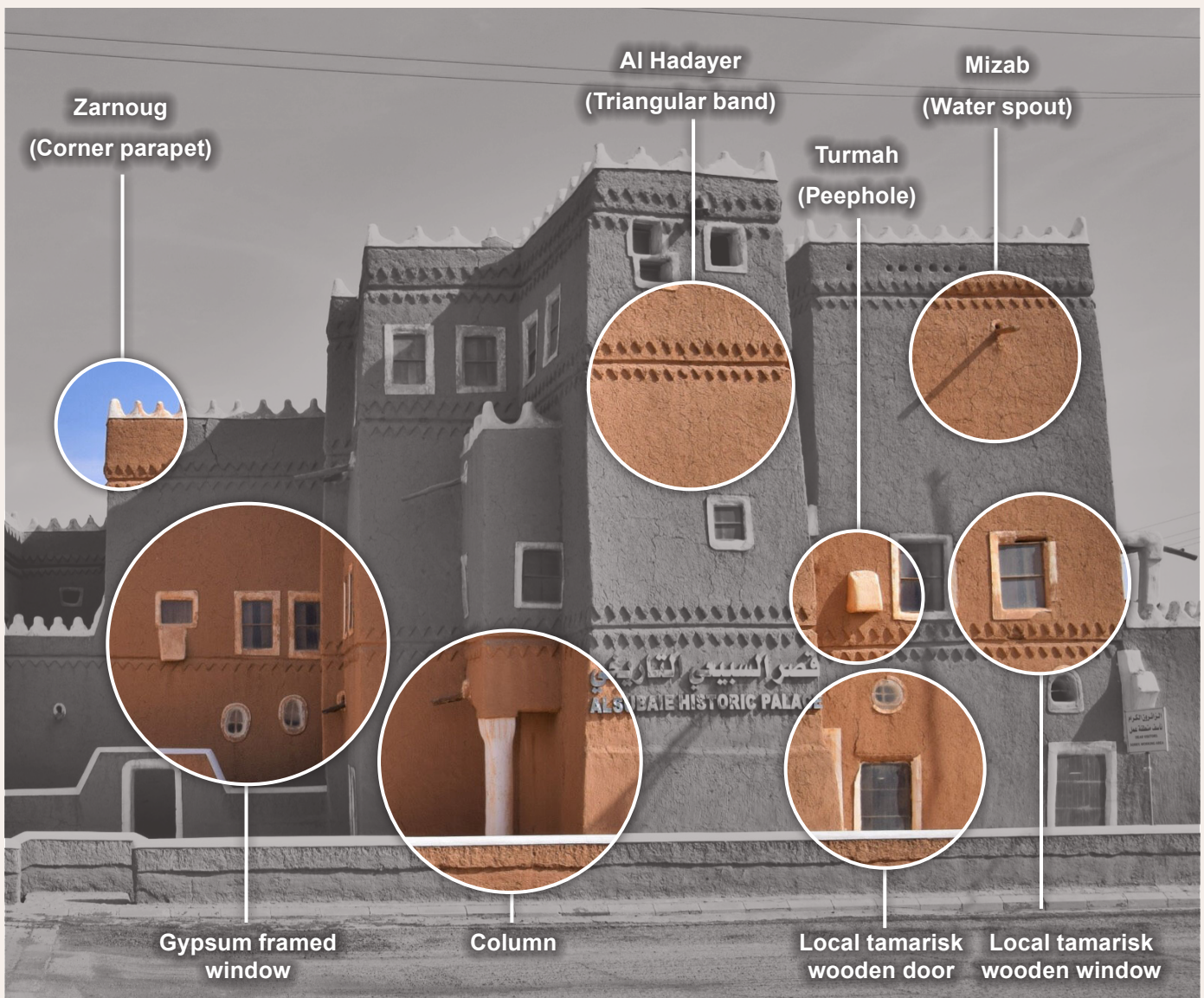


FIG.6 AL SUBAIE HISTORIC PALACE IN SHAQRA, RIYADH



### III.2 Settlement character

The Najdi building typology consisted of an introverted layout organized around courtyards with shared walls between adjacent structures. There existed a horizontal, rather than top-down, hierarchy and 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.

In response to the environment, the open-air courtyards aided in modulating the temperature as 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 aid channelling wind for cooling, and are framed by walls that also provide shade.

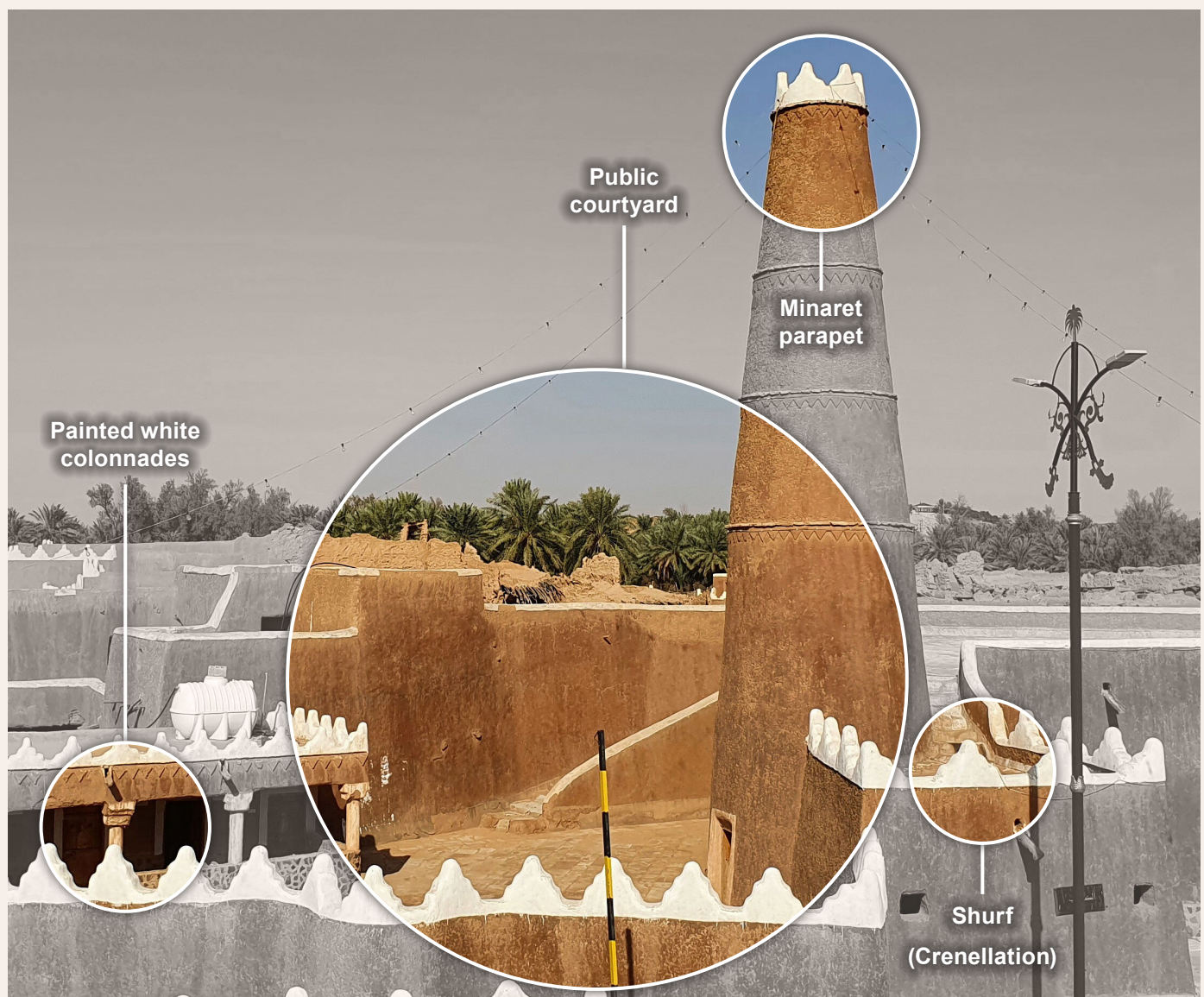


FIG.7 SETTLEMENT FORM, UYUN AL JIWAA, QASSIM



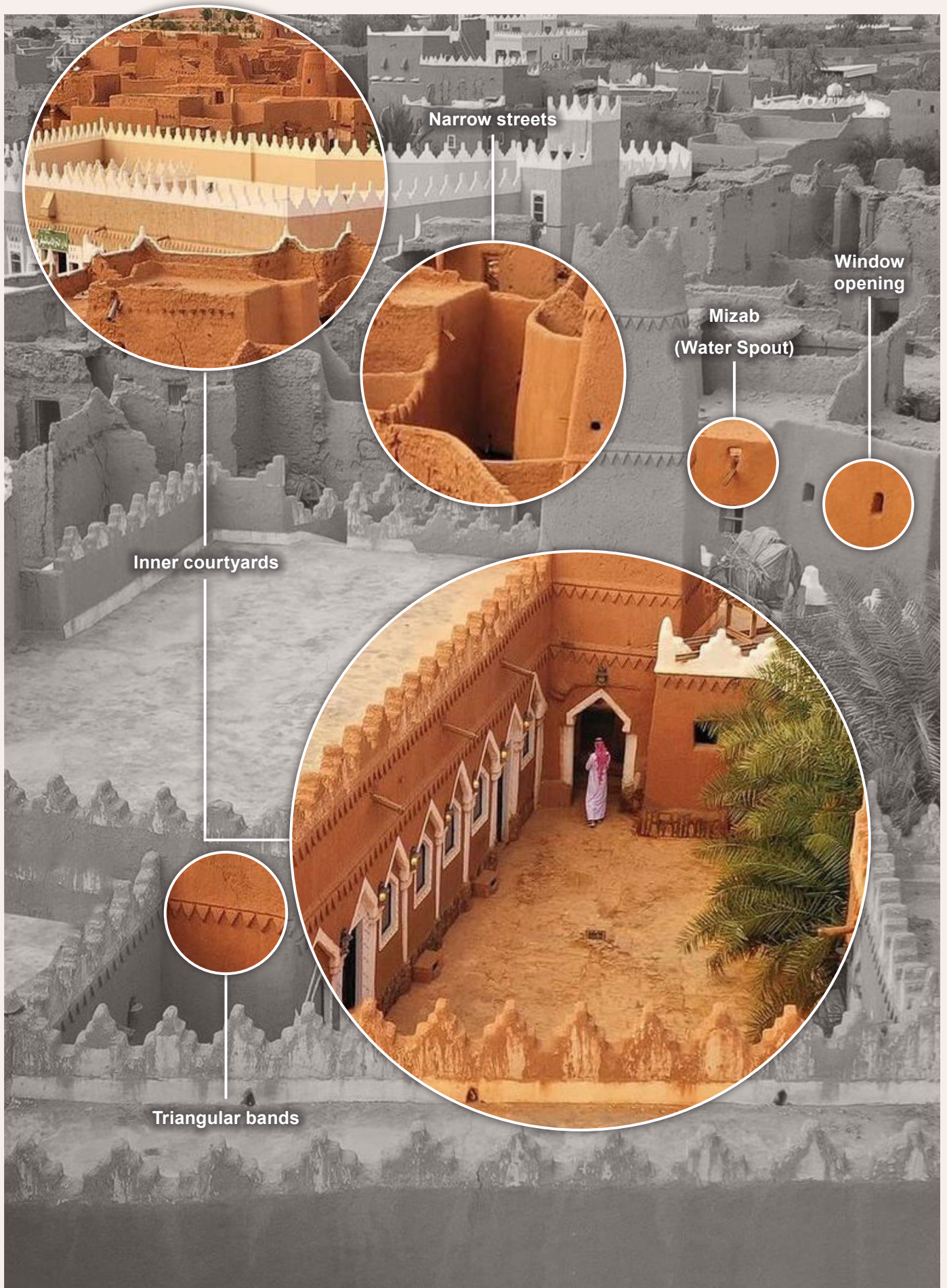


FIG.8 SETTLEMENT FORM, USHAIQER, RIYADH

## IV Analysis of Central Najdi Architecture

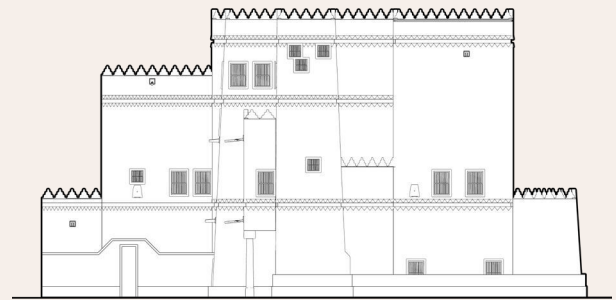
The evidence and formal analysis upon which the guidelines are based.

### IV.1 General typology

Traditional Najdi builds are characterized by the use of locally sourced materials, particularly mud, attesting to the clay-rich soils in the area. Decorative elements are often highlighted in white, and façades are topped with white parapets.

#### Traditional Najdi

Locations



Al Subaie Heritage Palace

### IV.2 Aspect ratio

Traditional Najdi buildings are defined by marked horizontal proportions, indicated by a width-to-height ratio between 1.8:1 and 2.7:1.

Width to Height Ratio

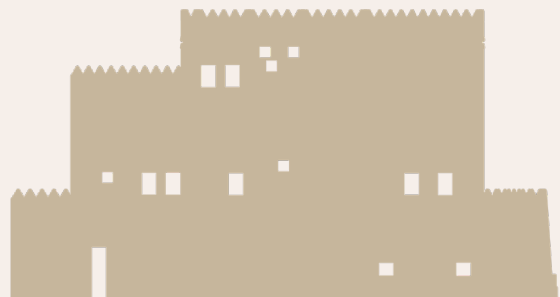


1.8:1

### IV.3 Solid to void ratio

The façades are mostly closed, with walls appearing to be a surface with punched openings. Some buildings are highly opaque, with a 2% opening, while others might have more open façades with up to 25% of the façade's surface consisting of windows or doors. The apertures on the ground floor tend to be limited and narrow, providing privacy and ventilation compared to the upper floors, where they are more significant.

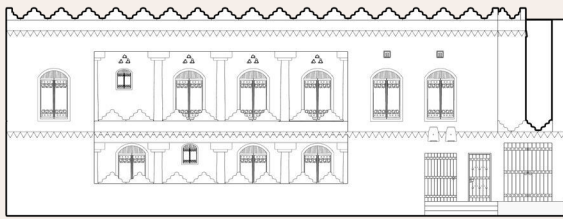
Façade analysis



Façade area – 1020 sqm  
5% void



## Vernacular façade studies



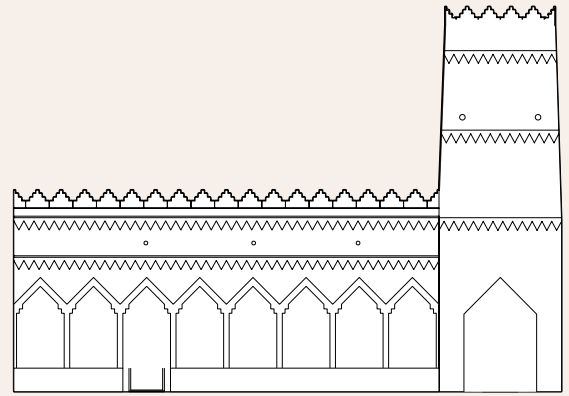
Building in Ushaiqer



2.7:1



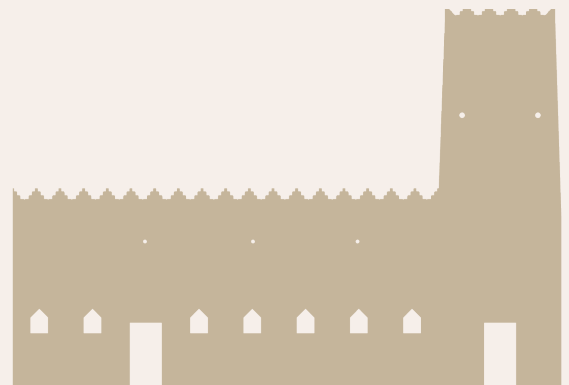
Façade area – 133 sqm  
25% void



Masjid in Ushaiqer



1.5:1

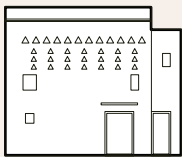


Façade area – 106 sqm  
5.3% void

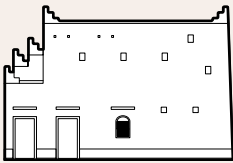
Vernacular façade studies

Traditional Najdi

Locations



Mud house, Tharmada



House in Ushaiqer

Width to height ratio

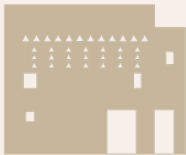


1.2:1



1.5:1

Façade analysis

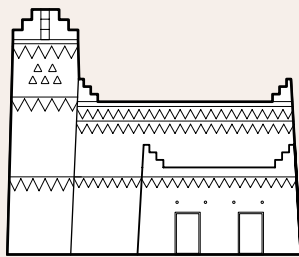


Façade area – 84 sqm  
12% void

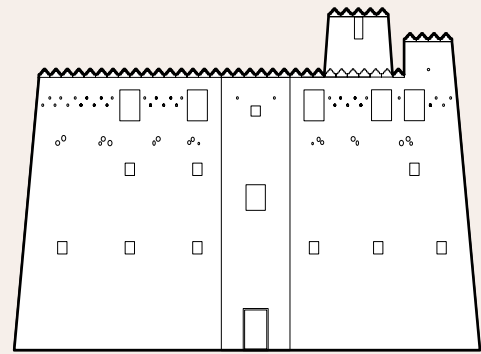


Façade area – 70 sqm  
6.5% void

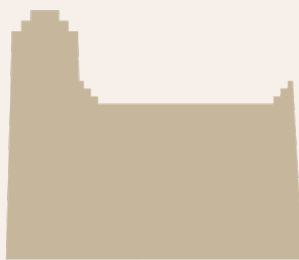




Al Rajhi Cabin



A'arif fort



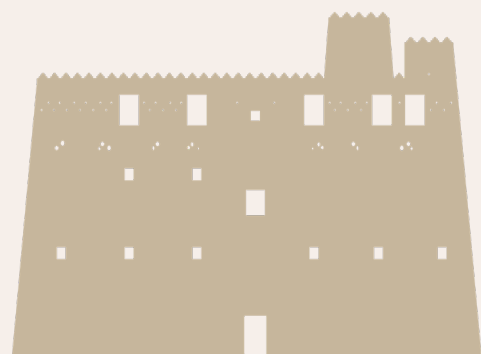
1.2:1



1.3:1



Façade area – 170 sqm  
4.7% void

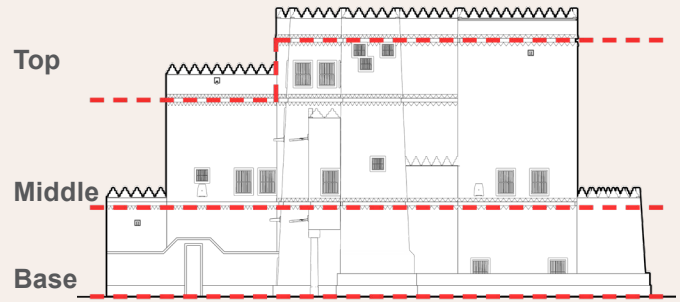


Façade area – 446 sqm  
1.6% void

#### IV.4 Tripartite articulation

Tripartite articulation is a typical feature of Central Najdi buildings, highlighting the hierarchical elements of a building's elevation.

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

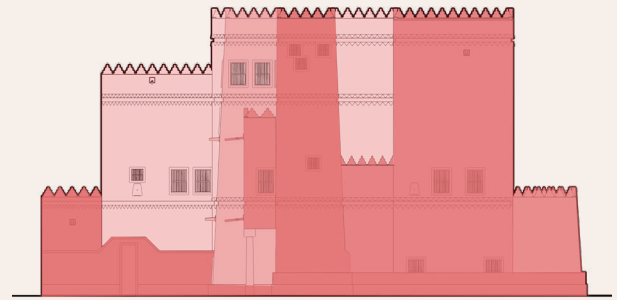


##### Tripartite articulation

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 and light filtration. This three-dimensional aspect adds a dynamism to the structure. The overall building is split into sections comprising narrower, more vertical portions.



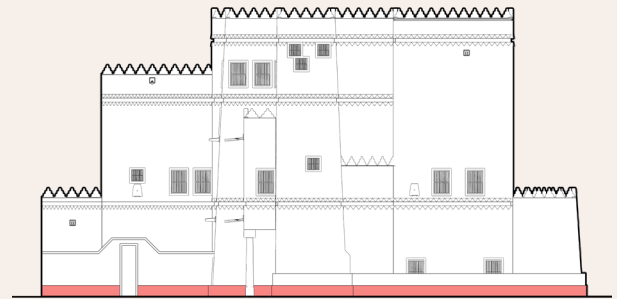
##### Façade depth

Façades in Central Najdi have numerous volumes, adding depth and dimension to the buildings.

#### IV.6 Wall to ground connection

Central Najdi buildings often feature particular treatment for the plinth of the structure.

The wall-to-ground connection is highlighted by a visible plinth, generally made of a different material such as stone or larger bricks.

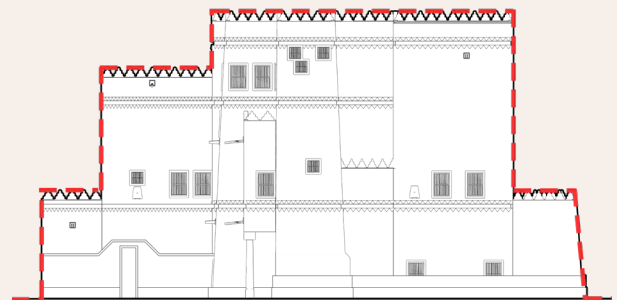


##### Wall to ground connection

Central Najdi buildings are built on a plinth that is usually of a different material.

#### IV.7 Variation in heights

Najdi traditional buildings typically vary in height depending on each habitable space and the function it serves within the building. The buildings show clear vertical bands in the façades with varying heights.



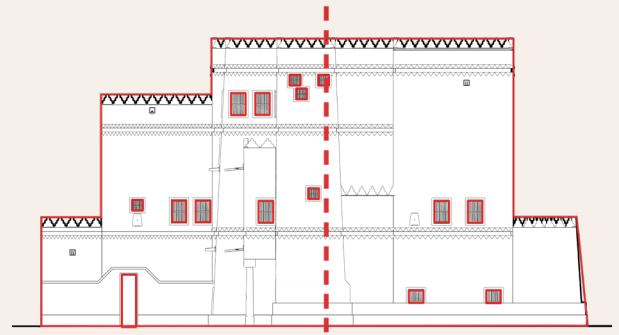
##### Variation in heights

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



#### IV.8 Asymmetry

Najdi buildings tend to have irregular massing and openings, as the volumes and rhythm of the buildings respond to the organic evolution of the building over time, the material properties of the elements used, as well as the function of its interiors. This asymmetric quality is further extended in the built environment through irregular urban grids.

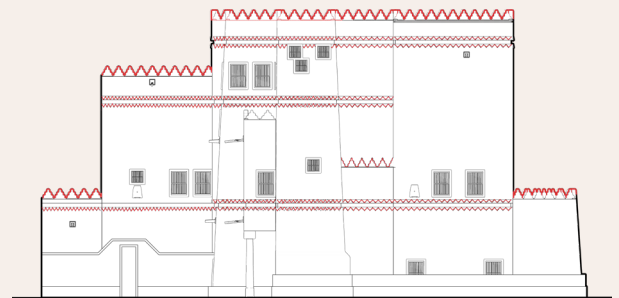


##### Asymmetry

Najdi buildings typically do not follow symmetrical massing.

#### IV.9 Ornamentation

The most distinctive architectural ornamentation are the triangulated crenelations crowning the buildings. Façades are often decorated with additional details such as repeating and alternating elements, decorative shading, and fenestrations. Typically, low rise Najdi buildings include at least six ornamentation elements while mid-rise buildings include at least four.



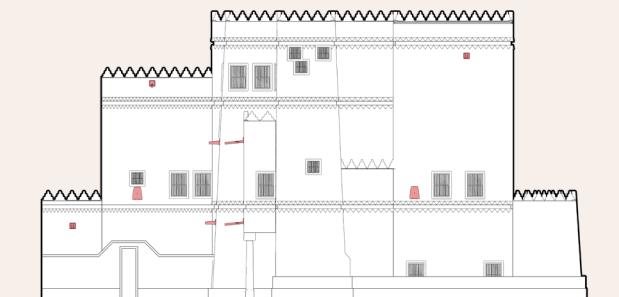
##### Ornamentation

Most façades have repeating and alternating elements that are finely detailed.

#### IV.10 Projecting elements

Façades are typically characterized by projecting elements such as the *turmah*: a prominent window closed with wood punctuated by numerous small holes to see through, and usually located on the second floor of Central Najdi houses.

Sometimes, buildings have projecting bays, a habitable space projecting outwards from the wall.



##### Projecting elements

Typical façade with projected *turmah* and habitable projected bays.

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.

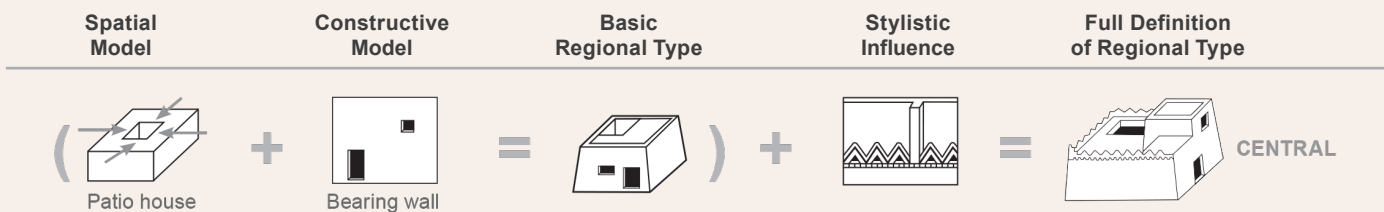
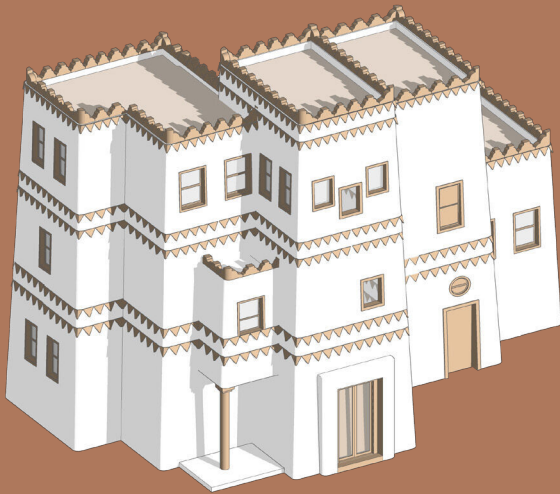


FIG. 9 Character equation for Central Najdi

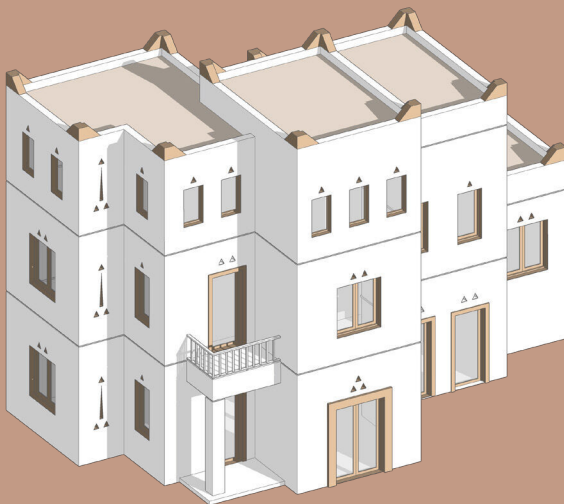




Traditional style

## TRADITIONAL

Earth walls of gradually tapering thickness with an irregular geometric profile. Multitude of volumes and planes, with small openings, crenelated parapets, triangular banded patterning, and geometric fenestrations.



Transitional style

## TRANSITIONAL

Smooth planes in earth tones, slightly recessed small windows and larger door openings, made of glass. Sharp detailing and interpretation of traditional urban form.



Contemporary style

## CONTEMPORARY

Abstraction of geometric designs upon facade, adapting to a range of building types and increased daylight. Perforated walls, screens and setbacks for shade. Main entrance set underneath shaded arcade, of timber material.

## 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 Central 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

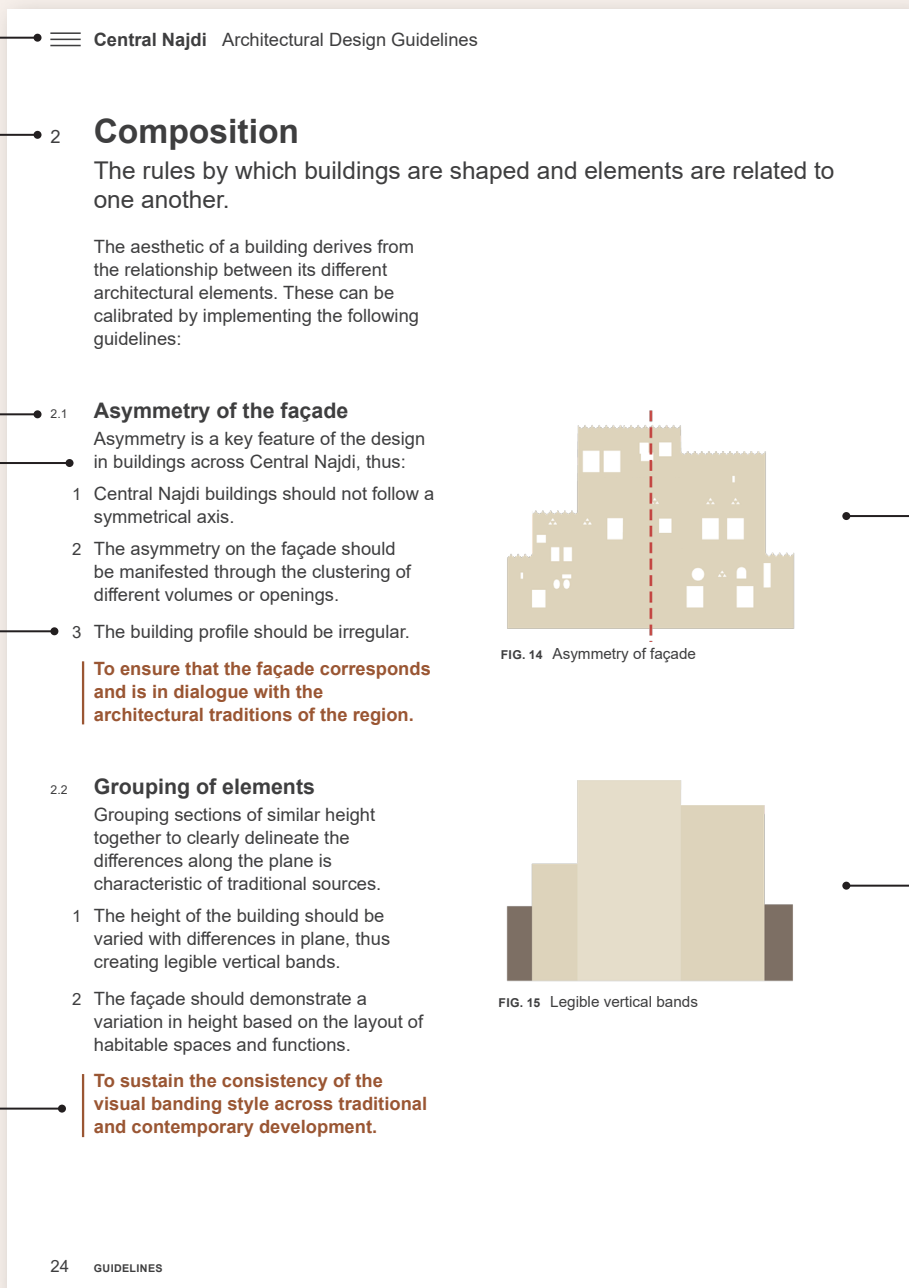
1 Chapter number  
and heading

2 Guideline  
number and  
heading

3 General  
description

4 Guideline  
actions

5 Rationale



6 Illustrations

FIG. 10 Typical guideline structure



# GUIDELINES

## 1 Key features

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

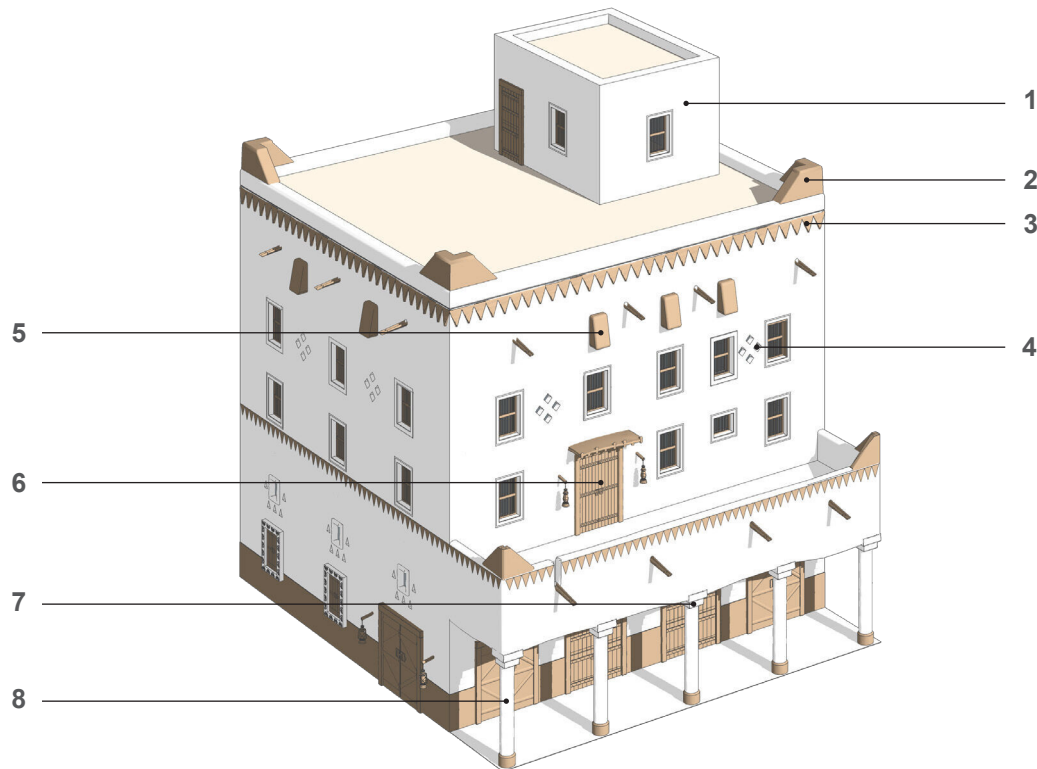


FIG. 11 Central Najdi key features

### Key features:

- 1 Rooftop pavilions or structures: made from a lighter construction material than the base of the building.
- 2 Crenelated parapets: carved from mud and covered by white gypsum plaster to redirect raindrops away from the building's mud walls.
- 3 Triangular bands: sometimes as single bands or in different combinations. They protect façade walls and usually appear in the top and middle areas of the façade.
- 4 Fenestrations: Small geometric openings that provide ventilation and lighting to the internal rooms.
- 5 Traditional elements: turmahs (lookout points) and mizabs (drainage spouts).
- 6 Traditional doors: made from tamarisk, painted in geometric designs, and ornamented with timber shutters; doors follow the vernacular language illustrated in this section.
- 7 Crowns of columns: One or more stone blocks that may be carved and decorated.
- 8 Arcades: composed of either orthogonal or triangular arches.



FIG. 12 Al Subaie Heritage House



FIG. 13 Examples of Central Najdi architecture

1.1

## Character summary

From windows to doors to fenestrations, openings are abundant in the buildings of Central Najdi, rendering façades with high perforation rates.

Unlike Northern Najdi, facades may derive from an existing repertoire and can be extensively ornamented, with multiple variations for each ornamentation type.

Parapets, which consist of five steps and are usually painted in white, have their crenelations clearly detailed. These parapet features differ from the ones in the Eastern Najdi, as the latter are less crenelated, with three levels, while continuing the same color as the façade.

Patterns are also used to decorate facades, whether on parapets, openings, entrances, or building floor lines.

Triangulation is most often used and the materials generally used include timber or plaster. Despite their diverse locations on the façade and their different materials, the composition of patterns takes a longitudinal orientation.

Borders are used around windows; They can be either simple in design or decorated with geometric motifs. Borders are also found at the base of stone walls where the wall meets the floor. This technique, called skirting, is sometimes adopted for protection against rain.

At entrances, triangular arches are used to create a shaded space that serves for climatic and ventilation purposes. The columns holding the triangulated arcades are surmounted by rectangular capitals to support multiple large beams of the arches; they tend to have simple capitals.

## 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 Central Najdi, thus:

- 1 Central Najdi buildings should not follow a symmetrical axis.
- 2 The asymmetry on the façade should be manifested through the clustering of different volumes or openings.
- 3 The building profile should be irregular.

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

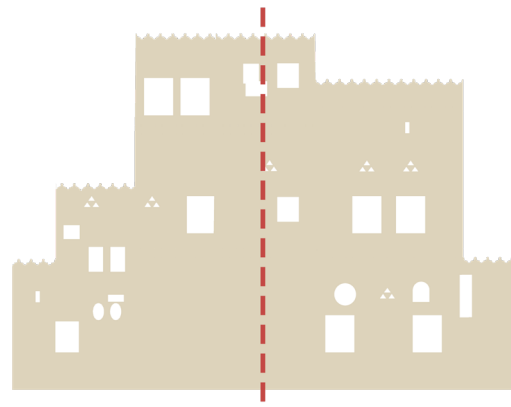


FIG. 14 Asymmetry of façade

### 2.2 Grouping of elements

Grouping sections of similar height together to clearly delineate the differences along the plane is characteristic of traditional sources.

- 1 The height of the building should be varied with differences in plane, thus creating legible vertical bands.
- 2 The façade should demonstrate a variation in height based on the layout of habitable spaces and functions.

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



FIG. 15 Legible vertical bands



### 2.3 Entrances and articulation

Main entrances are typically differentiated by some element, and create suitable thresholds between the public and private at all levels:

- 1 The arcades should ensure a transitional space between the street and the building.
- 2 Main entrances could consist of square arcades.
- 3 Other entrances may be slightly recessed
- 4 Upper floors may also have balconies, which may be shaded to provide privacy and shade.

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

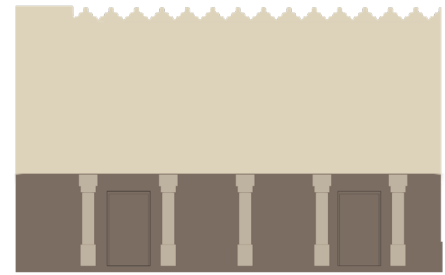


FIG. 16 Typical arcaded entrances

### 2.4 Width-to-height ratio

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

- 1 The overall proportion of the building should be wider than it is high.
- 2 The general width-to-height ratio of the whole building should be from 1.2:1 to 2.7:1.
- 3 Vertical bands can be assembled to create the final width-to-height ratio of the overall structure.

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

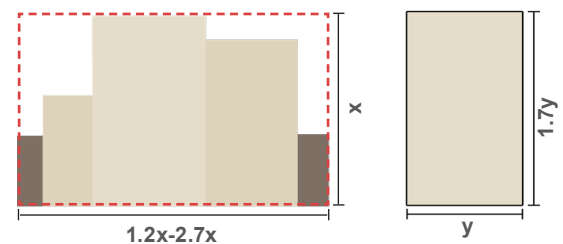


FIG. 17 Width-to-height ratio of whole structure is 1.2:1 to 2.7:1

## 2.5 Ornamentation

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

- 1 Low-rise Najdi buildings should have at least six ornamentation elements while mid-rise ones should include at least four.
- 2 White gypsum borders should be used around windows; they can either be simple in design or engraved with geometric motifs.
- 3 Small triangular fenestrations and triangular bands should be provided on the façade.
- 4 Façades should include projecting elements, such as turmah and mizab (rainwater overflow).

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

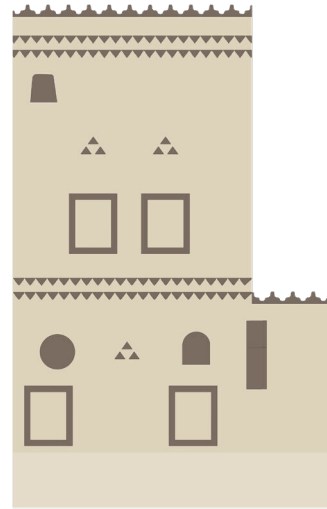


FIG. 18 Crenelated terraces, finely detailed triangular bands

## 2.6 Wall to ground relationship

Wall finishes demonstrate a close relationship with the ground. New buildings should:

- 1 The building should sit on a plinth as a transition between the wall and the ground.
- 2 Although not as common as Northern Najdi, where there is a plinth, employ stone for the material.

**To ensure that the building relates to the ground following a traditionally-informed approach.**



FIG. 19 A plinth serves as transition between building and ground

## 2.7 Solid façades

Per traditional architecture, facades feature smaller openings, proportionally less to the wall.

- 1 Openings can often be placed in pairs.
- 2 Façades should have more openings of a smaller scale.
- 3 Natural variation in the distribution and sizing of elements such as windows and doors should be introduced.
- 4 Traditionally, only 10-15% of the façade should be allotted for openings and fenestrations.

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

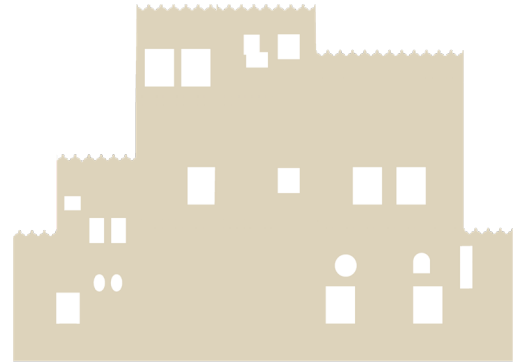


FIG. 20 85-90% solid

## 2.8 Geometry of the components

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

- 1 The geometry of doors and windows should be simple and orthogonal.
- 2 The façade should have variations of circular and triangular fenestrations articulating its walls. This includes rectangular turmahs (a mud-brick projection from the façade which functions as a peep hole).

**To ensure that the designs for openings and ornamentation harmonize with the character of the area.**



FIG. 21 Wall articulations

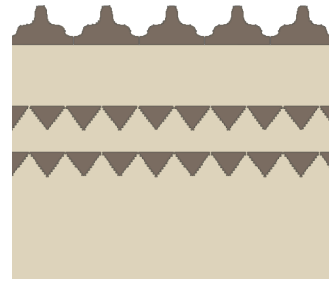


## 2.9 **Roofscape and rooftop elements**

Roofs and parapets form a distinctive component in Central Najdi. Historic designs carry through even in contemporary buildings. The design of new buildings should:

- 1 Multi-stepped triangulated crenelations should be adopted.
- 2 Crenelations should either have a mud or a white-plastered finish.
- 3 Parapets feature more ornamentation in traditional styles, and are less ornamental in the contemporary design.

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



**FIG. 22** Rooftop is decorated with crenelations

## 2.10 **Secondary frontage**

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

- 1 External openings should not allow visual access to the private interior spaces.
- 2 Lower bands should have fewer windows to ensure more privacy.
- 3 The base levels should either comprise fewer / higher windows to avoid any direct line of vision from the street, or a shaded arcade to increase privacy.
- 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. 23** Secondary frontage

### 2.11 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 should be tightly positioned, and not exceed a height of three storeys.
- 3 Organic street grid patterns should be adopted.

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



FIG. 24 Narrow streets

### 2.12 Building cluster and courtyards

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

- 1 Employ a layout centered around courtyards, sharing walls between neighbouring buildings.
- 2 Courtyards should be designed to delineate between private/public use and to respond to the environment.

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



FIG. 25 Building cluster

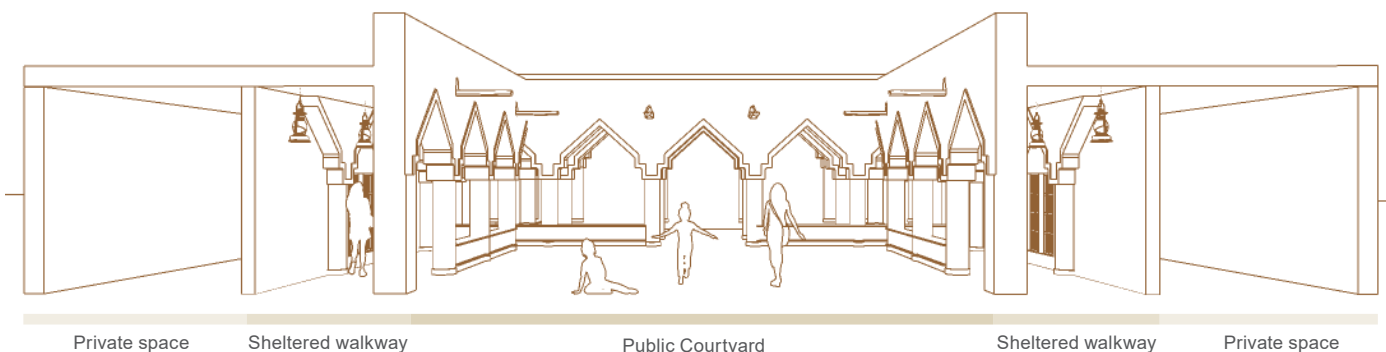
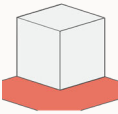


FIG. 26 Public courtyards

### 3 Elements

The individual parts that are the building blocks of the Central Najdi Architecture.

TAB. 2 Central Najdi architectural elements

| GENERAL ELEMENTS                                                                    |                            |                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <b>Key characteristics</b> | Refer to “1 Key features” on page 22                                                                                                                                                                                                                                                                                                                                         |
|    | <b>Façade proportion</b>   | Traditional Najdi buildings should be defined by marked horizontal proportions indicated by a width-to-height ratio between 1.8:1 and 2.7:1. These proportions reflect the horizontal hierarchy and procession between public to private spaces that characterize traditional 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 2% opening ratio, while others should have more open façades with up to 25% of the façade’s surface consisting of windows or doors. The apertures on the ground floor should generally be limited and narrow compared to the ones on the upper floors.                                                                         |
|   | <b>Opening proportions</b> | The façade’s composition should be asymmetrical without a clear vertical order. Openings should generally be vertical with width-to-height ratios ranging between 1:2 to 1:5 for doors, 1:2 to 1:5 for windows, and a horizontal proportion of 2:1 for attic windows.                                                                                                        |
|  | <b>Composition</b>         | Tripartite articulation is a typical feature of Central 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. The base should usually consist of the first story but can vary depending on the overall building size. |
| BASE ELEMENTS                                                                       |                            |                                                                                                                                                                                                                                                                                                                                                                              |
|  | <b>Entrances</b>           | Main entrances should not exceed the ground floor story in height and they are often placed under a shaded arcade. The doors themselves can range from ornamented shutter doors and glass. In traditional buildings, timber should be used for doors and jambs and can be highly patterned or carved. See expanded guidelines “3.2 Doorways and entrances” on page 35        |
|  | <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 façade in the base portion of the building depending on the function of the space. External columns should be characterized by minimal use of ornaments in comparison to the interior’s arcades.                                                                                                                         |
|   | <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 Central 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 styles for the base, middle, and top tiers. The base tier should be located on the ground floor and can incorporate arcades. The middle levels should consist of repeated openings of different sizes, and finally, the top tier should consist of a combination of the parapet with other Najdi elements. See expanded guidelines “3.1 Tripartite articulation” on page 34 |
|   | <b>Windows and Openings</b> | See “3.3 Windows and Openings” on page 36.                                                                                                                                                                                                                                                                                                                                                                                                    |
|   | <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 with ornamentation and made of timber. 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.                                                                                                                                                                                                                                                                                 |

## TOP ELEMENTS

|                                                                                     |                         |                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <b>Roofscape</b>        | All rooftops should generally be flat and accessible from the central courtyard. Their use as an amenity space is encouraged. See expanded guidelines “3.4 Roofscape Perimeter and Parapet Detail” on page 37                                                      |
|  | <b>Rooftop elements</b> | Rooftop pavilions or structures can be either covered or exposed and should give direct access to the roof terrace. This area can become a gathering space that provides privacy and ventilation.                                                                  |
|  | <b>Parapets</b>         | They should be crenelated or flat, and also become an extension of the external walls above the roof level to provide privacy to the rooftop areas. Parapets can also be combined with fenestrations at the base, to facilitate airflow in these habitable spaces. |

## OTHER ELEMENTS AND ORNAMENTATION

|                                                                                     |                    |                                                            |
|-------------------------------------------------------------------------------------|--------------------|------------------------------------------------------------|
|  | <b>Materiality</b> | See expanded guideline “4 Colors and Materials” on page 38 |
|  | <b>Color</b>       | See expanded guideline “4 Colors and Materials” on page 38 |
|  | <b>Pattern</b>     | See expanded guideline “5 Patterns” on page 40             |

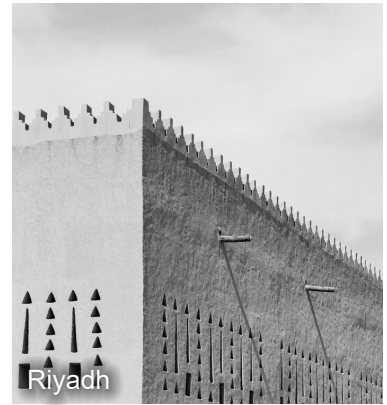
## Top



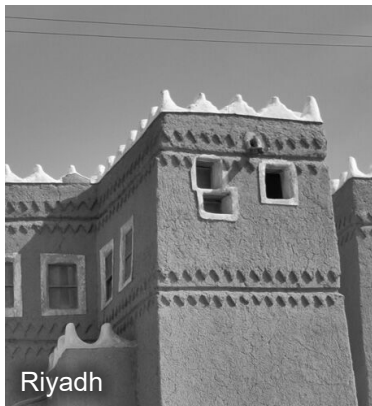
Riyadh  
Traditional crenellation style



Riyadh  
Traditional rooftop elements



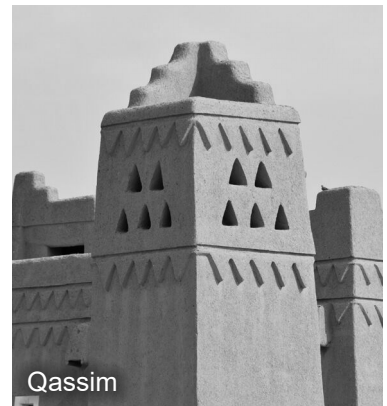
Riyadh  
Typical crenelated parapet



Riyadh  
Traditional rooftop elements

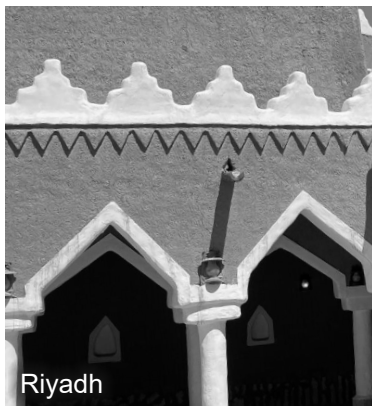


Qassim  
Typical crenelated parapet

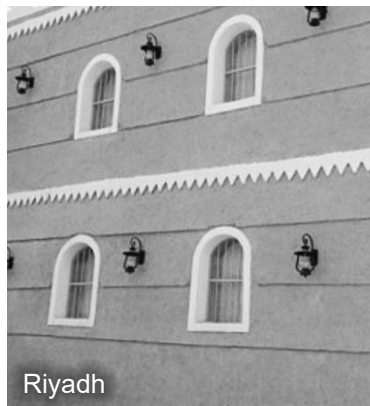


Qassim  
Traditional rooftop elements

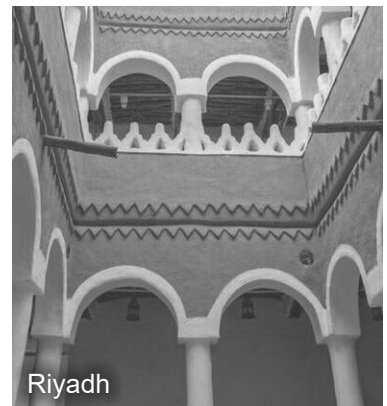
## Middle



Riyadh  
Crenellations, Triangular bands and Mizab along arcade



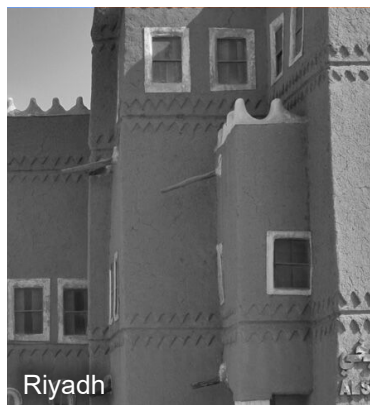
Riyadh  
Triangular bands and lanterns



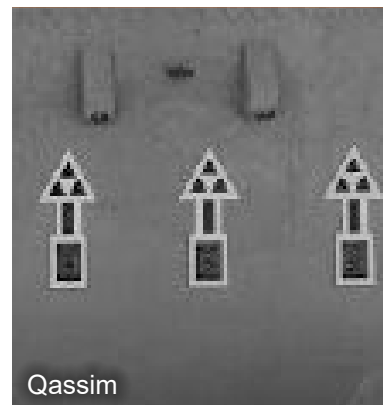
Riyadh  
View to above from courtyard



Riyadh  
Triangular fenestrations

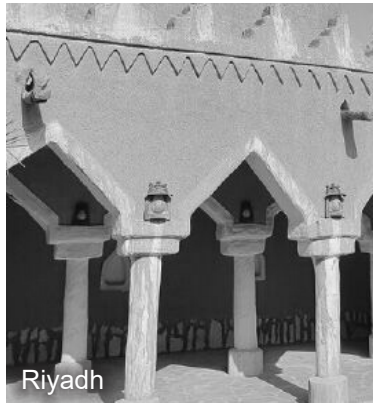


Riyadh  
Triangular band wall patterns

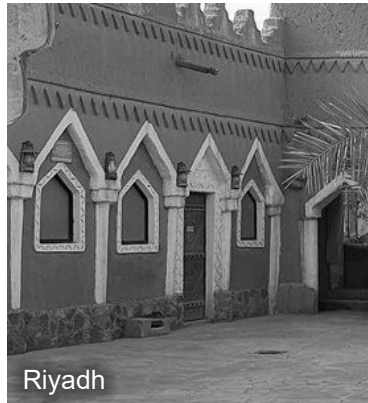


Qassim  
Vertically articulated fenestrations

## Base



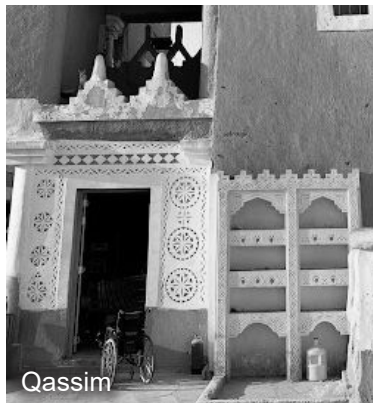
Riyadh  
Triangular arched arcade



Riyadh  
Triangular arched entrance



Qassim  
Traditional ornamented doorway



Qassim  
Traditional ornamented doorway

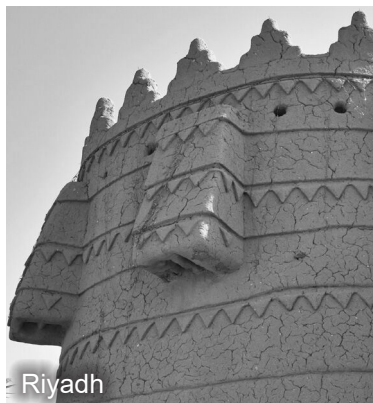


Qassim  
Typical entrance with arcade

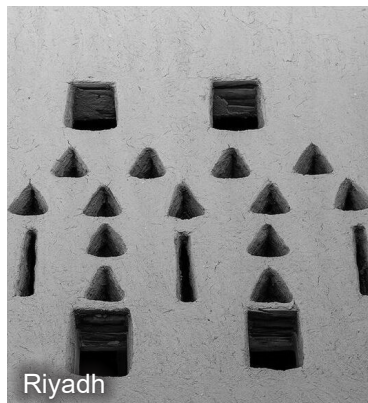


Riyadh  
Shop front with signage

## Ornaments and other elements



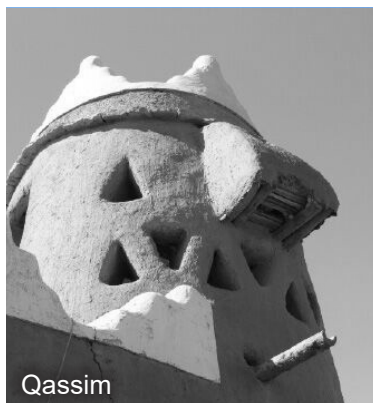
Riyadh  
Turmah with triangular bands



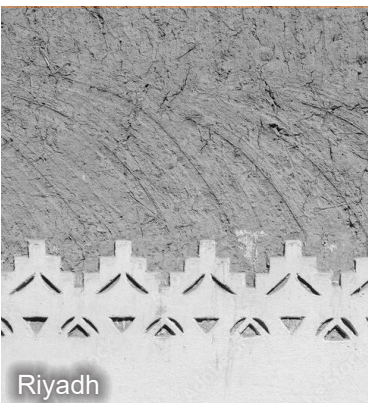
Riyadh  
Typical fenestrations



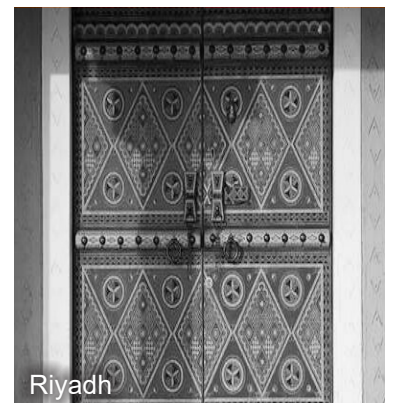
Qassim  
Example door detail



Qassim  
Turmah, fenestrations and mizab



Riyadh  
Wall patterns



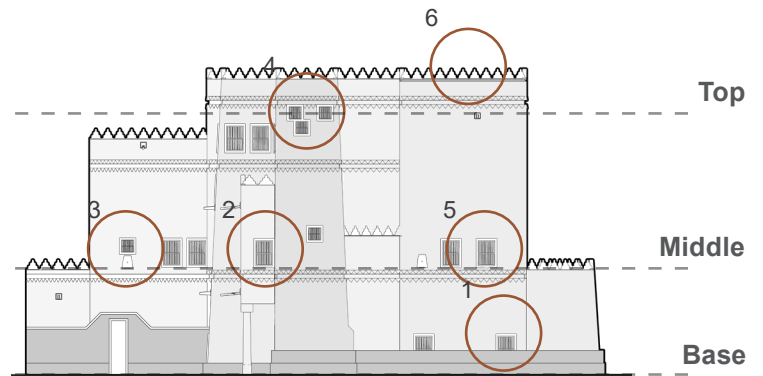
Riyadh  
Example door detail



### 3.1 Tripartite articulation

Tripartite articulation is a typical feature of Najdi buildings that highlights the hierarchical elements of a building's elevation. Usually expressed through the façade, which is typically split into three separate tiers (base, middle, and top), with each having its distinct character.

The most common elements found in Najdi settlements include doorways, turmahs (peepholes), fenestrations, and crenelations.



- 1 Openings should be articulated with a change in materiality and/or color from the main façade.
- 2 Frames should usually be ornamented and projected from the main façade.
- 3 Windows should be made from local tamarisk wood.
- 4 The sill should be configured at a height that respects the privacy of the interior, where it is important to the function of that space.
- 5 Middle-floor openings should be generous in scale to provide a view of the street through screened openings.
- 6 Top section of the building should include various decorative and fenestration elements that address the roofscape of the building.

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

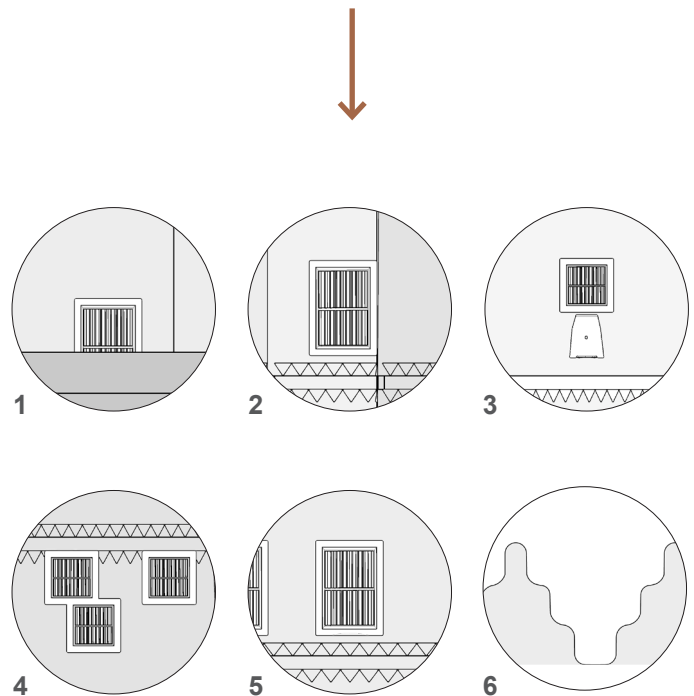


FIG. 27 Tripartite articulation elevations

**To create a framework for the rhythm of the façade that is aligned with historic traditions.**

### 3.2 Doorways and entrances

The traditional architecture of the central area benefits from the Najdi influence that is also present in the northern and eastern regions; the traditional Najdi doors are one of the key features that evoke the local architecture.

Characteristics include the following:

- 1 The built context should have an informal grouping in which the doors' alignment should figure in function of the interior rooms' layout rather than the external façade's composition. The position of the private or public door should also depend on the street planning, discerning between spaces that are considered private and those which are communally shared.
- 2 Openings should abide by simple orthogonal geometry.
- 3 Openings are not necessarily surrounded by plaster ornamented frames.
- 4 Doors should be characterized by:
  - Geometrical colored patterns and ornamentation.
  - Tamarisk and local palm trunks as materials.
  - Metallic chains and ring handles.
- 5 Doors should be generously scaled and should often employ decorative over-panels. They should be of a width-to-height proportion in which the width varies between 1.2 m and 1.5 m while the height remains around 2.5 m.

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

**To continue the tradition of ornamented front doors for future generations.**

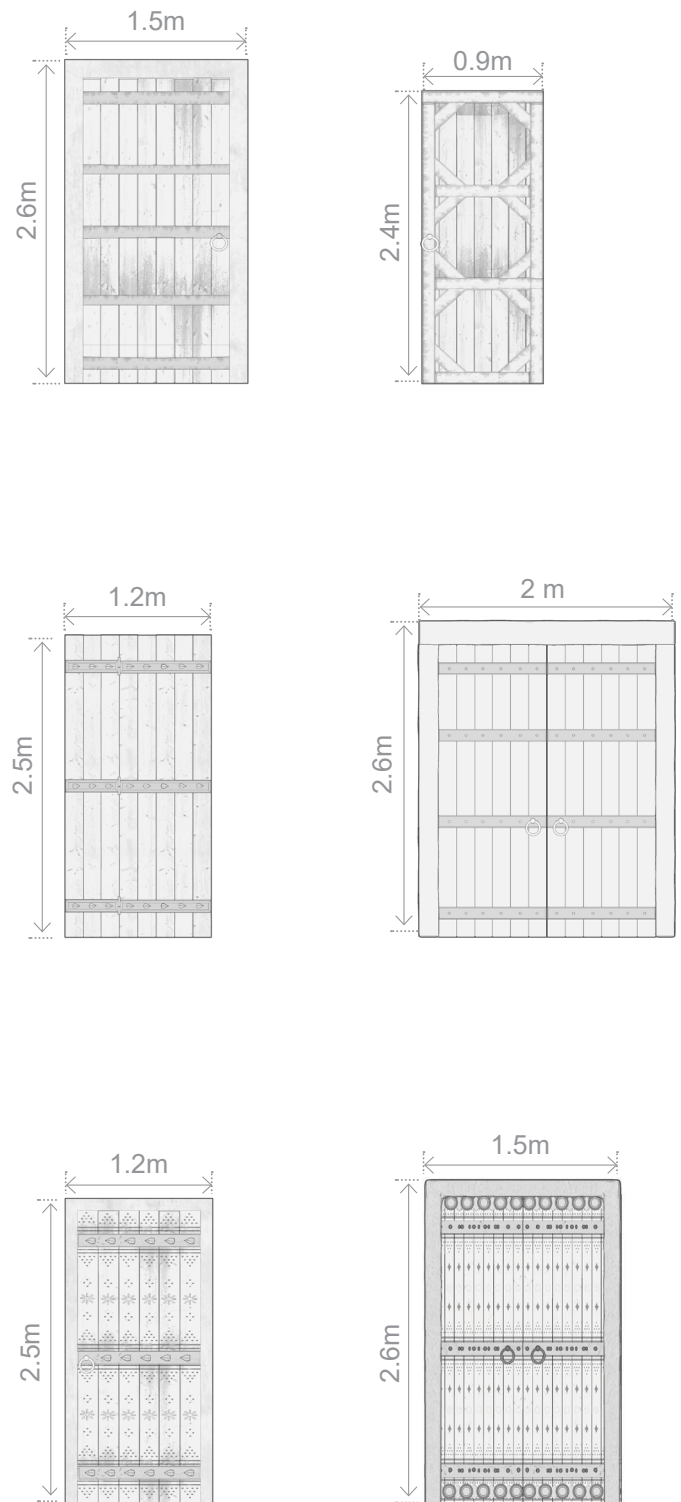


FIG. 28 Traditional door elements

### 3.3 Windows and openings

Whereas the vernacular architecture of Central Najdi benefits from the same Najdi influence that is also found in Northern Najd and Eastern Najd regions; the traditional Central Najdi windows are one of the key features that evoke a sense of local architecture.

Characteristics include the following:

- 1 Windows should be characterized by:
  - Geometrical colored patterns.
  - Tamarisk and local palm trunks as materials.
  - Metallic chains and ring handles.
- 2 Simple openings should figure in solid walls with flat tops.
- 3 Openings should be surrounded by ornamental plaster frames.
- 4 Upper floors should generally have more openings than ground floors.
- 5 Vertical asymmetrical composition should be followed for openings and their alignment should relate to the interior rooms' layout rather than the external façade's composition.
- 6 In general, vertical windows should be of proportions within the 1:2 - 1:5 proportional margin, and attic windows, which sit horizontally, a more suitable proportion of around 1:1.

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

**To make windows and openings that are contextually sound within the existing built environment.**

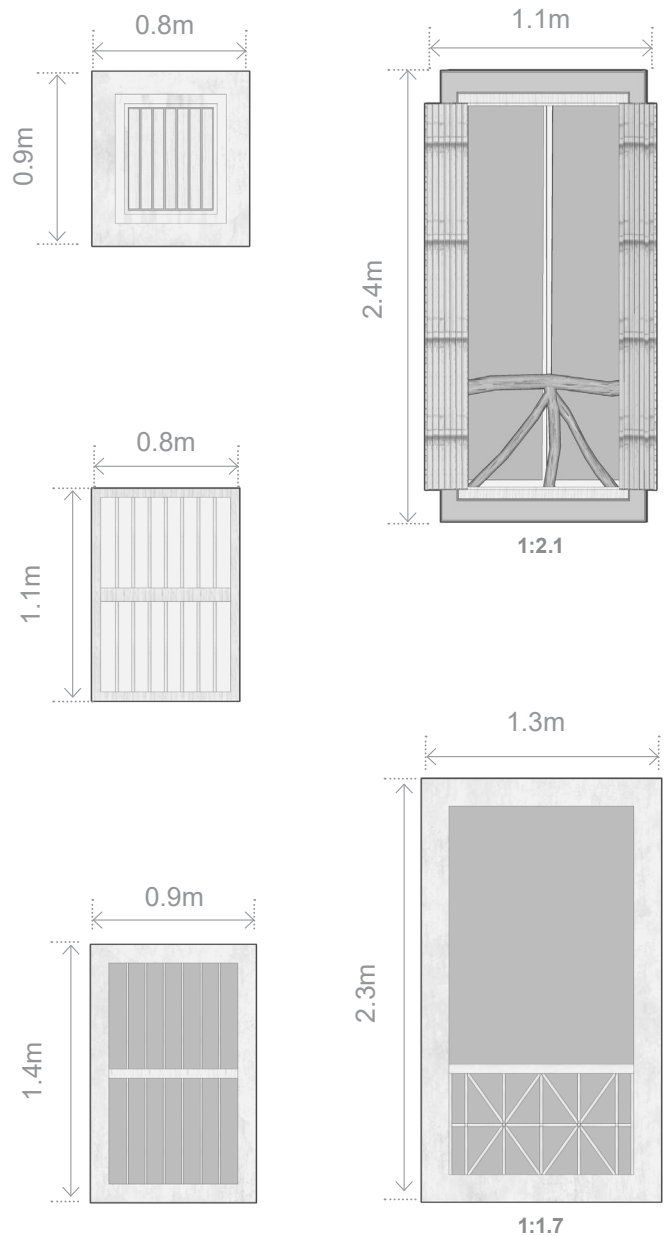


FIG. 29 Traditional window elements

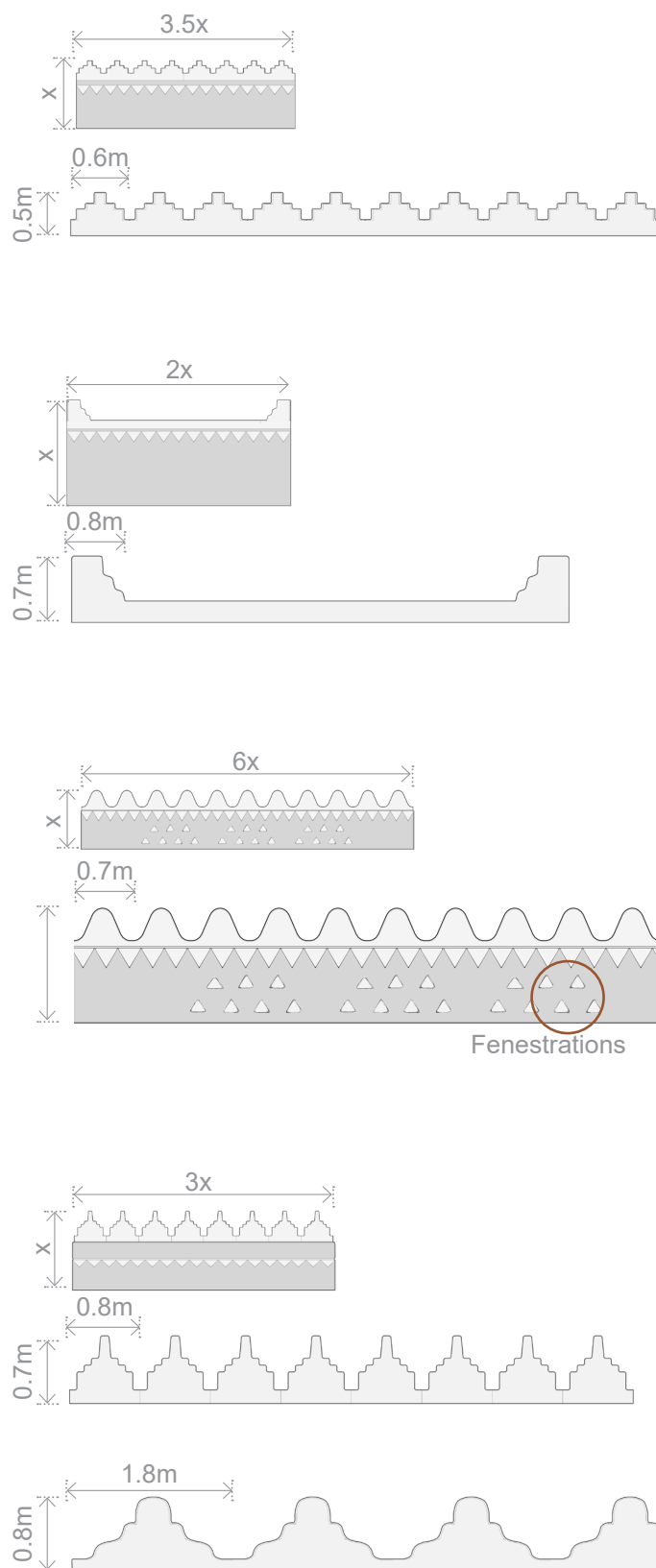


### 3.4 Roofscape perimeter and parapet detail

The traditional roofscape of Central Najdi is characterized by stepping rooflines and habitable roof terraces. Elements specific to the roofscape include the following:

- 1 Façades should run up flush into tall crenelated terraces that provide privacy between terraces and buildings.
- 2 The size, proportion, and shape of the crenelation may vary depending on the building's use or status.
- 3 Crenelations should be carved from mud and are usually covered with white lime plaster.
- 4 Fenestrations (small geometric openings in a traditional Najdi façade) present on parapets provide ventilation and lighting.
- 5 Crenelations should usually be combined with fenestration bands below them to facilitate the airflow to the roofscape.

**To create skylines and roofscales that are historically informed.**



**FIG. 30** Traditional roofscape perimeter and parapet detail

## 4 Colors and materials

The prevalent materials used and color range found within the architecture of Central 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 Central 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 should be used on walls, and should be chosen in correlation with the hues of sand and stones specific to each site. Colors could include shades of beige and brown with either earthy yellow hues or light pink undertones.
- 4 Use gradients of the base hues as secondary colors on recessed sections of the building. Include accent colors by using lighter, brighter, or darker tones contrasting with neutrals to highlight particular architectural elements. Color examples include dark reds, light tones of beige, yellow and brown, as well as shades of blue echoing the sky.
- 5 Prioritize the use of natural and locally sourced materials such as clay, stone, tamarisk wood, and palm materials.

**To integrate the building in its geographical and cultural context through unifying and strengthening the local chromatic and material palette.**



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/)



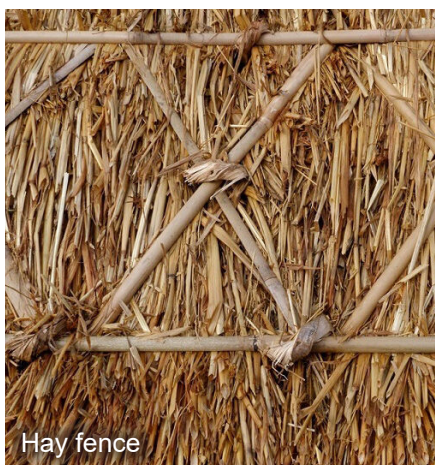


FIG.31 **COLORS AND MATERIALS**



## 5 Patterns

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

The Central Najdi area 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. Patterns and symbols are often used to reflect the traditional tribal lifestyle and the harsh desert environment.

- 1 Traditional geometric patterns may be used as a reference as they are composed of multiple adjacent and patched layers of geometric, criss-cross motifs.
- 2 Each motif could be reinterpreted in a first instance by repeating it, thus forming a new geometric pattern.
- 3 The newly created patterns may then be further reinterpreted in a second instance by abstracting and rendering it a simpler version yet still inspired by its predecessor.
- 4 New abstracted patterns can become speckled or dappled to form areas of light and shadow.
- 5 Reinterpreted 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 copied.

**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 they create in the interior.**

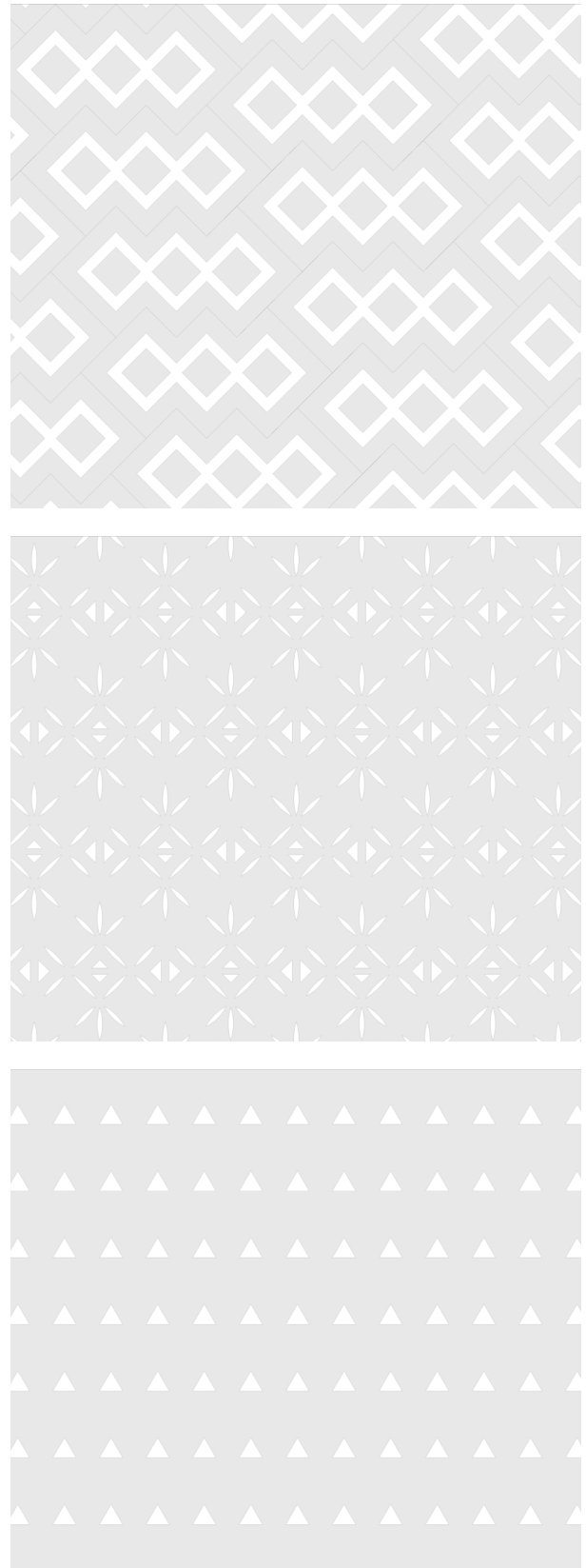
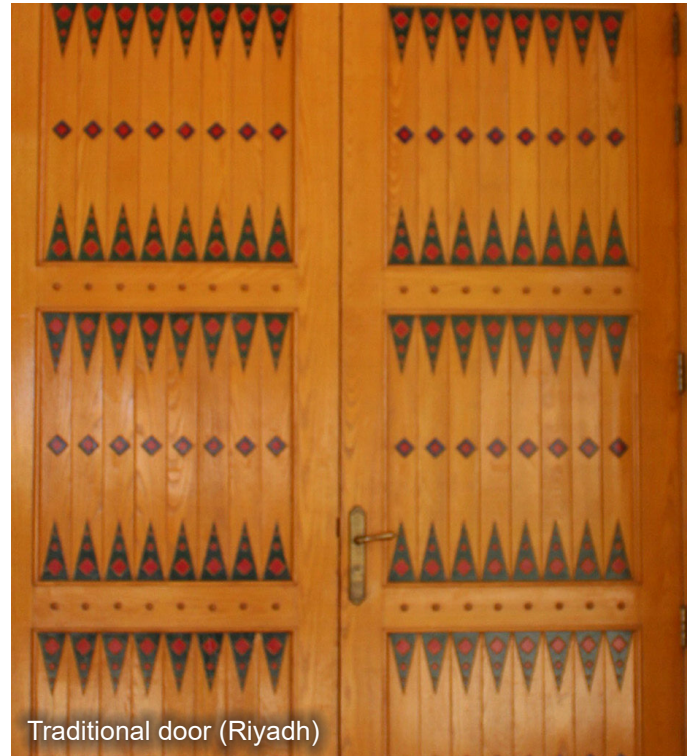


FIG. 32 Patterns abstraction

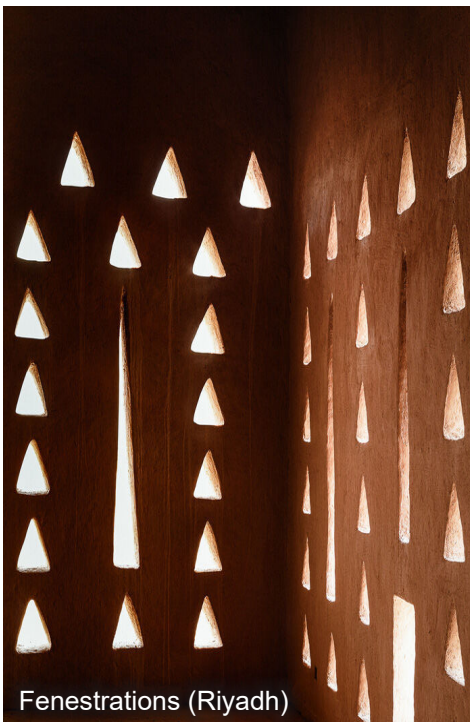




Traditional patterned rug (Riyadh)



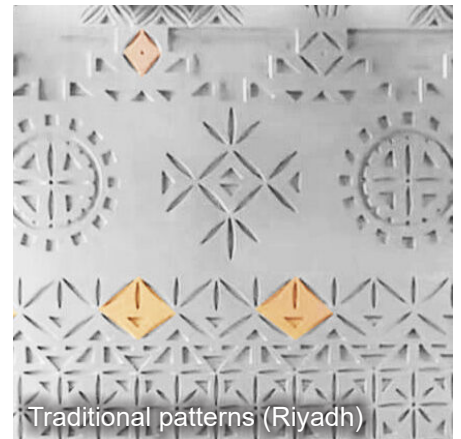
Traditional door (Riyadh)



Fenestrations (Riyadh)



Parapet details (Riyadh)



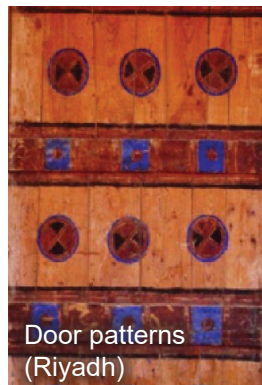
Traditional patterns (Riyadh)



Triangular bands (Riyadh)



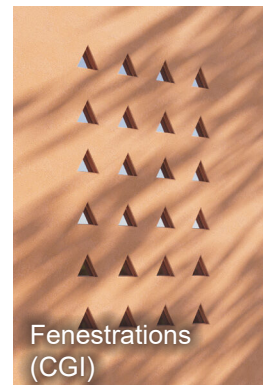
Door patterns (Riyadh)



Door patterns (Riyadh)



Door details (Riyadh)



Fenestrations (CGI)



Ornamentation (Riyadh)

FIG.33 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.**

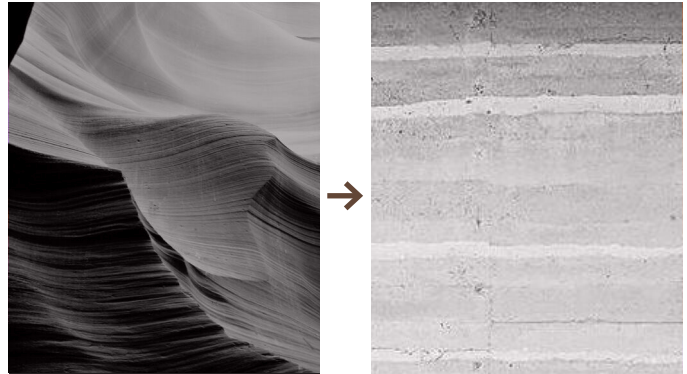


FIG. 34 Example of building material abstraction\*

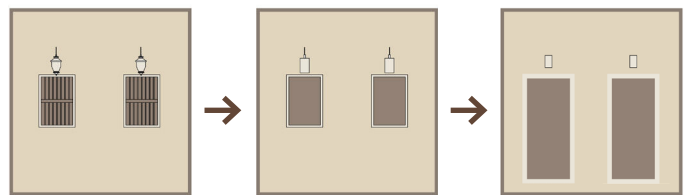


FIG. 35 Example of window shape abstraction\*

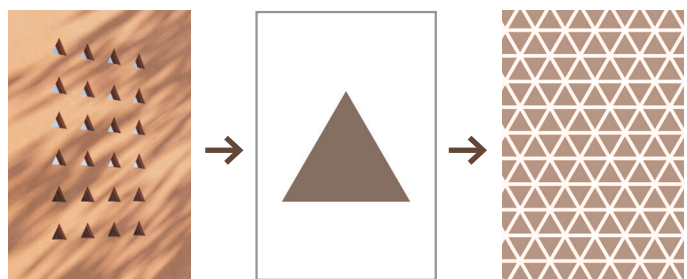


FIG. 36 Example of pattern abstraction\*

\*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 Central 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 a 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.**

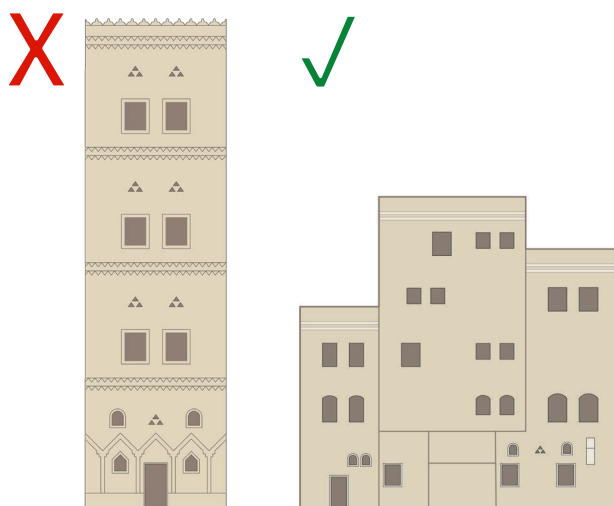


FIG. 37 Break down building massing to better fit traditional architectural elements\*

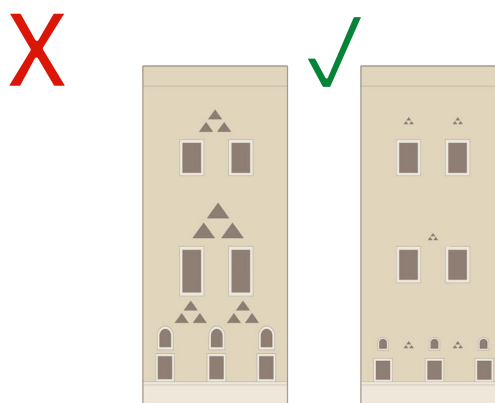


FIG. 38 Do not scale and distort smaller elements into oversized graphic features\*

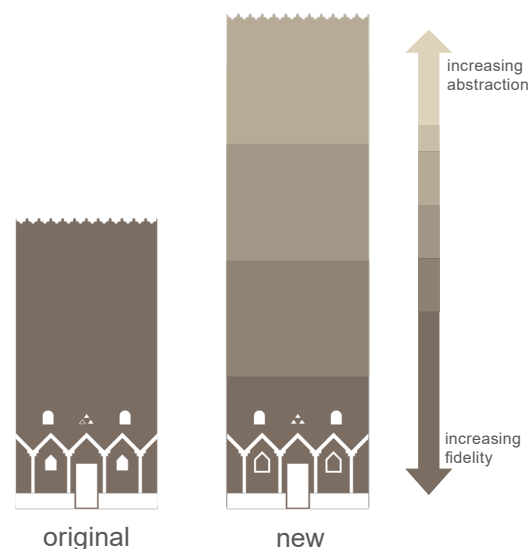


FIG. 39 Pay attention to building elements near the public realm, especially at the ground floor\*

### 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.

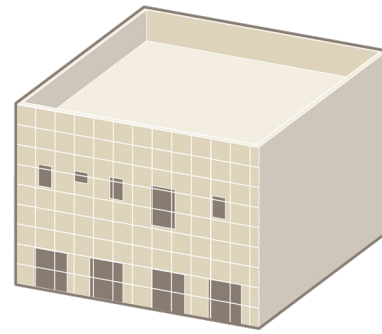
**To maintain the functionality of architectural elements.**

### 6.4 Adaptation

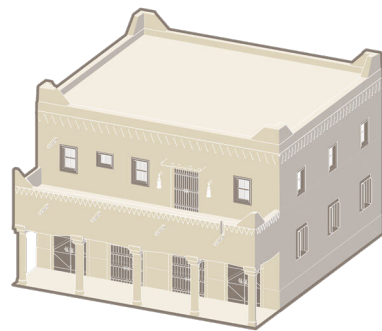
The application of traditional architectural styles to new building types requires sensitive adaptation.

- 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.**



Superficial arcade and window screens



Functional arcade and window screens

FIG. 40 Example of functional architectural elements\*

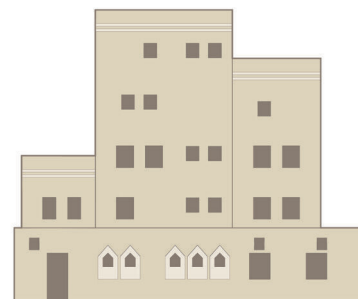
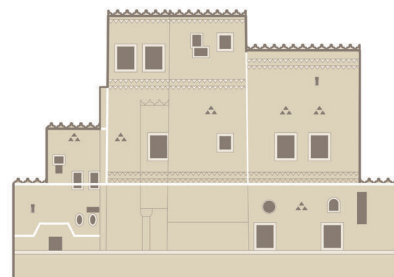


FIG. 41 Adaptation of traditional architectural elements to a contemporary building\*

\*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 Central 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.**

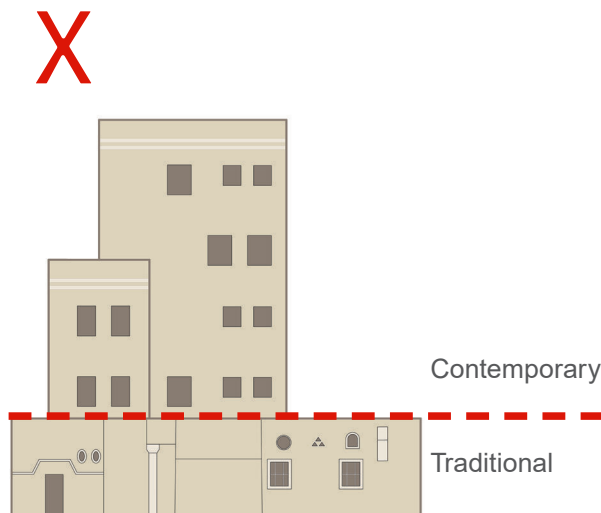


FIG. 42 Do not create hard breaks between mixed sources\*

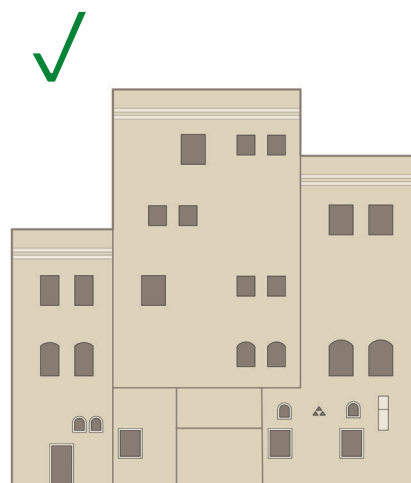


FIG. 43 Create gradual transitions between mixed sources and strengths of character application\*



## 7 Worked examples

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

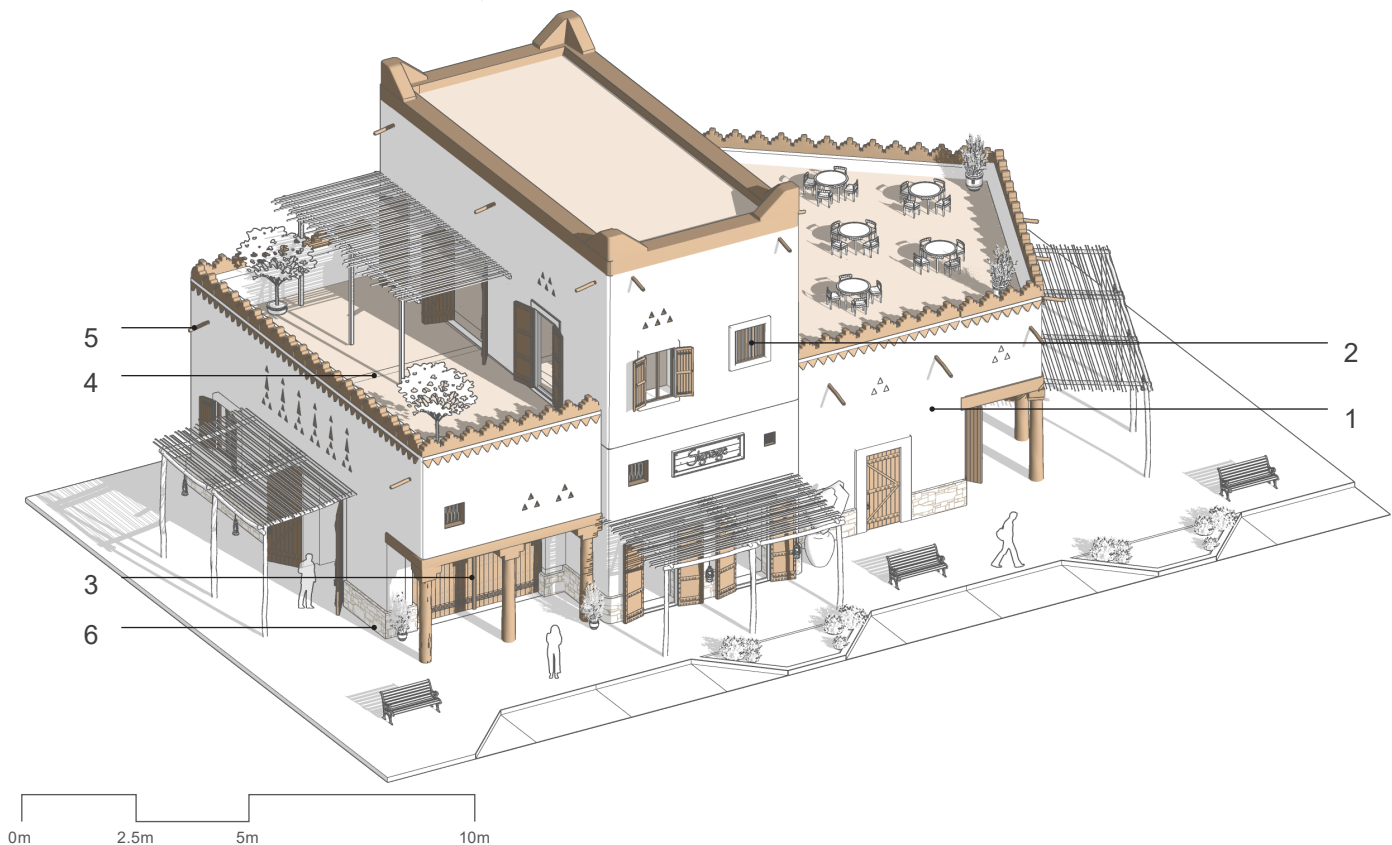


FIG. 44 Small size building

### 7.1 Traditional

This worked example of the traditional style incorporates a robust and comprehensive application of sections 3-5 of the guidebook. In the traditional scenario, there is emphasis on the gradually sloping upwards walls and the triangular arch as key feature.

- 1 The façade has an asymmetrical composition of elements with a distinct character for the top, middle and base with the interior dictating the massing.
- 2 Window-to-wall ratio range between 10 to 15 % and opening proportions are vertically rectangular within the 1:2-1:3 range.
- 3 Door is made from tamarisk, painted in geometric designs, ornamented with

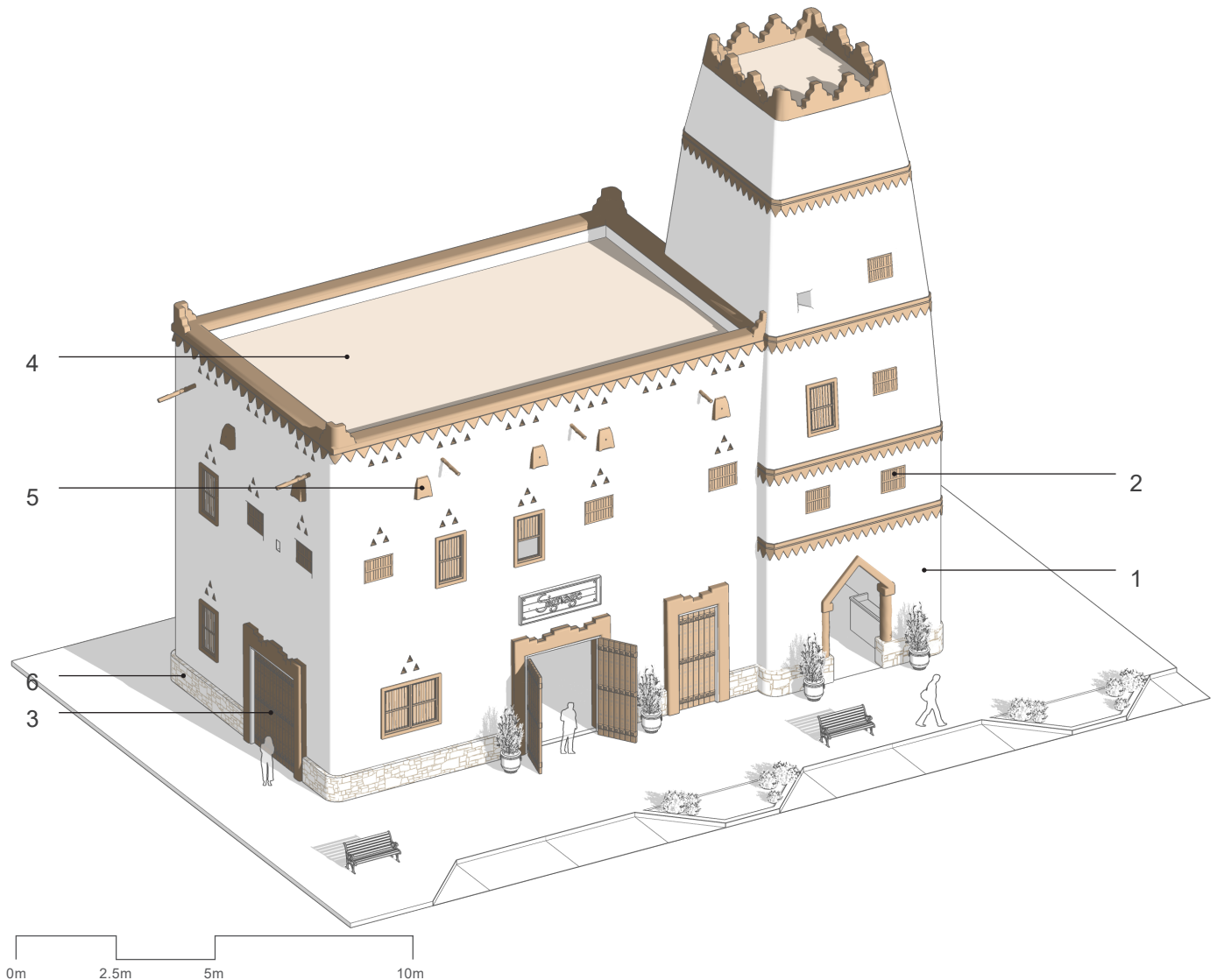


FIG. 45 Large size building

- timber shutters, emphasized through a triangular arch.
- 4 Roofscape connects the building's interior and provide access to the terraces with parapets made of double-stepped crenelations and single triangular bands.
- 5 Adoption of the turmah and the mizab, downspout for rainwater drainage, as well as triangular bands in the towers to indicate the separation of stories.

- 6 Stone plinth: incorporate as a base to provide a transition from ground level to the rest of the structure.

**To create contemporary interpretations that connect and celebrate the built heritage of the Central Najdi area.**

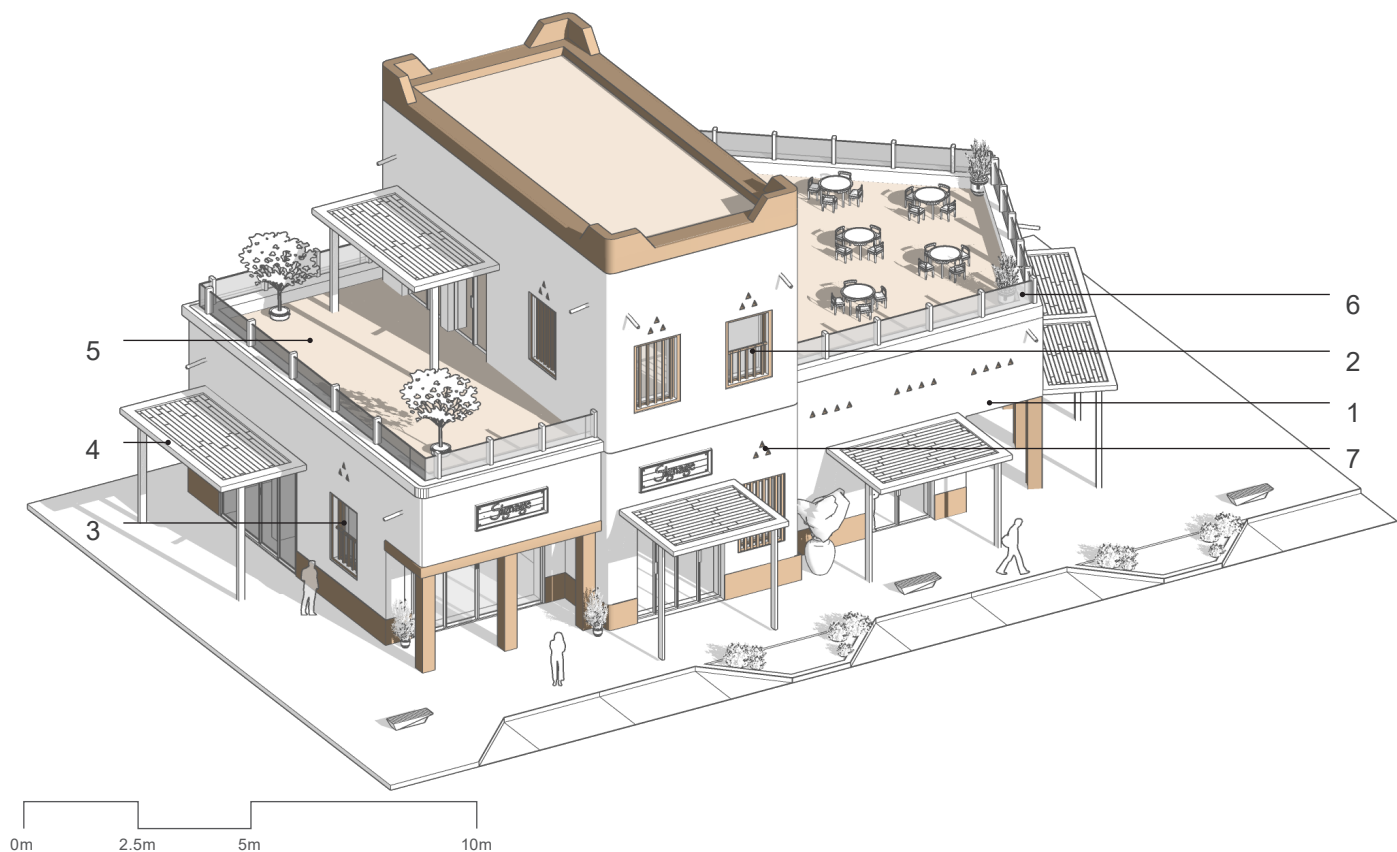


FIG. 46 Small size building

## 7.2 Transitional

This worked example of the traditional style incorporates a robust and comprehensive application of sections 3-5 of the guidebook. The scenario shows continuity and overlap with the traditional style, yet it emphasises newer materials and styles which support its foundations.

- 1 Façade composition is asymmetrical based on the layout of the interior. The middle and top tiers of the building should

each have their own character - one with more openings, the other with an inhabitable rooftop.

- 2 Window-to-wall ratio are higher and larger than the traditional building and within the 25-40 % range with a simplified timber latticework and louver.
- 3 Opening proportions are vertical and rectangular with a proportion of at least 1:2.



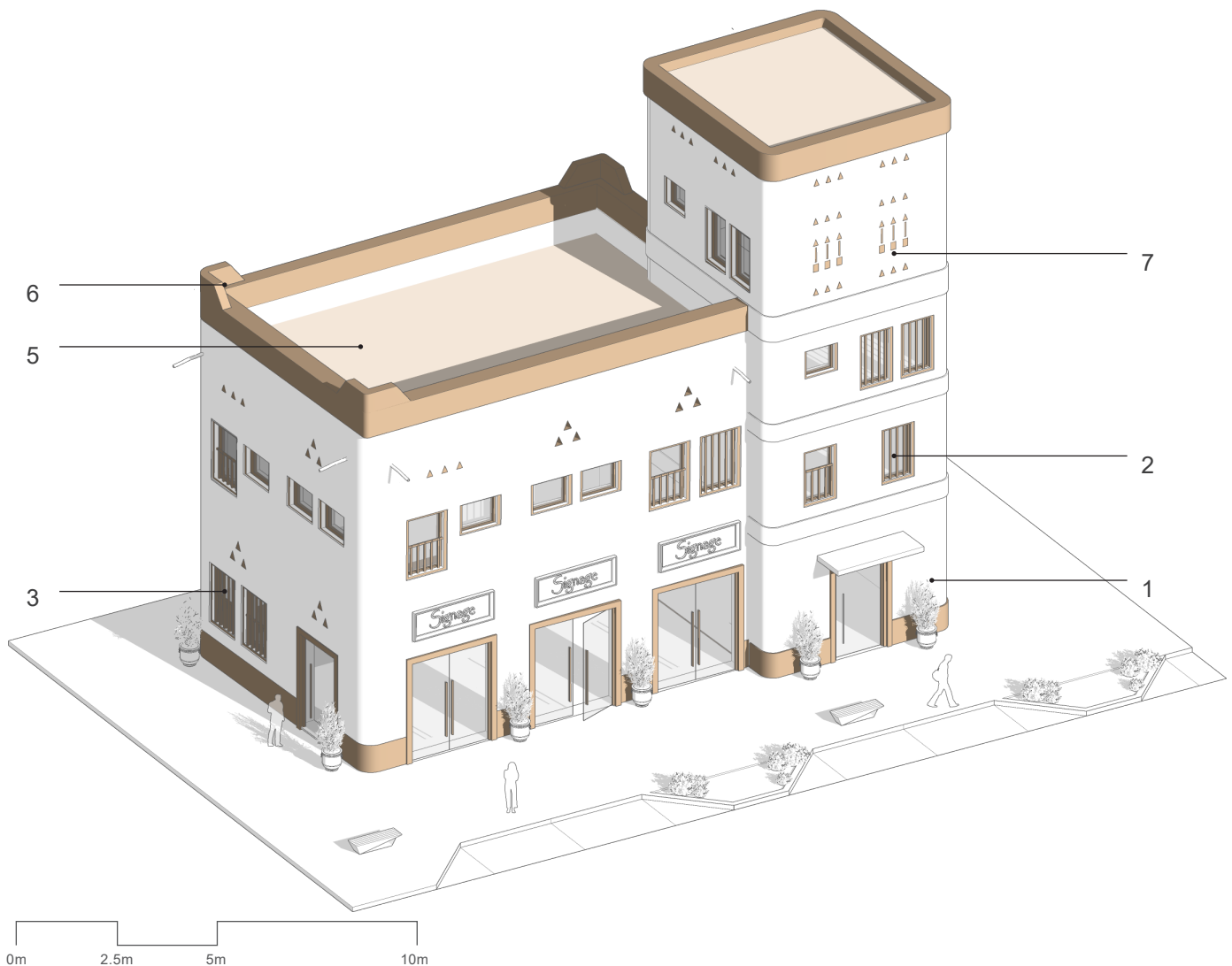


FIG. 47 Large size building

- 4 Houses sharing access with arcades and shopping areas do not exceed the ground floor with minimal columns, and, in the absence of arcade, shading should be provided with timber canopies.
- 5 The roofscape connects the building's interior and is often inhabitable.
- 6 The parapet is maintained following the traditional composition and rhythm on

the handrail, which can include the use of glass and wooden or metallic vertical supports.

- 7 Fenestration lines above windows, as well as a double shadow gap that separates the stories on the tower.

**To embrace modern living and lifestyles which are aligned with traditional forms.**



**FIG. 48** 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. The scenario embraces contemporary changes in construction and availability of skills, designs and materials. It also incorporates adaptation as a built-in method to respond to modern ways of living and working.

- 1 The façade composition is asymmetrical, opening are purposefully not aligned from one level to another.
- 2 Window-to-wall ratio is much higher than traditional buildings and within the 40 to 60% range. Opening proportions should be vertically rectangular with a proportion ranging from 1:2 to 1:3.
- 3 Windows and openings include timber louvers with abstract geometrical Najdi



FIG. 49 Large size building

- patterns. They may be bigger in scale than the transitional style and integrate louvers with direct access to balconies on all levels.
- 4 The main entrance is differentiated in hierarchy with a shaded arcade surrounding the main door.
  - 5 The roofs have articulated minimal parapets that respect the traditional treatment.
  - 6 The facade is divided up by horizontal balconies and long linear openings.
  - 7 Incorporate increasingly abstracted geometrical patterns across the facade. .
- To create opportunities for simple, attractive, and innovative design which celebrates the Central Najdi characteristics.**



## 8 Public realm

An overview of public realm character in Central Najdi.

### 8.1 Overview

The focus of the public realm guidelines within this document is to strengthen local architecture by identifying and enhancing distinct characteristics of public realm in Central Najdi. 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 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. 50 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 character area.
- **Types of public space** - A selection of spatial types that provide the architecture of the area its distinctive character.
- **Materials** - A summary of hardscape

character for the Central Najdi.

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

### 8.2 General character

The adjacent photographs summarize the characteristics of public realm and local landscape in the Central Najdi. As set out in the introduction, the area is known as the geographical and cultural heartland, of the contemporary Kingdom, capturing its multiple geographies and characters, as well as a symbol of harmony with adjacent landscapes and its various cultures. Known for its biodiversity, mud, earth, and rock are used as main building materials, and architecture is generally grouped together around an internal courtyard. Pilgrim routes, settlement patterns, and economic and political power are major characters of the area.





Public Pathway (Riyadh)



Wadi and agricultural land (Riyadh)



Public Square (Riyadh)



Market Frontage (Riyadh)



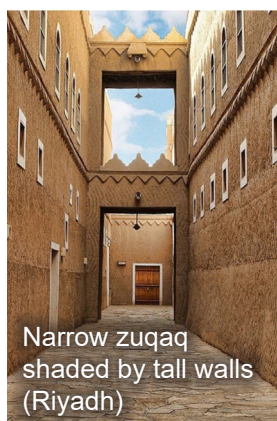
Narrow covered zuqaq (Dubai)



Public Seating (Riyadh)



Connecting Bridge (Riyadh)



Narrow zuqaq shaded by tall walls (Riyadh)



Baraha (Qassim)

FIG.51 PUBLIC REALM AREAS AND ELEMENTS IN CENTRAL NAJDI



### 8.3 Types of public space

Central 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.

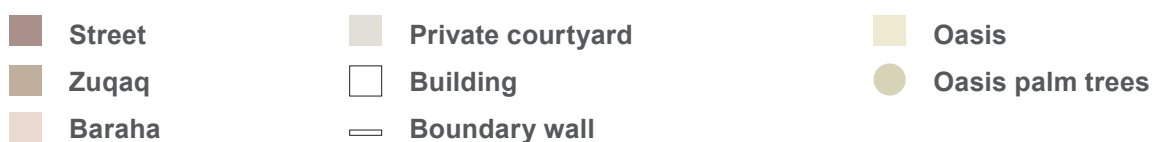
The plan illustrates a typical hierarchy of urban spaces and streets in Central Najdi. The following spaces are considered to be the principal typologies:

- 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. 52 Typical urban plan

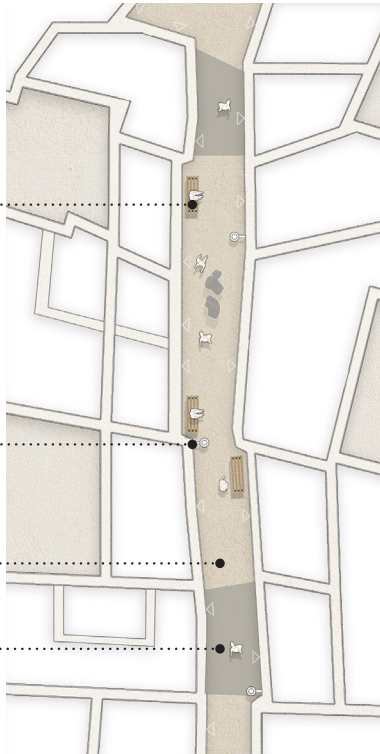




**Furniture**  
Public seating located at widest points of zuqaqs, along building walls, away from private entrances

**Lighting**  
Wall mounted lights avoid space take in narrow passageway. Warm light color provides atmosphere and highlights building material texture.

**Paving**  
Bound stone paving. Compacted earth could be used on smaller zuqaqs.  
Passageway beneath building



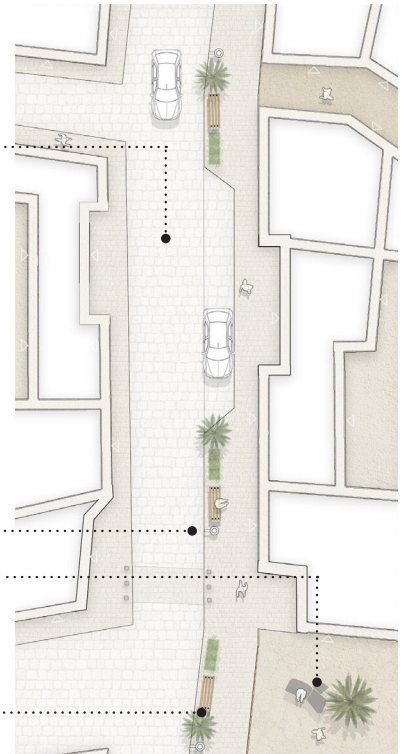
**FIG. 53 Zuqaq**  
No vehicle access.

**Paving**  
Organic shaped basalt paving with hammered finish

**Lighting**  
Low level lighting spaced along boundary street to provide visibility.  
Ensure adequate lighting at crossing points.

**Furniture**  
Boulders used in place of bollards on urban edge

**Planting**  
Street planting along the road.



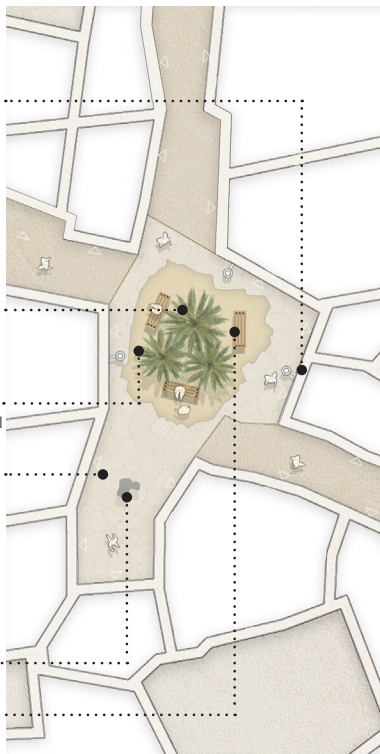
**FIG. 54 Street edge**  
Vehicle access.

**Lighting**  
Wall mounted LED lights

**Planting**  
Single tree and low shrubs as a central feature

**Paving**  
Depaved area of sand around planting with informal border  
Organic shaped basalt paving with hammered finish. Increase in paving size from zuqaq indicates a moment to pause.

**Furniture**  
Natural boulders as central feature  
Seating beneath trees



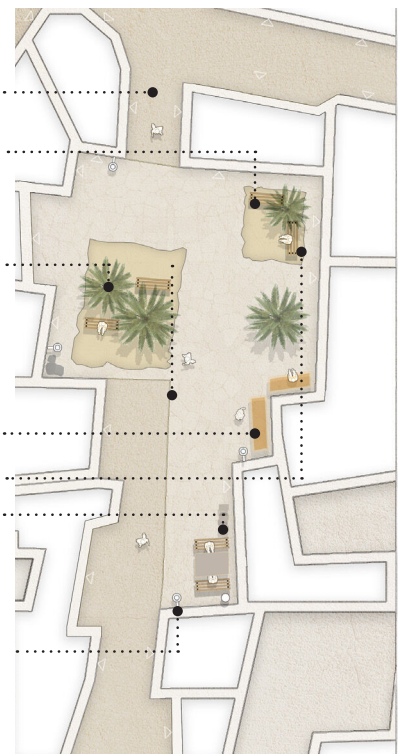
**FIG. 55 Baraha**  
Trees should be used in baraha located close to the oasis. Baraha furthest from the oasis could use a canopy for shade.

**Paving**  
Organic shaped basalt paving with hammered finish  
Depaved area of sand for play area with informal border

**Planting**  
Planting pockets define seating areas and bring shade to open space

**Furniture**  
Informal seating  
Benches located beneath tree adjacent to play area  
Cafe seating

**Lighting**  
Wall mounted LED lights



**FIG. 56 Saha**  
Varied seating types/ uses.  
Depaved area for play.



## 8.4 Materials

The suggested palette for materials to be integrated in The Central Najdi has been conceived to be contextual and complementary to the existing character of the area.

### Key considerations

- 1 Select locally sourced Saudi materials with low embodied carbon, such as limestone and gravel, 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.
- 4 De-pave and rely less on concrete where possible to improve the micro-climate 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 area.**





8.5

## Planting

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

### Key considerations

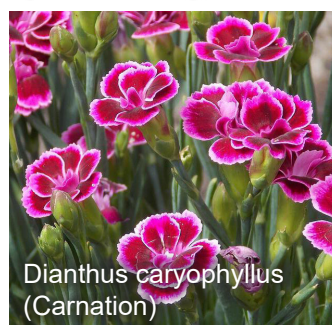
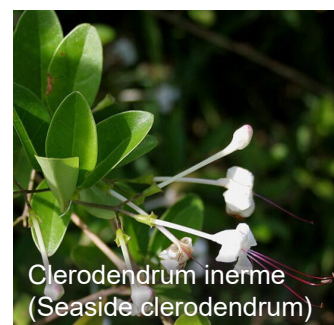
- 1 The tree landscape character should carefully calibrate and work with existing aquifers, rainwater, irrigation, and canal systems.
- 2 Rely less on importing new tree species, and source existing drought tolerant and saline water resistant as well as native and locally adapted species.
- 3 Adopt 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 in baraha areas.
- 7 Contribute to maintaining and enhancing oasis areas, using multi-layered planting where appropriate comprising a variety of palm species, fruit trees and fodder grasses as well as additional habitat value such as fruits for birds.
- 8 Minimize understory and decorative planting. If under story 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. 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.

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



FIG. 57 Seating



FIG. 58 Trash bin



FIG. 59 Shading



FIG. 60 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. 61 Ceiling light



FIG. 62 Wall hanging light



FIG. 63 Free standing light



FIG. 64 Bollard

## 8.8 Signage

The 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.
- 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. 65 Main signage



FIG. 66 Wall hanging signage



FIG. 67 Free standing signage



FIG. 68 Column signage



## 8.9 Parking

Street front parking is provided for customers of active retail frontages, and for 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. 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 or the bike lanes is encouraged where possible.

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

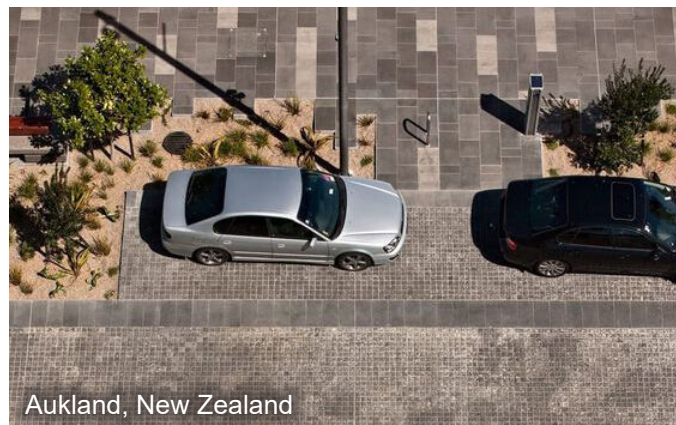


FIG. 69 Parking example

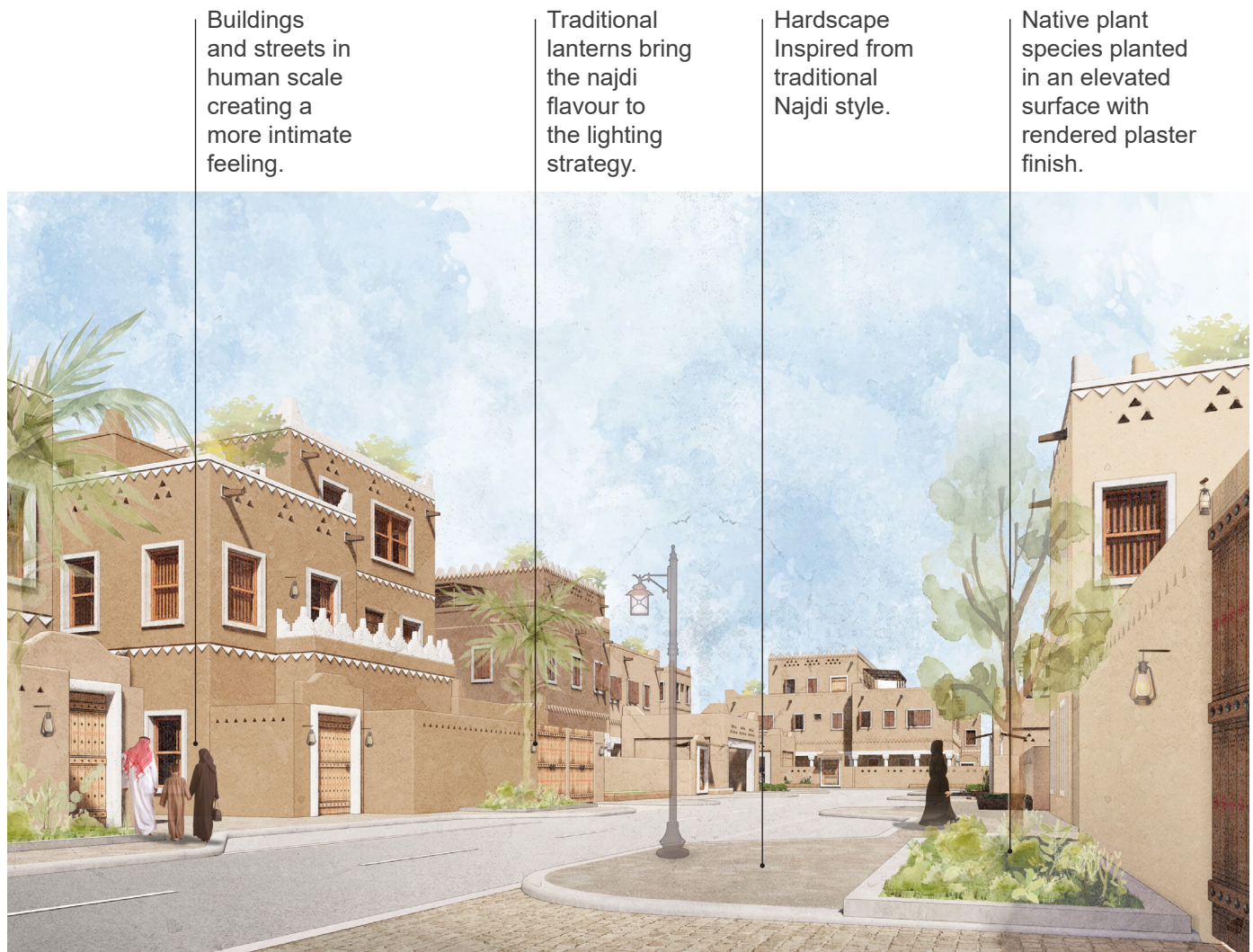


FIG. 70 Road side parking - Type 1



FIG. 71 Road side parking - Type 2

## 8.10 Public realm worked examples



**FIG.72 PROPOSED VIEW OF A RESIDENTIAL NEIGHBOURHOOD IN CENTRAL NAJDI AREA**

This worked example incorporates suggestions proposed in this section. The scenario presents a public realm adapted to the Central Najdi's built architecture which is defined by marked horizontal proportions, façades that are mostly closed, and a characteristic procession between public and private spaces, as well as apertures on the ground floor which tend to be limited and narrow.

- 1 Materials prioritize the use of natural and locally sourced materials such as clay, stone, limestone, and acacia trees.
- 2 The base colors on walls are in correlation with the hues of sand and stones specific to the region, which include different shades of beige and brown alongside earth or yellow hues.



Materials like concrete and rubberised asphalt are preferred.

The plazas are more open and larger with well planned landscape for social gatherings.

Simplistic and modernistic design are preferred.

Water features inspired by natural wadis, bringing gentle sound, enhancing the ambiance.

The Contemporary style follows a monumental scale for it's public spaces.



**FIG.73 PROPOSED VIEW OF A COMMERCIAL DISTRICT IN CENTRAL NAJDI AREA**

- 3 Design details include traditional adobe, painted mud brick walls, and textured concrete for feature walls, planting areas, benches, or flooring.
- 4 Local trees are used across as shading structures and as buffer zones.
- 5 The lighting strategy reinforces the Najdi sense of built character through the use of elements such as hanging lanterns on external walls.

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



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