

Madinah Rural

Architectural Design Guidelines





FIG.1 MADINAH RURAL ARCHITECTURAL CHARACTER AREA

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FIG. 2 Khaybar Historic Fort Settlement

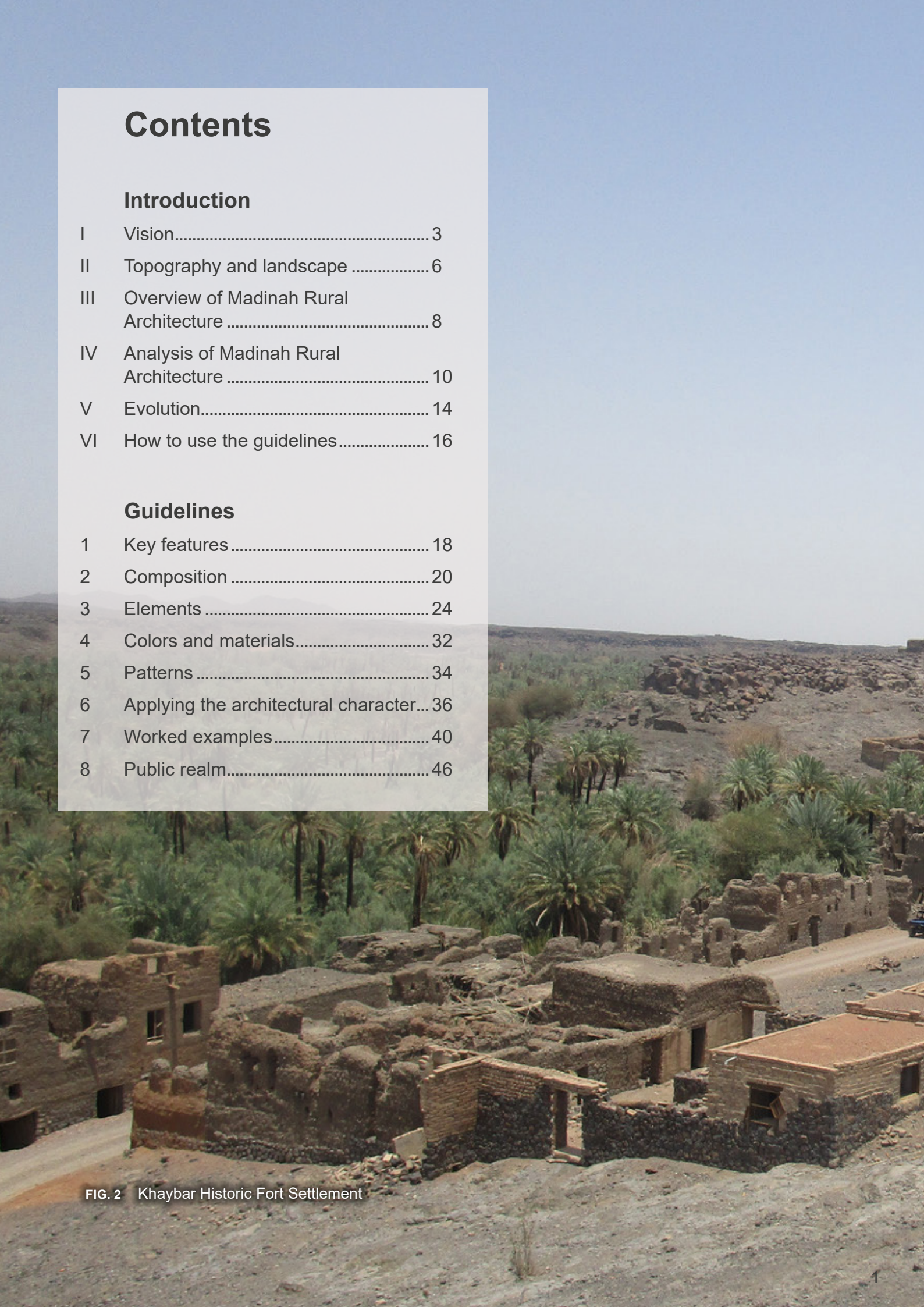




FIG.3 ARCHITECTURAL CHARACTERS MAP OF KSA

INTRODUCTION

Vision

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

I.1 Guidelines philosophy

The Architectural Design Guidelines aim to foster contemporary design that is rooted in the diverse geographic and cultural contexts of the Kingdom.

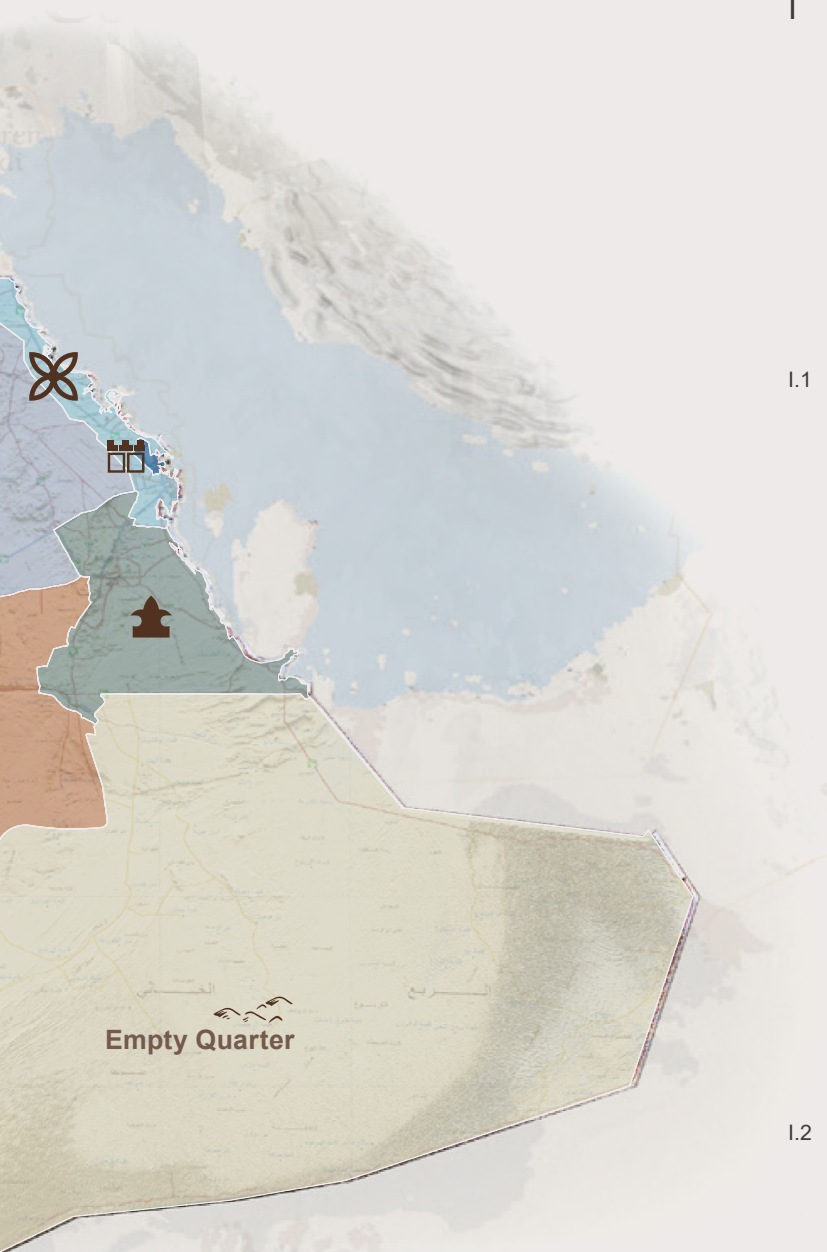
Its propositions are based on the study of historical precedent, taking inspiration from vernacular forms and the embedded knowledge shaped by generations of practice and experience.

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

I.2 National context

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

Though application boundaries for the architectural character have been defined (fig. 3), influences may extend across boundaries. Designers are advised to consult adjacent areas architectural guidelines documents and confirm the status of their building context with facts on the ground.



Najran

Al Ahsa
OasisAl Qatif
OasisEast
CoastEastern
NajdiSpecial
Zones

I.3 **Madinah Rural**

Madinah Rural Architectural character area is located in north-central Arabia, in the eastern Hejaz region. The area sits to the east of Madinah City and borders the Al Ula Special Zone to the north, Taif Highlands to the south and the Central Najdi region to the east.

The character area covers a significant area with a range of landscape features including mountains and wadis associated with the Hejaz highlands, the volcanic fields of the Harrat which are prominent around Madinah City, and the eastern desert plains.

For the Guidelines, the historic city of Khaybar has been identified as the principal example. Khaybar is situated 170 km to the north of Madinah and is characterized as an agricultural oasis, with special cultural and natural historic significance.

Other settlements and locations which present similar and relevant architectural characteristics include the villages of Al Rawan, Al Mashreqah, Abu Washi and Al Mashraqa, and the palaces of Al-Awared and Sufinah.



FIG.4 MADINAH RURAL SOURCES OF ARCHITECTURAL CHARACTER

II **Topography and landscape**

Observations on the links between landscape, climate, culture and the architectural character of Madinah Rural.

II.1 **Landscape**

Khaybar is situated in Harrat Khaybar, one of the expansive volcanic fields which define much of Madinah rural's landscape character. Harrat Khaybar covers an area of more than 14,000 square kilometers focused around a 100 km long line of volcanic vents which have produced the basaltic field.

The historic settlement is located on the outer edge of the lava field, with the Harrat and other natural features forming natural divisions in the irregular layout of Khaybar. Volcanic deposits have created soils which are rich in magnesium and potassium, supporting local agriculture.

Khaybar benefits from a number of springs, where permanent water reaches the surface at the lowest parts of the settlement, giving rise to lush vegetation, supported by dams to regulate irrigation. The area is defined by widespread date palm groves, corn fields and other crops. The presence of water, and suitability for agriculture has attracted settlers to the area since the Bronze Age.

The strategic existence of an Oasis City on the western caravan trade route between Yemen and the Levant, specifically as a stopover point between Madein Saleh and Madinah was a key factor in its growth. Khaybar continues to supply the city of Madinah with dates and other agricultural products.

II.2 **Climate**

Khaybar has a hot desert climate with low annual rainfall (average 73 mm) and average high daily temperatures from 21.6 in January to 39.3 in July and August. Khaybar relies on groundwater sources such as wells and springs.

II.3 **Culture**

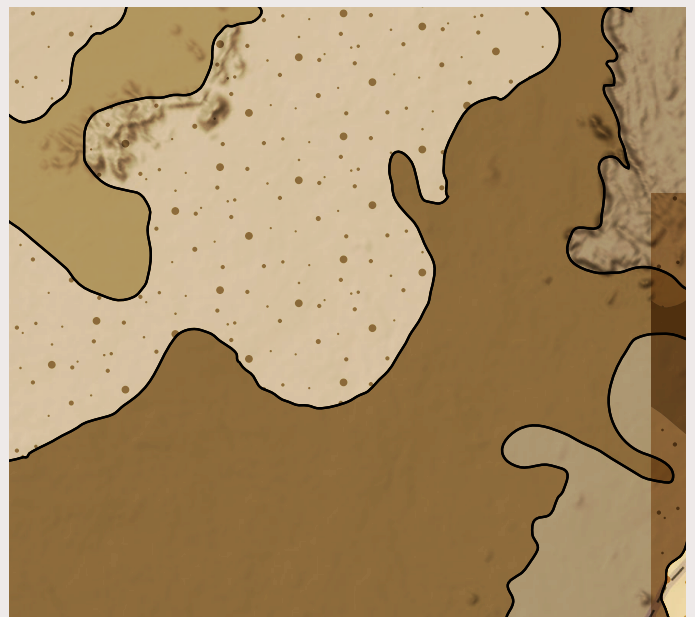
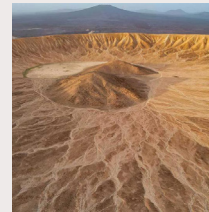
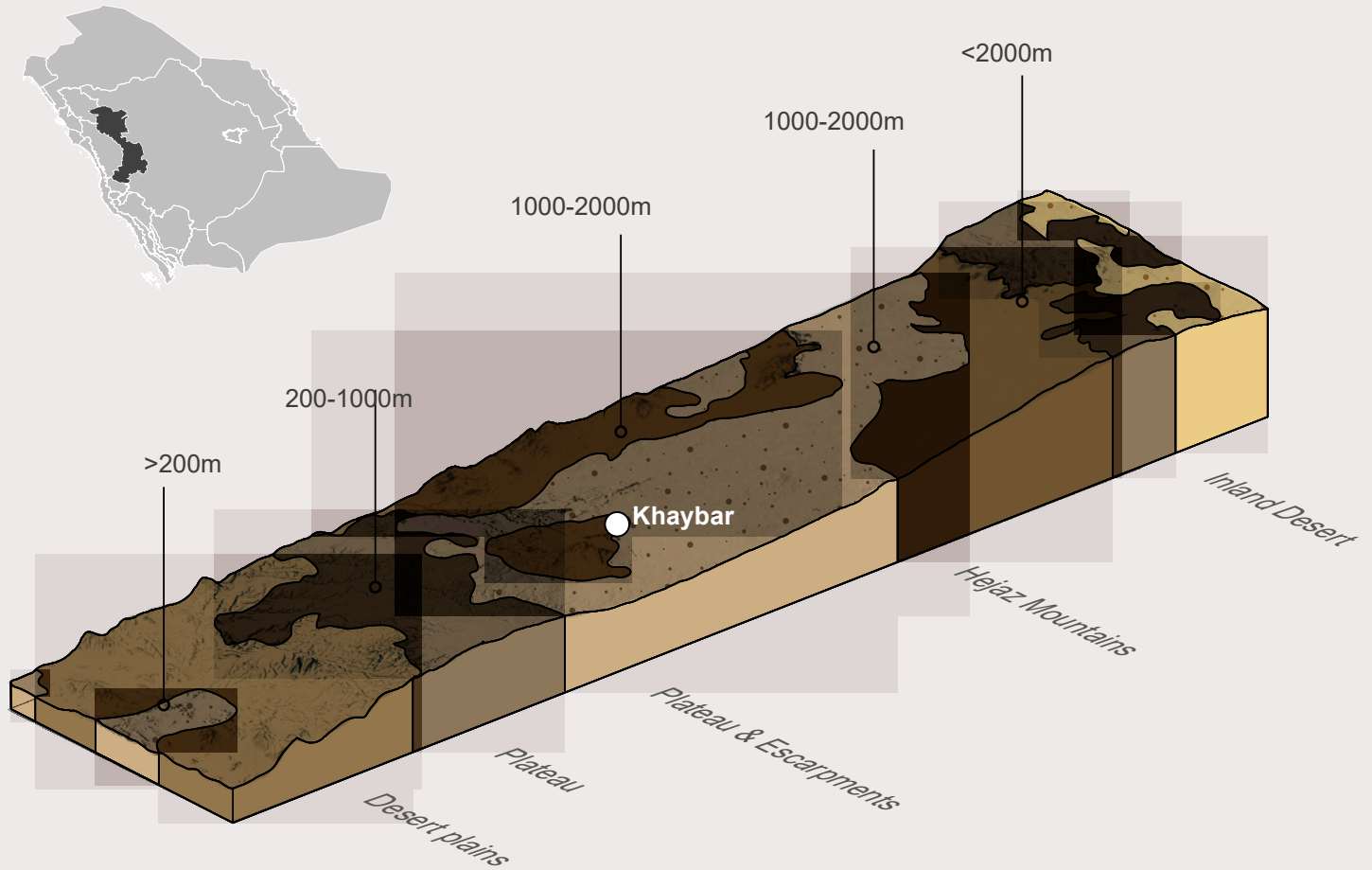
Khaybar occupies a unique position on the edge of the Harrat landscape, strategically located on the historic western caravan route. Local springs have allowed the city to flourish as a center for agricultural production, alongside a proud Islamic heritage.

II.4 **Architectural influence**

Khaybar is arranged as three distinct districts, Nataah, Shaq and Katibah, separated by swamps, desert or lava drifts. Each district comprises several villages and fortresses which are often located on higher ground, overlooking the agricultural areas below. Areas of higher ground, either hills or basaltic rocks, were utilized for the creation of fortifications.

The historic city remains today but flooding and topography led to the construction of the modern city a few hundred meters to the south on flat land.

Most of the traditional houses in the historic settlement were constructed with mud bricks and lava stone, with parts of palm trees used for roofs and drainage.



Plains

Plateau

Plains

Escarpments

Mountains

Inland Desert

FIG.5 MADINAH RURAL TOPOGRAPHY AND LANDSCAPE

III Overview of Madinah Rural Architecture

A summary of the existing character of traditional architecture and settlements of Madinah Rural.

III.1 Architectural character

The buildings in Khaybar Old Town are typical of the vernacular in Madinah Rural. They are characterized by simple forms with small openings, constructed in local materials. Key architectural elements are summarized as follows:

- The composition of building volumes is of simple, orthogonal forms which

emphasizes the massing's human scale.

- Most buildings are two stories but some elements have a stronger vertical emphasis. These internal spaces benefit from higher ceilings with improved air circulation and natural cooling.
- Buildings have a high solid to void ratio and windows openings are typically small to regulate internal temperatures.
- There is a distinct palette of window shapes which are rectangular, square, triangular or key-hole. Wooden window shutters, frames and doors are typically used, and they do not have elaborate carving but some shutters are painted in bright colors.

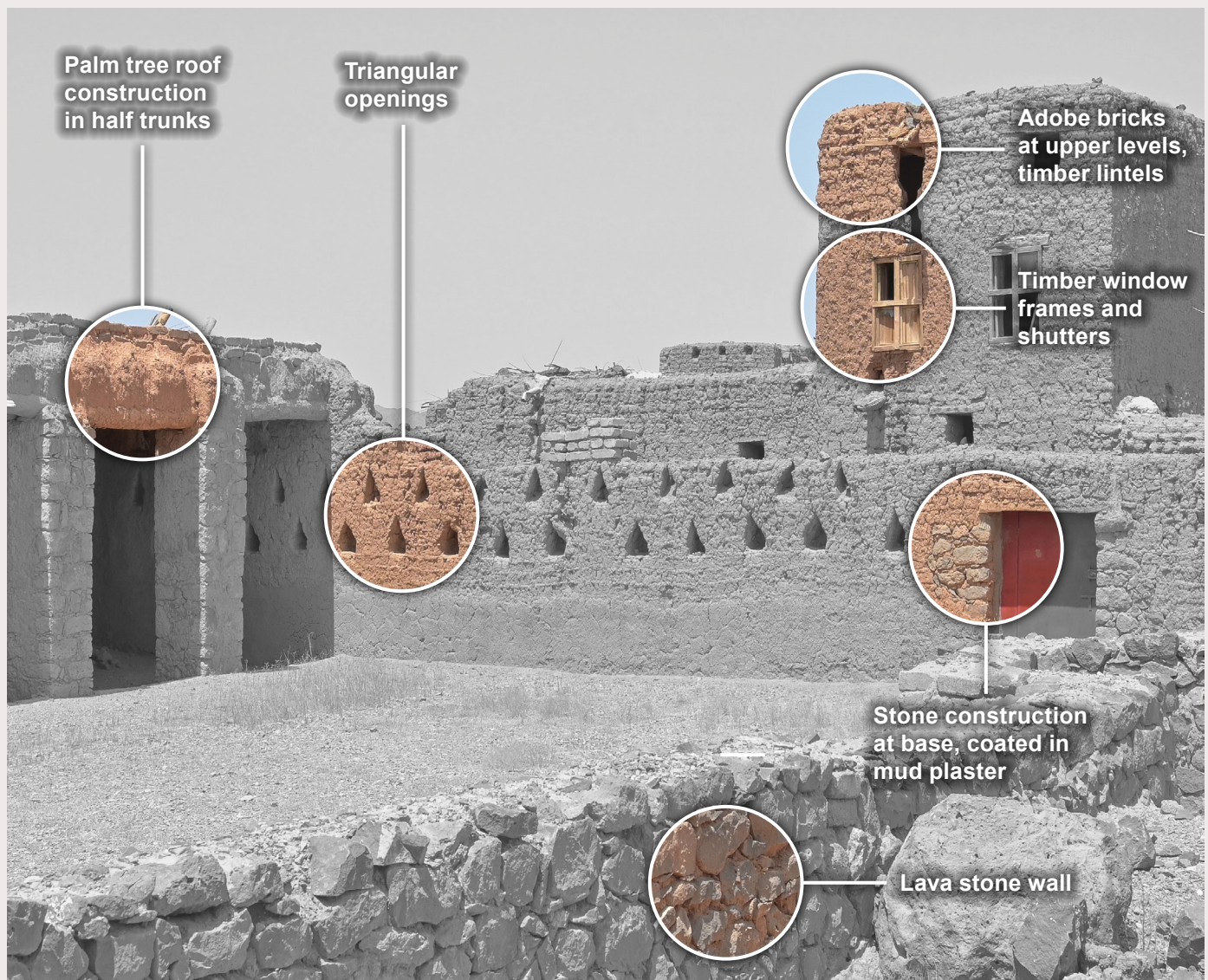


FIG.6 TYPICAL HOUSING IN KHAYBAR OLD TOWN

- The base of buildings is primarily lava stone with mud brick earth construction above and local palm tree timber details, such as window lintels.
- Structural elements, such as stone or wood, are commonly expressed around windows and doors. The structure of the roof beams, made of palm trees, was left exposed at the junction with the walls and covered in hay.

- Villages and fortifications were constructed to take advantage of the promontories produced by the volcanic landscape allowing protection from flooding and invaders.
- Khaybar follows the traditional 'khayf' settlement pattern, which is typical of the Madinah Rural area and represents the authentic architecture of northern Arabia with minimal or no external influence.
- The settlement has few areas of public realm as buildings are arranged compactly to create shade and protection from the sun.

III.2

Settlement character

The settlement form is a sensitive response to the palm oasis and natural landscape. The following features are evident:

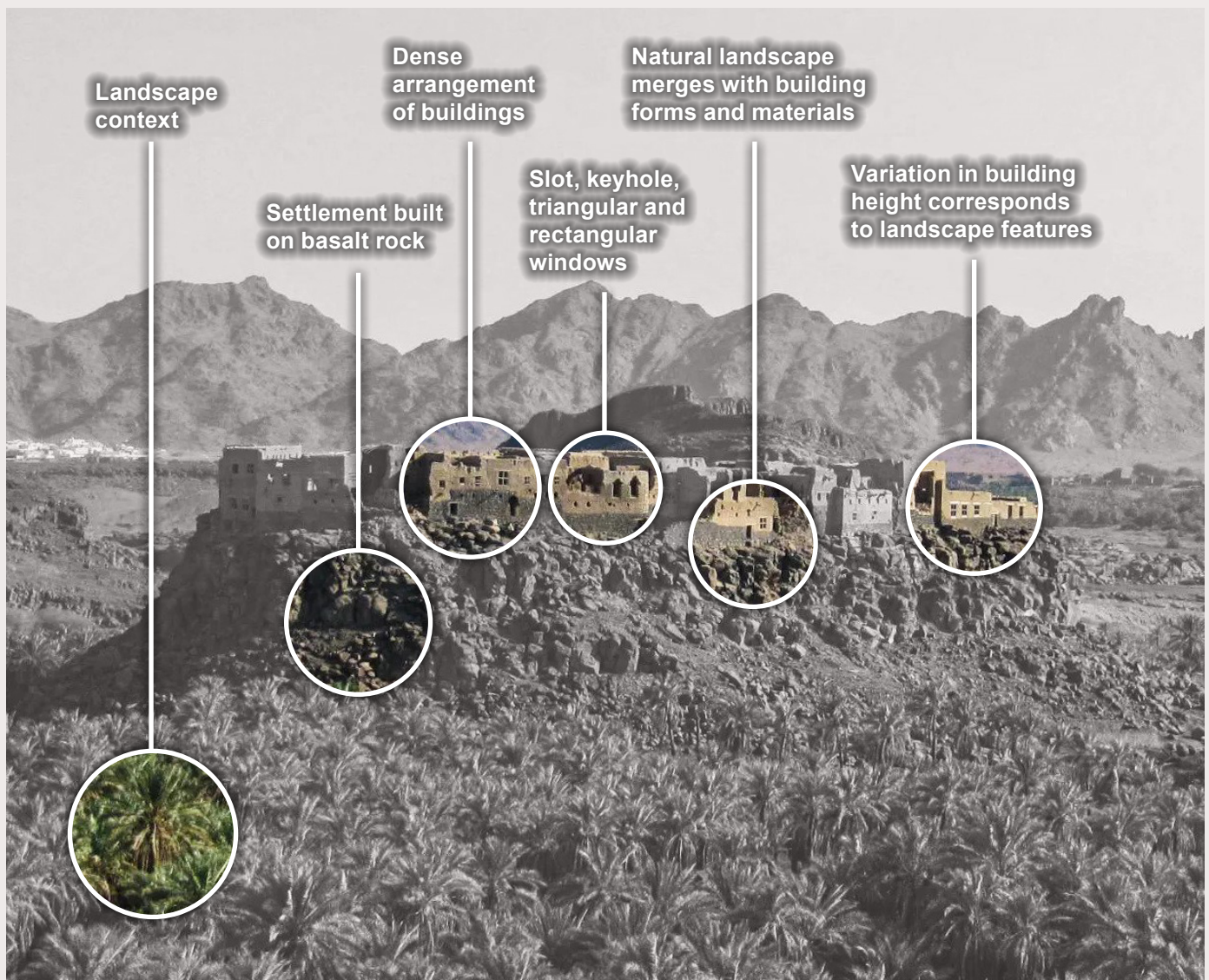


FIG.7 KHAYBAR OLD TOWN PROMONTORY

IV Analysis of Madinah Rural Architecture

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

Analysis of the key characteristics of typical buildings illustrates several common architectural traits which form the basis of guidance in Madinah Rural. These are summarized under the following headings.

IV.1 General typologies

Vernacular buildings typically comprise simple, orthogonal forms, often two stories, but occasionally with more vertical elements. At a townscape scale, narrower buildings sometimes form conjoined groups, creating a more horizontal form.

IV.2 Aspect ratio

The adjacent examples from Khaybar are characterized by horizontal proportions, indicated by a width-to-height ratio between 1:0.4 to 1:0.75. The two examples from Sufinah have greater vertical component, with ratios around 1:1.11 to 1:1.14. As noted above, the widest examples in Khaybar are groups, formed of several conjoined buildings. Sometimes these sub-divisions coincide with varying taller vertical components.

IV.3 Solid-to-opening* ratio

The facades are simple and opaque with few punched openings, supported by a facade void percentage of less than 23%.

* For the purpose of these formal studies, openings refer not to transparent glazing or void, but to non-masonry and non-rendered 'infill' surfaces such as shutters, screens and roshans.

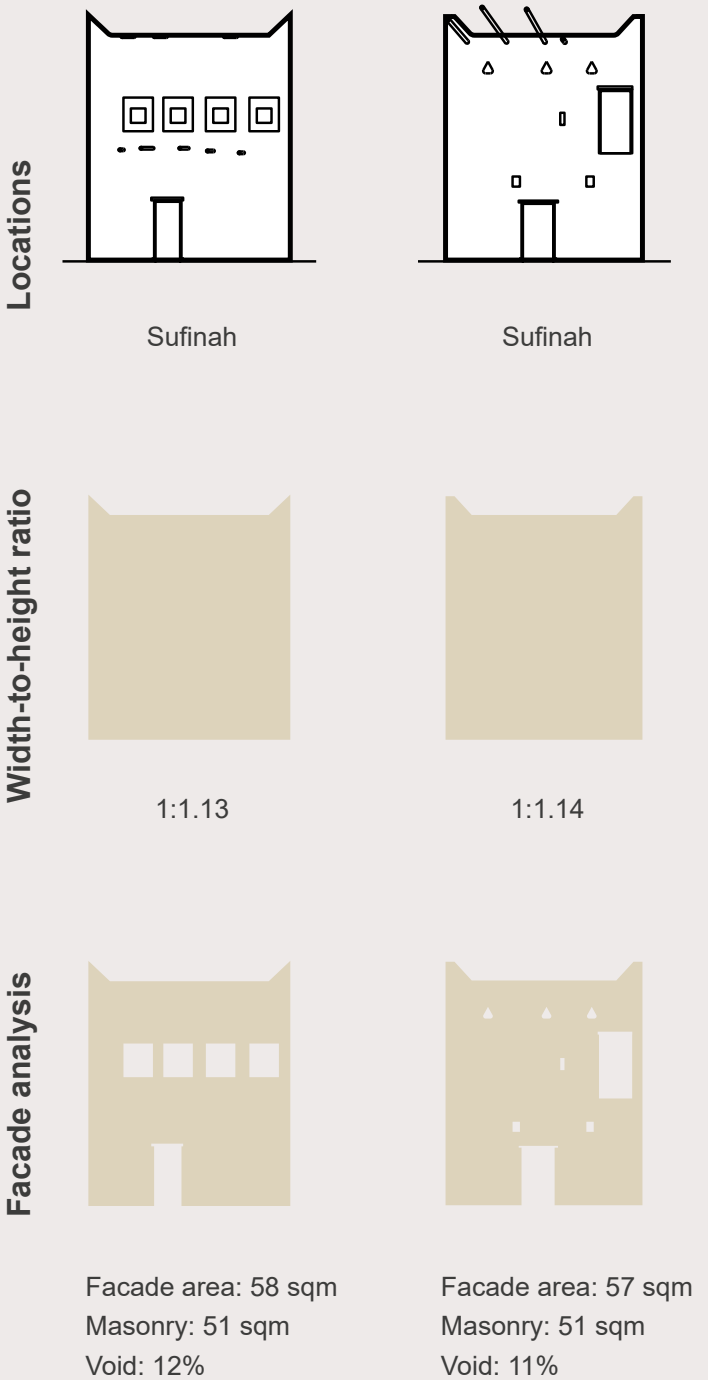
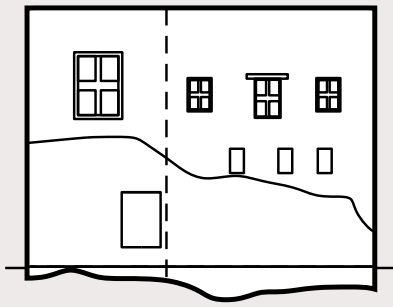
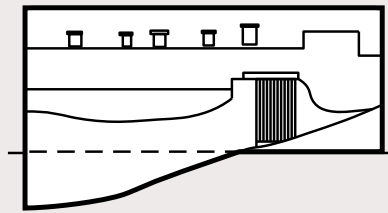


FIG. 8 Vernacular facade studies

Vernacular facade studies



Khaybar house within fort



Khaybar hillside



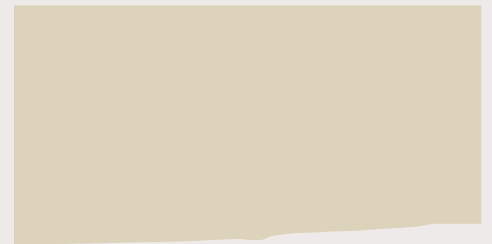
Khaybar hillside amalgamated



1:0.80



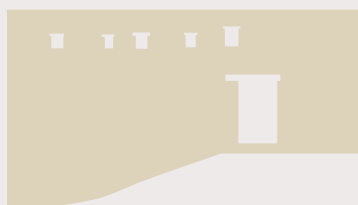
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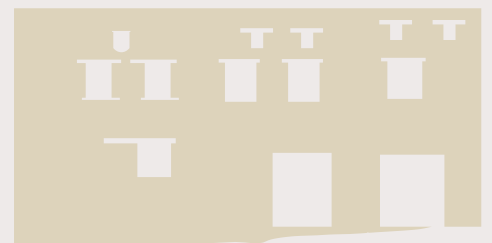
1:0.50



Facade area: 122 sqm
Masonry: 111 sqm
Void: 9%



Facade area: 75 sqm
Masonry: 70 sqm
Void: 7%



Facade area: 137 sqm
Masonry: 113 sqm
Void: 18%

IV.4 Tripartite articulation

Facades are articulated with a clear base, middle and top. This is known as ‘tripartite articulation’. The distinction between base and middle is expressed most clearly through the materiality of the building. The base is usually constructed mainly from lava stone, with larger, coarser materials, with the building ground plain sometimes blending with the particular topography of the slope. The middle zone is typically defined by mud brick earth construction.

Apart from entrances, the principal openings tend to be situated in the top layer, although punctuated ventilation openings are sometimes found in the middle. The split between the layers is often uneven and irregular, a characteristic which reflects the nature of construction materials and position of openings.



FIG. 9 Tripartite articulation

Facades are typically split into 3 separate tiers with their own distinct character: base, middle, and top.

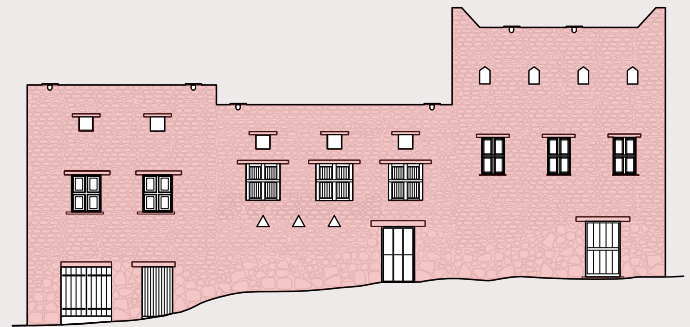


FIG. 10 Solid with punctuation

Simple, solid facades with a range of punctuated openings.

IV.5 Horizontal emphasis

Buildings have a strong horizontal character, often accentuated by conjoined groupings. Individual buildings occasionally feature taller vertical elements. Buildings are typically 2 to 3 stories.

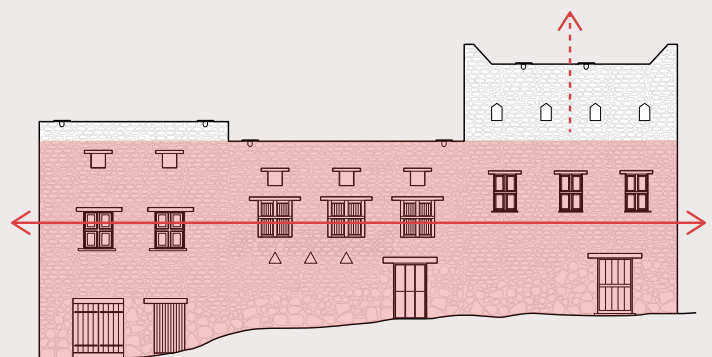


FIG. 11 Horizontal emphasis

Buildings demonstrate a strong horizontal character.

IV.6 Horizontality of groups

Narrower conjoined buildings often combine to form a wider group which reads as a larger horizontal form. Subdivisions are sometimes relatively subtle at a townscape scale, due to the commonality of materials and solid nature of facades and irregularity of openings. Stepped rooflines and the presence of openings provide clearer definition of divisions.



FIG. 12 Horizontality of groups
Conjoined building groups accentuate horizontality

IV.7 Varied symmetries

Analysis indicates a varied palette of opening types. Common openings include rectangular, square and triangular shapes. Larger window openings typically define the building 'top', with smaller ventilation openings in the middle and upper levels. The spacing of openings is usually irregular, and vertical relationships between openings are frequently absent.



FIG. 13 Variation and asymmetry in openings
Facades are punctuated by a range of opening sizes and shapes - positioned asymmetrically.

IV.8 Recessed and flush openings

Typical buildings are characterized by recessed or flush openings. Doors are usually recessed, and windows flush. The only exception are modest lintel projections.

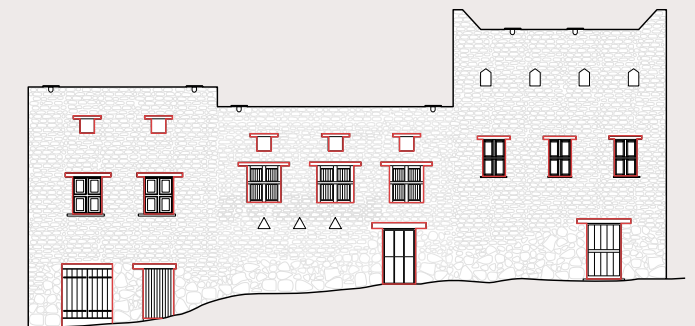


FIG. 14 Recessed with flush openings
Projections are uncommon with most buildings including flush windows and recess doors.

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 the 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.

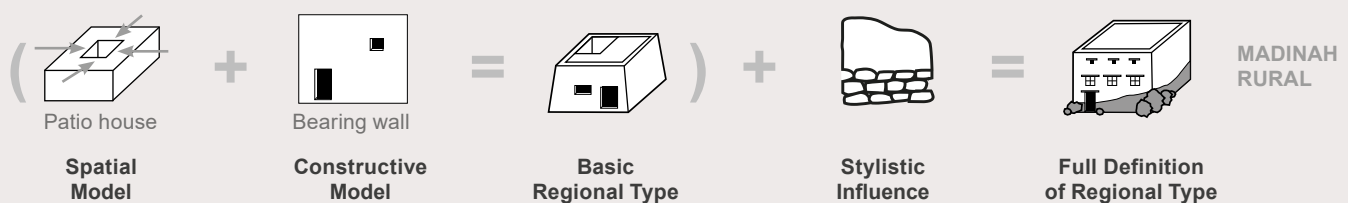


FIG. 15 Character equation for Madinah Rural (after Ishteeaque & Al-Said 2008)



Traditional building

TRADITIONAL

Traditional buildings are characterized by strong articulation of the base signaled by lava stone base, transitioning into mudbrick construction. Varied opening types and symmetries with recessed or flush doors and windows. Short, flat parapets with stepping between adjacent buildings in conjoined groups, and finials on the corners of the tallest parapets.



Transitional building

TRANSITIONAL

Similar to the contemporary model, the transitional building incorporates a smoother plane between base and upper tones. Openings retain an irregular horizontal spacing similar to the traditional form and upper-level ventilation holes.



Contemporary building

CONTEMPORARY

Contemporary buildings adopt a consistent form. Facades incorporate simplification and abstraction. Transition in tone between base is evident, but with smoother, stepped planes. Larger openings with deeper reveals, absence of ventilation openings in layer below parapet, and greater horizontal alignment. Finials adopt a smaller, simplified form.

FIG. 16 Evolution of styles

VI How to use the guidelines

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

VI.1 Chapter organization

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

- 1 **Key features** - The most essential 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 architecture.

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

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

The document concludes with:

- 8 **Public realm** - An overview of public realm character in Madinah Rural.

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

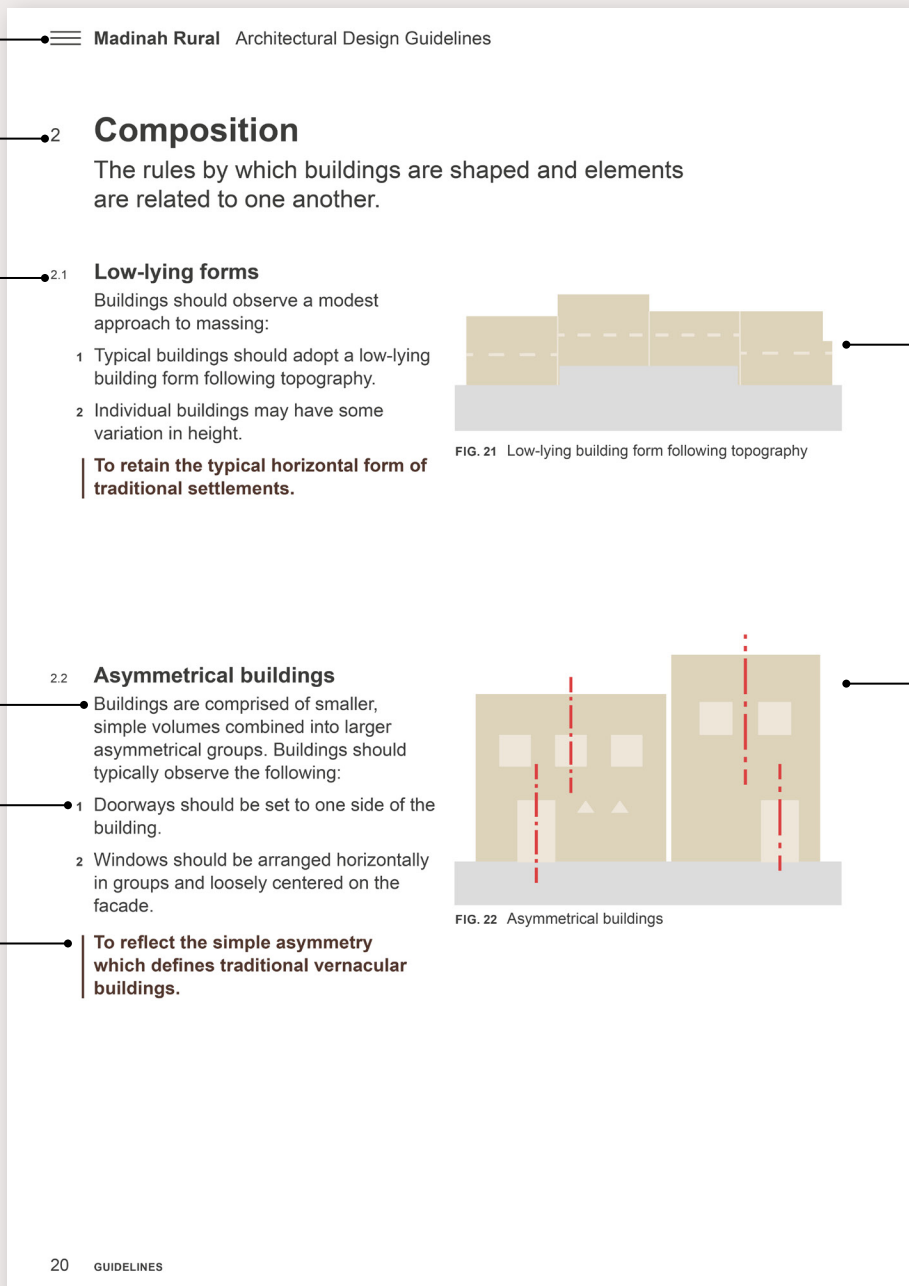
1 Chapter number
and heading

2 Guideline
number and
heading

3 General
description

4 Guideline
actions

5 Rationale



6 Illustrations

FIG. 17 Typical guideline structure

GUIDELINES

1 Key features

The most important attributes essential for conveying the architectural character of Madinah Rural.

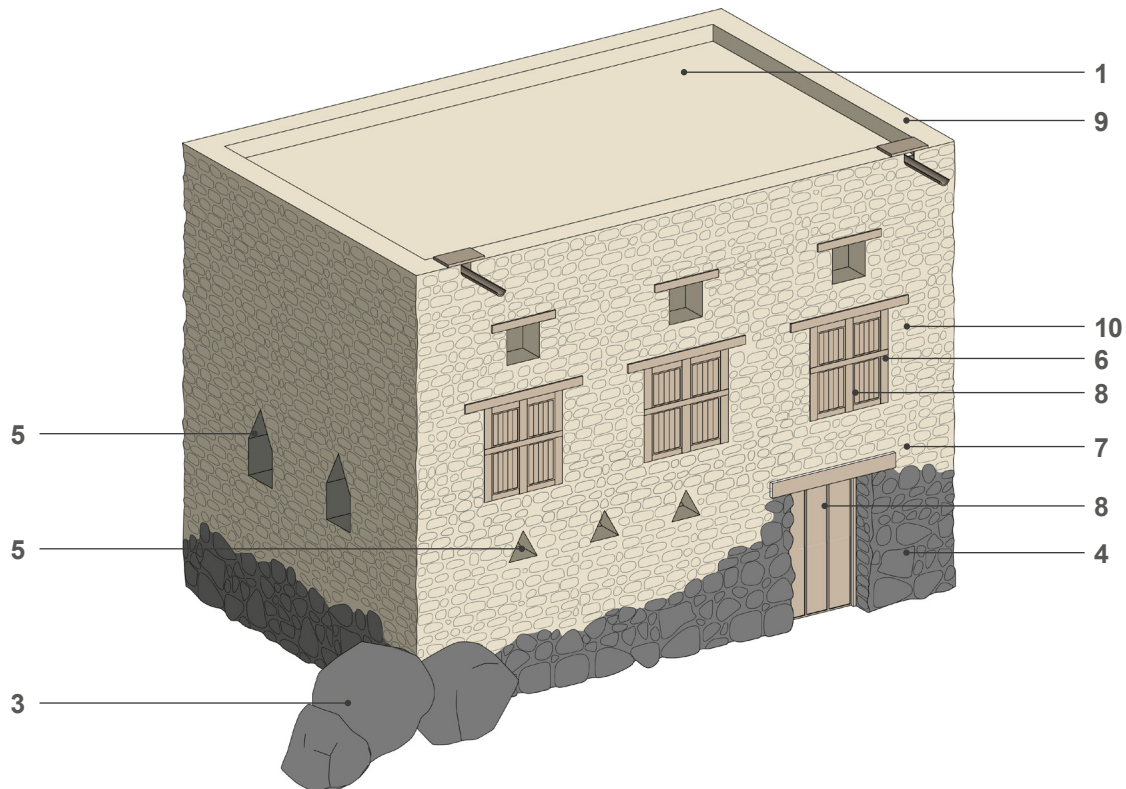


FIG. 18 Rural Madinah key features

Key features:

- 1 Simple, low-lying building forms with steps in roof profile within building groups.
- 2 Buildings groups typically create an enclosed block with an internal courtyard.
- 3 Stone boulders incorporated at the base of buildings.
- 4 Gray stone lower walls and earth tone upper walls.
- 5 Triangular and triangular-topped vent openings and niches, arranged in rows.
- 6 Simple small windows, typically with four subdivisions and expressed lintels above.
- 7 Informal facades with horizontal character and elements with squarish proportions.
- 8 Timber tone window and door frames and panels.
- 9 Flat parapets with rare use of parapet finials at the corners of upper volumes
- 10 Minimal ornamentation.

1.1 Character summary

The vernacular character of Madinah Rural is intrinsically linked to the particular landscape character, topography and climate of the character area.

The construction of traditional buildings is dominated by mud (earth) and stone, alongside other natural elements including palm trees. These materials are evident in the external character of buildings, with earthen tones set above a light gray base and foundations which blends with the bedrock below.

Buildings are simple, with use of openings and windows to encourage airflow and ventilation. The microclimate has also informed the disposition of rooms and space within and between buildings. Windows typically face away from the sun, and houses extend to create inner courtyards.

Settlements such as Khaybar take advantage of the presence of valleys, water and oases. Flood management and defensive considerations have led to the creation of distinctive clusters of buildings and fortifications on rocky outcrops.

Sufinah, a smaller historic town, is dominated by earth and palm tree construction, with occasional use of stone. Buildings tend to be smaller in footprint and lower scale, with similarly simple form and geometry.

The guidelines in this section distill key principles relating to the composition of typical vernacular buildings which are relevant to traditional, transitional and contemporary forms of development across the Madinah Rural area.



FIG. 19 Khaybar fort



FIG. 20 Sufinah

2 Composition

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

2.1 Low-lying forms

Buildings should observe a modest approach to massing:

- 1 Typical buildings should adopt a low-lying building form following topography.
- 2 Individual buildings may have some variation in height.

To retain the typical horizontal form of traditional settlements.

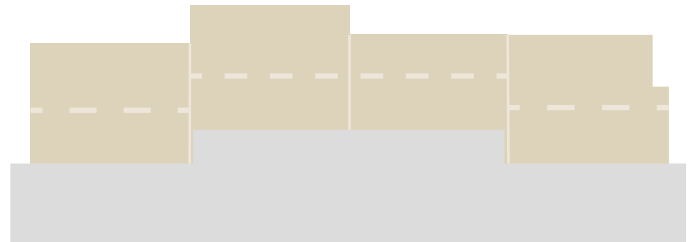


FIG. 21 Low-lying building form following topography

2.2 Asymmetrical buildings

Buildings are comprised of smaller, simple volumes combined into larger asymmetrical groups. Buildings should typically observe the following:

- 1 Doorways should be set to one side of the building.
- 2 Windows should be arranged horizontally in groups and loosely centered on the facade.

To reflect the simple asymmetry which defines traditional vernacular buildings.

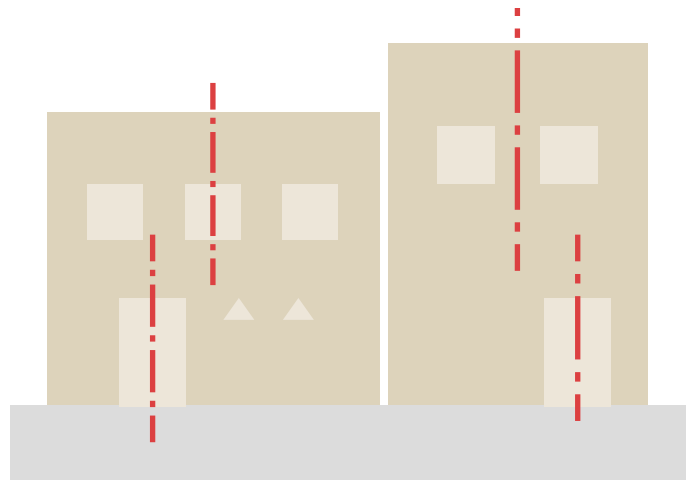


FIG. 22 Asymmetrical buildings

2.3 Solid facades

Vernacular buildings in the Madinah Rural character area are typically defined by solid facades, and therefore buildings should:

- 1 Have small windows relative to the walls.
- 2 Look like they have loadbearing walls.
- 3 Have a rustic character and simple form.

To create balanced facades which are consistent with vernacular forms.

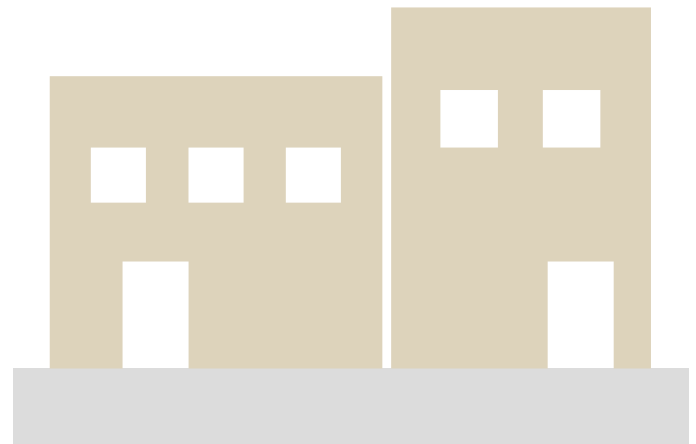


FIG. 23 Solid facades

2.4 Simple openings

Openings should be small and simple:

- 1 Windows and doorways should have minimal ornamentation.
- 2 Windows should be relatively square in proportion with expressed lintels above.
- 3 Panels and frames should be constructed from timber with a natural tone.
- 4 Square vents might be aligned vertically above windows.

To evoke the simple character of vernacular facades in Madinah Rural.



FIG. 24 Simple articulation of openings

2.5 Flat parapets

Parapet design should embrace the following points:

- 1 Parapets should generally be short with some variation in height.
- 2 On rare occasions, parapet finials might be used on the corners of the tallest volumes.

To reflect the typical roofscapes which are typically flat within single buildings, and stepped across urban blocks.

2.6 Ventilation openings

Ventilation openings should have variation:

- 1 Varied groupings of ventilation openings should be considered, arranged in rows. Appropriate styles could include:
 - Triangular vent openings and niches
 - Triangular-topped vent openings and niches
 - Square openings with expressed lintels.
- 2 Centre the ventilation openings above windows. Align ground floor vents horizontally with ground floor lintels.

To support the horizontality of buildings and create recognizable base and upper zones within facades.

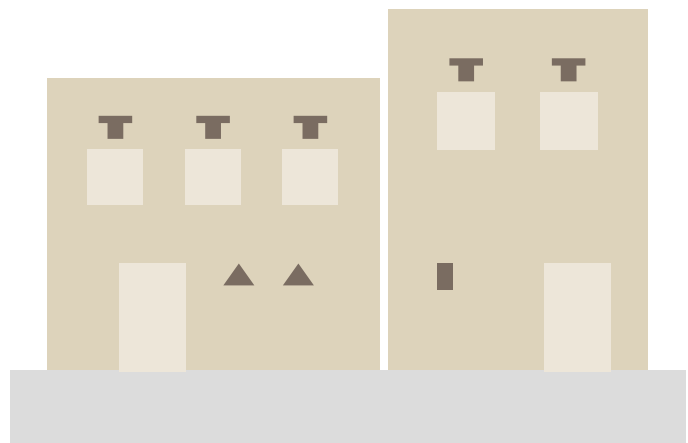


FIG. 25 Ventilation openings

2.7 Continuous streetwalls

Traditionally, urban blocks were created with an organic accretion of buildings that clearly defined streets. Buildings should:

- 1 Align primary street-facing facades with adjoining buildings.
- 2 Share party walls with neighbors to create larger urban blocks.
- 3 Present subtle variety in height and alignment between neighbors.
- 4 The stepping of the base wall material and upper wall materials should be considered.
- 5 Buildings could be arranged to create inner courtyards defined by enclosing walls.

To ensure that individual buildings work as a group, fitting into the overall townscape.

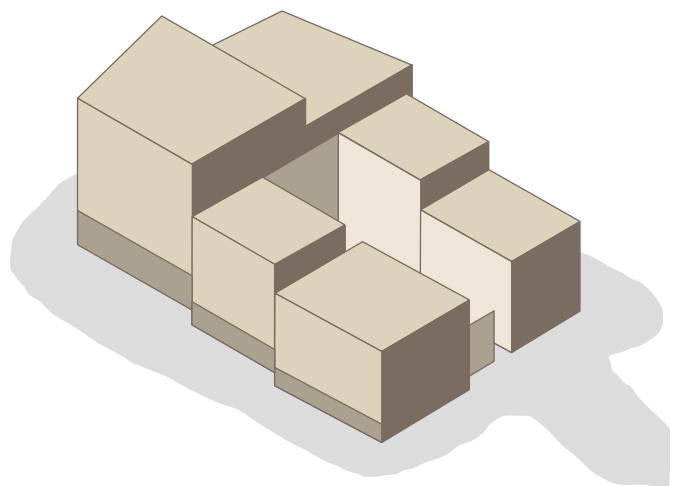


FIG. 26 Building grouping with inner communal courtyard

2.8 Responding to landscape

Buildings in Madinah Rural should respond to the topography and natural qualities of the landscape:

- 1 General asymmetry and stepped volumes across building groups is preferred.
- 2 Buildings should have an elemental quality to their design, like primitive, un-worked objects.
- 3 Buildings should have a clearly defined base, expressed by stone boulders at the base of buildings, and gray stone lower walls.
- 4 The middle and upper levels of buildings should have earth tones.
- 5 Respect the topography. Do not completely flatten the site and erase the natural variation.
- 6 Design should be sensitive to solar orientation, hydrology, wind and the physical characteristics of the soil.
- 7 Allow for natural variation in:
 - wall alignments;
 - floor-to-floor heights;
 - rooflines.
- 8 Avoid use of abstract over-rationalisation such as:
 - regular grids;
 - perfect symmetry;
 - mechanical repetition of elements.

To respond to the natural environment and landscape context.

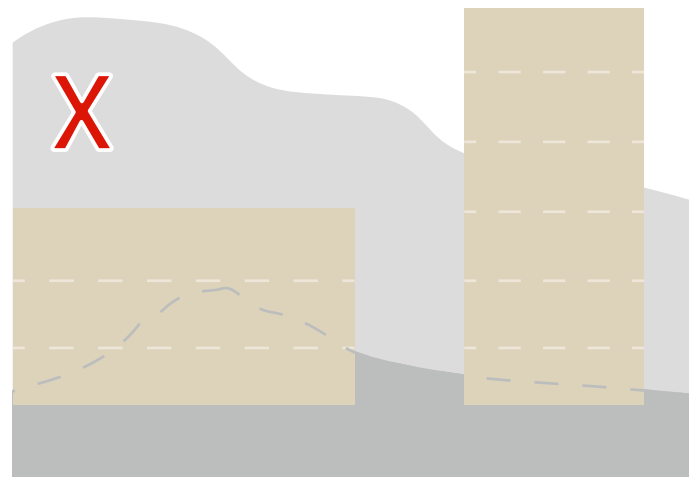


FIG. 27 Building form follows topography.

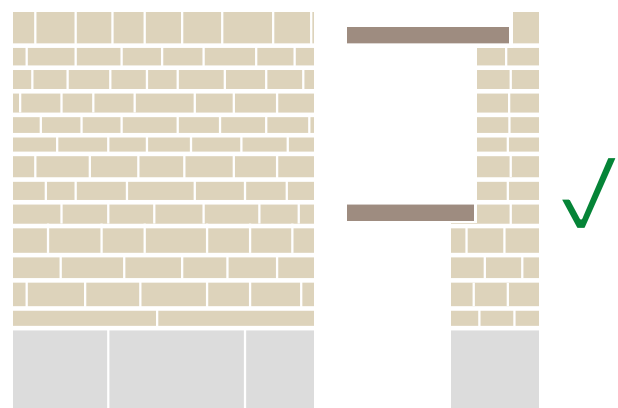
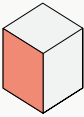
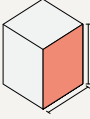
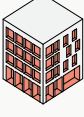
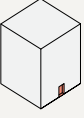
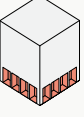
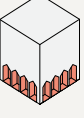
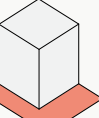


FIG. 28 Contemporary buildings' walls loadbearing to support the structure of the floors

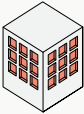
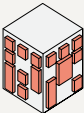
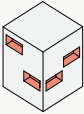
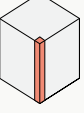
3 Elements

The individual parts that are the building blocks of the Madinah Rural architecture.

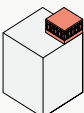
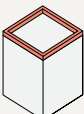
TAB. 1 Madinah Rural architectural elements

GENERAL ELEMENTS		
	Key characteristics	Refer to introduction for overview of key characteristics of the Madinah Rural character area.
	Facade proportion	Facades should be made up of simple, solid, orthogonal forms that emphasize horizontality.
	Window-to-wall %	Should have relatively small windows, large areas of solid wall. Up to 20 - 40% maximum of the facade is openings. Openings should be protected from direct solar radiation.
	Opening proportions	Window openings can be square, vertically rectangular or triangular. Due to the climatic conditions, window opening should be on the smaller scale. Facades should exhibit a mixture of two or three types of windows. Windows can be flush with the facade or set back. Structure should be expressed and window frames are to be made of wood.
	Composition	Volumes can be horizontal or vertical. Some volumes can have an expressed verticality, particularly to accentuate an important building or as wayfinding. Multiple buildings should be thought of as a group. Massing should respond to context and history, have a compact form and strong geometries.
BASE ELEMENTS		
	Entrances	Primary entrance should be clearly defined, door framing and recessing can add depth and create a sense of entry. Dark grey stone plinth emphasises base of the building.
	Shop fronts	No externally mounted rolling shutters; recessed shutters preferred. If awnings and shades are used, they should be secondary to the main facade and be demountable. For areas of historic character, sideways folding shutters flush mounted with the building facade are preferred.
	Arcades	Where a building is located on a gateway route or other significant route designated by the planning authority, buildings should provide an arcade at the ground floor to create a more walkable city and enhance the public realm.
	Curtilage	The exterior ground floor of buildings, including the covered exterior space of arcades, should seek material and design integration with the surrounding public realm. The interface between the public realm and the curtilage should be universally accessible, with no sudden changes in level, single steps or other trip hazards. Careful attention should be paid to ensuring a positive pedestrian experience by improving the microclimate around buildings.

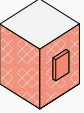
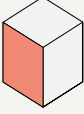
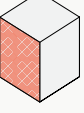
MIDDLE ELEMENTS

	Wall articulation	Walls should be monolithic, without breaks or set backs. Party walls are allowed. Adjacent buildings can be of contrasting natural materials.
	Windows and Openings	Window and opening design are subject to a large number of compositional guidelines. See expanded guideline overleaf
	Projecting elements	Projecting elements are not characteristic of the architectural character of the Madinah Rural area; therefore, they should not be included.
	Recessed elements	Doors are recessed within the base layer of the building.
	Shutters and Shading	Shutters should be simple and made of wood. No other shading elements or projections are allowed.
	Corner features	Traditional settlement patterns and topography present a range of corner conditions requiring facades to respond to a range of slopes and terrain. Buildings typically turn the corner with a step up in massing, and a shift in the pattern of openings on side elevations.

TOP ELEMENTS

	Roofscape	Roofscape should be staggered with occasional taller elements. A rectilinear, staggered roofscape should be considered. Roof terraces can be used.
	Rooftop Elements	Rooftop mechanical equipment including rainwater management infrastructure should be set back min. 4m from the edge of the building primary and secondary frontage and properly screened behind a parapet, or in an enclosure, to avoid visibility from the main road.
	Parapets	Parapets should be flush and integrated into the building's facade.

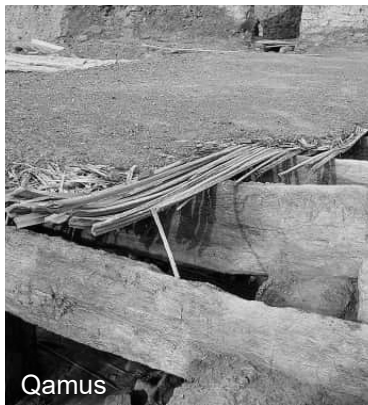
OTHER ELEMENTS AND ORNAMENTATION

	Materiality	See expanded guideline (materials and color in guidelines section 4)
	Color	See expanded guideline (materials and color in guidelines section 4)
	Pattern	See expanded guideline (patterns in guidelines section 5)

Top



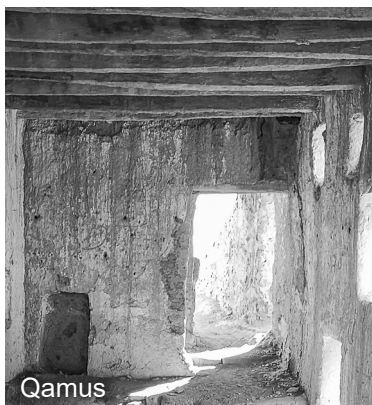
Al - Awared
Timber roof construction



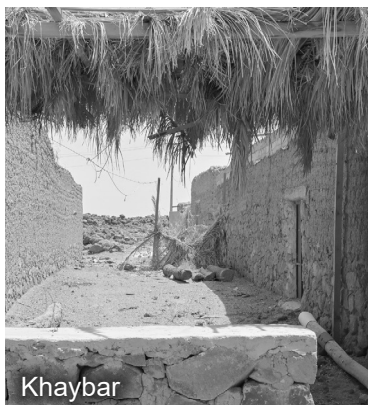
Qamus
Traditional roof beams



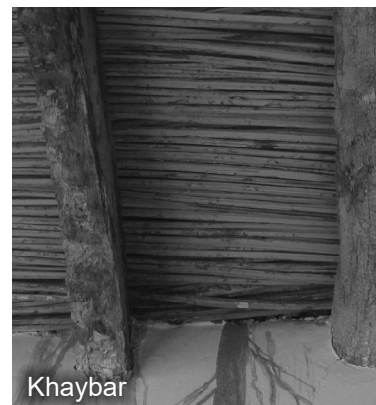
Khaybar
Projecting traditional timber drainage



Qamus
Timber construction

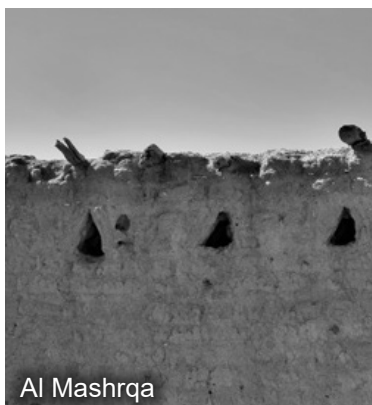


Khaybar
Thatched hay roofing

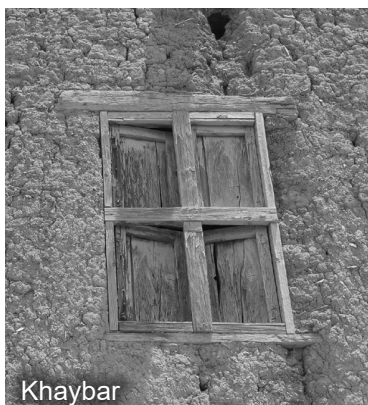


Khaybar
Roof detail

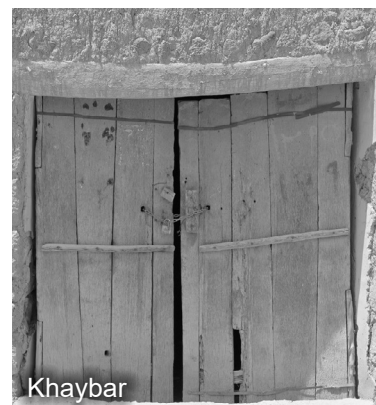
Middle



Al Mashrqa
Typical triangular openings



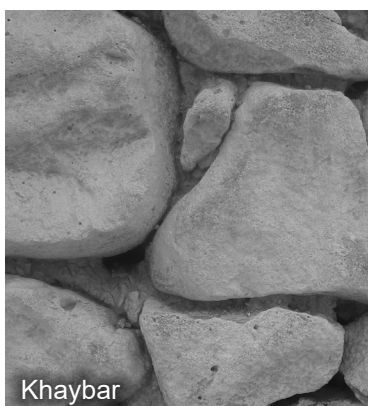
Khaybar
Painted timber shutters



Khaybar
Traditional wooden shutters



Al - Awared
Timber drainage

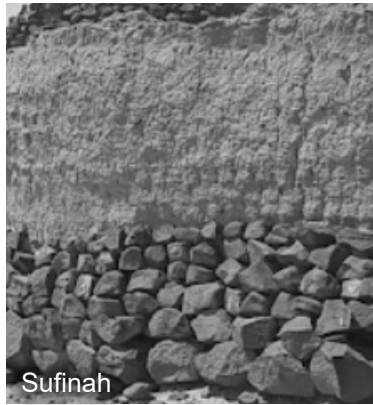


Khaybar
Stone

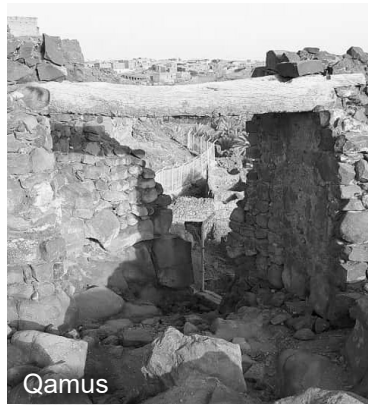


Khaybar
Earthen brick

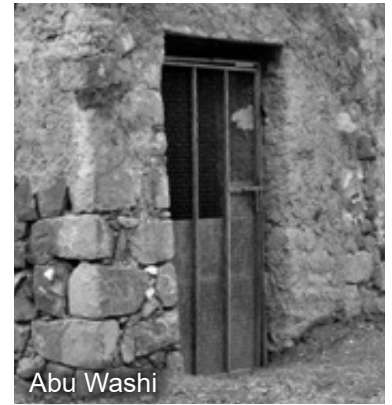
FIG. 29 Examples for top and middle elements

Base

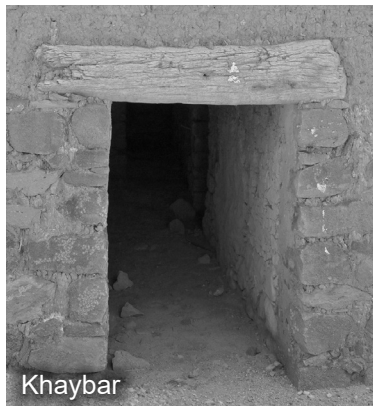
Sufinah
Stone at base, adobe above



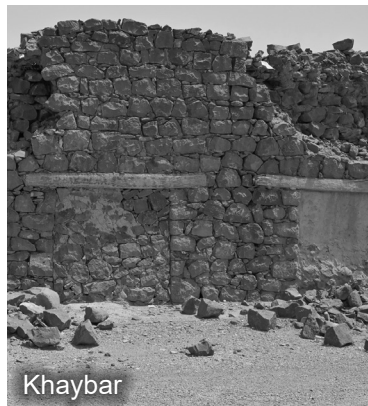
Qamus
Palm tree lintel



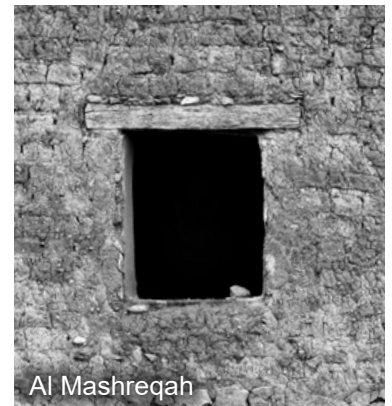
Abu Washi
Recessed timber door



Khaybar
Palm tree lintel



Khaybar
Lava stone and wood



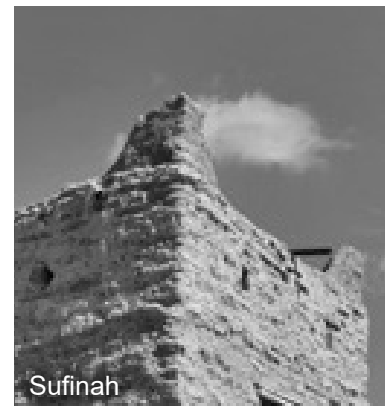
Al Mashreqah
Simple openings, timber lintels

**Ornament
and other
elements**

Al-Nazzar
Covered courtyard



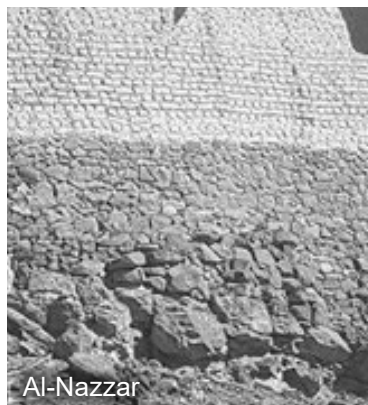
Sufinah
Projecting rainwater pipes



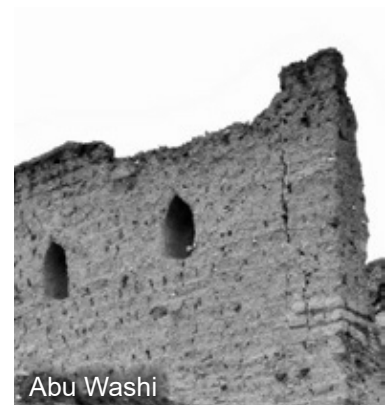
Sufinah
Finials



Sufinah
Finials



Al-Nazzar
Stone layers



Abu Washi
Finials

FIG. 30 Examples for base and other elements

3.1 Doors and entrances

Doors and entrances in the Madinah Rural area are typically relatively simple, in keeping with the overall facade treatment. New buildings should:

- 1 Clearly articulate primary entrances. Door framing and recessing can add depth and create a sense of entry.
- 2 Use wood, stone, and earth materials to articulate entrances. Consider using materials that are local to the area.
- 3 Accentuate the character of the entrance through the choice of height and proportion.
- 4 Consider the use of door lintels.

To create legible entrances which are carefully integrated within the base of the building, responding to the character of the adjacent landscape

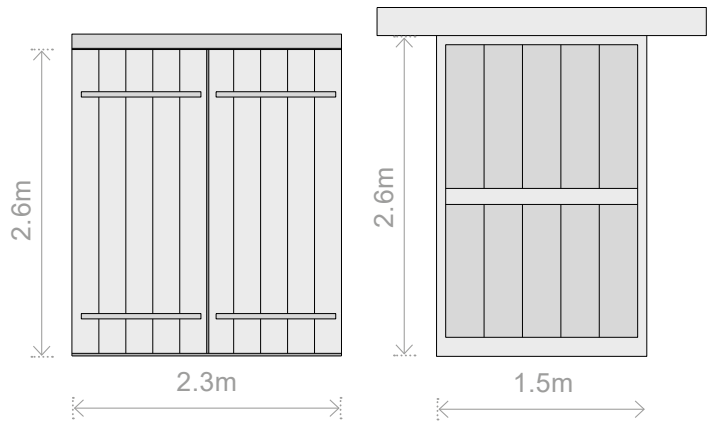


FIG. 31 Traditional door elements



FIG. 32 Contemporary door elements

3.2 Windows and openings

Windows and openings have a distinctive presence as part of the overall composition of facades in Madinah Rural. New buildings should:

- 1 Use wood, stone, and earth materials to articulate openings. Consider using materials that are local to the area.
- 2 Include windows which are square or rectangular in proportion. Other openings can adopt a range of geometric shapes including square or rectangular.
- 3 Recess smaller triangular windows. Timber-framed windows should be flush with the facade.
- 4 Respond to climatic conditions. Regular smaller openings are more appropriate along south / east / west facades. Smaller window openings also contribute to the character and add interest.
- 5 Arrange windows in horizontal patterns, with a single type per row. Traditional forms sometimes adopt a more irregular spacing across conjoined frontages. Contemporary forms should consider clearer alignment across building groups where topography allows.
- 6 Incorporate vertical alignment of openings and windows in different horizontal planes.
- 7 Provide visible wooden beams above windows.

To respond to environmental and climatic factors and create facades which are recognizable to the character area

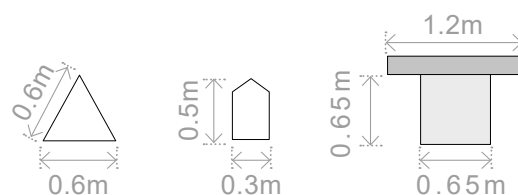


FIG. 33 Traditional openings

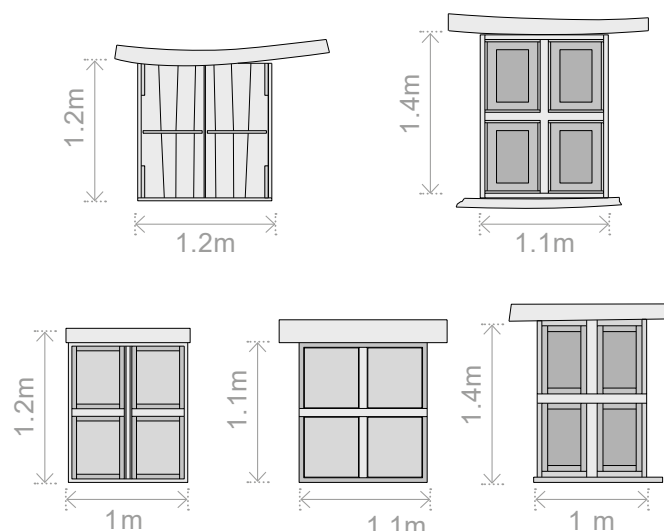


FIG. 34 Traditional windows

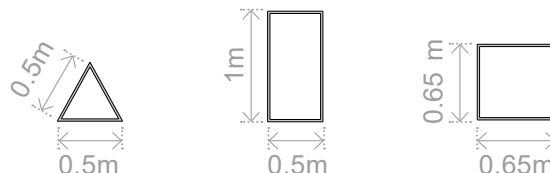


FIG. 35 Contemporary openings

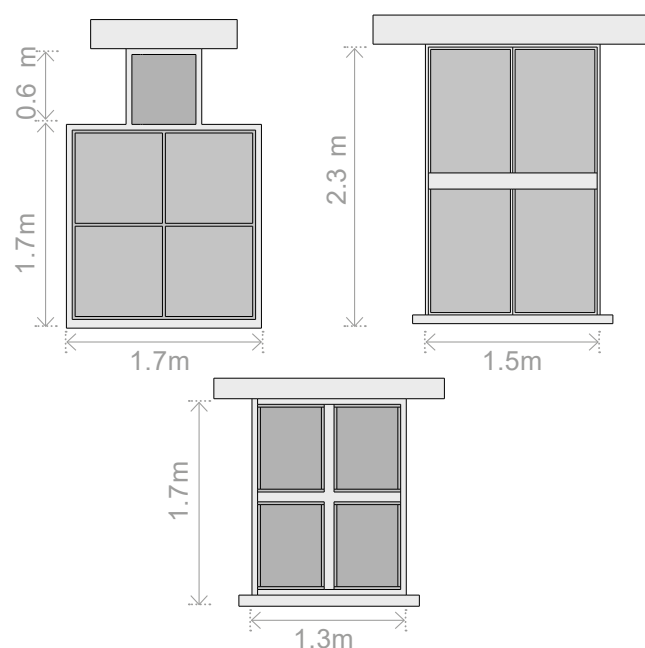
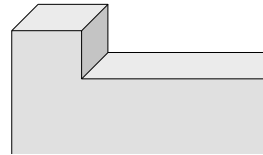
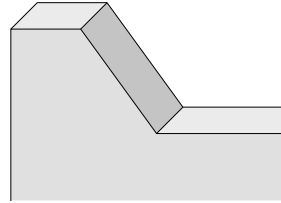


FIG. 36 Contemporary windows

3.3 Rooftop elements

The traditional roofscape of Madinah Rural has a distinctive character. New buildings should:

- 1 Incorporate a flat parapet which is flush with the structural wall, and integrated into the facade.
- 2 Encourage a rectilinear, staggered roofscape as part of broader conjoined buildings and compositions.
- 3 Typically exclude rooftop activation, although consider opportunities for external rooms in more contemporary forms.
- 4 Provide finials to mark the corners of parapets of larger buildings.



To express the organic form and character of the traditional townscape character in Madinah Rural

FIG. 37 Rooftop elements

3.4 Other elements

Other elements which should be considered include spouts for drainage purposes as illustrated in 3.1 Rooftop elements.

To embed other elements which are frequently part of the overall composition of buildings

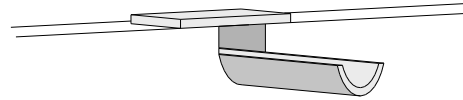


FIG. 38 Other elements

4 Colors and materials

The prevalent materials used and color range characteristic of the traditional architecture of Madinah Rural.

Buildings have a relatively simple color palette which is closely attuned with the local landscape and geology.

- 1 Buildings in the Madinah Rural character area commonly use stone, wood, and earth. Foundations are frequently made of stone, while upper walls and levels are made of stone or mud brick.
- 2 The use of stone is a direct response to local climatic conditions. Stone assists in increasing the durability of the building, also mitigating against flooding. Wood is often utilized for overhangs and to frame building openings.
- 3 The principal materials are reflected in the typical colors of buildings, with light grays around the base, and earth tones in the middle and upper levels.
- 4 New buildings should draw inspiration from the adjacent palette and select material finishes and colors that are compatible with it.

To maintain the vernacular context which is in keeping with the area's landscape character.

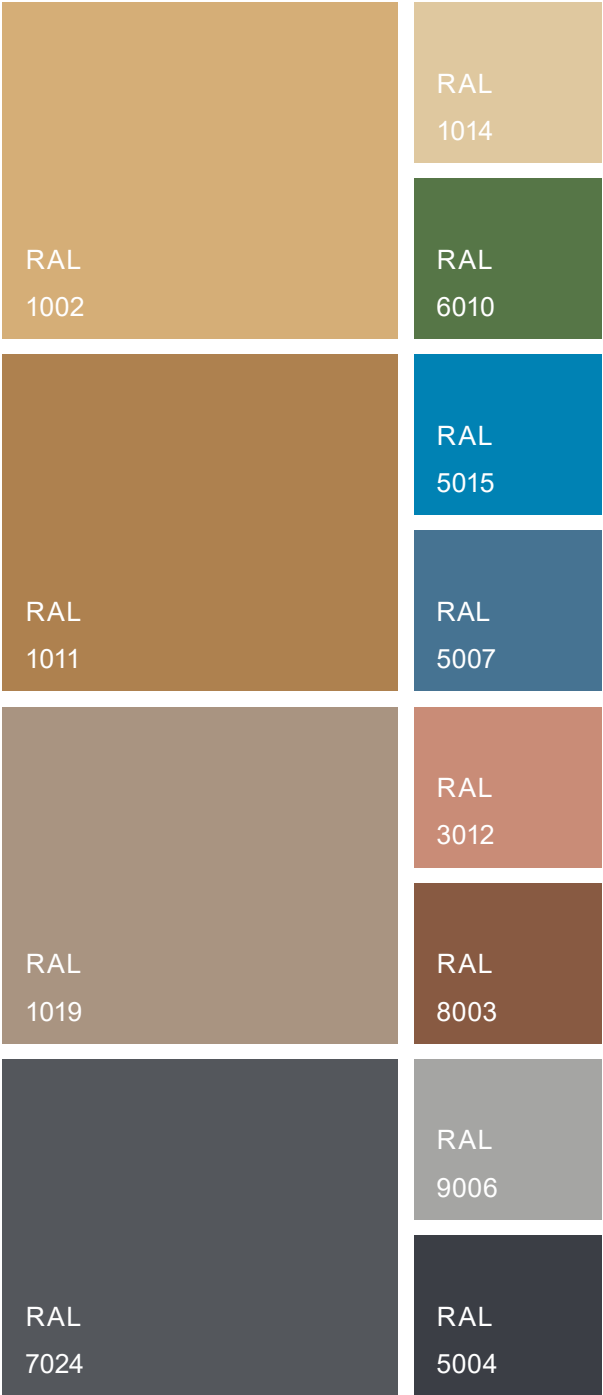


FIG. 39 RAL color palette
RAL codes are part of a universal color-matching system used to provide consistency in architectural finishes. It is recommended that teams verify colors with a physical fan deck. For more information visit www.ral-farben.de/en/

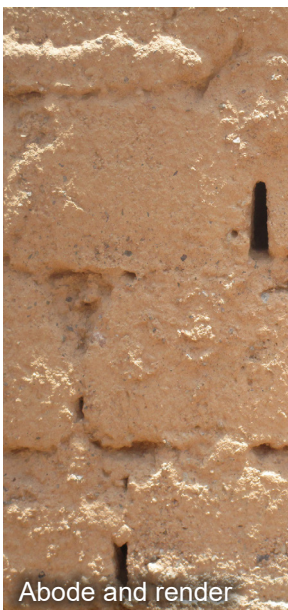
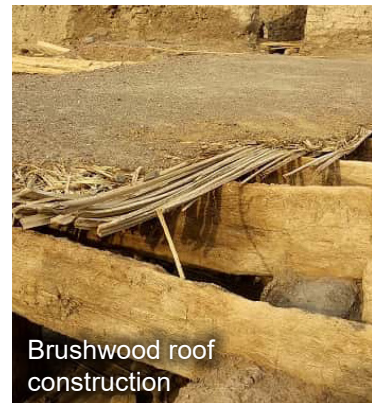


FIG.40 **COLORS AND MATERIALS**

5 Patterns

Common motifs and patterns used in the traditional craftsmanship and material culture of the Madinah Rural architectural character area.

Patterns in the Madinah Rural character area are typically derived from the composition of different materials, or from the use of small simple geometric openings.

- 1 Use local materials to create distinct patterns which embody local context.
- 2 Use contrasting materials for the base and upper levels of the building.
- 3 Use surface patterns sparingly with simple geometric openings only.
- 4 Ensure that patterns are used consistently on decorative elements to maintain consistency across the building.

To add interest to facades to provide subtle differentiation to buildings.

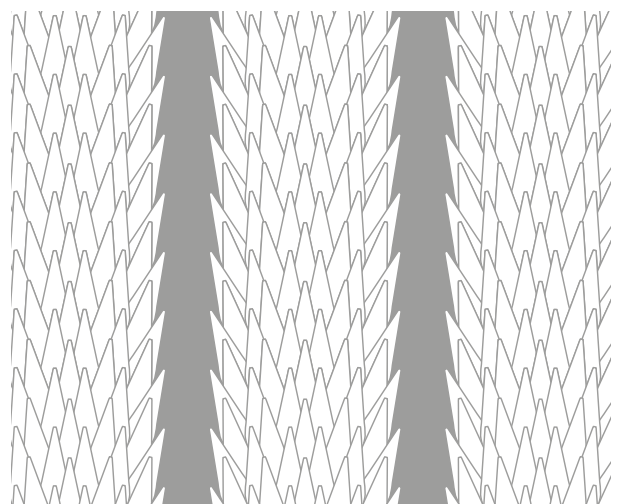
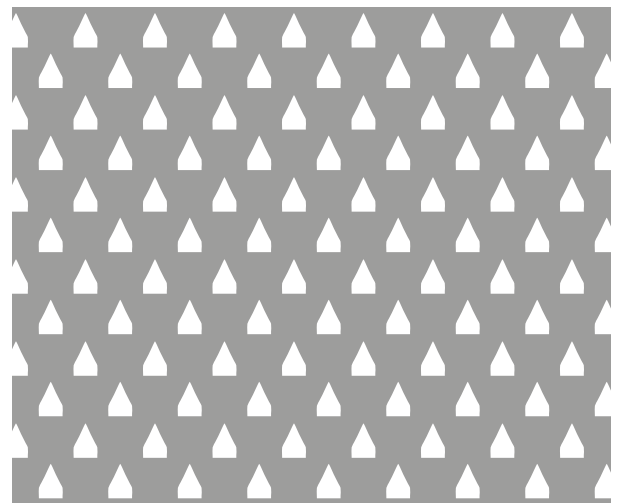
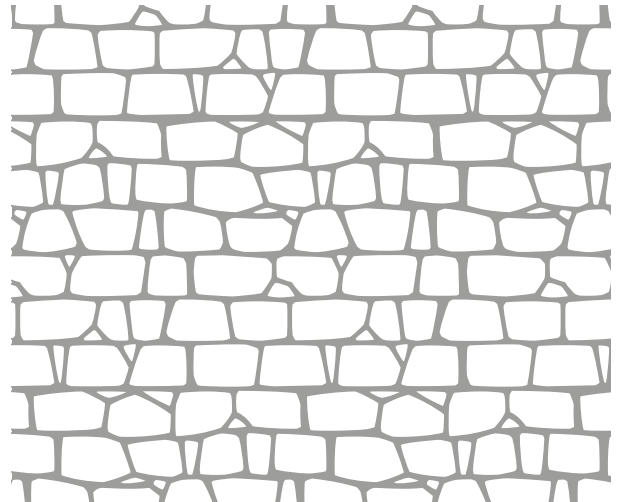


FIG. 41 Patterns abstraction

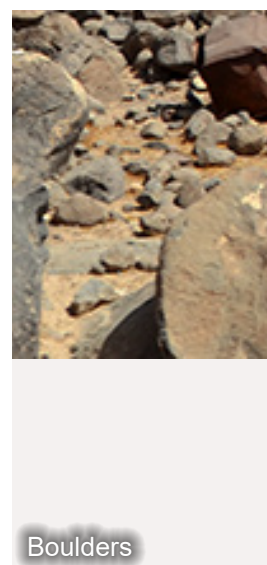
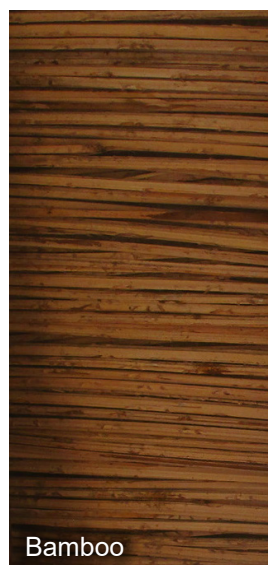
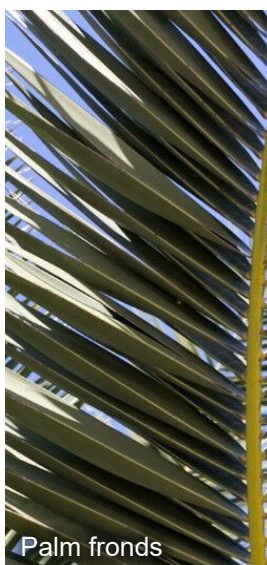
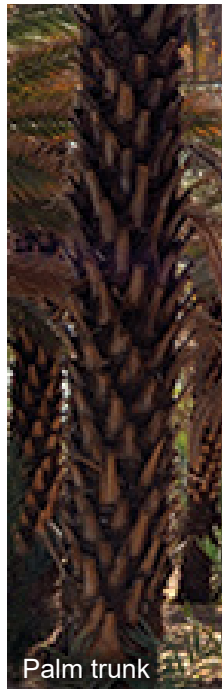
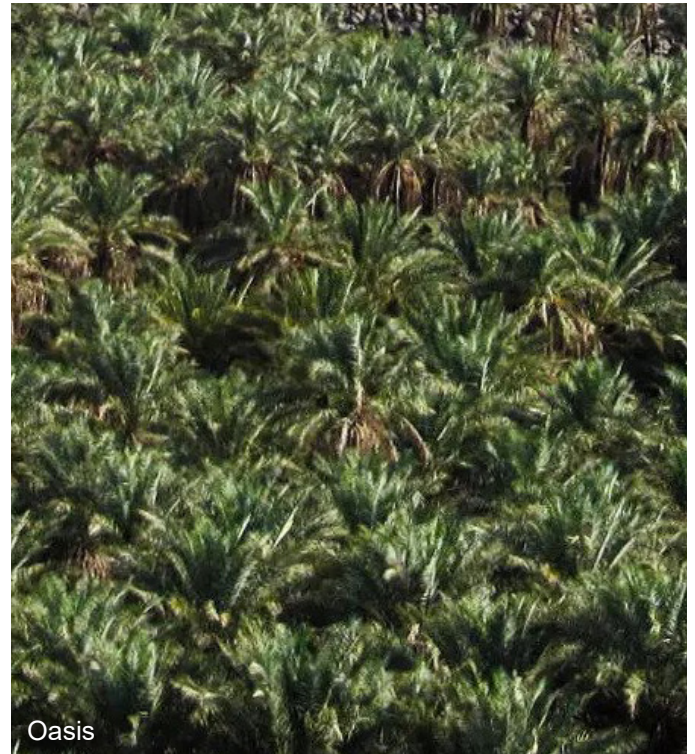


FIG.42 **PATTERNS**

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.

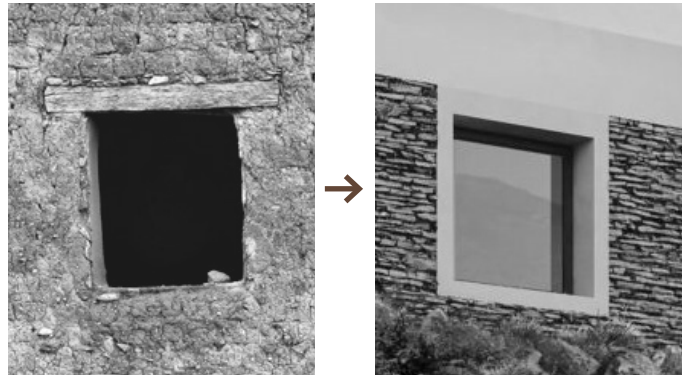


FIG. 43 Example of building material abstraction*

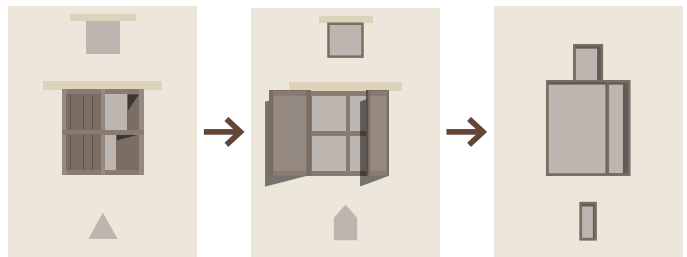


FIG. 44 Example of opening shape abstraction*

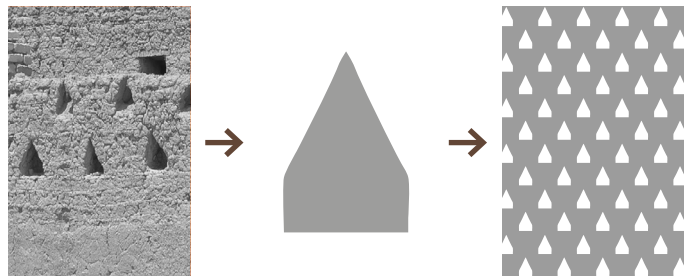


FIG. 45 Example of pattern abstraction*

*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 Rural Madinah 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.

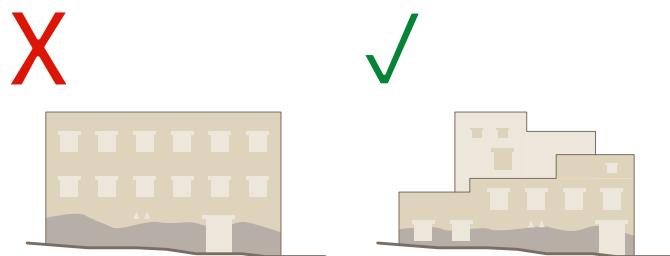


FIG. 46 Break down building massing to better fit traditional architectural elements *

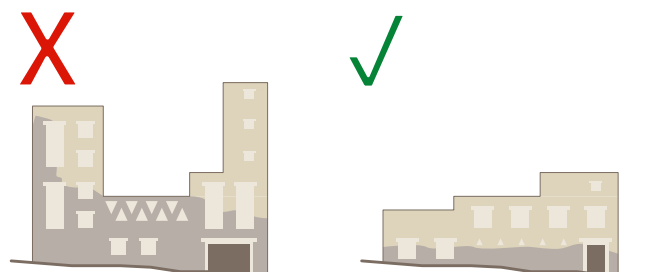


FIG. 47 Do not scale and distort smaller elements into oversized graphic features*

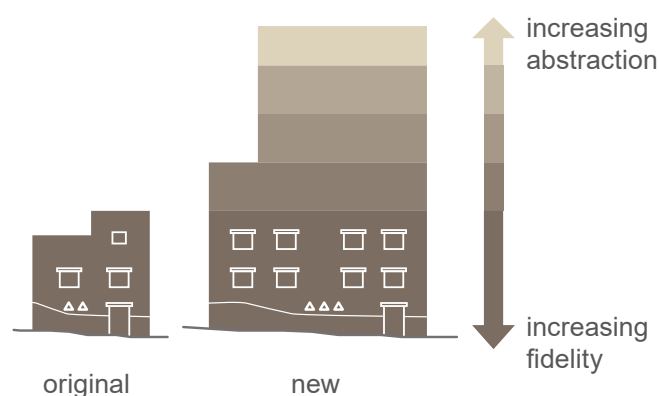


FIG. 48 Pay attention to building elements near the public realm, especially at the ground floor*

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.

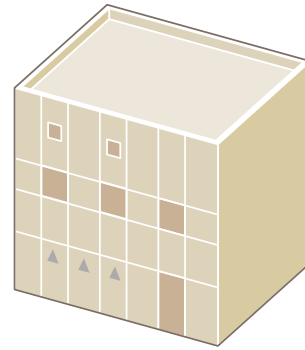
To maintain the functionality of architectural elements.

6.4 Adaptation

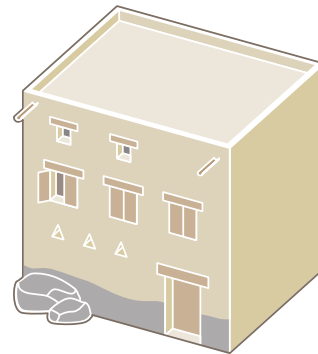
The application of traditional architectural characters to new building types requires sensitive adaptation.

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

To apply architectural character through contemporary means.



Superficial window screens



Functional window screens

FIG. 49 Functional use of architectural elements*

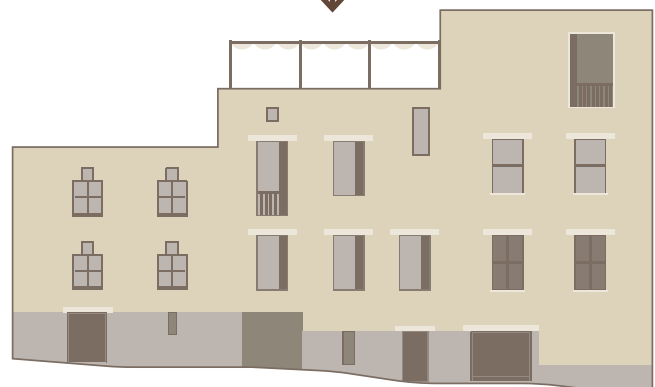
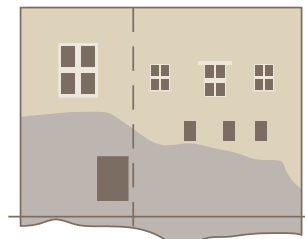


FIG. 50 Adaptation of traditional architectural elements to a contemporary building*

*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 Rural Madinah 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, particularly in peripheral sites far from the core of the character areas.

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

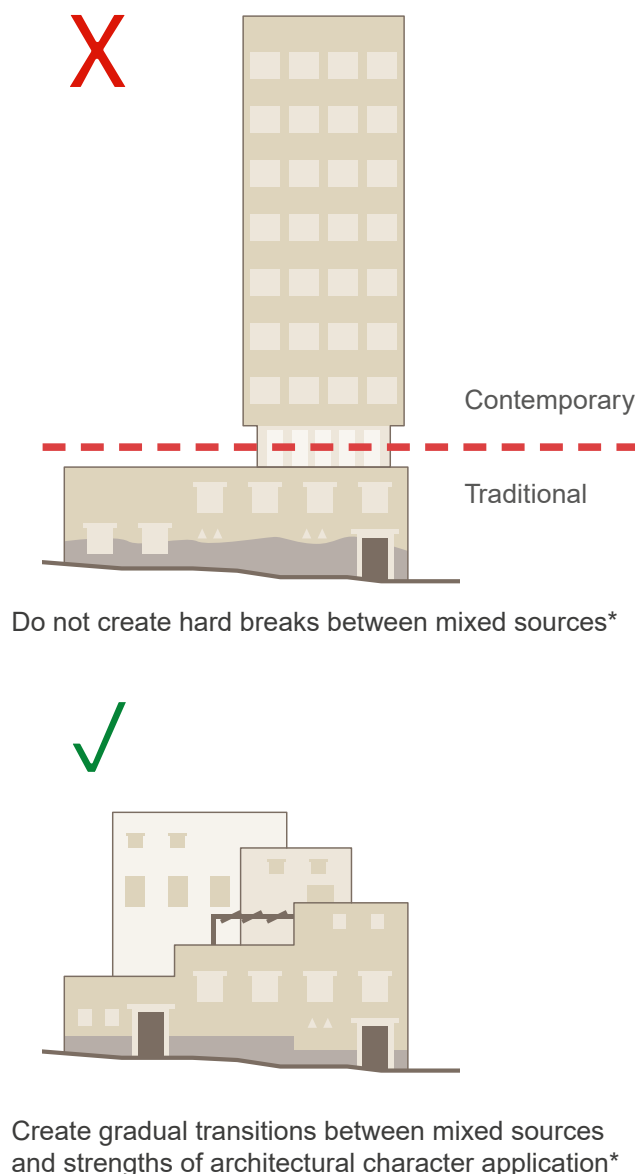


FIG. 51 Appropriate mixing of sources

7 Worked examples

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

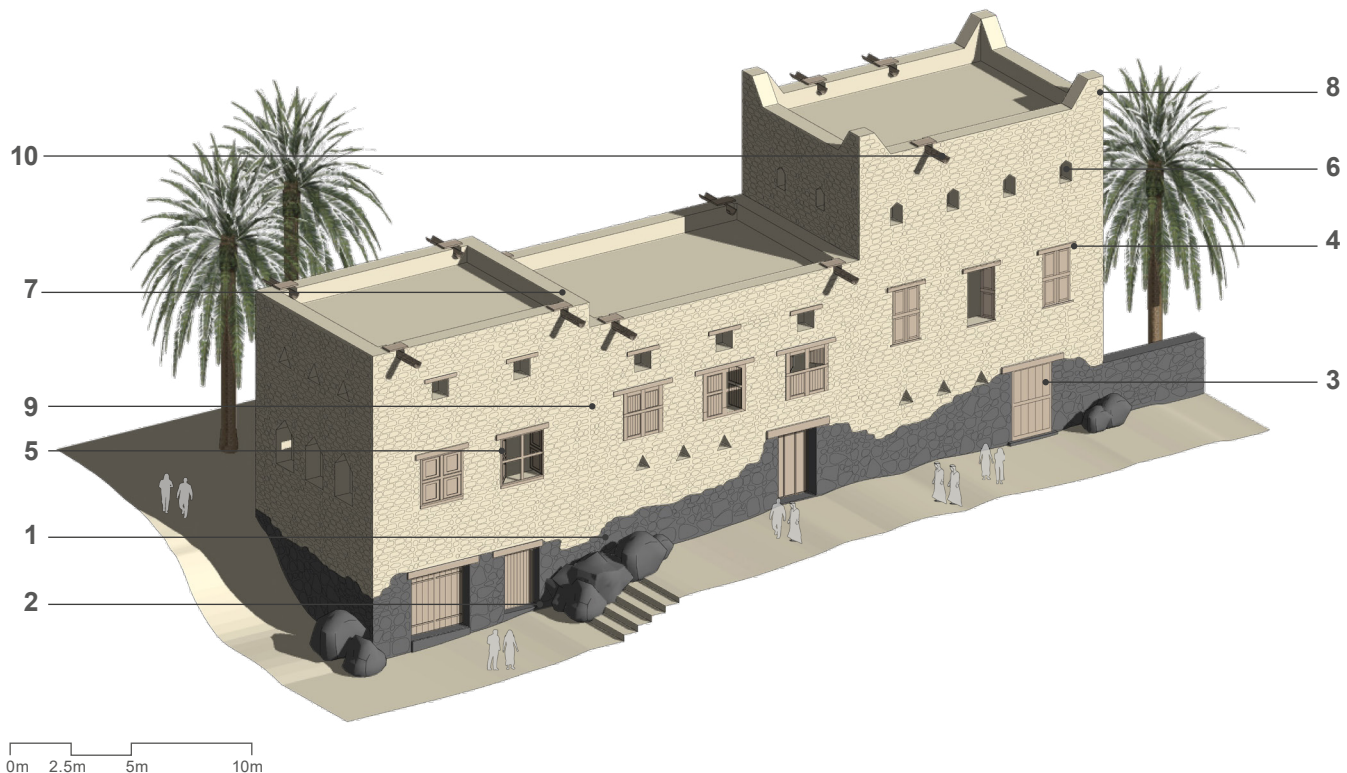


FIG. 52 Small size building

7.1 Traditional

The traditional worked example features a very strong application of the guidance in sections 3 to 5. This is particularly evident in the tonality and texture of the base and middle / upper levels, and the approach to fenestration and openings.

- 1 Coarser lava stone base with darker gray tones and organic transition to earthy mudbrick tones and textures above.
- 2 Presence of larger rocks, and clear connection with the landscape and local topography.
- 3 Doorways set to one side, with simple ornamentation.
- 4 Irregular horizontal alignment of windows across facade.



FIG. 53 Medium size building

- 5 Square window openings with expressed lintels, and some variation in sizes between the different building volumes in a conjoined group.
- 6 Square and triangular openings, including some at a lower level above the base, and some beneath the parapet.
- 7 Shallow parapets which step between buildings across conjoined groups.
- 8 Tallest buildings include finials on corner of parapets.
- 9 Smaller sized buildings are typically 2 to 3 stories, with story levels sometimes hard to read across the facade due to irregular spacing and window position.
- 10 Presence of drainage spouts in parapets.
- 11 Incorporation of semi-private courtyards as part of larger forms of development.
- 12 Covered openings to create connections to courtyards.

To create a strong connection and celebration of the Rural Madinah vernacular.



FIG. 54 Small size building

7.2 Transitional

The transitional model is a progression of the traditional form, without embracing all elements of the contemporary model. Many of the traditional features remain present, but some variations signal an evolution and reinvention of specific elements.

- 1 The transition from base to middle layer of the building continues to be marked by the change in tone from darker grays, to a more earthy color. Shifting construction methods are reflected in a more rational transition plane.
- 2 Openings are square in proportion with expressed lintels, with groups positioned in an irregular alignment across conjoined facades.



FIG. 55 Medium size building

- 3 Ventilation openings adopt a consistent geometric style, size and position with the traditional model.
- 4 Shallow, flat parapets step between buildings in conjoined groups. Absence of outdoor roofspace in small building. Drainage pipes avoided in front elevation.
- 5 Simplified finial form on parapets of largest buildings.
- 6 Incorporation of semi-private courtyards as part of larger forms of development.
- 7 Covered openings to create connections to courtyards.

To ensure that transitional buildings create a clear continuity between traditional and contemporary forms.



FIG. 56 Small size building

7.3 Contemporary

The contemporary model ensures buildings conform to modern regulations with regard to energy, safety and other building standards, relevant to all new buildings. The model seeks to reflect changes in construction and availability of skills and materials, and also incorporates adaptation to respond to modern ways of living and working.

- 1 The overall form follows similar massing and proportions to those of more traditional buildings, with taller buildings sensitively extruding traditional forms.
- 2 The overall wall to opening ratio retains a fairly consistent approach with traditional proportions with potential for adjustments including more generous window sizes.
- 3 Windows are aligned horizontally as a distinct variation with traditional forms.
- 4 Windows and doors are translated into abstracted versions of original forms. The simplicity of the traditional style remains,



FIG. 57 Medium size building

but they adopt a more rectangular proportion with recessed balconies.

- 5 The transition from base to middle has a more defined plane. There is potential to articulate larger building forms by allowing a symmetrical step in the base material to envelope the lower window grouping.
- 6 Rooftop inhabitation encouraged, with shaded terraces and concealed MEP areas incorporated.
- 7 Finials are not present on building parapets.
- 8 Incorporation of semi-private courtyards as part of larger forms of development.
- 9 Covered openings to create connections to courtyards.

To create opportunities for simple, attractive design solutions which celebrate the essential characteristics of the area, and respond to changing ways of living and working.

8 Public realm

An overview of public realm character in Madinah Rural.

8.1 Overview

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

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



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

FIG. 58 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 character area distinctive character.
- **Materials** - A summary of hardscape character for the architectural character area.

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

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

8.2 General character

The adjacent photographs summarize the typical characteristics of public realm and local landscape in Madinah Rural. As set out in the introduction, the architectural character area is characterized by the meeting of the Harrat landscape and adjacent oases.



Sloped terrain



Fort



Boundary walls



Market square baraha



Narrow covered zuqaq



Oasis



Fabric strings



Narrow zuqaq shaded by tall walls



Boundary condition

FIG.59 PUBLIC REALM

8.3 Types of public space

Madinah Rural's 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 character of Madinah Rural.

The plan illustrates a typical hierarchy of urban spaces and streets in Madinah Rural.

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.

- Large baraha: Larger local space which is more likely to include adjacent commercial uses.
- Small 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. 60 Typical urban plan

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

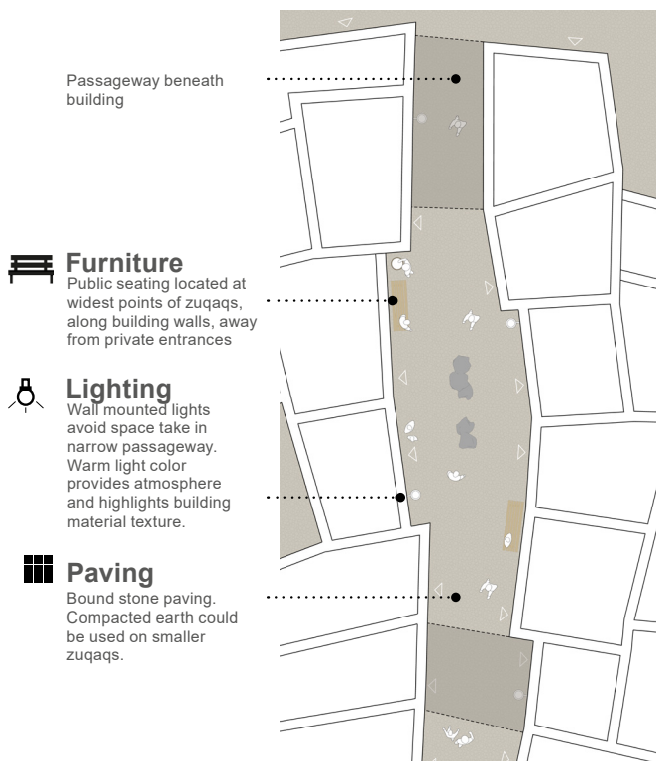


FIG. 61 Zuqaq
No vehicle access.

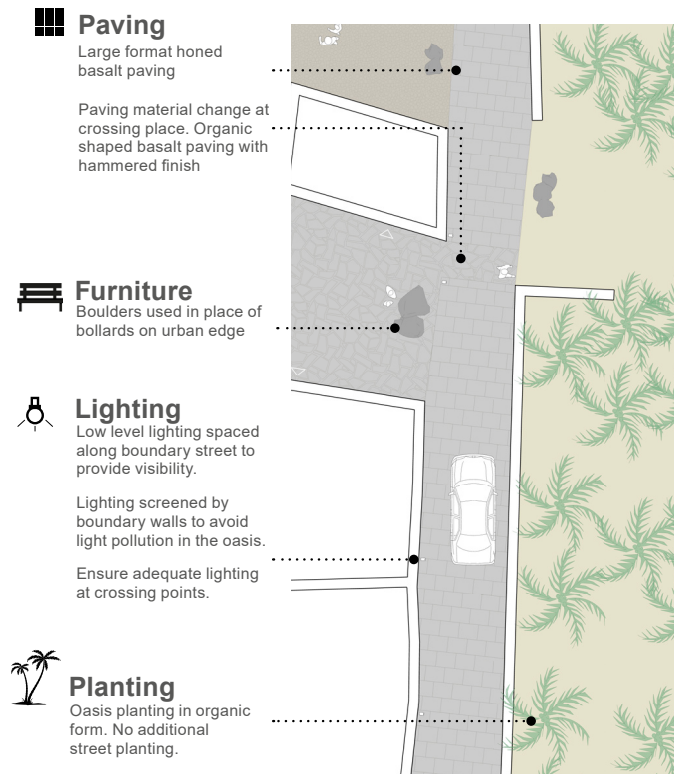


FIG. 62 Street on oasis edge
Vehicle access. Should allow connections to oasis.

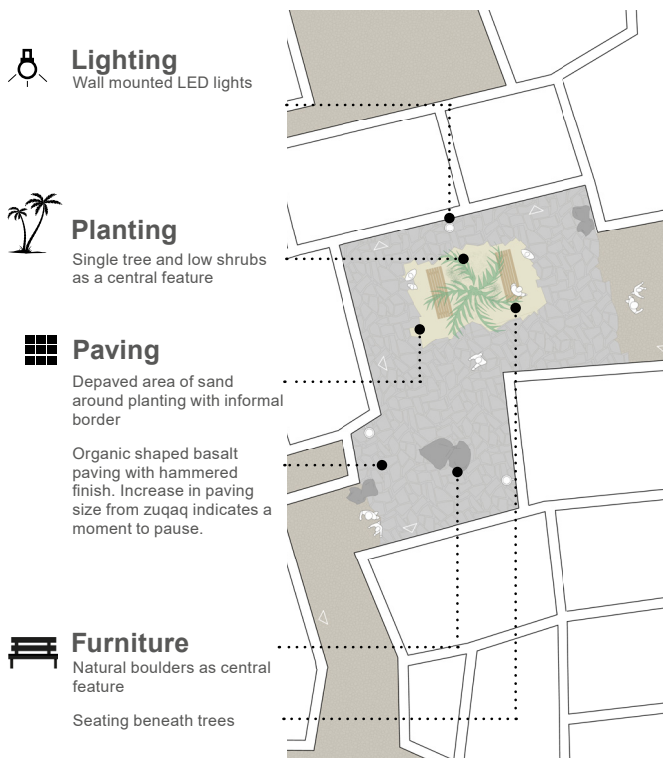


FIG. 63 Small baraha
Trees should be used in baraha located close to the oasis. Baraha furthest from the oasis could use a canopy for shade.

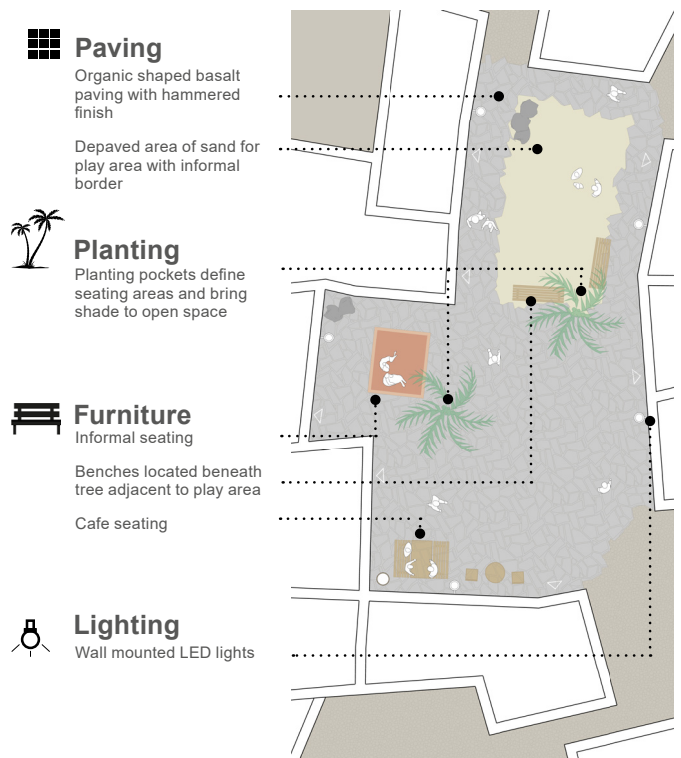


FIG. 64 Large baraha
Varied seating types/ uses. Depaved area for play.

8.4 Materials

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

Key considerations

- 1 Select locally sourced Saudi materials with low embodied carbon and high content of reused or recycling aggregates (for non-natural materials).
- 2 Areas with higher footfall should have higher specification and materials that are durable, minimizing the need for regular repair and replacement.
- 3 Re-use materials, where possible formed from waste material.
- 4 Where possible, deliver materials using sustainable means of transport.
- 5 Select materials that have longevity and that can be easily cleaned, repaired and sourced with high-quality materials replaced like for like.
- 6 De-pave where possible to improve the microclimate and use sands or aggregates in place of paving.
- 7 Materials should provide varying textures within a simple color palette to complement the area's character.
- 8 Employ subtle changes to paving to highlight difference between typologies.
- 9 Make good existing streetscapes and ensure materials are replaced only when necessary to minimize carbon footprint.
- 10 Use larger paving format to emphasize more prominent routes.
- 11 Consider incorporating special patterns to emphasize important spaces.

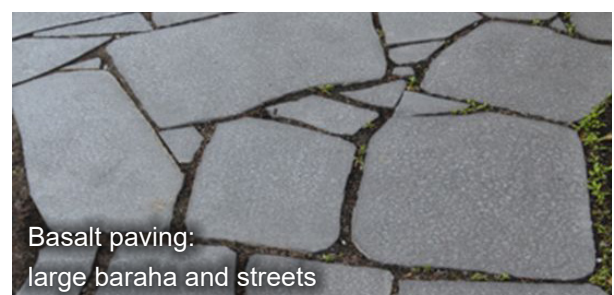
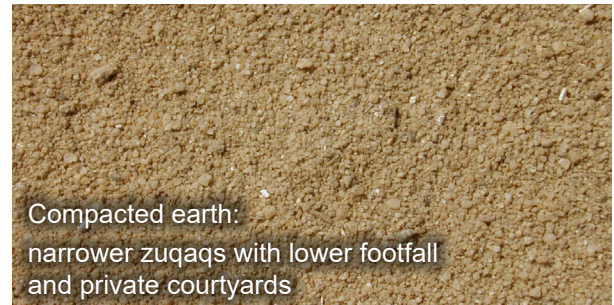


FIG. 65 Public realm material references

8.5

Planting

Tree planting should complement the overall character of the Madinah Rural area, helping to shape places and enable planting through sustainable means.

Key considerations

1 Water must:

- Be considered carefully, responding to the local microclimate, water availability and landscape character.
- Use drought tolerant and water sensitive species

2 Trees should:

- Adopt an informal layout, avoiding overly linear or formal planting.
- Only be planted where shade can be best utilized or where shade is necessary to encourage using the public realm.
- Make a characterful contribution to the quality of routes and spaces. Consideration should be given to how a tree is seen and how trees can be used as wayfinding markers.

3 Planting should:

- Be relatively limited within the urban area, mainly in baraha areas. Contribute to maintaining and enhancing oasis areas, using multi-layered planting where appropriate comprising a variety of palm species, fruit trees and fodder grasses.
- Consider additional habitat value such as fruits for birds, etc.
- Understory and decorative planting should be minimized. If under story planting is necessary, it should be functional e.g. herbs or edible.
- Have a palette which aims to use both native plants and those that have locally adapted.

Trees



Shrubs

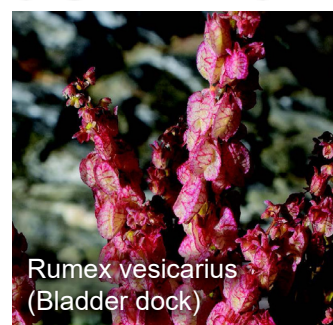
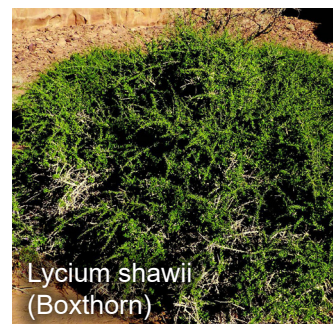


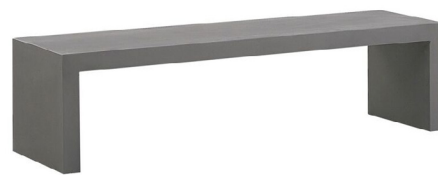
FIG. 66 Planting references

8.6 Street furniture

Street furniture should be carefully selected to provide continuity and co-ordination, limiting clutter. Colors and style of furniture should blend into the context rather than stand out as features. In general, the design of street furniture should 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 Consider 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 have suitable heights and have backs or armrests.
- 7 Be of high quality, coherent, and rationalized to minimize street clutter.
- 8 Have a co-ordinated appearance, with a consistent material and color palette to complement character.
- 9 Avoid duplication by rationalizing and combining elements.
- 10 Be easily maintained and repaired with replaceable components, and retained and improved where existing furniture has heritage value.
- 11 Boundary walls should contribute to the landscape character and setting of the region. The use of bare concrete block is discouraged.
- 12 Boulders should be considered in place of bollards.



Seating



Fabric canopy



Boundary walls



Informal play

FIG. 67 Street furniture references

8.7 Lighting

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

Key considerations

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

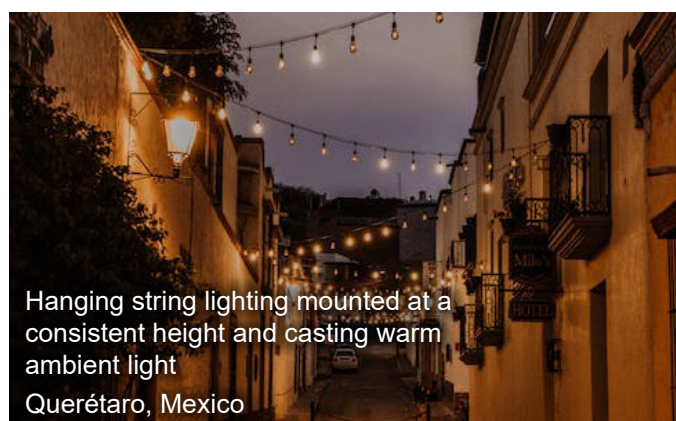
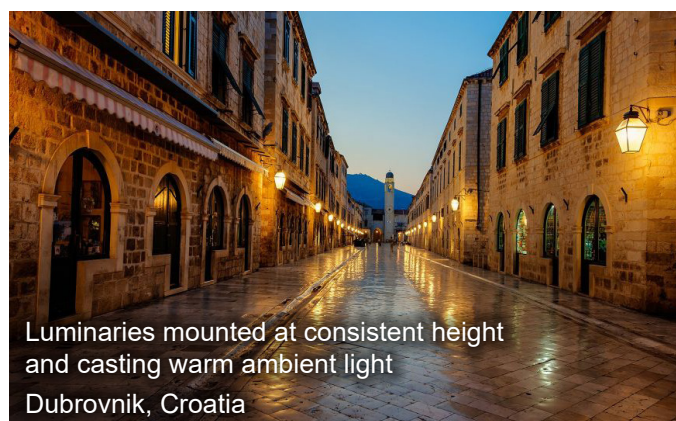
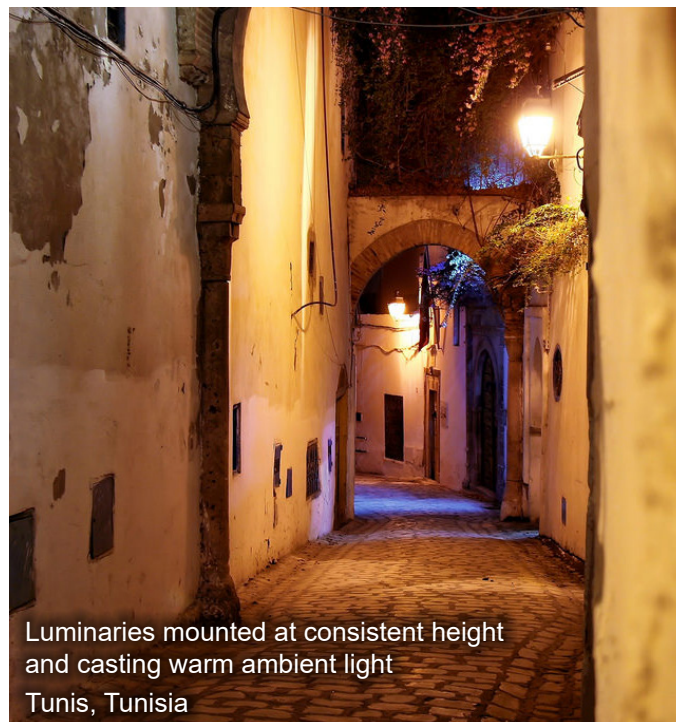


FIG. 68 Lighting references

8.8 Signage

Signage should play a vital role in supporting good wayfinding across settlements in Madinah Rural. An appropriate signage strategy will contribute to a positive experience of navigating streets and spaces.

General considerations for signage are set out below:

- 1 Establish an appropriate distribution of signage based on analysis of the hierarchy of routes, and location of destinations or key buildings. Focus the position of signage where it is most suitable, for example between key destinations or at important intersections.
- 2 Use visual markers such as locally appropriate planting, paving, lighting and frontages to enable intuitive wayfinding.
- 3 Embrace signage design which is bespoke and complementary to the character of Madinah Rural.
- 4 Avoid large totems, signposts and obstructive signage that detracts from the public realm appearance.
- 5 Adopt a light touch approach to signage which aligns with the scale of routes and spaces. For example, signage could be wall-mounted, in paving or mounted on sensitively designed light columns.
- 6 Ensure that the approach to materials, font, color and size of signs is sensitive and appropriate to the local context.
- 7 Ensure signage and wayfinding are accessible and intuitive to all people including those with visual impairment and of different languages, through innovative use of symbols, color and texture.



FIG. 69 Sensitive integration of street signage



FIG. 70 Ornamental signage

8.9 Parking

The approach to parking is a key component in the overall approach to the public realm. The appropriate location and design of parking has the potential to enhance the experience of moving across for streets and spaces for people.

General considerations for parking are set out below:

- 1 The design of streets and spaces should seek to prioritize the experience of people movement. In general, efforts should be made to find more space for pedestrians, avoid obstructive parking locations, integrate pedestrian crossings in suitable locations and manage traffic speeds.
- 2 The position of parking should enable the provision of greater space for pedestrians in shadier areas. On-street parking should be rationalized, with the incorporation of appropriate surface treatment of parking to achieve an increased footway width.
- 3 Tree planting should be integrated between bays to create greener streets.
- 4 Access to parking areas should be considered at the outset of the public realm design process.
- 5 Where appropriate, spaces that are currently dominated by car parking could be re-imagined as public spaces by relocating parking underground. Alternatively, some parking might be reduced alongside improvements to walking, cycling or public transport, or relocated to the edge of central destinations.
- 6 Access to smaller spaces or streets should be restricted to local private vehicles access
- 7 Local businesses to agree the timing of servicing to minimize the impact on areas with high pedestrian footfall.
- 8 Parking bays should adopt a surface treatment which is suitable to the local area and scale of the street or space.
- 9 In larger accessible spaces where unlawful parking is a concern, limited use of bollards should be considered.
- 10 Cycle parking should be carefully integrated to the public realm and be positioned at local destinations including shops, souks, mosques or transport hubs.
- 11 Cycle parking should respond to the width of streets. On narrower streets, parking should be parallel to the curb edge and on wider streets, stands can be perpendicular to the curb.



FIG. 71 Integration of parking bays in streetscape

8.10 Public realm worked examples



FIG. 72 View of local street in Madinah Rural

The worked public realm examples above illustrate typical spaces in Madinah Rural. The illustrations seek to demonstrate the application of some of the main public realm principles. Specific opportunities and features are annotated on the images above.

Proposals for key spaces and streets should prioritize the following public realm moves:

- 1 Embrace connections with the distinct landscape and topography of Madinah Rural through the use of materials, and the creation of spaces and streets work with the terrain.
- 2 Adopt a locally sensitive planting strategy, using palms to bring streets to life and create shade.
- 3 Create suitable scales of space, including smaller squares to serve neighborhoods and connect to adjacent wadi areas.
- 4 Develop a pedestrian friendly, walkable environment.
- 5 Establish comfortable experience for residents and visitors, as part of a vibrant urban setting.
- 6 Reinforce a clear hierarchy of streets and spaces as part of a local network.



FIG. 73 View of neighborhood square in Madinah Rural

- 7 Create a range of scales of space, including larger public spaces, smaller neighborhood squares and tighter, well-shaded streets.
 - 8 Adopt an integrated approach to the provision of street trees, planting and drainage features to create shade, and establish green, resilient places.
 - 9 Coherent approach to the activation of key streets and spaces, identifying suitable locations for retail and leisure.
 - 10 Embrace opportunities for public art to enliven space.
 - 11 Careful application of architectural guidelines to create places with a suitable scale, and appropriate character.
 - 12 Find opportunities to reinforce or create legible streets and wayfinding.
 - 13 Use the arrangement of space and buildings to create enticing glimpses, and longer views or vistas to key landscape features, civic or religious buildings as appropriate.
- To create a welcoming, comfortable and walkable network of streets and spaces**

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