حكومة دبي
GOVERNMENT OF DUBAI

بلدية دبي
Dubai Municipality

# HATTA

## URBAN DESIGN & PUBLIC REALM GUIDELINES

This page is intentionally left blank



# HATTA

## URBAN DESIGN & PUBLIC REALM GUIDELINES

# CONTENTS

# Background

## A Shared Vision For Hatta

Dubai's 2040 Vision to create the a more liveable city is supported by the strategies and place-based plans that set out how to deliver it, as well as the development plans, which sets out the planning rules that are needed to shape what gets built and where.

Frameworks are living documents and will continue to evolve over time. They bring together vision, thinking and projects from across Dubai and other organisations.

The design guidelines are a design resource to guide development which are responsive and specific. What they seek to promote are developments that engage in intelligent, sensitive and interpretive dialogue with context and place. The outcomes should always contribute to reinforcing the over arching Vision for Hatta.

The purpose of these guidelines is to enhance Hatta's legacy, integrating the old with the new in one setting. This harmony can be achieved through a deep understanding of what makes Hatta distinctive.

## How Does The Guidance Relate To Planning Policy?

These guideline now forms the basis for master plan requirements in all areas that fall under Dubai Municipality's planning jurisdiction. It must be used in conjunction with other relevant standards and guidelines, as appropriate.

It is the responsibility of the developer and the consultant to ensure that the proposed planning applications conform with the requirements of these guidelines and all subsequent updates and all other applicable standards and guidelines (beyond the remit of this guideline).

The planning hierarchy diagram (opposite) outlines how Dubai Municipality collaborates with a number of other entities to plan, develop and maintain the Emirate's existing and future plans. These include a mix of public sector and private sector bodies.

While each entity is responsible for their domain, it is essential that their design approach for the quality of buildings, public realm and streets conform to a high and uniform standard to help create an identity of place, protect the environment and serve meaningful experiences and wellbeing for its users.

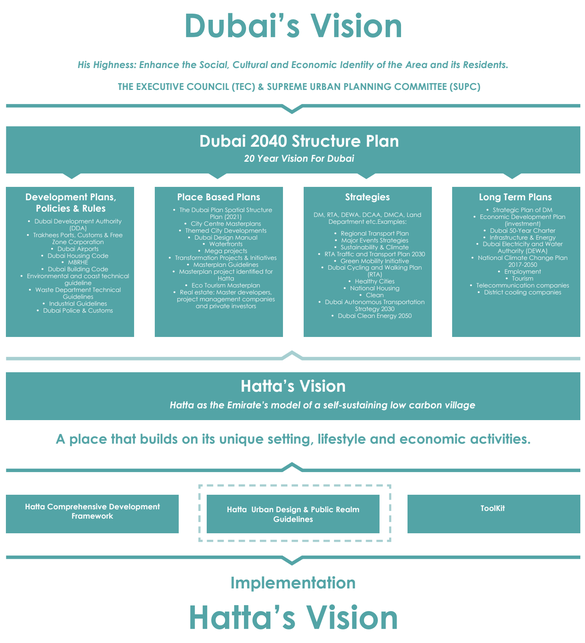



*Illustration 1.1 Alignment of Hatta's vision*

This page is intentionally left blank


# 1

# Introduction

# 1.1 Guideline Overview

This study is a non-statutory design guide and will be used by Dubai Municipality (as the planning determining authority) to inform discussions around character in pre-application meetings and within the general planning process.

For designers embarking on the earliest phases of a project without an existing planing permission, the guide provides a context driven design strategy. This resource is to be used as a springboard by designers to inspire creative responses to the context, rather than a prescriptive design code.

For designers operating within the context of an existing planning permission (where no details or guidance on how to respond to the local character exists either within the local planning framework or the existing permission) this guidance should be used to instill an identity and sense of place.

Dubai Municipality will look to align subsequent area masterplans and design codes to align with this guidance where possible. In both scenarios the study may also be used in the following;

- Design Statements
- Concept Masterplans (CMP)
- Full Masterplans (FMPS)
- Design Review Assessments

To demonstrate how the site analysis has informed the final design response, in terms of the urban structure and area masterplanning, street design, landscape design and building design.

## Step 1 >

## Review the Comprehensive Framework Plan to gain an understanding of Hatta's cultural heritage and landscape

The Comprehensive Framework Plan explores the landscape and cultural heritage of the Hatta area.

Design teams are invited to familiarise themselves with this analysis, and undertake their own research into related areas of interest, to help to inform and evolve their own design strategy for the masterplanning and architectural design of their project.

## Step 2 >

## Explore Hatta's design narratives

Design narratives are presented in this guide through a transect, to establish a direction for the urban form, architectural language and materials & detailing of Hatta, and help to define a character for each area.

Design teams should use these narratives as the basis for developing their design strategy.

The approach is one of *'comply or explain'*, where designers choosing to develop an alternative narrative will be expected to explain how the urban structure, architecture, materials and detailing have been derived from an analysis of the local cultural heritage or landscape character.

The narratives illustrated in this study have been tested and provide a baseline approach, against which alternative narratives will be assessed.





# 1.2 Guideline Structure

This Guide seeks to introduce the core principles of urban design and sustainability insofar as they relate to low carbon eco-village development. These principles have in turn been informed by the qualities of successful placemaking.

## Structure

The core aim of the guide is to provide developers, designers and planners with the information and support they need to improve the design quality and sustainability of the development in Hatta.

The Guidelines therefore seeks to fulfil a number of different roles. It needs to be useful when developers are selecting a site and briefing their design team; in helping to frame design statements and planning applications; and in helping planning authorities to assess the quality of submitted planning applications.

## Four Character Types

The following chapter sets out clear design guidance under four key character type conditions have been set out to encapsulate the range of design considerations for development.

- Wadis & Waterbodies
- Mountain
- Urban Villages
- Rural Development

The figure (opposite page) shows how built form and landscape design guidance has been set out under each of the four character context types.

Guidance is set out at a range of scales, from strategic level to more detailed design scale. Both mandatory and advisory guidance is set out under each of the contextual conditions.

In general, each section seeks to protect, restore and leverage built form, landscape and cultural heritage, to create distinctive identities in each spatial area type .In addition to the above guidance, general guidelines have also been proved towards the end of the report covering topics which might be applicable to each of the four areas.

The Design Guidance distinguishes between:

**(M) Mandatory Elements**

Must be adhered to obtain planning approval.

**(A) Advisory Elements**

Strongly encouraged, but are discretionary. Relating developments to advisory elements will aid the development contribute positively to a overall cohesive urban form for Hatta.

## Guidance Clarification

**Scenario 1:**

The character of each area (T1-T6) responds to specific guidelines derived from specific parameters. These parameters have been established after studying the specific site condition of each specific area. These areas are

Urban,

Rural, Mountains and Wadi & Waterbodies.

***Instance Where The Development Is Located Completely Within A Character Area Type (Example Of Urban And Rural)***


**Scenario 2:**

Due to the richness of the area there will be instances where the interface between area overlap. These cases shall have to be addressed on a case by case basis with the relevant stakeholders. The guidelines for each of the overlapping areas should be referenced to ensure they are being addressed. However the expertise of the project specific planning department and developers/designs teams will be required to create custom solutions with a holistic design approach.

***Instance Where The Development Is Located Across Two Character Area Types (Example Of Urban And Rural)***

# Guideline Structure

**HATTA URBAN DESIGN & PUBLIC REALM GUIDELINES**

**Introduction**

**General Development Context**

**Built Form** | **Public Realm**

**Character Area Specific Guidelines**

| Urban Character | Rural Character | Wadis & Waterbodies | Mountains & Hillsides |
|---|---|---|---|
| **Built Form**<br>Scale, Continuity, Rhythm, Balance, Emphasis And Contrast<br>Appropriate Typologies | **Built Form**<br>Scale, Continuity, Rhythm, Balance, Emphasis And Contrast<br>Appropriate Typologies | **Built Form**<br>Scale, Continuity, Rhythm, Balance, Emphasis And Contrast<br>Appropriate Typologies | **Built Form**<br>Scale, Continuity, Rhythm, Balance, Emphasis And Contrast<br>Appropriate Typologies |
| **Public Realm & Landscape**<br>Edges, Softscape And Hardscape, Routes, Visual Elements, Biodiversit, Furniture, Fenestrations, Lighting, etc. | **Public Realm & Landscape**<br>Edges, Softscape And Hardscape, Routes, Visual Elements, Biodiversit, Furniture, Fenestrations, Lighting, etc. | **Public Realm & Landscape**<br>Edges, Softscape And Hardscape, Routes, Visual Elements, Biodiversit, Furniture, Fenestrations, Lighting, etc. | **Public Realm & Landscape**<br>Edges, Softscape And Hardscape, Routes, Visual Elements, Biodiversit, Furniture, Fenestrations, Lighting, etc. |

**Design Elements**

**Appendix**

* Follow all relevant technical guidelines, e.g.:
Building: Elements of Traditional Architecture in Hatta (DM), Dubai Building Code (DM), Al Sa'fat (DM), Universal Design Code (DM)
Streets: Geometric Design Manual for Dubai Roads (RTA), etc.

*Illustration 1.2 Hatta Urban & Public Relam Guidelines Stucture*

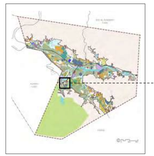




# 1.3 How to Use The Guideline

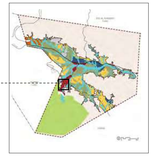
Development Framework

- Land Use Breakdown Per Cluster
- Land Capacity
- Initiatives Per Cluster

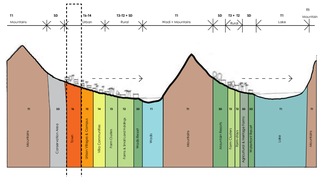


Zoning Plan

- Policy Reference
- Development Control
- Affection Plans



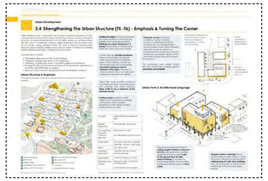
Hatta's 4 Key Areas & Design Transect



Urban Design Guidelines

Visual Aesthetic Toolkit

Urban Development: Built Form Guidance



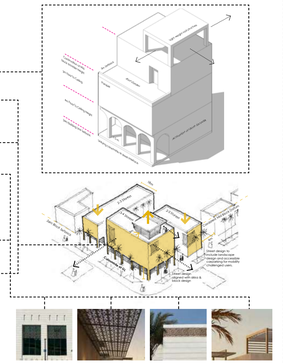
Public Realm: Open Space Guidance

Visual Identity

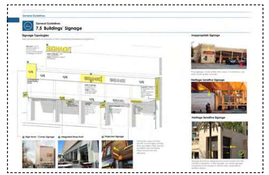
Submission and designs which deviate from this narrative and material selection must explain how this relates to the overall vision and character of Hatta.

| | |
|---|---|
| Facade | Design Composition and facade rhythm |
| Spatial Objective | Enclosure, permeability, integration |
| % of opening | % of window to wall on external facade<br>% of glazing at ground level |
| Projections | Recessed, cantilivered, canopy |
| Roofs | Roof type, rooflines and parapet design |
| Opening treatment | Recessed, framed, screens, setback or projected |
| Orientation | Massing Orientation (Vertical/ Horizontal) |
| Materials and Colour | Preferred Style, Materials and dominant tones |

* Follow all relevant technical guidelines, e.g.:
Building: Elements of Traditional Architecture in Hatta (DM), Dubai Building Code (DM), Al Sa'fat (DM), Universal Design Code (DM)
Streets: Geometric Design Manual for Dubai Roads (RTA), etc.



General Guidelines: Signage



General Guidelines: Materials & Colours

*Illustration 1.3 How to Use The Development Framework & Guidelines Together*



# 02

## General Development Context

# 2.1 Design Transect For Hatta

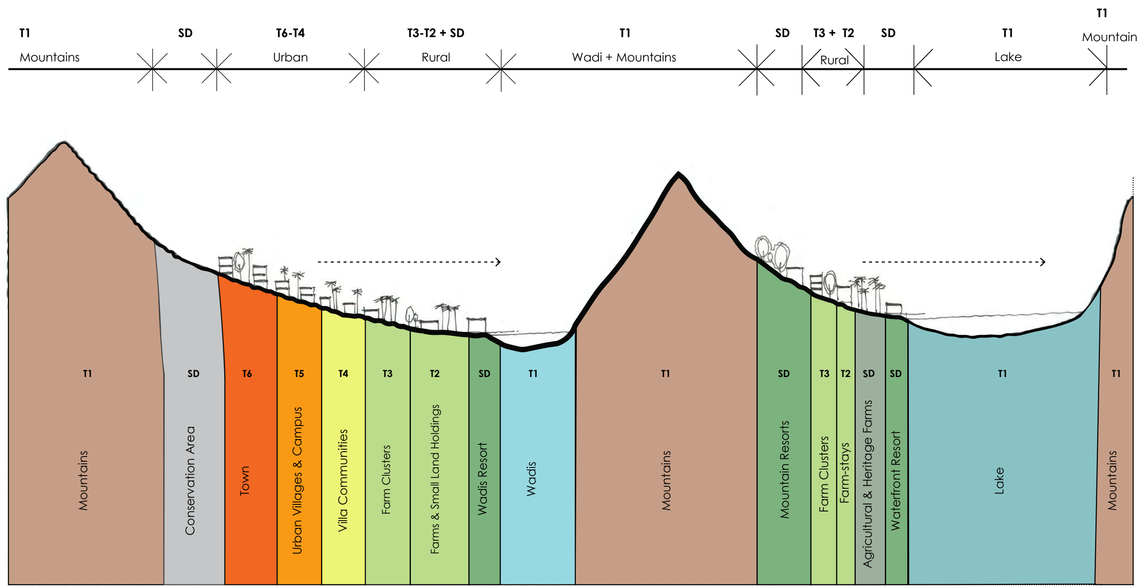



*Illustration 2.1 Design Transect for Hatta*





# 2.2 Character

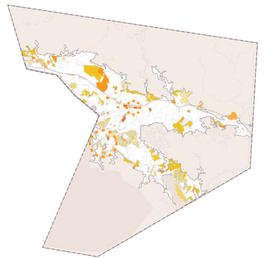
| | SD | T6 | T5 | T4 | T3 | T2 | T1 |
|---|---|---|---|---|---|---|---|
| | **Special District** | **Urban** | | | **Rural** | | **Natural** |
| ***Urban Patterns and profiles*** | Clustered urban fabric | Compact urban fabric | Compact urban fabric<br>Large Central courtyards | Enclosed, semi enclosed layout | Blended into landscape | Blended into landscape | Minimal |
| ***Entrances, Setbacks, Roofscape*** | Refer to guidance on setbacks per land use<br>Limited entrances<br>Green Buffer | Can have zero front setbacks<br>Multiple entrances<br>Colonnades to provide street level shading<br>Marked public entrances | Can have zero front setbacks<br>Shading elements on roofscape<br>Simple geometry for openings and colonnades<br>Accessible roofs | Refer to guidance on setbacks in residential areas<br>Recessed balconies<br>Rooftop terraces | Refer to guidance on setbacks per land use | Refer to guidance on setbacks per land use | Refer to guidance on setbacks per land use |
| ***Scale, Character and Emphasis*** | Resorts character<br>Low-rise, variable density<br>Up to two storey | Medium rise, Medium to high density<br>Up to four storey on corner blocks<br>Human scale + Corner emphasis | Medium rise, Medium to high density<br>Commercial & mixed-use (residential and leisure/ entertainment)<br>Contemporary Interpretation of vernacular<br>Soft interface with the wadi/ ecological edge | Residential Character<br>Small openings for privacy<br>Semi permeable fence<br>Small scale retail and Community services | Low-rise, low density<br>Up to one storey | Low-rise, very low density<br>Up to one storey | Integrated into landscape |
| ***Permeability and accessibility*** | provide views to existing heritage assets<br>Vehicular access | Active edges<br>80% ground floor retail<br>Limited Vehicular access | Active edges<br>100% ground floor retail<br>Permeable blocks<br>Public access points every 50m<br>Limited Vehicular access<br>Refer to guidance on wadi edges | Vehicular access | Limited Vehicular access | Limited Vehicular access | Mountain trails<br>Limited Vehicular access |
| ***Public Realm and Open Space*** | Hierarchy of open space (public, semi public to private) | Flexible open space<br>Hierarchy of open space (public, semi public)<br>Public open space + pocket plazas | Active Wadi-edge<br>Public walkways<br>Public open space + pocket plazas | Hierarchy of open space (semi public to private)<br>Community parks | Hierarchy of open space (semi public to private) | Private gardens | Public open space |
| ***Materiality***<br>*Refer to material palette* | Materials to be sympathetic to landscape and heritage areas | Local vernacular-avoid ultra modern/contemporary architect | Contemporary interpretation of vernacular materials | Traditional materials | Vernacular materials | Respond to natural landscape | Respond to natural landscape |
| ***Recommended Heights*** | Up to 2 storey | Up to 4 storey on corner plots | Up to 3 storey | Up to 2 storey | Up to 2 storey | 1-2 storey | No development |
| ***Visual*** |  |  |  |  |  |  |  |

The Mountains / Hillside

*Table 2.1: Hatta's Character Matrix*

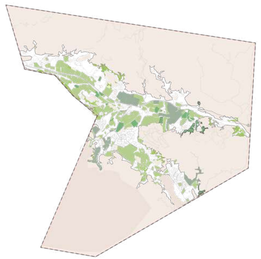
# 2.3 Character Areas & Visual Identity

Urban Development



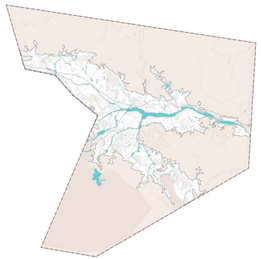
- T6: Town
- T5: Urban Village & Campus
- T4: Villa Communities
- SD: Heritage

Rural Development



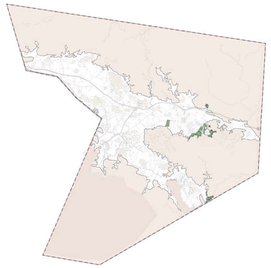
- T3: Rural Clusters
- T2: Farm-stays
- SD: Heritage Farms & Resorts
- SD: Leisure & Recreational & Resorts

Wadi & Water-bodies*



- T1: Wadis
- T1: The Dam & Waterbodies

The Mountains / Hillside



- T1: The Mountains
- SD: Mountain Resorts

** Any development on plots adjacent to Wadis, Water-bodies should refer to the guidance section Wadis & Waterbodies.*

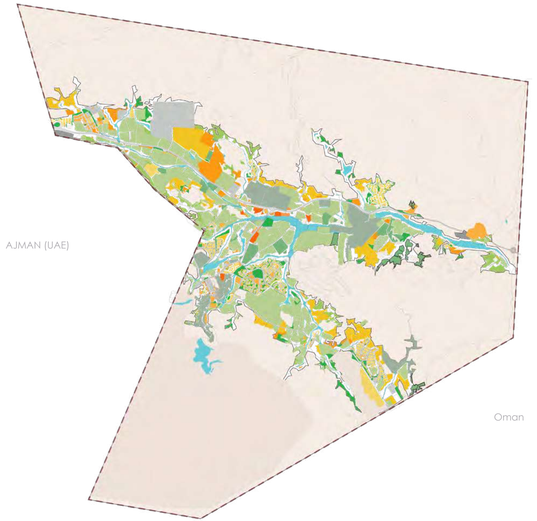
*The illustrations above are indicative for the design guidance purposes only, please refer to the geo data-base*

*Illustration 2.2 Four Character Areas of Hatta*





# Character Areas & Visual Identity





*Visual Identity.*

*The illustrations above are indicative for the design guidance purposes only.*

*Illustration 2.3 Four Character Areas & Visual Identity.*




# 2.4 Key Drivers For A Distinctive Identity

There are key built form and structure (morphological) characteristics or narratives, that can be identified within each of the key areas of Hatta. These characteristics should become the focus for new developments within each of Hatta's defined areas. Four distinct areas (which generally relate to specific topographical conditions) have been identified. It is envisaged that the characteristics identified below will be deployed as guiding precedents in the evolution of a language for each distinct area within Hatta.

## Urban Form

Analysis

- Hatta heritage village-constructed 16th century-recently reconstructed.
- Terraced residential villages
- Large villages existing in the bottom of Al Hajar Mountains
- Islamic levelled residential agricultural village in Wadi Gemma
- Islamic City and settlements.
- Al Sharia Palm Tree Village.
- Combination of natural and man-made landscape

Narratives

Urban

- Defined settlement edge of 2-3 storeys datum.
- Marker buildings can be 3-4 storeys.
- A fine urban grain
- Hierarchy of memorable streets, including lanes and mews
- Buildings around market squares and courtyard spaces
- Development on steeper slopes should run in alignment with the contours.

Mountains, Hillside & Mounds

- The urban form should relate to the sloping topography, with a grain of development aligned in parallel with the contours. Hillside building can be set into the landscape to reduce visual impact.
- Terraced residential villages and clusters of 1-2 storeys.
- Focused views to the Hajar Mountains to be maximised by the change in level and topography.
- Cutting out of the slope to be utilised for parking
- Development in areas >15% will be considered as exceptional development.

Wadi

- Permeability to the Wadi network
- Focused views to Wadi amenity spaces.
- Cultural landscape relationship with defensive Fort & Lookout Towers.

Rural

- Courtyard typology to relate to historic village clusters of 1-2 storeys.
- Hidden courts and less structured housing clusters-organic informal configurations
- Clusters to be connected together by crossing and bridges-15 minute living

## Architectural Language

Analysis

- Bronze Age residential buildings
- Umm An Nar period tombs. 7 Rock blocks engraved with different inscriptions at Hatta dam site.
- Bronze Age burial sites and tombs.
- Iron Age forts that controlled the Wadis in the mountainous areas.
- New building typologies were introduced to Hatta such as Mosques-Al Sharia Mosque Constructed in 1780.
- Hafit period tombs visible circular domed shaped.
- Hafit period Honeycomb double walled grave is found.
- Tiered/jettied building form at Hatta Arrival

Narratives

Urban

- Rhythm and colonnades leading to key public streets and spaces.
- Silhouette articulated buildings at strategic arrival. Height should be sensitive to the mountain backdrop.
- Mutli storey buildings used to provide architectural emphasis can echo the Central Fort Tower-stone plinth with render.
- More detailed facade treatment and ornamentation can be introduced into secondary lanes and shared surfaces with new urban core pedestrian routes.
- South facing faces be use higher solid to void ration to reduce direct solar gain.
- Facades orientated to the North should be designed to enhance connection with the shaded public realm.
- Irregular window openings at upper levels to avoid monotony.

Mountains, Hillside & Mounds

- Long low buildings as a counterpoint to the verticality of the Haydar mountains.
- Avoid modern glass buildings where possible.

Wadi

- Light weight architecture within wadi flood zone.
- Wadi's edge to be low-medium rise.
- Architectural language should incorporate glazing to capturing views of the Wadi. Upper levels facade and articulation to define and frame views.
- Mixed use ground floor along Wadi edge at the strategic arrival.

Rural

- Private gardens, yards, car parking courts and garages.
- Pitched roofs can be used to echo local vernacular of traditional Emrati housing.
- Green roofs to minimise loss of green.

## Materials & Detailing:

Analysis

- Stone inscriptions of animals or people .
- Falaj irrigation system which currently still exists in Hatta.
- Combination of stone & render
- Mosques typically use white render to represent purity. The buildings become landmarks in key locations.
- Contemporary vernacular housing are usually render in sandy colour to blend with the tones of the landscpe and foster built form neighbourhood unity.
- Local stone used in combination with light coloured grout to integrate with sandy coloured render.

Narratives

Urban

- Plinths to be used at level changes, entrances, gateways & corners.
- Screening and signage integrated into facade at entrances.
- Light weight roof treatment at upper level set backs.

Mountains, Hillside & Mounds

- Sustainable eco-friendly building materials should be considered such as rammed earth architecture.
- Darker local stone should be used in mountains areas to reduce visual impact of built form.
- The Haydar mountain should be retained as an important backdrop to the settlement of Hatta. Stone echoes built form heritage found from various periods including Umm An Nar age, bronze age, iron age etc.

Wadi

- Light weight structures can be inspired by mud/wood/ weaved/ thatched construction methods found in traditional housing.
- Potential referencing of stone inscription of animals to be along ecological and biodiversity corridors as part of public realm strategy.

Rural

- Wooden structures and weaved screening can be used to echo local vernacular of traditional Emrati housing.
- Stone boundary walls and architecture of the buildings can integrate to become one composition.

# 2.5 Heritage Overlay: Built Form Characteristics

## Heritage Overlays

Hatta heritage character area is the area beyond the historic core. This area will be allowing a future expansion of Hatta village in the same architectural style of the historic core. The heritage character area shall be reflecting environmental and architectural elements of the surrounding.

Heritage Character Area Characteristics

- Block sizing of Hatta historic village
- Heights same as Hatta historic village
- Triangular (Primitive arch)
- Corner circle arch
- Corner ornamented arch
- Hatta traditional column typologies
- Hatta traditional door types and door typical details
- Hatta traditional window types and typical details
- Wall recesses (Mishkat)
- Hatta wall parapets
- Hatta traditional decorative strip

## View Corridors

- Protection and/or enhancement which will be integrated with & complement the urban form and structure of Hatta.
- To protect and enhance views and prospects which contribute to the appreciation of landscape & natural heritage.
- To protect and enhance important views and view corridors into, out of and within the city, and to protect existing landmarks and their prominence.

## Heritage Overlay: Buffer Zone

The buffer zone is an area surrounding the site which has complementary restrictions placed on its use and development to give an added layer of protection to the property. This should include the immediate setting of the nominated property.

important views and other areas or attributes that are functionally important as a support to the property and its protection.

Buffer Zone Characteristics:

- Block sizing
- Height regulations
- Protecting views from and to historic core
- Using local materials, colors and finishing materials
- Using forms and massing similar to the ones provided in approved examples
- The percentage of openings within the elevations should follow provided examples in approved guidelines
- Abstraction of Hattas's wall parapets, arches, traditional doors and windows.

## Historic Buildings Buffer Zones

Historical buildings within Hatta fall within a classification based on the value of the historic buildings to be classified as "A" Buildings with Higher Value and "B:" Buildings with less value. This is reflected in setting the buffer zones for these historic buildings.

- Classification A requires a buffer zone set at 150 m and currently includes the following buildings: Hatta fort; House of Wali; Southern Tower; Northern Tower; Old Mosque
- Classification B requires a buffer zone set at 100 m and currently include the following buildings: Khalfan House; Abdallah; Al Hashmy House; Renovation (Tarmeem) House

## Proposed Area of Traditional Agriculture

Areas of traditional architecture shall be subject to exceptional development. Any new constructions on agricultural plots should be prohibited whenever possible and only approved when there is an essential need for providing services for the areas.

Area Of Traditional Agriculture Characteristics:

- Light weight structures
- Temporary structures
- Mud structures made of local materials
- Structures made of palm groves (Similar to Hatta local huts)
- 1 Floor height limit
- Heritage farms and falaj irrigation system should be totally preserved with no construction allowed on them

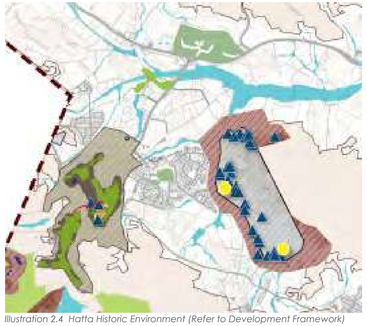


*Illustration 2.4 Hatta Historic Environment (Refer to Development Framework)*


*Illustration 2.5 Historic Buildings Buffer Zones (Refer to Development Framework)*





# 2.6 Heritage Overlay: Visual Identity

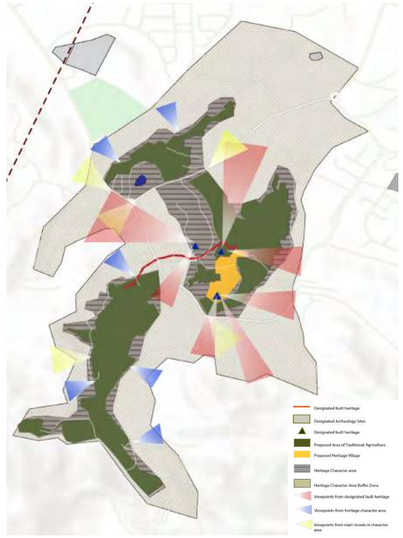



*Illustration 2.6 Hatta's Heritage Character Areas & Buffer Zone*

*** Please refer to the classification system outlined by the Architectural Heritage and Antiquities Department (AHAD) of Dubai Municipality*

**Heritage Character Buffer Zone: Traditional** ----------→ Contemporary Arch.

**Heritage Character Area:** Vernacular Architecture ----------→ Traditional Architecture

**Proposed Area of Traditional Agriculture:** Highly Sensitive Design Outcomes: Temporary ----------→ Permanent

*Illustration 2.7 Hatta's Heritage Character Areas & Buffer Zone*

## 2.7 Visual Aesthetics Toolkit

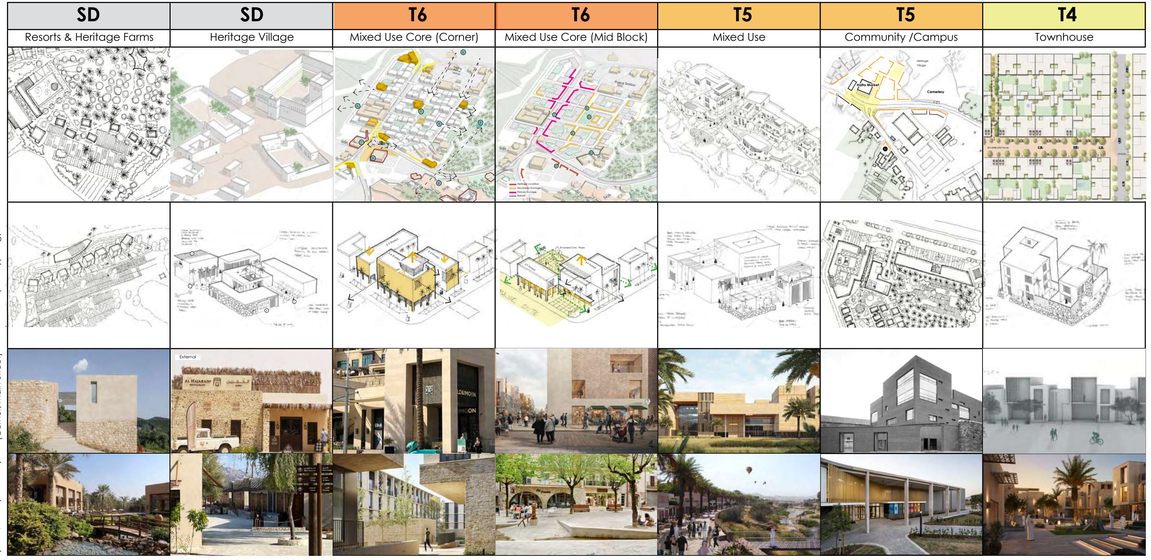
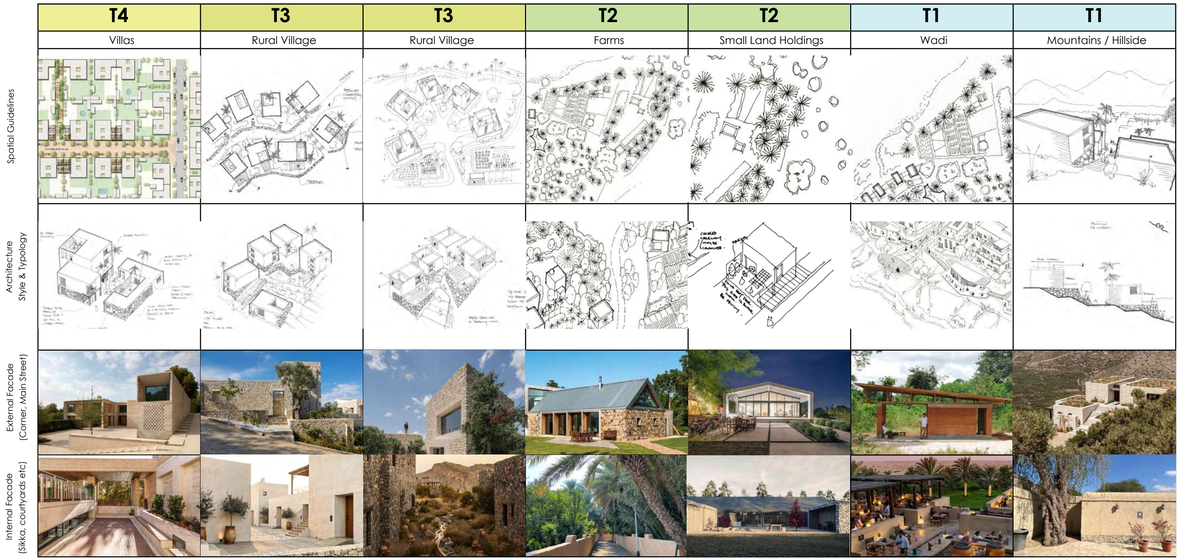



*Table 2.2: Hatta's Visual Aesthetic Toolkit*



GENERAL DEVELOPMENT CONTEXT

## Visual Aesthetics Toolkit




# 03

## Urban Character

# 3.1 The Core: The Old & The New (T6)

The layout diagrams set out in this section are for illustration purposes and should not be considered as a masterplan.

Applicants are encouraged to use the guidance and design narratives set out for each area as a baseline to inform their own design outcomes as part of the planning submission process.

The approach is one of 'comply or explain', where designers choosing to develop an alternative narrative will be expected to explain how the urban structure, architecture, materials and detailing have been derived from an analysis of the local cultural heritage or landscape character.

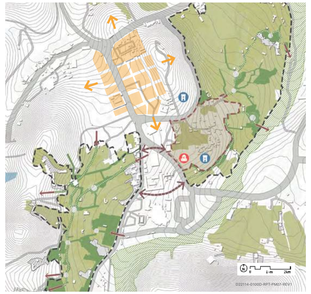


*Illustration 3.1 Wider context of the new core.*

** For prevailing design guidance such as FAR, BUA etc please refer to Cluster M1 of the Comprehensive Development Framework as outlined in the table below.*

- **Active frontage** along primary routes should be maximised.
- Maintain **block continuity** along new main street.
- **Fixed zero setbacks** along key mixed use frontages.
- **Reduce vehicular access** along primary routes.
- **Servicing** to be accommodated from secondary routes.
- **Sikka width to be a minimum of 6m between blocks**

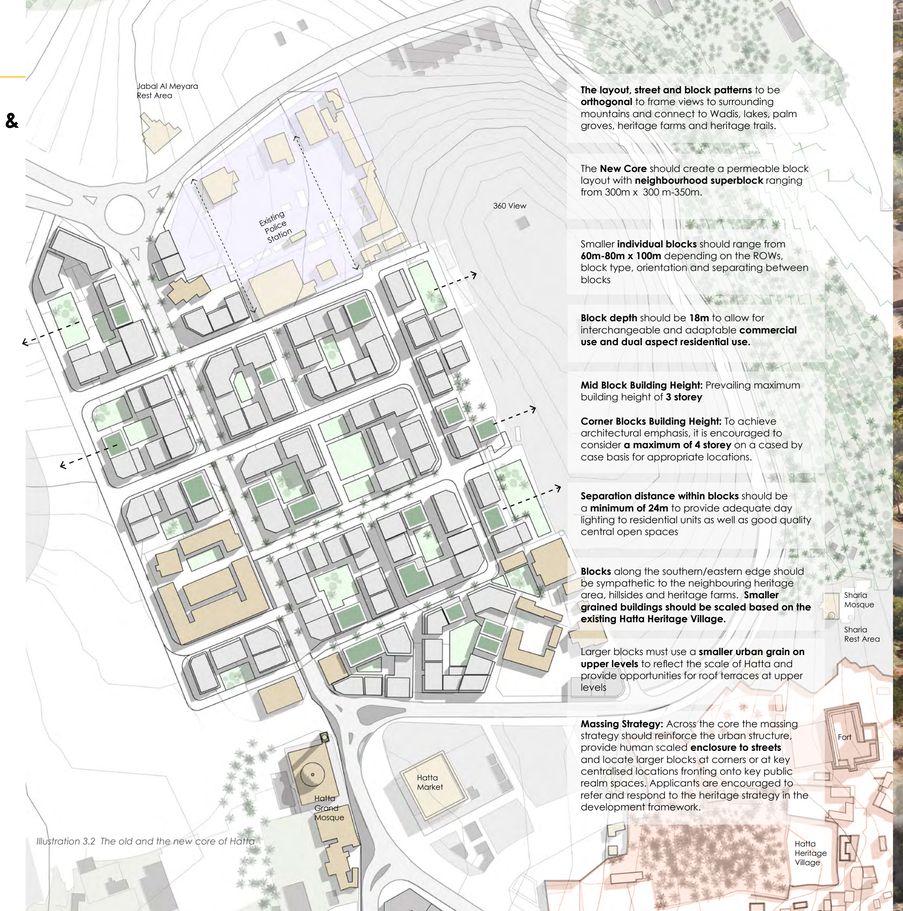



*Illustration 3.2 The old and the new core of Hatta*

**The layout, street and block patterns** to be **orthogonal** to frame views to surrounding mountains and connect to Wadis, lakes, palm groves, heritage farms and heritage trails.

The **New Core** should create a permeable block layout with **neighbourhood superblock** ranging from 300m x 300 m-350m.

Smaller **individual blocks** should range from **60m-80m x 100m** depending on the ROWs, block type, orientation and separating between blocks

**Block depth** should be **18m** to allow for interchangeable and adaptable **commercial use and dual aspect residential use.**

**Mid Block Building Height:** Prevailing maximum building height of **3 storey**

**Corner Blocks Building Height:** To achieve architectural emphasis, it is encouraged to consider **a maximum of 4 storey** on a cased by case basis for appropriate locations.

**Separation distance within blocks** should be a **minimum of 24m** to provide adequate day lighting to residential units as well as good quality central open spaces

**Blocks** along the southern/eastern edge should be sympathetic to the neighbouring heritage area, hillsides and heritage farms. **Smaller grained buildings should be scaled based on the existing Hatta Heritage Village.**

Larger blocks must use a **smaller urban grain on upper levels** to reflect the scale of Hatta and provide opportunities for roof terraces at upper levels

**Massing Strategy:** Across the core the massing strategy should reinforce the urban structure, provide human scaled **enclosure to streets** and locate larger blocks at corners or at key centralised locations fronting onto key public realm spaces. Applicants are encouraged to refer and respond to the heritage strategy in the development framework.

# 3.2 Enhanced Connectivity

## Objective

***Ease of movement in new and existing development will ensure that people living in Hatta can travel easily from their home to the facilities they need for their day-to-day activities: their workplace, school, shops, place of worship and their families.***

***15 minute city principle for Hatta***

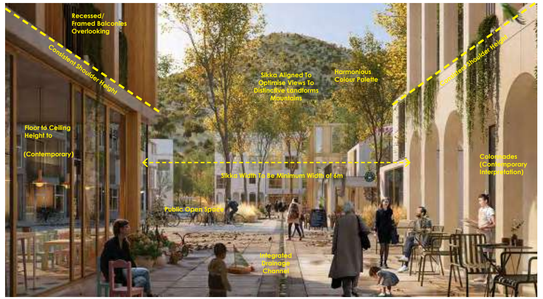
Connectivity affects the degree to which transportation networks such as streets, walking and cycle paths, connect people to their destinations (including intermediate destinations such as public transport services).

Good connectivity provides easy access to key destinations for pedestrians. Excellent connectivity actively seeks to discourage car use by making local trips easier and more pleasant by foot than by car.

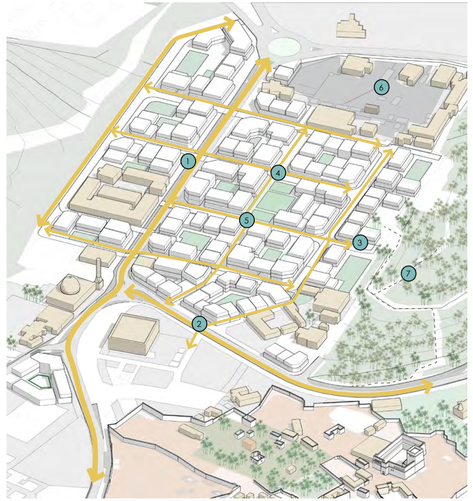
The comprehensive framework and design guidelines for Hatta encourage pedestrian connectivity both along and across the wadi. The wadi will become the main "spine", or connector, between neighbourhoods, rather than a physical barrier.

## Mandatory Guidance

- M Create direct street layouts which contribute to the ease with which an area can be understood by residents and visitors.
- Create access points to the Wadi spine to enhances connectivity, through open space and streetscape elements, allowing for "green" connections beyond the Wadi corridor itself.
- M Encourage the development of mixed use schemes that can provide a mix of local employment, recreation and retail facilities.
- M Provide a choice of direct and well connected streets which promote walking, cycling and integration.
- M Roads, streets, paths and spaces should be designed in response to estimated traffic generation, to fulfil their intended function and to reflect their importance and significance.
- M Provide regular short blocks of development which will increase permeability.
- M Existing and proposed routes should consider the safety of all users.
- M Clear signage should be provided to ensure ease of movement and aid wayfinding.
- M Provide direct and attractive links between destinations which incorporate desire lines and movement patterns.
- M Connect pedestrian and cycle path networks with distributor networks for longer distances (particularly relevant for cycle use).




*The old and the new core of Hatta*




1. Connect the civic core fabric
2. Connect to Heritage core
3. Connection to mountains
4. Strong pedestrian linkages
5. Connect open spaces
6. Opportunity to strengthen connections
7. Integrated pedestrian paths

*Illustration 3.3 Connectivity map for the new core*





# 3.3 Land Use & Mix of Uses

## Objective

***Consider the compatibility of uses in a mixed use development during both the day and at night.***

***Give additional consideration to adjacent uses when providing for activities that generate high noise levels, vibrations and/or odours.***

***On large sites, separate incompatible uses with a space or courtyard between the buildings containing these uses.***

***Reduce conflict between uses through spatial separation and physical means such as buffers or internal air conditioning for residential apartments.***

.

## Mandatory Guidance

**3.3.1 Residential**

- Occupied residential buildings in good condition should be retained and restored unless they are not aligned with the determined village development plan
- Strategic existing buildings located along the main axis of a village should be reconverted to offer an active frontage at the ground floor.
- New developments should not exceed 3 levels, rising to 4 occasionally on corner sites.

**3.3.2 Community services**

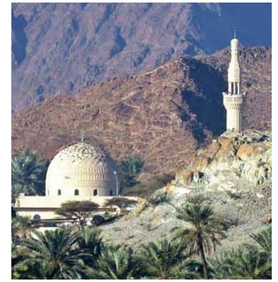
- Community services buildings should be retained unless they are not aligned with the determined Comprehensive Development Plan for Hatta.
- All religious buildings should be retained. Demolition or change of use is not permitted.
- Retained buildings should be restored if necessary.
- New buildings should not exceed 3 levels.
- New buildings should participate in the sense of place of the Hatta, including an identifiable and qualitative public space.

**Commercial & Hospitality**

- Allocate commercial uses to ground floor of frontages facing the main ROWs, in particular corner units.
- Boutique hotels and second homes in villages should only take place in newly built forms.
- Provide a mix of residential and leisure/ entertainment land uses in the 'soft' side built environment interfacing with the wadi/ ecological/agricultural interface
- Provide 'light touch' functions within the wadi/ecological/agricultural buffer zone including walk ways, viewing platforms and stand alone structures elevated on posts designed to be used in 'sacrificial' space prone to flooding.
- Part of the roof should be accessible for the use of residents. These roofs should be designed for day and night occupation: partly covered by a shading structure by day, partly open to the sky by night, embracing the surrounding landscape.
- Courtyard typologies are encouraged in farm areas.
- Sunken buildings and courtyards should be considered as a means of increasing the gross floor area (GFA) while keeping a low skyline.
- Designers should consider the interpretive application of vernacular architecture and clearly demonstrate this in their design submission.

**3.3.3 Mosques**

In the design of mosques and spaces associated with mosques, refer to Architectural requirements for specific building types in Dubai Building Code.



*Hatta Grand Mosque, opposite Hatta Market*


*Example of Restaurant in Hatta*

*Existing Hatta Market*

*Hatta Hall, located along the spine road, adjacent to the Civic Defense Building.*

# 3.4 Strengthening The Urban Structure (T5-T6)-Emphasis & Turning The Corner

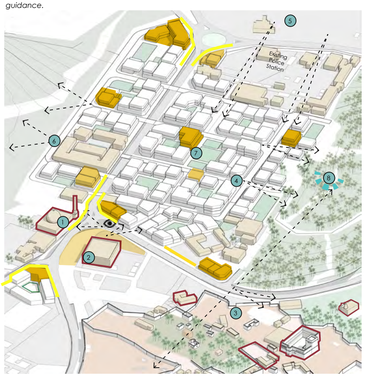
Taller buildings have a important role to play in signifying locations of civic commercial or focal points of urban activity such as town centres or transport junctions. In more rural settlement such as Hatta, where two or three storeys are the norm, it is desirable to place higher buildings in key locations such as on corners, along principal routes, the end of vistas or around parks. Decisions about building height should also be made in relation to creating street-building height ratios creating good enclosure.

General rules of thumb:

- 'Wrapping' large spaces with small buildings;
- 'Stepping' a large mass down to its neighbours;
- 'Stepping' a large mass down to sensitive edges and interfaces
- Ensuring that the ground level most relevant to pedestrian experience is as active and interesting as possible.
- Step up to the corner for visual importance and legibility of place.

## Urban Structure & Emphasis

*The diagram below sets out indicative corner site locations to help illustrate the relevant guidance.*




1) Hatta Grand Mosque
2) Hatta Market
3) Heritage Village
4) Building gaps on mountain fronts
5) Enhance views from rest area
6) Views to pal groves and mountains
7) New public space
8) Views from Hatta Watch Tower
Landmarks
Existing Police Station Campus

*Illustration 3.4 Connectivity map for the new core*

**Additional height** should be provided at corner locations to enhance the legibility and wayfinding in Hatta. **Buildings on corner should be 3- 4 storeys** depending on their location within the urban structure of Hatta

Corner sites are **visually prominent,** have two frontages and should offer more entrances to different parts of the building. Corners are best emphasised by incorporating **prominent entrances and/or windows at the apex.** Housing on corners need to face two ways and avoid blank facades and gables.

'Sikka' like routes provide access to a possible enclosed courtyard space with planting and water features. **Sikka width to be a minimum of 8m between blocks**

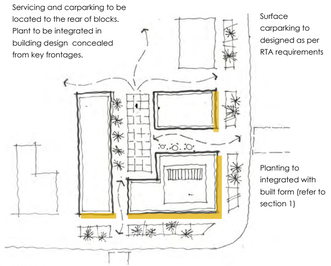
**Positive corner** provides a solid edge to both pavements, possible colonnade creates shaded pedestrian routes and/or shaded seating areas for cafes.

| | |
|---|---|
| Facade | Vertical rhythm based on design grid |
| Spatial Objective | Permeability, enclosure |
| % of opening (Ground + Above ground) | 40% window to wall<br>min 60% glazing at ground level |
| Projections | Semi open balconies, recessed openings, Canopy, colonnade |
| Roofs | Flat, green roofs |
| Opening treatment | Opening setback, screens, framed openings, |
| Orientation | Vertical massing on corners |
| Materials and Colour | Rendered walls, Local Stone, neutral shades.<br>Contemporary encouraged. |

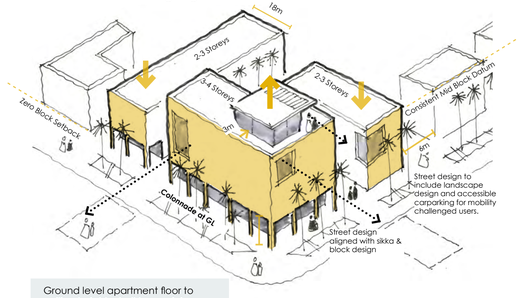
*Illustration 3.5 Corner sketch (Top view & Isometric)*

**Vehicular access** should be avoided at corner locations. Access to carparking should be provided from secondary/tertiary where possible routes. When required, vehicular access should be co-located and set as far away from the intersection as possible.

The courtyards can create routes into the overall plot creating greater **pedestrian permeability.**




## Urban Form & Architectural Language




Ground level apartment floor to **ceiling heights shall be a minimum of 2.7m** and applicants and their designers should consider **3-4m on the ground floor of multi-storey buildings** to provide for future adaptability. The prevailing maximum building height is **3 storey (10m).**

**Irregular window openings** should be provided at upper levels to avoid monotony. Designs should provide a **unifying base to multi-storey buildings** such as colonnades to enhance the relationship with street and public spaces.

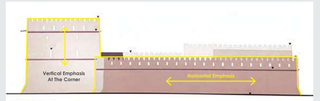




# 3.5 Corner Site: Facade Guidance (T5-T6)

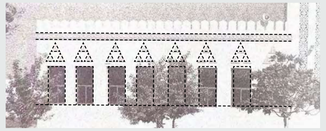
## Historical References & Materiality

*Reference to vertical emphasis, openings, detailing and materiality at Hatta Fort. This can be interpreteted and applied at corner locations in new core diagonally opposite.*




*Reference highlighting massing and vertical emphasis at Hatta Fort.*


*A more recently completed restaurant building at the edge of heritage village. The architectural language appropriately reflects the vernacular to provide traditional identity of Hertiage Village*



*Distinctive detailing to facades including Hatta Majlis (Hatta Recess Type 1 as defined in 'Elements of Traditional Architecture in Hatta'*

## Facade Compostion & Scale (3-4 storeys)


*Contemporary interpretations can be proposed outside defined conservation areas such as the heritage village Prominent corner sites should respond at a range of scales, base, middle and top as outlined above.*

## Facade Compostion & Scale (2-3 storeys)

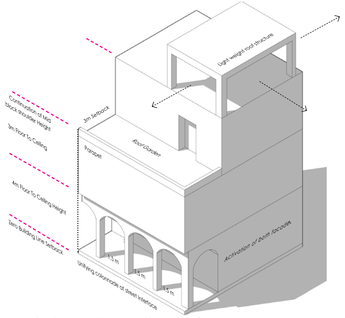
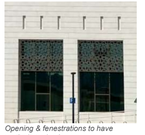


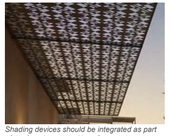

*Illustration 3.6 Facade composition model for corners*

*Colonnades provide rhythm to facades as well enhanced connection from building to public realm. Arch type should be selected as part of an appropriate architectural language.*

## Facade Components



*Opening & fenestrations to have vertical emphasis.*



*Shading devices should be integrated as part of the facade composition. Geometric patterns can be incorporated to create textures on public realm.*

*Banding and articulation of facade to provide visual interest.*

*Light weight roof structures*

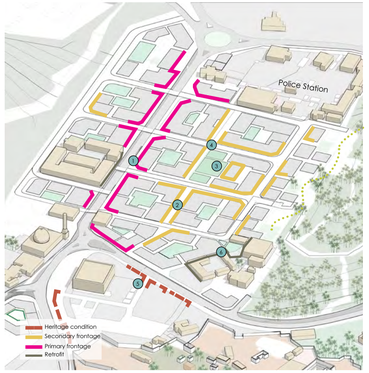
***** Please refer to Dubai Municipality's 'Elements of Traditional Architecture in Hatta' for Further Detailed Design Guidance.***

# 3.6 Strengthening The Urban Structure (T5-T6): The Street As A Place

General rules of thumb for strong urban structures include:

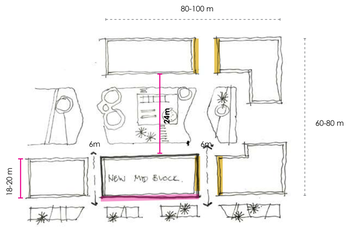
- **Continuous building lines** along a block edge are more successful at providing good enclosure to a street or square and generating 'active frontage'
- **A block of a depth of 10m for fine-grained mixed-use or housing and 18-20m for retail / commercial development provides a useful basis for design**.
- A clear definition between **public and private space**
- **Vertical and horizontal rhythms in appropriate locations** (the building widths)
- Appropriate proportion and scale of windows and doors
- Consideration of **local morphology and vernacular** (the pattern of streets, blocks and building types);
- **A flexible framework** to provide for a range of users including master developers, community groups and individual plot owner.

## Urban Structure, Continuity & Balance




1. Continuous primary frontage to enhance streetscape
2. Secondary active frontage
3. Public space edged with active frontages
4. Strong frontage around heritage core
5. Active frontage on nodes/ corner buildings
6. Opportunity to retrofit facades

*Illustration 3.7 Facade composition model for corners*




## Urban Form & Architectural Language

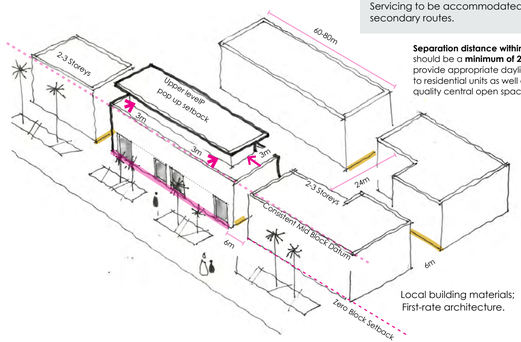



*Illustration 3.8 Mid-block sketch (Top View & Isometric)*

**Mid block infills** should help to **re establish edge conditions to the public street**.

**Similar height and footprint** to maintain existing form. Possible increase in footprint or height could be made by **upper set back floor**, or rear projecting-built form.

Overall mid-block buildings, act as a **repair to existing urban grain**, in solid form and in maintain pedestrian permeability.

**Zero building line setbacks** along key streets & frontages.

Reduce vehicular access along primary routes by collocation.

Servicing to be accommodated from secondary routes.

**Separation distance within blocks** should be a **minimum of 24m** to provide appropriate daylighting to residential units as well as good quality central open spaces

Local building materials; First-rate architecture.

Design outcomes should be of a **small urban grain** responding to existing Hatta Heritage Village.

**Maintain block continuity** along the new main street. emphasise vertical rhythm in particular and avoid exposing blank walls.

Design outcomes should contribute in making frontages 'active' to add interest, life and vitality to the public realm-**the street as a place.**

Design outcomes should use: **Frequent doors and windows**, **with few blank walls;**

**Narrow frontage buildings**, giving **vertical rhythm** to the street scene;

**Articulation of facades, with enlivened edges** balconies, bays, porches, awnings, colonnades or other projections that provide a more comfortable threshold enabling uses to overlap into the street;

**Lively internal uses** visible from the outside, or spilling onto the street.

**Sikka width to be a minimum of 6m between blocks**





# 3.7 Mid Block Facade Guidance (T5-T6)

## Historical References & Materiality

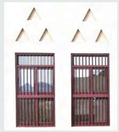
*Hatta Old Juma Masjid*

*Hatta Old Juma Masjid reference highlighting scale, proportion of colonnade. Please refer to 'Element Of Traditional Architecture In Hatta' Guidelines for further details.*

## Scale & Materiality (1-2 storeys)


*A variety of retail facade treatment are outlined in 'Element Of Traditional Architecture In Hatta' Guidelines. These guidelines should be used in Hatta's conservation areas.*

## Distinctive Features

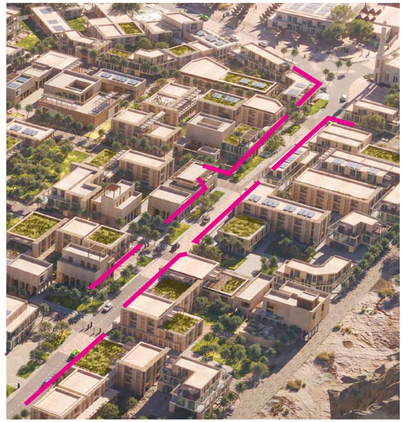


*Hatta Majlis: Fenestration & Recesses*

*D14 Triangular (Primitive) Arch Type*

***** Please refer to Dubai Municipality's 'Elements of Traditional Architecture in Hatta' for Further Detailed Design Guidance.***

## Block Continuity & Facades



*In order to a deliver successful streets, individual blocks and their facades need to be well considered to provide adequate levels of enclosure, rhythm and activation.*

## Scale & Facade Materaility (2-3 storeys)

*For areas outside sensitive conservation areas, more contemporary approaches to facade design should be considered. The scale, proportion and materiality should be appropriate to Hatta. Facade elements such as signage should be integrated to strengthen the overall street as a coherent collective.*

## Sense of Enclosure

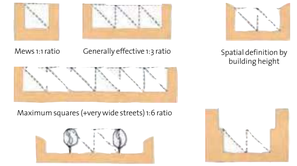



*Illustration 3.9 Enclosure setback height to street width*

*Source: Urban Design Compendium 1, English Partnerships*

## Enclosure, Urban Grain & Rhythm

*In order to create a well defined urban fabric and street the buildings should relate to a horizontal datum established by the prevailing height of existing neighbouring buildings The horizontal datum can be reinforced in a variety of ways, from cornice lines and window heights to parapet heights.*

*In order to improve the townscape qualities of certain areas in Hatta, vertical breaks should be introduced through party wall projections, deep recesses, changes in wall plane setback and narrow side yards. Urban granularity, expressed as vertical breaks in facades, help to create rhythm and interest.*

*Illustration 3.10 Good and bad example of rhythm and enclosure*

# 3.8 Network of Streets & Spaces (T6)

Hatta's open spaces should be designed positively, with clear definition and enclosure. There should be no ambiguity or left over space. This can be achieved by giving each outdoor space a clear function, character and shape, and clarifying boundaries through the positioning of adjacent buildings, walls, fences, trees and hedges.

Buildings facing onto public open spaces should be designed create an identity for Hatta and a sense of ownership and care.

**Maximising windows and doors encourages active frontage**, enabling communication between inside and outside.

Transition between public realm and inside of building should be **accessible for everyone.**

## Urban Structure & Movement

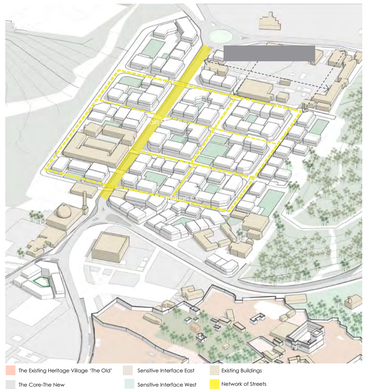
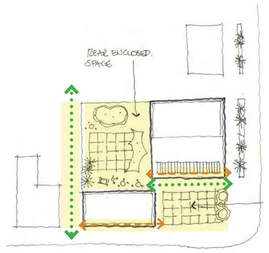



*Illustration 3.11 Urban structure & Movement network diagram*



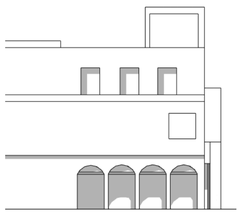



*Illustration 3.13 Facade treatment at corner.*

## Urban Form & Architectural Language

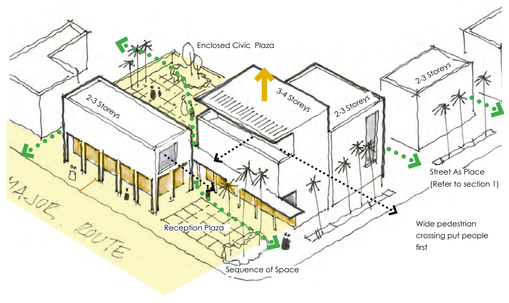



*Illustration 3.12 Corner sketch (Top View & Isometric)*

**Open corner** allowing for a small public space facing the street. With a second being semi hidden but clearly enclosed providing a more s**heltered space for events.**

**Public facing facades of the buildings to be colonnaded.**

**Larger buildings facing onto major road** holding the corner and facing over the small public realm.

Built form configuration and street design should be developed to **encourage traffic calming** in the new core area .

A **shared surface** with can be used encourage cross pedestrian movement from the heritage village to the new core.

As a rule of thumb, core commercial/ retail areas should have been **10-15 premises every 100m** to become successful frontages and enlivened streets.

As a rule of thumb, it is generally recommend to provide a **height to width ratios of 1:3** to ensure appropriate levels of built form enclose

**Small urban grain and pedestrian friendly streets.**

**Shaded public spaces** and resting areas should be provided for through out the core





# 3.9 Open Space: Form & Facade Guidance (T5-T6)

## Historical References & Materiality


*Hatta Fort: Unique massing and treatment of materials help the built form and court yard become one seamless entity.*

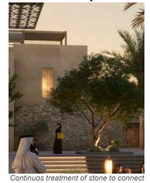

*Hatta Old Juma Masjid Courtyard*


*Hatta Old Juma Masjid Courtyard*

## Scale & Massing (2-3 storeys)


*Design Elements for open space*

## Facade Components



*Continuos treatment of stone to connect through from walkways into courtyards*

*Upper level set colonnades to provide additional viewing over courtyard space. Set back helps to make the space more comfortable for pedestrians.*

*Roof terraces and a harmonious palette of materials at upper levels*

*Sunken courtyards spaces to align with Hatta's distinctive architecture & space (refer to "Elements of Traditional Architecture in Hatta' Guidance)*

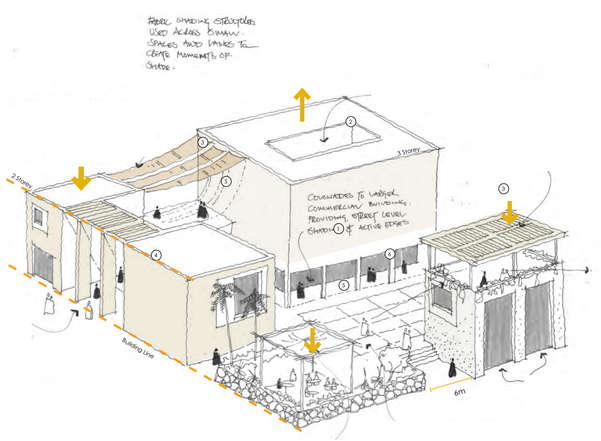
## Facades: Internal Courtyards

*CGI render of how a sunken courtyard can look and feel in Hatta. Arches and facade treatment can vary depending on Site Location and the architectural language used. More traditional responses are encouraged closer to the conservation areas. Opportunities for contemporary interpretation sit outside highly sensitive areas.*

*A sequence of public and semi public spaces are proposed witin the new core of Hatta. These can be covered or open where appropriate. The scale and dimensions should be derived from studies found within the heritage guidance-'Elements of Traditional Architecture in Hatta'. Courtyards can differ to the external treatment of the building to create lighter spaces with higher level of comfort for more stationary users.*

# 3.10 Commercial & Mixed Use Built Form (T5-T6)

## Urban Form, Scale & Architectural Language




Main Components

1. Colonnades and shaded walks
2. Large Patio for natural light (min. 6m as per Dubai Building Code)
3. Rooftop terrace and shading
4. Framed entry
5. Free standing shading structures
6. Semi enclosed plaza

*Illustration 3.14 Commercial & Mixed-use Built form sketch*

General rules of thumb:

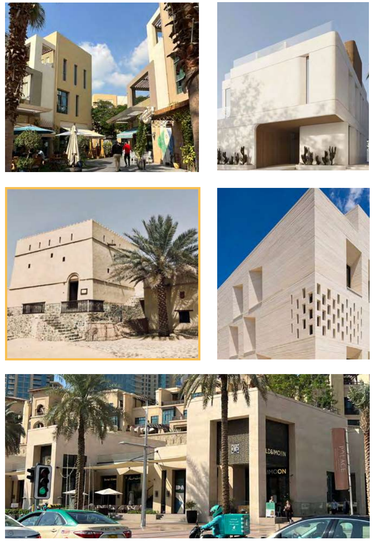
- 'Wrapping' larger 3-4 storey buildings with smaller buildings 2-3 storey buildings.
- 'Stepping' a large mass down to its neighbours;
- 'Stepping' a large mass down to sensitive edges and interfaces
- Ensuring that the ground level most relevant to pedestrian experience is as active and interesting as possible.
- Step up to the corner for visual importance and legibility of place.

Design Principles

- Semi enclosed courtyard
- Clustered units
- Open views
- Flexible space programming
- Shaded paths and terraces
- Human architecture scale
- Simple geometry
- Contemporary interpretation of vernacular design
- Active frontages & rhythm

## Visual Identity

T6 & T5 mixed use areas will use locally sourced materials such as local stone or sandstone where possible to create a unified and coherent neighbourhood that respects the character of Hatta. Landmarks buildings such as corner buildings can use varying architectural language and materials to emphasis their unique location. Brick and render can also be considered however their hues must match the placemaking objective for each spatial area.



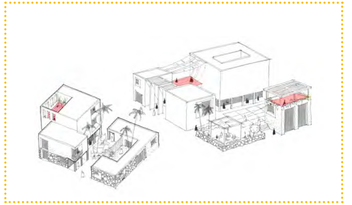
*Architectural Language for Commercial built form*





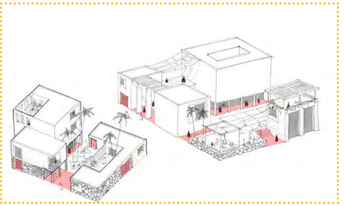
# 3.11 Architectural Language & Urban Spaces (T5-T6)

## Terraces



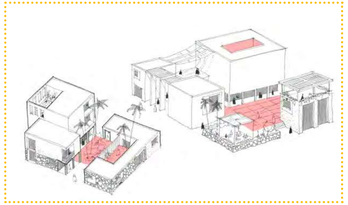
- M Maintain flat roofs wherever possible, following the tradition of Hatta Region
- M For accessible flat roofs, provide an adequate parapet wall or subtly decorated balustrade
- M Ornamental balustrade should be subtle and should tie in with the surrounding landscape avoiding striking details and colours
- A It is advisable the use of canopies or sails on rooftops to provide shading
- A Rooftop terraces can be used for F&B or commercial purposes
- A It is advisable to locate terraces with open views to the landscape

## Gateways & Walkways



- M Use of local and natural materials, both for paving surfaces and building facades
- A Alleys between buildings should be studied to provide shading and guarantee natural ventilation
- A Mark main entrances and key public walkways with architectural elements such as colonnades to provide climatic comfort and wayfinding
- M Use suitable night lighting within alleys and on key entrances to provide safety and interest
- M Stepped accesses can be provided to reach elevated or sunken plazas however ramped access must be provided too

## Courtyards

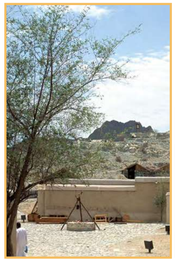


- M The courtyard typology is recommended for both private and public buildings as they are spaces that are recommended for outdoor sociality
- A Courtyards can be sunken in order to obtain even more cooling and shading effect from buildings
- A Courtyards can be ornamented with water features, planting, shading structures and colonnades to create a more comfortable and inviting space

Existing

Proposed

*Architectural Language for Commercial built form*



Existing

Proposed

Existing

Proposed

# 3.12 Commercial & Mixed Use Built Form (T5-T6)

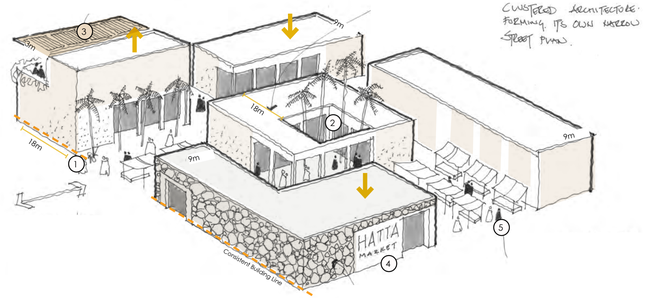
## Urban Form, Scale & Architectural Language

The cluster of building and spaces below represent a scalable urban form that can be applied to T5 or T6.

**For T5 urban villages**, **height should be between 2-3 storeys** along key routes and pubic spaces should respond proportionally.

**For T6 Town (New Core)** a similar urban form can be scaled and applied. **Height should be between 3-4 storeys** along key streets and frontages, with public spaces responding appropriately.

A combination of urban forms can be used to **respond to sensitive edges** in both T5 and T6.




Main Components

1. Colonnades and shaded walks
2. Central Pavilion
3. Rooftop terrace and shading
4. Supergraphics
5. Free standing market stalls

- **Block depth** should be **18m** to allow for interchangeable and adaptable **commercial use and dual aspect residential use.**
- For **smaller grained commercial blocks**, block depth should be a **minimum of 9m.**

*Illustration 3.15 Commercial & Mixed-use Built form sketch*

Design Principles

- Semi enclosed courtyard
- Clustered units
- Open views
- Flexible space programming
- Shaded paths and terraces
- Human architecture scale
- Simple geometry
- Contemporary interpretation of vernacular design
- Active frontag**es**

*Architectural Language for Commercial built form*

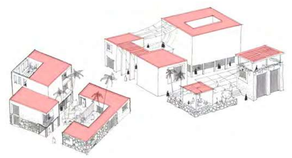
| | |
|---|---|
| Facade | Rhythm by solid and Void |
| Spatial Objective | Permeability, enclosure |
| % of opening (Ground + Above ground) | 40% window to wall<br><br>min 60% glazing at ground level |
| Projections | Semi open balconies, recessed balcony, Canopy, colonnade |
| Roofs | Flat, green roofs |
| Opening treatment | Opening setback, screens, framed openings, |
| Orientation | Predominantly horizontal, vertical massing on corners |
| Materials and Colour | Rendered walls, Local Stone, Shades of beige, whites and light colours |





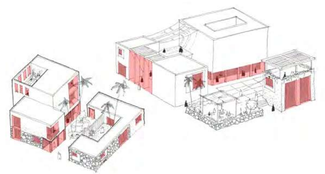
# 3.13 Architectural Language & Facade Treatment (T5-T6)

## Roofs & Canopies



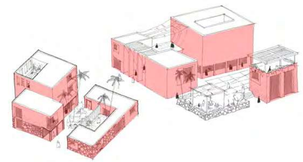
- A Roof profiles can be characterised by different shapes, colours or patterns
- M A variation of tones could be used, it is advisable to use a few colours (max. 3) and maintain a suitable and subtle colour palette
- A Flat roof are preferable and the facades can be decorated with roof profiles or top bands
- A Canopies are recommended to mark entrances and provide shading to these locations

## Colonnades & Openings



- A Use of colonnades are recommended along commercial ground floors to provide comfortable frontages for pedestrians
- A It is preferable to use simple geometry for openings and colonnades
- A Prefer form repetition, especially in commercial buildings to give order and a consistent architectural language
- A Use small openings where privacy is needed and on facades that are exposed to the sun
- A Openings can be ornamented by material, colour or texture to give more emphasis on certain facades or key points in a building

## Facades Treatment



- M Maintain consistency with the traditional use of materials on the facades
- M Use a few materials (max. 3) and textures within a single building and within a single cluster of buildings. The different materials should be used as decoration and to mark certain elements of a building such as entrances
- A Decorations on facades can be achieved through traditional extrusions or recesses, reinterpreted in a contemporary key
- M In urban areas the use of glass on facades is permitted in a greater way, however this material must be used only and up to 40% of a single facade's surface.

Existing Proposed

Existing Proposed

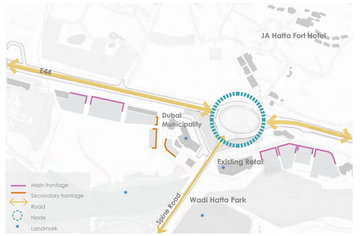
Existing Proposed

*Architectural Language for Commercial built form*






# 3.14 Strategic Arrival (T5)




*The diagrams above are indicative and for guidance purposes only. Submissions must be accompanied with design statements and masterplans as per the DM approval process and submission requirements*

## Objectives

- *To establish a strong sense of place through the delineation of planning boundaries and settlement limit for urban and rural development.*
- *To protect the surrounding environment from the encroachment of buildings.*
- *To maximise the value and the enjoyment of the Wadi*

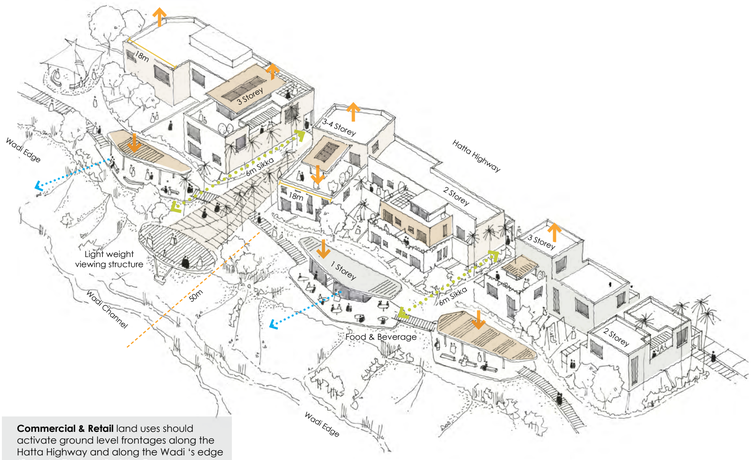
## Visual Identity

**Interface With ROW**

**Interface With Wadi**

*Architectural Language for Commercial built form*

## Urban Form, Scale & Architectural Language




**Commercial & Retail** land uses should activate ground level frontages along the Hatta Highway and along the Wadi 's edge *(Refer to Cluster M2 of the Development Framework Plan)*

**Height Strategy:** The prevailing height for Hatta is 3 storeys (T5-16), however **4 storeys should be considered on corner sites at strategic locations** to add emphasis and contribute to legibility.

**Informality along the Wadi edge.** The layout and design of **buildings should have a loose and natural quality**.

Building within the **50m buffer zone** should be of a **light weight construction** and should not have an adverse effect of the ecological qualities of the Wadi network.

**Massing Strategy:** Built form should reduce in scale and transition towards the Wadi edge.

For streetscape and landscape design guidance *refer to Section 1 of these guidelines and To RTA-Geometric Design Manual For Dubai Roads-2017).*

**Primary Wadi shared pathways** must be a minimum of **4m wide** and located **above the 100 year flood event level.**

*Illustration 3.16 Commercial & Mixed-use Built form sketch*






## 3.15 Industrial Area (T5): New & Retrofit


*Guidance on how to improve Agro-industrial area on the outskirts of Hatta*

**Urban Infill Buildings**

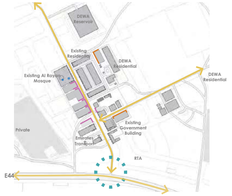
Urban infill is a key regeneration strategy that can help to enhance areas suffering from poor spatial planning and poorly defined public realm.

New infill buildings should respond to the prevailing height and building line of existing buildings.

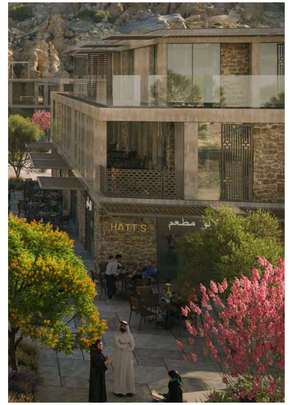
Architectural and visual style for campus / industrial areas can be explore contemporary and modular systems.

*Suggested facade types for agro-industrial area. Facades should contribute to the overall eco-friendly low carbon vision for Hatta.*

| Facade | Modular composition |
|---|---|
| % of opening (Ground + Above ground) | 20% window to wall<br>Min 60% glazing at ground level on main street |
| Projections | limited projections, recessed openings |
| Roofs | Flat, green roofs |
| Opening treatment | Vertical louvres, screens |
| Orientation | Predominantly horizontal |
| Materials and Colour | The use of industrial materials should be carefully considered or concealed with green walls. Light colours and translucent materials. |




## 3.16 Education Campus (T5): New & Retrofit


*Suggested facade solutions for Campus style regeneration areas. This type of facade can help integrate with residential blocks and harmonise with mountain location.*

**Built Form Retrofit**

As part of the overall vision for Hatta regeneration areas may require the retrofittting of buildings and facades to improve the overall sense of place for Hatta. Key opportunities include:

- Re-alignment of buildings to better address street edge/building line.
- Ground floor activation.
- Transition massing between existing buildings.
- Adding better definition public spaces and Sikkas.
- Relocattion and concealment car parking to the rear to buildings to enhance higher quality public realm.

**Streetscape Retrofit**

Retrofitting within the pedestrian realm is an ongoing process and can be used to upgrade existing streetscape to incorporate features that were not within the original design.

These elements can vary in scale and can include:

- Adding shade structures & planting.
- Restructuring the street by adding cycle tracks, new configurations sn changing materials with the project area.
- Paving, light fixtures and a a new palette of public realm furniture



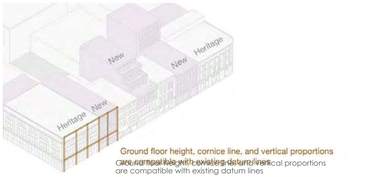

# 3.17 Building Retrofit

One of the key targets of the development framework plan for Hatta is protection of the local culture, heritage and environment through sustainable activities. Retrofitting buildings is an environmental-friendly and cost-effective approach to preserve heritage assets and enhance building performance. When retrofitting urban heritage buildings, new designs must be compatible with the existing built form, scale, Heritage Framework to reinforce and maintain the integrity of the existing character.

Retrofit includes any changes to the exterior of the building, including extensions, demolition, construction of additional floors, glazing of external balconies, changes to step-backs and street access. The retrofit should also be assessed by its effect on the immediate context, including possible encroachment on public rights of way, or compromise to neighbourhood privacy. "

Retrofit

- Retrofit design should be compatible with existing character and exhibit the characteristics found in the community.
- New buildings adjacent to existing buildings, street wall height should match the general street wall height or cornice line.
- Retrofit design should include architectural elements found along the streetscape, particularly datum lines, porches, window proportion, elevation porportions, coulours andmaterials.
- Greater step-backs are required for buildings in a heritage context, massing should be broken down, and providing front entrances on main streets.




Ground floor height, cornice line, and vertical proportions are compatible with existing datum lines

Retrofit in a heritage context

- New construction should not cover or destroy key heritage features, such as: materials, volumes, and spatial relationships that characterize existing property.
- Retrofitted facades should be visibly differentiated from the old, achieving compatibility primarily through harmonious scale, massing, facade articulation and materiality.
- Maintain vertical rhythm of the facade, as historic buildings often exhibit a finely scaled, vertically-oriented rhythm created through towers, bays, tall narrow windows, and repetition.
- Vertical and horizontal datum lines of adjacent heritage buildings should be retained, for example, floor heights, signage, window proportions in the facade.

| | |
|---|---|
| Facade | Match existing facade composition |
| Spatial Objective | Enclosure |
| % of opening (Ground + Above | Match existing datum lines and opening percentages |
| Projections | Limited projections, canopy and colonnades encouraged |
| Roofs | Match exiting roofline |
| Opening treatment | Match opening datum lines, opening setback, screens, framed openings |
| Orientation | Predominantly horizontal |
| Materials and Colour | Match existing materials, finishes and colour palette, contemporary materials encouraged. |






# 3.18 Market & School Area (T5)

Hatta Market
Hatta's local market occupies a key location within the core. The regeneration of the market will help enhance the area as a vibrant local retail offering. Additional market squares and public realm will help to connect to main street, proposed market areas, existing heritage village and new core.


*Example of Retrofit Facade & Roof. Galleria Mall, Dubai*

*Opportunity to introduce a new roof structure over the to market building and associated public square*

School Area
The school buildings in this area do not contribute positively to the fabric and streetscape of Hatta. The sketch opposite identifies high level objectives aimed at improving built form and public realm. Applicant should consider the following:

- Building height to be 2-3 Storeys, with consideration for 4 storey at key corner locations.
- Larger school blocks should be surrounded with smaller blocks, which address and align with the street edge.
- Educational buildings should must be designed to provide a positive interface with street and public spaces.
- Massing should step down to sensitive neighbouring areas such as residential areas to the south and south east.
- Carparking should be located to the rear to of blocks to reduce visual impact.
- Access points should be consolidated where possible to align with RTA's standards

| | |
|---|---|
| External Facade | Modular composition |
| Spatial Objective | Enclosure, permeability |
| % of opening (Ground + Above ground) | Match existing datum lines<br><br>30% window to wall |
| Projections | Limited projections, canopy and colonnades encouraged |
| Roofs | simple roofline |
| Opening treatment | Opening setback, screens, framed openings, |
| Orientation | Predominantly horizontal, vertical on corners |
| Materials and Colour | Local stone and render, wooden frames. Coloured panels on internal facades |

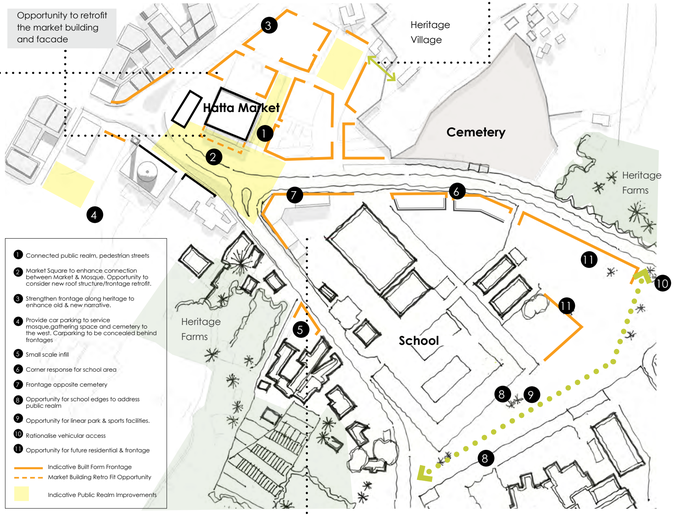
*Example of school responding to its corner site conditions by defining the street edge and well as rotating the larger 3 3 storey volume to contribute to city wayfinding and legibility.*

**Blocks** along the southern/eastern edge of new core must be sympathetic to the neighbouring heritage area, hillsides and heritage farms. **New built form should be scaled on the grain of the existing Hatta Heritage Village.**

New sequence of space and pedestrian routes to build on routes of traditional markets

New pedestrian connection to Cemetery. Access to be indirect and managed.

Opportunity to retrofit the market building and facade




Opportunity for archaeological sites become part of touristic trails. Cemetery access from Heritage Village. Defined parking should be provide for visitors

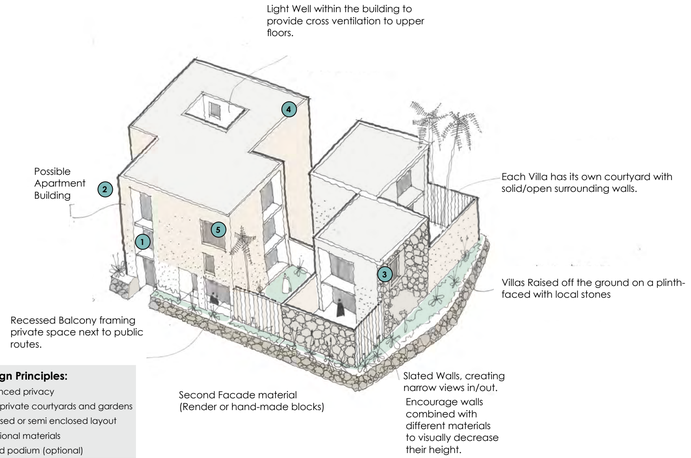
*Illustration 3.17 Indicative sketch showing spatial objective for school and market area.*






# 3.19 Residential Courtyard (T6-T4)

## Urban Form, Scale & Architectural Language




**Design Principles:**

- Enhanced privacy
- Semi-private courtyards and gardens
- Enclosed or semi enclosed layout
- Traditional materials
- Raised podium (optional)

Main Components

1. Communal courtyard
2. GF private terrace
3. Rubblestone facade
4. Render facade
5. Rooftop terrace
6. Recessed balcony

*Illustration 3.18 Residential Courtyard Built form sketch*

## Visual Identity

*Architectural Language for New Residential Typologies based, Treatment based on the Dubai Municipality's "Elements of Traditional Architecture in Hatta" guidelines*

| | |
|---|---|
| Facade | Rhythm based on design grid |
| % of opening (Ground + Above ground) | 40% window to wall ratio<br>15% max widow to wall on ground level (mixed-use upto 60%) |
| Projections | Projected balconies, Semi open balconies, recessed balcony, bay windows, etc. |
| Roofs | Flat, accessible roofs and defined parapets |
| Opening treatment | Framed windows, vertical louvres, screens, slatted walls |
| Orientation | Balance horizontal & vertical as per design |
| Materials and Colour | Contemporary materials, rendered walls, Local Stone, bricks, stone cladding, Restricted colours near heritage |

# 3.20 Mixed-use Residential (T6-T4)

## Urban Form, Scale & Architectural Language

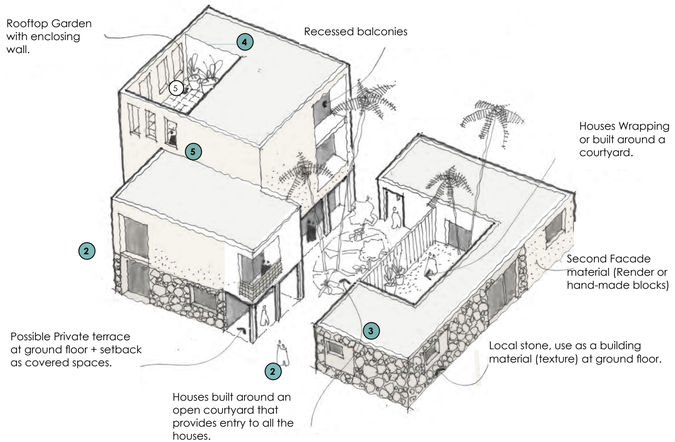
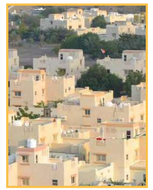



*Illustration 3.19 Commercial & Mixed-use Built form sketch*

## Visual Identity



*Architectural Language and treatment for New Residential Typologies based on the Dubai Municipality's 'Elements of Traditional Architecture in Hatta' guidelines.*

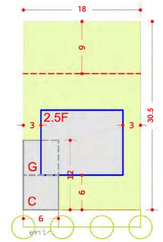
| | |
|---|---|
| Facade | Rhythm based on design grid and massing |
| Spatial Objective | Enclosure, permeability |
| % of opening (Ground + Above ground) | 40% window to wall ratio<br><br>60 % window to wall at ground level |
| Projections | Projected balconies, Semi open balconies, recessed balcony, bay windows, etc. |
| Roofs | Flat, green roofs, accessible roofs |
| Opening treatment | Framed windows, vertical louvres, screens |
| Orientation | Horizontal, vertical massing on corners |
| Materials and Colour | Wood, rendered walls, Local Stone, Shades of light tones, contemporary materials encouraged |





# 3.21 Residential (T4): Villas Plot Layout Guidance (Reduction in Plot Size)


## Villa Plot Area 550 m2

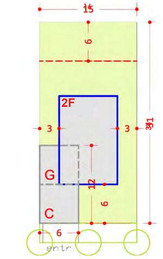



## Villa Homezone Street Guidance

This section will illustrate the conditions to which the proposed dwelling typologies, must adhere while facing a homezone street. Housing styles including villas and townhouses will be visually represented in subsequent sections.

- A sikka joining two neighbouring home zones, providing pedestrian connectivity within a homezone cluster.
- Homezones create a shared pedestrianized priority space in front of residences, allowing for families and neighbours to meet outside. The narrow width between plot boundaries, combined with reduced parking and increased planting and trees will create a cooler and more welcoming environment for the residents to enjoy.
- Plot entry and residential entry next to each other, reducing on plot build up.
- Residential buildings align with the back of the pavement edge to provide a physical presence and shade.
- The rear of plots form a 'collective' enclosed green space. Providing larger visual garden for all residents.
- The rear of the plot could be used for food production for the residents, or as part of a wider 'market garden' for Dubai.
- The design of architecture to use local/historical references such as courtyards and roof terraces.

## Villa Plot Area 550 m2




### Emerging Guidance

- Zero main building setback to the front of the plot to ensure maximum shade coverage onto the street.
- The ground floor main building footprint should not exceed half of the depth of the plot. This is to enable/ encourage the provision of a sizable back garden and spacious mid-block aspect.
- Flexibility on the provision of one-storey, flat-roofed annex buildings detached from the main building. Total building footprint should not cover more than 70% of the plot.
- Continuation of the street wall through the provision of garage mass.
- Animating the street wall through balconies, entrances and trees in the side setback

Final designs and plot sizes must align with the requirements set out in Dubai's National Housing Policy (MBRHE Mohammed Bin Rashid Housing Establishment). Please also refer to the Comprehensive Development Framework Plan & Toolkit.

*Appropriate Architectural Language And Treatment For New Villa Typologies.*

# 3.22 Residential (T4): Townhouses Plot Layout Guidance (Reduction in Plot Size)


*Appropriate Architectural Language And Treatment For Townhouse Typologies.*

## Townhouses Homezone Street Guidance 450 m2


Townhouse plot example.

Plot boundary

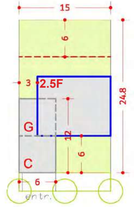
National Housing typologies will be broadened to include townhouses with a focus to reduce plot sizes. Reducing plot sizes allows for greater density in housing and ensures there is adequate land and space for future generations (Dubai's National Housing Policy)

Developments must:

- Contribute to the Hatta's overall vision and sense of place
- Align with the Dubai Municipality's Guidance on National Housing
- Use local/historical references such as courtyards, roof terraces and incorporate contemporary interpretation of historical references where appropriate.
- Respond to contextual conditions
- Provide for design and facade treatment that avoids excessive use of decoration and should follow the style of the building. Architectural detailing should be straightforward and uncomplicated. Avoid superficial decoration of surfaces and a mix of styles.
- Provide for building identity through façade tectonics and the juxtaposition of volumes and materials. Façade accentuations should be achieved by the existing functional elements such as railing, window frames, shading elements, etc.

## Townhouses

## Plot Area 372 m2




G – Garage
C – Carport

Final designs and plot sizes must align with the requirements set out in Dubai's National Housing Policy (MBRHE Mohammed Bin Rashid Housing Establishment). Please also refer to the Comprehensive Development Framework Plan & Toolkit.

| | |
|---|---|
| Facade | Modular composition front and back |
| Spatial Objective | Enclosure |
| % of opening (Ground + Above ground) | 40% window to wall ratio<br><br>Solid ground floor/ transparent in mixed-use |
| Projections | Projected balconies, Semi open balconies, recessed balcony, bay windows, etc. |
| Roofs | flat, green roofs |
| Opening treatment | Framed windows, vertical louvres, screens |
| Orientation | Predominantly Horizontal |
| Materials and Colour | Material varies per design. Porcelaine cladding, wood, rendered walls, Local Stone, Shades of light tones, shades of beige and grey. |





# 3.23 Residential (T4): Irregular Plots Typical Guidance

**Corner Plot with Long Street Frontage**

Corner plots can be designed with more freedom. For efficiency garage and carports should to be collocated and attached to the next plot.

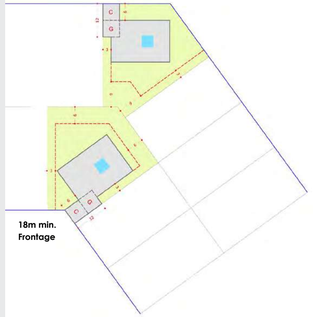
The house layout can be tailored to the needs of the plot, but should have at least two facades parallel to the adjacent plots.

At least a 9m distance is required from the bottom of the plot to maintain the "collective" enclosed green space and the larger visual garden for all residents.

**Corner Plot with Limited Street Frontage**

These plots need to be designed with a street frontage of at least 6m to allow convenient pedestrian and vehicular access. For efficiency garage and carports should to be collocated and attached to the next plot. The house layout can be less uniform but it should have at least two facades parallel to the adjacent plots.

A minimum 6m distance is required from the bottom of the plot to maintain the "collective" enclosed green space and maintain the larger visual garden for all residents.



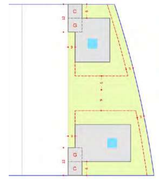

**Two Closing Plots with Two Street Frontages**

Plots with two street frontages can vary in shape. The primary frontage should be orientated along the long street to provide visual consistency and allow for better access to the plots.

The house layout can be less standardized but it should have at least two facades parallel to the adjacent plots.

At least a 6m distance from the boundary of the opposite plot is required for the smaller and 9m for the bigger plot to maintain the "collective" enclosed green space and maintain the larger visual garden for all residents.

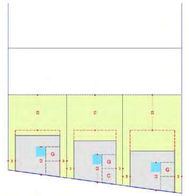
For efficiency garage and carports should to be collocated and attached to the next plot.



**Three Closing Plots with Common Frontage**

Occasionally irregular plots can be trapezoid in shape where the side boundaries are parallel.

3 houses can be arranged and positioned on the same frontline to create a stronger street wall and all have to be offset from the side plot lines to sustain a visual connection with the "collective" enclosed green space and the larger visual garden for all residents.

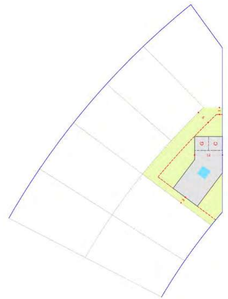


**Triangular Plots: Single Frontage**

Plots such as these may have long frontage and irregular, however they must still contribute to the quality of the streetscape.

In such a case according to the plot geometry, the house can be positioned without restraints, or it can to be located on the plot's building external line and adjacent to the neighboring houses to complete the street wall composition.

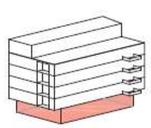
To achieve well considered balanced layouts, the parcellation design must avoid triangular plots where possible by trimming the acute angles (adding land to the adjoining plot)



# 3.24 Residential (T4): Expatriate Housing (New & Retrofit)

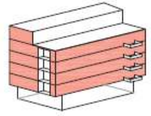
## New Construction

- Blocks of medium-rise apartments (3-4 storeys) are proposed to be clustered in a single residential compound or apartment complex.
- The design should be based on a module of clusters that accomodate inner courtyards providing semi-private open spaces with opportunities for a variety of outdoor activities, as well as a safe environment for children to play and a place for residents to walk and enjoy.
- The apartment buildings are designed with recessed ground floors to provide shade for people as they walk around the retail, dining, and entertainment uses on the ground floor.
- Facade designs can include Mashrabiyas to allow natural light into the apartments while maintaining privacy.
- Create discontinuities on the facade to avoid having huge massive wall effect.
- Block depth =60m

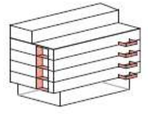


Ground Floor Strategy/Undercut Strategy

Roofscape



Facade Treatment



Balconies

## Retrofit

- Front and side elevations of new and modified buildings must match character of the buildings in close proximity.
- Facade elements such as: balcony railings, screens, and openings are appropriately scaled and are considerate to the human-scale
- Active ground level, maximizes opportunities to engage the pedestrians and enable vibrant street frontage
- Utiilities and plant rooms to be concealed from main facades and screened appropriately
- Using appropriate colors and minimizing the number of predominant colors used in the Façade design

| | |
|---|---|
| Facade | Modular composition front and back |
| Spatial Objective | Enclosure |
| % of opening (Ground + Above ground) | 40% window to wall ratio<br><br>Solid ground floor/ transparent in mixed-use |
| Projections | Projected balconies, Semi open balconies, recessed balcony, bay windows, etc. |
| Roofs | Flat, green roofs |
| Opening treatment | Framed windows, vertical louvres, screens |
| Orientation | Horizontal |
| Materials and Colour | Wood, rendered walls, Local Stone, Shades of light tones, shades of beige and grey |

Refer to DBC's design parameters and regulations on apartments design



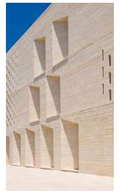
# 3.25 Built Form: Palette of Materials

In the urban areas the use of material should be more free and more materials are allowed to provide a urban feel to the built form including the use of polished stones that can provide a particular aesthetic and formality.

The use of a limited material and colour palette however is advisable to obtain a formal yet non-invasive character within the Hatta region and respect the local tradition and urban environment.

Local stone it can be used for walls or for paving surfaces

Beige rendered walls with decorative motifs and stone infills



Sandstone or similar local stone

Bricks (hues to match existing architectures and local materials)

*Illustration 3.20 Commercial & Mixed-use Built form: Palette of Materials*

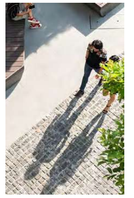
For further guidance on materiality & Colours, refer to General Design Elements, Section 7.6, 7.7, 7.8.

# 3.26 Landscape: Palette of Materials

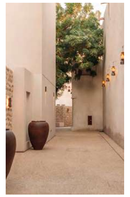
In order to improve Hatta's public realm experience, it is essential to establish a well-balanced approach to the palette of materials, especially in the heart of Hatta's urban areas and public spaces. The materials should have an environmental, aesthetic and functional duty to serve the locals and visitors alike. Materials should consider extreme weather effects such as sunlight, and at the same time heavy rainfalls. Located at regular, shaded nodes along the routes, key entrances, public open spaces and visitor destinations, the design should incorporate strong and natural finishes.

Natural Stone

Gravel



Concrete Pavers



Stabilized Fines

*Illustration 3.21 Commercial & Mixed-use Built form: Palette of Materials*

**Suggested Finish**

- Vernacular: Distressed finish of surfaces in plaster, in combination of heavy textured paint finish
- Contemporary Vernacular: Stone cladding (beige shade spectrum), with combination of smooth plaster & paint finish
- Combination of metal cladding, aluminium cladding, textured paint, stone finish as per design

# 3.27 Public Realm & Landscape: Open Spaces

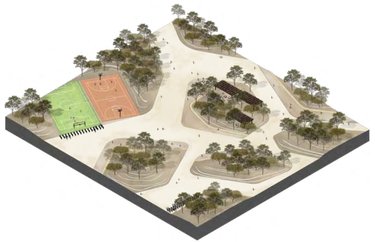


*Illustration 3.22 District Park treatment 3-Dimensional Illustration*

*Illustration 3.24 Neighborhood Park treatment 3-Dimensional Illustration*

*Illustration 3.23 Local/Pocket Park treatment 3-Dimensional Illustration*

District Park

District parks are large areas of open space that provide amenity facilities for an entire district population with a wide range of managed activities. The size of the spaces ranges from 3 to 5 hectares and comply with a ratio of 0.5ha /1000 people, and are designed to serve populations within 800 meters. They serve several neighbourhoods with visitors travelling from surrounding districts and tourists visiting. Hence, they are located at the heart of Hatta's larger communities within

Neighborhood park

Neighbourhood parks are open paces which are planned for daily use to serve the recreational and social needs of a community. They can accommodate a variety of activities, such as recreation, sport, and natural features conservation. Their areas range from 0.5 to 1 hectares and are mainly focused around Hatta's neighbourhood centres.

Local/Pocket Park

Local and Pocket Parks are small open spaces designed and equipped for both active and passive activities. Their average areas range from 0.1 to 0.3 hectares and they service the recreation needs of the immediate residential population. They are integrated within Hatta's local residential communities/areas, typically near local facilities, neighbourhood Mosques, local shops and amenities.

The District parks include and integrate the following amenities:

| Neighborhood Park Amenities |
|---|
| Large outdoor Sports facilities and courts |
| Children's play areas for all ages |
| Recreational, social spaces for gathering, seating and events |
| Animated Civic spaces and Public Art |
| Natural landscape features |
| Centralized specialty food & beverage |
| Informal picnic facilities |

The Neighbourhood parks include and integrate the following amenities:

| Neighborhood Park Amenities |
|---|
| Recreational social spaces (Passive Recreation) |
| Informal seating in shaded locations |
| Children's play areas |
| Distributed small-scale F&B opportunities |
| Garden spaces reflecting local character and habitat |
| Native and adaptive plant species |
| Walking and cycling paths |

The Local and Pocket parks include and integrate the following amenities:

| Local/Pocket Park Amenities |
|---|
| Small-scale children's playgrounds |
| Comfortable seating within the shade |
| Social and Family gatherings |
| Natural landscape features |
| Small Plaza |
| Community Gardens |
| Native and adaptive plant species |





# 3.28 Public Realm & Landscape: Treatment for Existing Forecourts Parking

The following illustrations depict the design intent and transformation of the existing four courts parking through also highlighting the different zones that make up a successful public realm design:

Right-of-Way Zoning

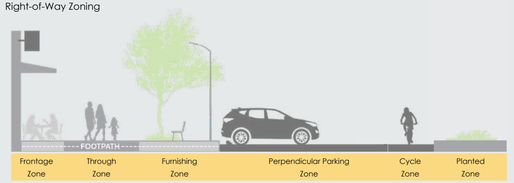


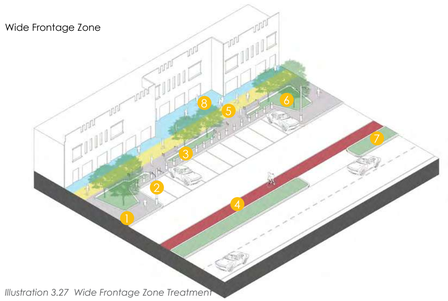

*Illustration 3.25 Right-of-way zoning section*

| Forecourts Parking Guidelines | |
|---|---|
| **General Guidelines** | |
| M | Well-defined Edge, Furnishings, and frontage zone shall be adopted. |
| A | Limit the length of perpendicular parking spaces to 5.5m |
| M | Add pedestrian scale lighting |
| M | Pedestrian crossing with accessible curb ramps shall be provided for disabled access |
| M | Ensure that pedestrian-scaled paving are provided to indicate sidewalk zones. |
| M | Coordinated palette of street furniture and streetscape elements. |
| M | Safety bollards shall be provided for pedestrian safety |

**Related Policy**

1. Improve access to local and on-street retail
2. Provide a high-quality public parks and recreation system

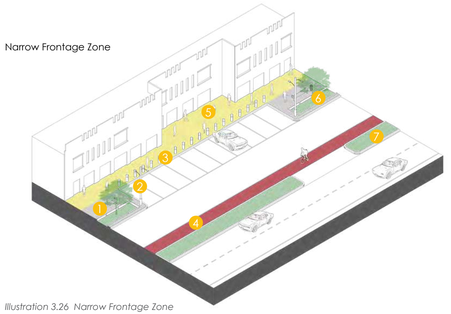
Wide Frontage Zone




1. Furnishing Zone
2. Lighting
3. Safety Bollards
4. Cycle Zone
5. Through Zone
6. Tree planting
7. Planted Zone
8. Frontage Zone

*Illustration 3.27 Wide Frontage Zone Treatment 3-Dimensional Illustration*

Narrow Frontage Zone




1. Furnishing Zone
2. Lighting
3. Safety Bollards
4. Cycle Zone
5. Through Zone
6. Tree planting
7. Planted Zone

*Illustration 3.26 Narrow Frontage Zone Treatment 3-Dimensional Illustration*

# 3.29 Public Realm & Landscape: Connectivity Strategy for the Soft Mobility to Wadi

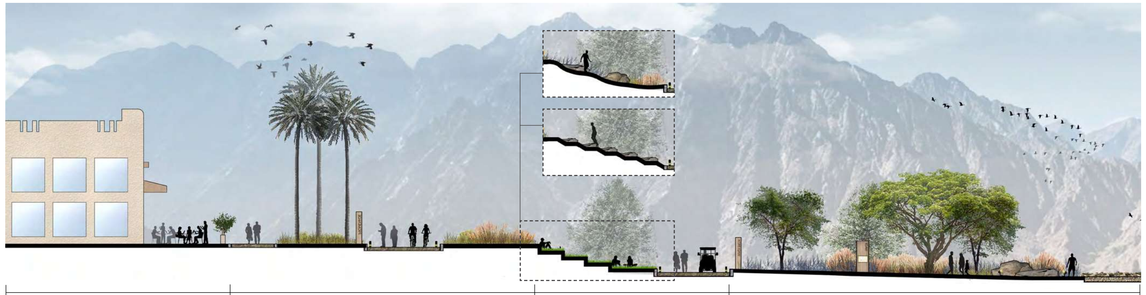



*Illustration 3.28 Connectivity Strategy for the Soft Mobility to Wadi Section*




*Illustration 3.29 Zoning for public realm frontange activition between commercial zone and wadi*

| Connection Guidelines | |
|---|---|
| **General Guidelines** | |
| M | Ensure a 4 meter wide corniche that includes outdoor seating and shaded walkways |
| M | Provide a connection into the wadi through bleachers, steps, ramps and informal steps |
| M | Provide pedestrian scale lighting that is directional and would not adversely impact the wildlife (using darksky protocols) |
| M | Furniture located within the flood zone to be of suitable robust materials, no loose furniture is permitted. |
| A | Use permeable paving to reduce water run off |
| M | Main adequate shading for pedestrians with shade structures and canopy trees |

**Related Policy**

1. Enhance stormwater and floodplain development





# 3.30 Public Realm & Landscape: Connectivity Strategy Across the Roundabout

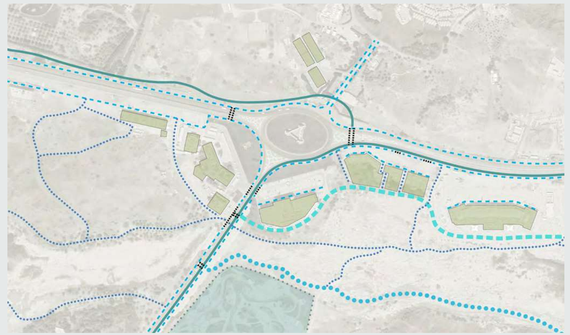


*Illustration 3.30 Connectivity Strategy Diagram*

- Corniche
- Sidewalk
- Pedestrian Crossing
- Wadi Shared Path
- Wadi Foot Path
- Cycle Lane
- Mixed-use Buildings
- Park

The provision of access for the disabled and individuals with special needs must be considered in the design of the Public Realm in order to ensure that all users experience the site to its full potential.

1. Integrate innovative techniques to accommodate disabled users such as aided stair access along steep slopes, ramps, handrails, tactile paving.
2. Mobility network to be supported by a coordinated suite of wayfinding signage including braille signage for the visually impaired.
3. Seating to be located adjacent to paths

*Pedestrian Sidewalk*

*Cycling Lane*

*Crossings*

*Walkways Between Buildings*

| Soft Mobility Guidelines | |
|---|---|
| **General Guidelines** | |
| M | A continuous sidewalk of 2 meters minimum for pedesterian circulation shall be maintained along landscape areas, and a minimum of 4 meters in front of commercial buildings |
| M | Ensure a 2.4 meter wide cycle lane network across Hatta |
| M | Ensure a connected network of walkways along the wadi edge of 2 meters wide shall be provided |
| A | The main wadi shared path to be 3m wide to accommodate all users including pedestrians cyclists and escooters on a suitable surface |
| M | Ensure trees have a 2 m minimum clear stem height in order to maintain views of site and wayfinding elements. |
| A | Path network to be positioned to take advantage of key views. |
| A | Screen undesired views by utilizing fences and vegetated screens/planting that control views and is appropriate to the context of the space. |
| M | Access to wadi shall be provided through stairs, ramps and informal steps |

# 3.31 Public Realm & Landscape: Space Between Buildings and Connections to Wadi

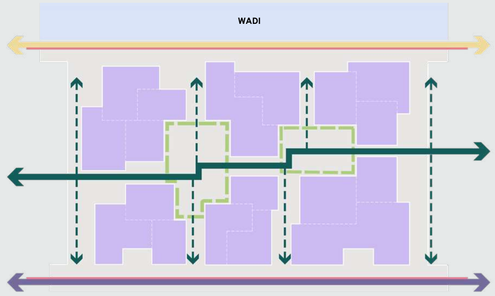
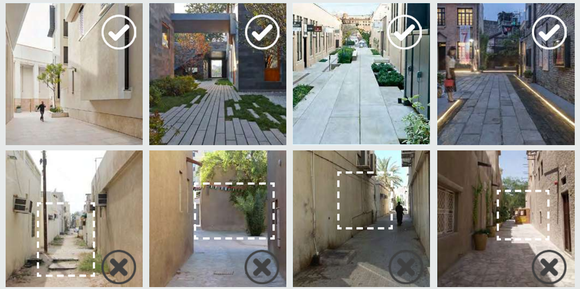



*Illustration 3.31 Space between buildings and connections to wadi diagram*



*Comparison between existing and recommended sikkas*

*Illustration 3.32 Space between buildings and connections to wadi collage*

Spaces between commercial buildings can provide framed views of the Wadis and mountain landscapes beyond and have the potential to be valuable public realm opportunities. These spaces are to be activated as civic spaces and connectors drawing people through to the Wadis and 'corniche' promenade behind. These spaces may be narrow like lanes or Sikkas or broader plaza spaces which can provide spill out space for adjacent commercial F&B units.

| Space Between Buildings and Connections to Wadi Guidelines | |
|---|---|
| General Guidelines | |
| A | Where access for vehicles is prohibited or minimal, spaces between buildings may be activated with high quality public realm elements including paving, seating, shade, play elements, and outdoor dining. |
| A | Pervious paving or integrated swales/raingardens |
| A | Active frontages where possible. |
| M | Promote natural surveillance especially in narrower lanes and sikkas. |
| M | Position prominent wayfinding elements to draw users through the spaces to the Wadi / promenade behind |
| A | Larger spaces to be flexible and have a variety of functions for all users' groups, encouraging people to linger in the shelter of adjacent buildings, include play items, group seating areas, shade structures and trees. |
| A | Larger spaces may be able to accommodate small retail kiosks or pavilion buildings. This is encouraged to activate the spaces. |
| M | Where vehicular service access is required through these spaces the design should remain as a 'shared surface' with the carriageway undefined. The path of vehicles to be controlled by strategically placed landscape elements such as seating, or planting. Bollards should only be used where these elements are not appropriate. |



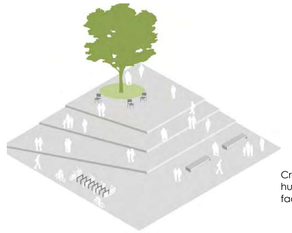


# 3.32 Public Realm & Landscape: Civic Spaces

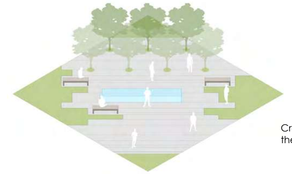
*Illustration 3.33 One possible location of Civic Space in the urban development*

| Civic Spaces Guidelines | |
|---|---|
| General Guidelines | |
| M | Provide flexible space for a variety of uses including events such as markets, or outdoor entertainment |
| A | Provide power and data points throughout the space |
| M | Allow for activation of building frontages and commercial spill out space adjacent |
| A | Interactive Water features are encouraged |
| A | Small scale informal play elements are encouraged |
| M | The space should include permanent art or sculpture |
| M | Vehicles should be prohibited except for emergency and for servicing |
| M | Parking to be limited to drop off and disabled parking. |
| A | Existing parking to be reduced and relocated to the rear of the buildings |

*Recommendations for Civic Spaces*



Creating civic event spaces and village hubs that connect the community to the facilities



Creating a civic space as an extension to the public library

civic event space that can
odate passive activities such as
exhibitions

Lush Planting

Pathway Planting Treatment

Urban Open Space Planting Treatment



# 3.33 Public Realm & Landscape: Planting in Urban Areas

Native Species
Adaptive Species
Site Specific

Urban Planting

The following guidelines apply for the planting selection within the Urban Areas:

M 1. The vision for Hatta Urban Areas is to have a mix of colorful, vibrant and memorable planting through the use of 70 % of native species and 30% of ornamental and adaptive species.

M 2. Abundant tree planting should characterize the planting within the urban areas to improve outdoor comfort, encourage active mobility and reduce heat island effect.

M 3. A mix of native and ornamental trees should be located on the streets to create an attractive leafy street and encourage the use of soft mobility routes.

M 4. The planting design should accommodate specific plant species that suit Rain Garden conditions within the public realm such as *Cenchrus ciliaris* and *Canna indica*.

A 5. The use of low growing evergreen shrubs and grasses should be considered within street verges or tree pits such as *Pennisetum steceum* and *Lavandula vera* to promote greenery and add softer feel to the urban areas.

**1-STREET | MEDIAN PLANTING**
**2-STREET | SIDEWALK PLANTING**
**3-URBAN SQUARE | EDGE PLANTING**
**4-URBAN SQUARE | FEATURE PLANTING**
**5-SURFACE PARKING PLANTING**
**6-SCREENING PLANTING**


Hyphaene thebaica


Bauhinia variegata


Acacia tortilis


Tamarix aphylla


Albizia julibrissin


Phoenix dactylifera


Delonix regia


Haloxylon salicornicum


Lavandula vera


Salvadora persica


Dipterygium glaucum


Ochradenus arabicus


Rhanterium epapposum


Plumeria obtusa


Euphorbia larica


Ochradenus baccatus


Ochradenus aucheri


Plumeria rubra


Cortaderia selloana


Muhlenbergia capillaris


Pennisetum setaceum


Malvaviscus arboreus


Salsola imbricate


Heliotropium kotschyi


Tecoma smithii


Convolvulus virgatus


Thunbergia alata


Heliotropium curassavicum


Cenchrus ciliaris


Canna indica



# 04

## Rural Character

# 4.1 Sustainable Development For The Rural Environment: Integration (T3-T2)

## Objectives

- *Provide for long term sustainability of ecosystems and habitats by recognising natural processes.*
- *Protects prominent natural landforms that contribute to local character.*
- *Ecological connectedness and coherence.*
- *Protect indigenous vegetation and habitat.*
- *Create and/or maintains the unique identity of a site.*
- *Increase public and private amenity.*
- *To add environmental and potential economic value.*
- *Retain and restore Wadi waterbodies and streams and by planting water body banks in suitable indigenous species.*

## Mandatory Guidance

- Retain existing vegetation, including mature exotic vegetation in appropriate locations.
- Seek the assistance of an ecologist or consult council to identify the most appropriate method to restore a stream or water body.
- Use planting to connect areas and enhance watercourses and as ecological and biodiversity corridors.
- Design layout and building locations around a cohesive vegetation framework and topography and avoid encroaching on important ecological systems.

Preserve Cultural Heritage (T3 -T2)

Sites may have important heritage features or historical associations which should be preserved. Identify and locate using these sites before beginning the design process.

Applicants should maximise opportunities to preserve and enhance cultural heritage – settlement sites, heritage buildings / structures, ecological, geological and archeological sites, and significant trees or vegetation groups; e.g. traditional and contemporary food collection areas, trade routes and flax mill remnants, trees and other vegetation

Applicants should:

- Refer to Hatta's Comprehensive Development Plan for information on affection plans and heritage overlay areas.
- Consult with Dubai Municipality's Heritage department to help identify sites of cultural importance and to determine the best ways to preserve each site.
- Locate new development so they do not dominate nearby heritage sites, and so they do not compromise the setting or the historic landscape connections of sites of cultural heritage.
- Ensure historic connections between site features and the surroundings are retained.

**Typical farm-stays layout**

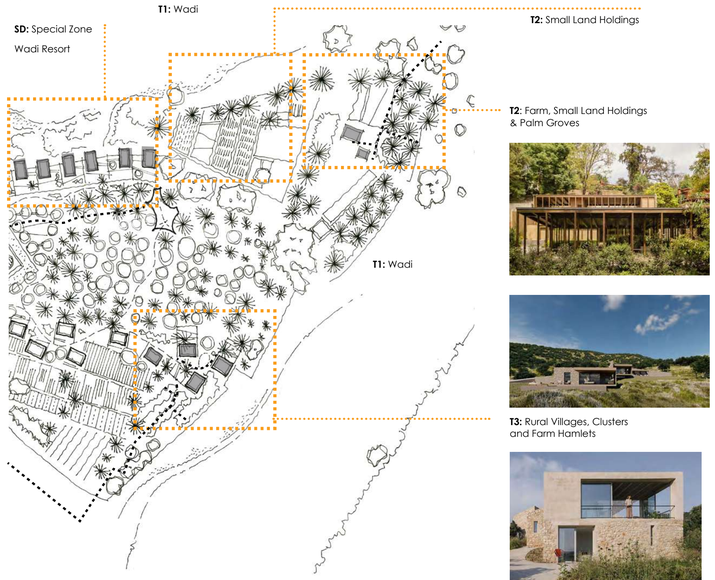



*Illustration 4.1 Typical Farm-stay Layout*

Note: The above sketch is indicative and is constructed to highlight how the varying rural conditions might come together in Hatta.







*Facade Treatments for Rural Areas*





# 4.2 Rural Clusters (T2)

## Accessibility

1. Public transport stops provided with walkable access to the main wadi / palm grove / agriculture interface and recreation area. M
2. One point of vehicular access to be provided per cluster so as to minimize excess road surface within rural areasSemi private access to peri agriculture / allotments A
3. A

## Urban Density

3. The density of the built environment should be kept low given the rural setting and requirement for site permeability. Built form should be set back from the edge of the roads. M
4. Small variations in height can be provided between 1 and 2 stories to allow for variation in the built form line and creation of terraces. A

## Urban Structure & Form

5. Create a dispersed urban form that sits lightly in the context to respect the rural surroundings and land use. Can be accomplished with low rise villas and semi-detached units with private gardens. M
6. Ensure and promote ecological permeability between the built form. Off set the built form from roads allowing for a green edge to the road and pollution from noise/visual pollution. M
7. Create upper floor setbacks to allow for usable roof terraces providing privacy and view of the surrounding area. M
8. Access roads should be minimized with several units be served by one access road. A
9. Individual residential units to have fences or walls along their gardens for privacy.

## Urban Edges

10. Edges of clusters to allow for ecological permeability into/through the site. M
11. Cluster's edge to respect the required offsets as required by regulations adjacent to wadis, palm groves or agriculture. M
12. Materials of walls, fences and roofs to compliment surrounding rural landscape and specified in more detail in the detailed architectural guidelines. M

## Land Use

14. The main land use will be residential with the occasional small-scale retail or community offering dependent on population count and proximity. M

15. Utilisation of 'pocket spaces' with soft uses to be used where appropriate and in demand. For example, food production or low-key exercise areas. A M

16. Activate the edge of the wadi / palm grove / agriculture interface with pedestrian/cycling micro mobility.

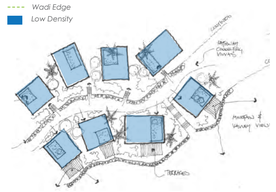



*Illustration 4.2 Density & Accessibility*

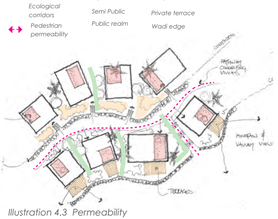



*Illustration 4.3 Permeability*


*Cluster Development with Green Infrastructure*

*Integrated Design in Rural Areas*

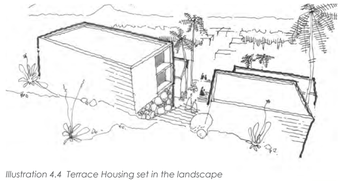


*Illustration 4.4 Terrace Housing set in the landscape*

# 4.3 Built Form Design Elements & Design Interpretation

## Terraces

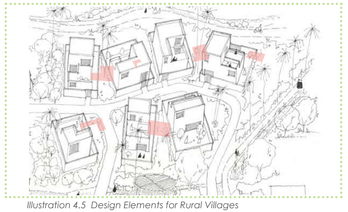


*Illustration 4.5 Design Elements for Rural Villages*

- A It is preferable to design terraces on flat roof rather than as overhanging blocks
- M For accessible flat roofs, provide an adequate parapet wall for security
- A It is advisable the use of canopies or sails on rooftops to provide shading
- A* Retaining walls should be made of materials that tie in with the rest of the building
- A It is advisable to screen the terraces or plan their location away from direct neighbouring views, i.e. protected by the buildings walls

## Roofs

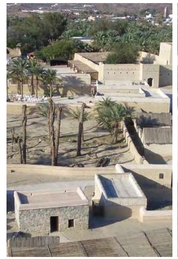
- A* Roof profiles should preferably be flat
- A* Roof profile can be decorated, but due to the rural character it is preferable to maintain simplicity and subtlety
- A* Where possible, it is recommended to opt for green roofs in order to reduce the impact on the rural landscape
- A* Shading canopies are recommended to mark entrances and to provide shading to rooftops, however it is preferable they don't stick out from the building but be integrated into it as much as possible

## Plot Boundary Walls

- A* Plot boundary walls should tie in with the buildings architectural style and materiality
- A* Boundary walls can be of varying heights and forms, it is preferable to maintain simplicity and subtlety
- A* Where possibile, boundary lines should be made of walls and should incorporate greening at intervals
- A* Accessibility through the plot boundary wall should be made visible and distinct to provide wayfinding and sense of place
- A* Avoid long stretches of plain dull boundary walls along main urban streets, with no interruption or interest
- A* Boundary walls can be used as signage location

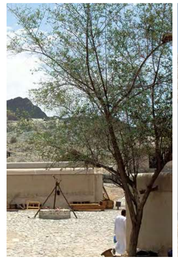
*Existing Hatta*

*Proposed*



*Existing Hatta*

*Proposed*



*Existing Hatta*

*Proposed*

*Photos of Hatta's heritage Village and modern interpretation of historical built form from the Village.*





# Built Form Design Elements & Design Interpretation

## Gateways & Walkways

*Illustration 4.6 Design Elements for Rural Villages*

- M* Use of local and natural materials, both for paving surfaces and building facades
- A* Walkways in rural areas should be laid out taking advantage of existing natural shading, where possible
- A* Mark main entrances and key public walkways with signage to provide wayfinding

## Openings

- A* Porches can be used to mark entrances and provide shading
- A* It is preferable to use simple geometry and forms for the rural built environment
- A* Use small openings where privacy is needed and on facades that are exposed to the sun
- A* Openings can be ornamented by material, colour or texture to give more emphasis on certain facades or key points in a building

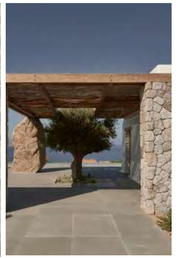
## Facades Treatment

- M* Maintain consistency with the traditional use of materials on the facades
- M* Use a few materials (max. 2) and textures within a single building and within a single cluster of buildings. The different materials should be used as decoration and to mark certain elements of a building such as entrances
- A* Variation of materials on facades can be bold, such as with big bandings in a contemporary way however providing a subtle and elegant style
- M* In the rural areas the use of glass should be limited to small portions of facades.

*Existing Hatta*

*Proposed*

*Existing Hatta*



*Proposed*

*Existing Hatta*

*Proposed*

*Photos of Hatta's heritage Village and modern interpretation of historical built form from the Village.*

# 4.4 Retention Of Rural Character

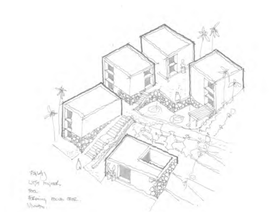
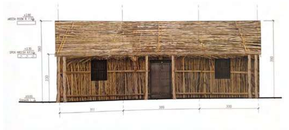


*Illustration 4.7 Rural Village Sketch*



*Hatta's Traditional Areesh (1-2 storeys, as identified in the 'Elements Of Traditional Architecture Guidance For Hatta (detailed heritage guidelines by Dubai Municipality).*

## Objective

- ***To preserve the character of the rural landscape.***
- ***To preserve the character of the rural landscape***
- ***To support the strategy of light-touch tourism.***
- ***To minimise the visual impact of rural buildings.***
- ***To preserve existing landscape character and qualities.***

## Mandatory Guidance

Informality

- Set in the unrestricted expanse of the countryside with the rugged diversity of the natural landscape, rural developments should be characterised by buildings in looser, informal arrangements .
- Buildings should be responsive to the contours and the features of the landscape.
- Building walls should not be strictly parallel to each other as a result of abstract, rationalized planning layouts.

Remoteness

- Rural sites are special by being surrounded by nature, far from urbanisation. This quality should be maintained.
- Buildings should be located away from main highways.
- The road way should 'belong' to the landscape, emphasizing the quality of the land, rather than being an engineering standard overlaid upon it.
- Infrastructural elements such as pumping and electrical substations should be hidden from view.

Modest scale

- The size of a building can have an adverse impact on the rural landscape. Domineering architecture can detract from a deeper experience of the place. To retain a modest scale:
- Rural buildings should be no higher than two storeys or 8 meters from ground level at entrance to the roof level (excluding height of parapets).
- Preferably, the second storey should be a smaller pop-up building element, expressed with a lighter architectural material and with an internal area less than 40% of the ground floor footprint.
- Taller architectural elements should be preserved for important civic and communal occupancies only.
- Rural buildings should not have large floorplates.
- Rural buildings should not have large, monolithic rooflines.

# 4.5 Reduce the Impact of Infrastructure

## Objective

Shelter

- ***Rural buildings and site layouts should offer a sense of protection from the surrounding wilderness and climate***

## Mandatory Guidance

- To accentuate the sheltering function of buildings in th rural environment.
- To highlight experiences of the wilderness through spatial contrast and difference.

## Advisory Guidance

- Building arrangements can define enclosed outdoor areas distinct from its natural surroundings.
- Compact building arrangements can provide a more hospitable microclimate.
- Walls and rooflines can frame views of the sky that signal domesticity and protection (e.g. courtyards)

## Objective

Simplicity

- ***Rural developments should generally be modest in form and complement the character of their landscape setting so as to direct people's attention to the landscape***

Development in rural areas is synonymous with the provision of on-site water supply and waste water treatment and disposal, telecommunication and electricity infrastructure. The cost of providing these services can be prohibitive in more isolated rural areas.

Above ground services can introduce urban clutter into the landscape and draw attention to development, and while secondary structures such as water tanks are typical rural features they can become dominant if not located sensitively.

## Objectives:

- ***Reduces the consumption of non-renewable energy sources***
- ***Rural communities are more resilient and are self reliant***
- ***Use of wind turbines and alternative energy sources will reduce reliance on the national power grid***
- ***Communal waste water treatment plants can provide a better level of treatment with less effect on the environment, and can be more economic***

To reduce the impact of infrastructure, applicants should:

- Facilitate on-site water supply and waste water treatment and disposal within the subdivision layout, providing communal waste water treatment facilities where appropriate
- Facilitate on-site infiltration of storm water from roads and other impermeable surfaces
- Consider on-site green waste recycling, and grey water re-use for irrigation purposes
- Where possible put services underground, or consider aligning them parallel to existing shelter belts or so they have landform or vegetation as a backdrop design and locate infrastructure such as water tanks so they are absorbed into the landscape, avoid prominent locations and make use of vegetation to 'anchor' these structures

# 4.6 Farms in Hatta (T3-T2)

| | Reactivated farm + farm stay | Agricultural farms |
|---|---|---|
| **Urban Form & Layout** | Dispersed building layout or clustered layout<br>Located in isolation from other settlements or part of an informal settlement<br>Context responding to topography & contours<br>Buildings framing pathways and gathering places<br>Limited building massing to protect the natural landscape and maximizing the quality of visitor experience | Limited buildings within farm areas<br>Larger buildings may appropriate along major roads for visitor centre or relationship with agri-tec university campus |
| **Character** | Individual residential units integrated with the landscape, or clustered dwellings forming a coherent village identity<br>Building units sited to enable both privacy from, and interaction with, traditional farming<br>Farm buildings should be low-lying and horizontal in proportion | Cultivated agricultural lands<br>Buildings integrated with agricultural landscape, finished in natural surfaces |
| **Accessibility** | Minimal access roads / tertiary to secondary roads<br>Car parking should be dispersed and integrated into the landscape.<br>Provide access to landscape and local agriculture | Secondary roads |
| **Edge conditions & Setbacks** | Buildings should be well screened by landscape and located away from main highways<br>Farm shops located near the entrance, retail on street-facing boundaries<br>Large setbacks | Large setbacks<br>Facilities and services locates on street-facing boundaries |
| **Landscape** | Diverse native and/or indigenous species that reflect local character<br>Traditional farming process | Diverse crops<br>Modern watering system |
| **Density** | Low density | Very low density |
| **Visual** |  |  |

*Table 4.1 Farm Typologies Matrix*





# 4.7 Appropriate Typologies: Clusters of Farm Stays (T3)

Where multiple farms are clustered in an area the potential for a local village centre should be explored. Such centres can provide additional amenities and services in support of the agricultural and hospitality sectors.

## Objective

- ***To support the development of agritourism in Hatta***
- ***To differentiate the market sectors for agritourism.***

## Mandatory Guidance

- Alternative tourist lodgings could cater to different sectors of the market beyond the on-site farm stays.
- Public realm landscaping and boundary treatments should be co-ordinated between different farms to establish a coherent identity.
- New buildings should be sited to enhance the public realm, framing pathways and gathering places.
- Accommodation units should be integrated with the landscape, sited and scaled proportionately to create an attractive setting.
- Accommodation units should provide access to the landscape for outdoor amenity.

*Variety of small scale low impact building typologies for farm areas*


*Illustration 4.8 Sketch of Village Farm Stay*

## Objective

- ***To add to the value of farm stay experiences.***
- ***To engage in the 'living museum' vision by preserving a traditional way of life. The village centre could house storefronts and restaurants featuring local products.***

## Mandatory Guidance

- Farm stay developments should treat farmers' houses as an important site feature rather than accommodation for support workers.
- Farmers' houses should create a pride of place for its inhabitants.
- Farmers' houses can include larger communal spaces, such as group dining facilities, to add value to the hospitality offer.
- Domestic scale farming (produce and livestock for the farmers' own use rather than the market) could provide an additional layer of interest to farm stays.

## Objective

- ***To support the local economy and contribute to the livelihood of farmers.***

## Mandatory Guidance

- Publicly accessible elements of farms can house retail components to extend their offerings beyond hospitality clientele.
- In village farm stays, street facing boundaries can contain farm shops.
- In standalone farm stays, buildings situated closer to the entrance can be designated for farm shops.

# 4.8 Appropriate Typologies: Standalone Farm Stays (T2)

Where farms are located in isolation from other settlements, the hospitality component can be more immersive, offering a closer experience to the landscape, the agricultural field and production facilities.

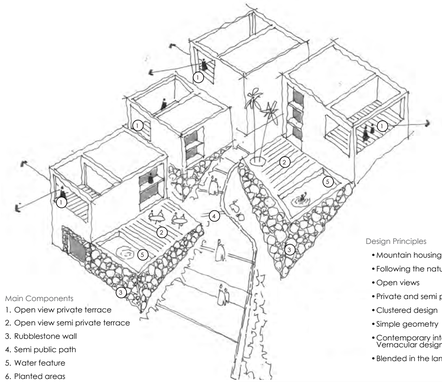
## Objective

- *To support the development of agritourism in Hatta*
- *To differentiate the market sectors for agritourism*
- *To provide structure and narrative sense to exterior spaces .*
- *For efficient Distribution of Services*
- *To respect the landscape setting of farm clusters.*

## Mandatory Guidance

- The standalone farm may require a broader range of amenities and attractions to support the hospitality offer, such as tourist-friendly production facilities and greater access to outdoor areas.
- A storefront near the entrance to the compound may be beneficial for capturing passing trade.
- Buildings should be well screened by landscape and located away from main highways to enhance the rural experience.
- Existing buildings that compromise the rural experience, such as those in close proximity to highways or infrastructure, should be removed or relocated.
- Car parking should be dispersed and integrated into the landscape.
- Farm buildings can be clustered to serve a range of useful functions.
- Simple buildings can be arranged to create complex exterior spaces.
- Partial enclosure can create a sense of shelter from the surrounding landscape.
- Building clusters can help signal communal outdoor space and promote sociability.
- Building alignments should be informal, taking cues from the local topography.
- Farm buildings are set in a predominantly horizontal landscape.
- Farm buildings should be low-lying and horizontal in proportion.
- Farm buildings should remain lower than the full canopy height of palm trees.

*Examples of Appropriate Typologies for Stand-alone Farm Stays*




Main Components
1. Open view private terrace
2. Open view semi private terrace
3. Rubblestone wall
4. Semi public path
5. Water feature
6. Planted areas

Design Principles
- Mountain housing
- Following the natural contours
- Open views
- Private and semi private terraces
- Clustered design
- Simple geometry
- Contemporary interpretation of Vernacular design
- Blended in the landscape

*Illustration 4.9 Sketch of Stand-alone Farm Stay*

| | |
|---|---|
| Facade | Minimal composition |
| Spatial Objective | Permeability |
| % of opening | min. 30% window to wall |
| Projections | No projections, Semi open balconies, recessed balcony, canopy. |
| Roofs | Inclined, Pitched, flat, green roofs |
| Opening treatment | Opening setback, colonnade, frames |
| Orientation | Predominantly horizontal |
| Materials and Colour | Wood, Local Stone, rendered walls, stone cladding, Shades of beige and earthy colours |





# 4.9 Hospitality Resorts (SD)


Legend

01 Semi Enclosed Hall With Hidden Square
02 Circular Shading Element
03 Villa Arranged on A Formal Axis
04 Pool Boundary
05 Villas In the Landscape With Private Gardens & Pools
06 Commercial Shops With Landscape Frontage (Trees, shading & seats)
07 Spa & Gym-'Organic Area'
08 Hotel & Reception

*Illustration 4.10 Commercial & Mixed-use Built form sketch*

In some circumstances, the conversion of farms for hospitality purposes will be deemed acceptable. These include:

- Less sensitive locations along strategic routes and highways (outside protected areas)
- Locations in close proximity to Agricultural Schools and Campus.
- Areas in close proximity to the strategic arrival.
- Infill regeneration areas, where frontage will contribute to the overarching low carbon eco-village vision for Hatta.

*Architectural Language for Commercial built form*

| | |
|---|---|
| Facade | Minimal Composition |
| Spatial Objective | Permeability |
| % of opening (Ground + Above ground) | min. 30% window to wall |
| Projections | Semi open balconies, recessed balcony, Canopy |
| Roofs | Inclined, Pitched, flat, green roofs |
| Opening treatment | Opening setback, screens, framed openings, |
| Orientation | Predominantly horizontal |
| Materials and Colour | Wood, rendered walls, Local Stone, Shades of beige, whites and earthy colours |

*These requirements are additional to the existing mandatory requirements set out by Dubai Municipality.*

**Submission Requirements**

1. Baseline Requirements
2. Architectural Design Statement
3. Visual Impact Assessment
4. Open Space & Landscape Plan

# 4.10 Built Form Palette of Materials

In the rural areas it is strictly necessary to maintain a natural aesthetic and look within the built form.

The use of mono-material and mono-colour is advisable to obtain a very subtle character but it is permitted the use of up to two materials and colours on each building or group of buildings.

Local stone to be used for walls or paving surfaces

Beige rendered walls

Distinctive Beige Coloured Walls In Heritage Farm Areas

Wood: architectural and decorative elements

*Illustration 4.11 Palette of Materials in Rural Areas*

## Mandatory Guidance

- Buildings should be finished in natural surfaces that are sensitive to the landscape setting
- Traditional construction and craft techniques and local materials must be used wherever possible
- Production buildings should retain a pragmatic, unadorned working quality.

For further guidance on materiality & Colours, refer to General Design Elements, section 7.6, 7.7, 7.8.

# 4.11 Landscape Palette of Materials

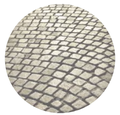
The Rural area offers a glimpse of Hatta's Heritage and agricultural farms and allows visitors to experience the traditional way of life. The proposed palette of materials to be used shall preserve the villages' identity and develop its sense of place. Materials include natural stone, stabilized aggregates, concrete pavers and natural gravel.

Natural Stone

Stacked-Stone Wall

Stabilized Fines

Cobblestone Pavers



Grasscrete

**Suggested Finish**

- Vernacular: Distressed finish of surfaces in plaster, in combination of heavy textured paint finish
- Contemporary Vernacular: Stone cladding (beige shade spectrum), with combination of smooth plaster & paint finish
- Contemporary: Combination of textured paint, stone finish with shaded to foster integration and reduce impact of massing.





# 4.12 Public Realm & Landscape: Heritage Village Sikkas

The Pedestrian Sikkas within the Heritage Village will provide visitors and locals with a chance to experience the history and traditions that the village holds.

Vehicles do not have permitted access. The dimensions vary and in some instances the spaces widen to accommodate tree planting and informal garden spaces.

Each typology includes a drainage detail running through the centre of the space. Paving should grade away from the building elevation, directing rain water away from the building frontages.

Guidelines include the following:

M 1. Clear access should be provided to the existing courtyards and the traditional open spaces within the village.

M 2. Existing footpath and alleways utilised should avoid disturbing the natural and the archaeological landscape.

A 3. Signage and wayfinding integrated within the trail may provide historical information and directional navigation throughout the village.

M 4. Construction materials should be limited to the wearing course and for future footpath repairs.

| Pedestrian Lanes and Alleyways Guidelines | |
|---|---|
| Details | |
| Dimensions | Min. 2m Wide |
| Sidewalk Zone/ Margin | N/A pedestrian space. |
| Edges / Drainage | Natural stone, (Regionally sourced granite) 150mm x 250mm laid flush. |
| Hard Landscape Finish | Natural Stone |
| Colours | Colours should assimilate with the surrounding base/tone colours within the landscape. |
| Street Trees | Native canopy trees planted informally, where space allows. |
| Drainage | Street profile should grade away from the building threshold towards the flush kerb channels. |

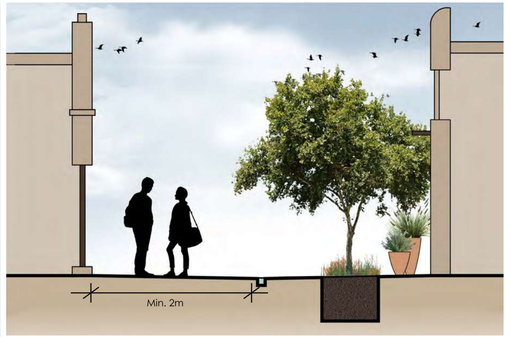



*Illustration 3.34 Proposed Heritage Alleyway Illustrative Section*

Hardscape

Natural Material

Softscape

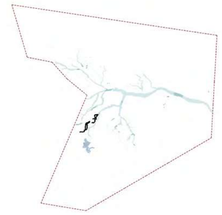
Native Planting Selection

Furniture

Natural, Robust and Durable

Lighting

Wall Mounted



*Key Plan*

# 4.13 Public Realm & Landscape: Plaza and Square

Plazas are small urban spaces for the community to use for gatherings and events. They are typically paved to provide functional space which reflects local character and identity, are defined by building frontages and can form a setting for important focal buildings. They are integrated into Hatta's local centers.

The Plazas and Squares should consider the following Guidelines:

| | Plazas and Squares Guidelines |
|---|---|
| | **General Guidelines** |
| A | The use of xeriscape strategies with native, adaptive and arid planting shall be considered. |
| M | A focal feature (Public Art or Cultural Heritage Elements) should be considered in order to attract people towards the space. |
| M | Open spaces should be dedicated for market spaces and/or pop-up shops. |
| M | Open spaces should be shaded through the use of shading trees and or man-made structures. |
| M | Locally sourced materials should be utilized within the plaza. |
| M | Comfortable seating within the shade should be provided. |

*Illustration 3.35 Plaza/Square Park treatment 3-Dimensional Illustration*

*Central Plaza with Water Feature*

*Possible Site Location for Plaza*

1. Protect and enhance rural areas, desert and mountain wilderness
2. Promote safe, active mobility-friendly streets
3. Integrate shading and protection, such as tree canopies, awnings and canopies, to encourage pedestrian activity along the street
4. Promote accessibility and a safe walking environment to public realm and open spaces with an emphasis given in the ability to access them by foot, bicycle and public transport.





# 4.14 Public Realm & Landscape: Palm Groves & Heritage Farms-Al Falaj

The Falaj System is an essential part of Hatta's heritage and is the main source of irrigation for farmlands. While exploring and marveling through the paths of the farmlands, the design intent is to enhance the Falaj to an extent that allows visitors to experience and reconnect with its historical and environmental value as it runs through rows of date palm trees and different varieties of vegetation.

Guidelines for the Falaj system include the following:

M 1. Field boundaries and existing irrigation structures that support the Falaj watering system should be repaired.

M 2. Seating areas and information signage should be added in the farmlands and for visitors to get a sense of the ancient falaj experience

M 3. Dead palm trees should be replaced with heritage palm species to maintain the palm population along with the introduction of a rich mix of orchard trees.

A 4. A full and diverse range of both heritage and contemporary crops inter-planted beneath the palms and orchard trees may be planted.

M 5. The ancient Falaj system should be repaired and commissioned to illustrate the historic irrigation techniques.

6. A more sustainable drip irrigation system may be introduced in other areas to reduce irrigation water consumption.

| Palm Groves and Heritage Farms-Al Falaj Guidelines | |
|---|---|
| **Details** | |
| Dimensions | As Per Existing Footpath |
| Construction Make-up / Sub-base | Compacted ground |
| Kerbs (where required) | N/A |
| Wearing Course | Locally sourced stone pavers |
| Colours | Mid grey to light beige to match the existing boundary walls and to assimilate with the surrounding base/tone colours within the landscape. |

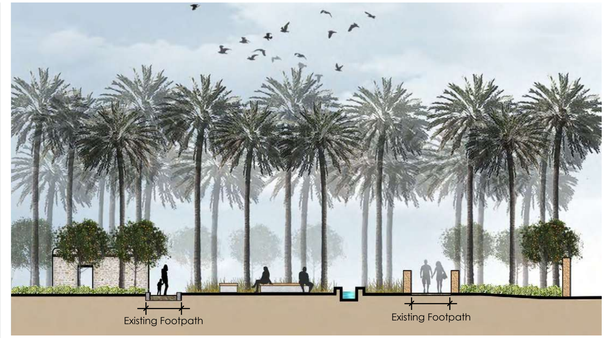
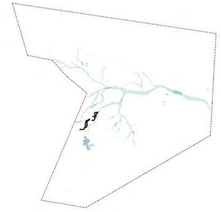



*Illustration 4.1 Proposed Primary Wadi Shared Path Illustrative Section*

*Hatta's Falaj Watering System and Palm Groves*



*Key Plan*

# 4.15 Public Realm & Landscape: Rural Planting

N Native Species
AN Adaptive Species
Site Specific

Rural Planting

The following guidelines apply for the planting selection within the Rural Areas:

M 1. The planting design within the rural areas should aim to enhance the local biodiversity and the overall ecological health of hatta through the use of 80% of native species and 20% of adaptive/ productive species.

M 2. The public realm should form a series of productive landscapes that support food production for local residents and links to Hatta's agricultural legacy. Species include *Punica granatum, Citrus sinensis,* and *Prunus persica.*

A 3. Opportunities for planting orchards, fruit trees, herbs, and other productive plants should be considered within softscape areas.

M 4. The planting design should comprise native and/or indigenous species, featuring local plants such as Sedr and Samar trees inspired by the existing rural landscape character in order to reduce the demand for landscape irrigation.


Prosopis cineraria


Acacia arabica


Punica granatum


Citrus sinensis


Ziziphus spina christi


Phoenix dactylifera


Prunus persica


Citrus reticulata


Acacia ehrenbergiana


Opuntia spp.


Ficus sycomorus


Ochradenus arabicus


Rhanterium epapposum


Limeum arabicum


Euphorbia larica


Ochradenus baccatus


Capparis decidua


Pluchea dioscoridis


Salvadora persica


Cymbopogon commutatus


Carnulaca aucheru


Crotalaria aegyptiaca


Salsola imbricate


Heliotropium kotschyi


Matricaria chamomilla


Mentha spicata


Senna italica


Heliotropium curassavicum


Solanum lycopersicum


Thymus vulgaris

**1-SIKKA**
**2-STREET | SIDEWALK PLANTING**
**3-RURAL PLAZA | EDGE PLANTING**
**4-RURAL PLAZA | FEATURE PLANTING**
**5-SCREENING PLANTING**
**6-PRODUCE PLANTING**


Rural Open Space Treatment


Agriculture Planting


Agriculture Planting

# 05

## Wadis & Waterbodies

# 5.1 Public Realm & Landscape: Wadi Character

The Wadi network across Hatta can be described under three broad landscape character types. These characters have arisen from their physical attributes such as profile, edge condition, depth and width, vegetation, and general condition. Many of the wider Wadis in the lower flat valley areas are degraded as a result of their use as vehicular access to farms and presence of major infrastructure such as electricity pylons.

The three character types are;

- Wide & Shallow through settlements; Wadis are deep and wide often bounded by mature farms and settlements, some are degraded by overuse by vehicles.
- Flat across open landscape; the lower flat valley wadis adjacent to the main highway and passing through the contemporary commercial farms.
- Steep and contained; Steeper narrow Wadis often forming cannons. Water velocity may be high during floods and the profile of the sides of the wadis will make access difficult. They present the greatest opportunity for habitat creation and ecological restoration.

**Flat Across the Open Landscape** — **GENERATE**

M 1. Generate Wadis as public open spaces
M 2. Generate strong soft mobility connections
M 3. Generate pockets of habitable landscape destinations

**Wide and Shallow Through Settlements** — **ENHANCE**

M 1. Enhance native vegetation cover where degraded
M 2. Enhance environment for Bee pollinators
M 3. Enhance landscape amenity value adjacent to development

**Steep and Contained** — **CONSERVE**

M 1. Conserve existing wadi profile and natural edge
M 2. Conserve Permanent waterbodies, pools and streams
M 3. Conserve area as inaccessible to general public

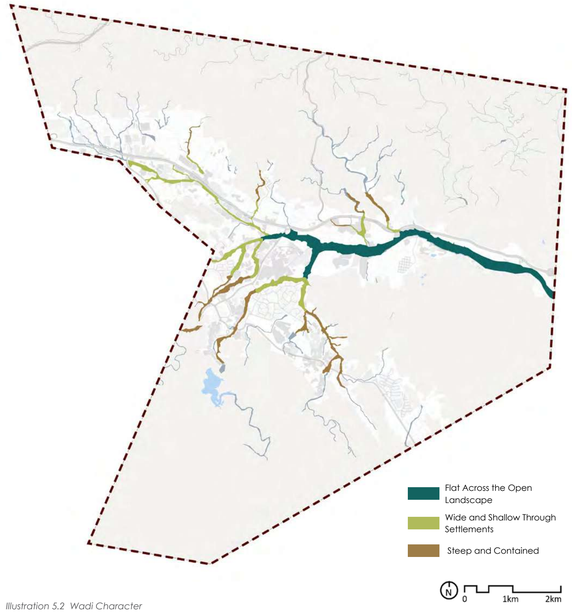



*Illustration 5.2 Wadi Character*





# 5.2 Public Realm & Landscape: Wadi Character Types

## Public Realm & Landscape: Wadi

The Wadi is a major spine that dominates Hatta landscapes as it passes through a diverse set of landscape characters, ranging from agricultural date farms and dense oasis farms, to residential neighborhoods and touristic destinations. It acts as a connecting spine between the touristic and residential hubs at the north and the urban most settlements in the center.

The landscape connectors within this guideline include:

1. Primary Wadi Corridors – Recreational green corridor which includes soft mobility routes and pedestrian footpaths (Wide, Shallow and Flat).
2. Secondary Wadi Corridors-Naturalized wadis for pedestrians (Narrow, Steep and Contained).

Forms and Patterns:

*Forms and patterns on existing images*

**Related Policy**

1. Enhance stormwater and floodplain development
2. Preserve and enhance wadi landscape and develop ecological corridors to promote biodiversity
3. Promote Wadi soft mobility connections to the different settlements
4. Maintain a setback from wadi edge to serve as an environmental protection

Wadi Character Typologies:

Flat Across the Open Landscape

*Flat Wadi Typology*

Wide and Shallow Through Settlements

*Wide and Shallow Wadi Typology*

Steep and Contained

*Narrow and Contained Wadi Typology*

# 5.3 Public Realm & Landscape: Wadi Mobility-Circulation

A comprehensive and fully connected circulation strategy is proposed for Hatta which priorities soft mobility modes. The focus will be on the comfort and safety of non-vehicular road users, promoting active lifestyles for residents and visitors. We will also apply to have Hatta become an official UCI (Mountain bike) city, which will make it the first mountain village in Asia with this distinction.


1. 4m Wide paved / bound surface
2. To accommodate all soft mobility modes-eScooters, eBuggy's, Cyclists, pedestians


1. Min 2m wide
2. Informal bound aggregate or gravel paths.


1. Urban cycle lanes finish
2. Beige / sand colour should be used in visually sensitive locations


1. Gravel mountain paths of varying width.
2. Bike tracks are not dedicated and to be shared with walkers


1. Informal gravel paths, min 1.5m
2. To include stone steps as required


1. Designed to the highest accessibility standards for all users including those with disabilities.
2. Paved or bound gravel surface

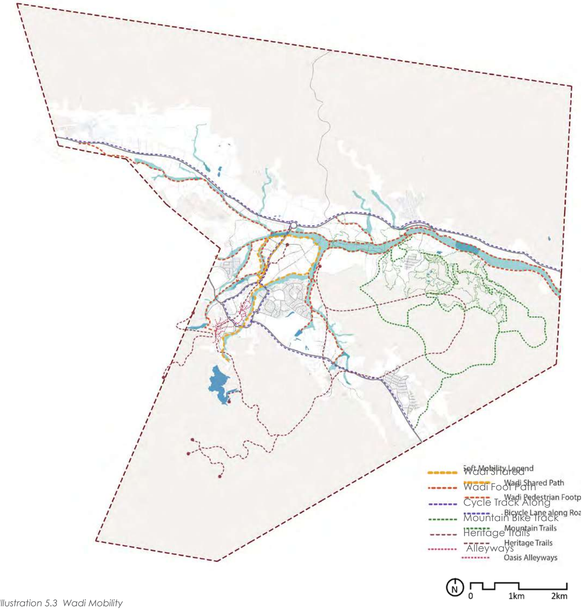



*Illustration 5.3 Wadi Mobility*





# 5.4 Public Realm & Landscape: Ground & Raised Crossings

Due to the complex network of Wadis in Hatta and the nature of the urban development which sits on 'Islands' surrounded by Wadi valleys, existing crossings are essential and numerous. This guideline makes recommendations for these existing crossings and enhancements for other road users such as pedestrians and cyclists as well as providing guidelines for new crossings particularly to facilitate the primary soft mobility network within the Wadi corridor.

Existing Crossings;

Many existing crossings are located on top of a dam wall, others are bridge crossings and there are many examples of informal roads which provide access to farms, crossing at grade on what is referred to as an Irish Crossing or Ford.

M 1. Existing road crossings on dams or bridges must be adapted to facilitate safe pedestrian and cycle crossings, either by adapting the road design or adding an additional structure to the side of the existing.

A 2. Existing road raised crossing barriers and balustrades and safety crash barrier could be replaced with designed bespoke solutions, subject to highway standards and local authority approval.

M 3. Existing informal vehicular crossings within the Wadi to be removed where access can be provided to farms by alternative routes without entering the Wadis.

*Treatment for existing crossings*

Proposed New Crossings;

M **Raised Crossing:** Where primary shared soft mobility routes cross the Wadis, new raised crossings will be required. They must be above the 100 year flood event level or if lower be designed to withstand such an event. They should be designed to a high architectural standard using materials appropriate to Hatta.

*Treatment for raised crossings*

A **Ground Crossing:** Secondary paths and existing essential vehicular access may pass through the 'bed' of the wadi at grade. Sections of the route passing through the annually or up to 5 year flood event should be robust bound surface such as insitu concrete with exposed aggregate surface.

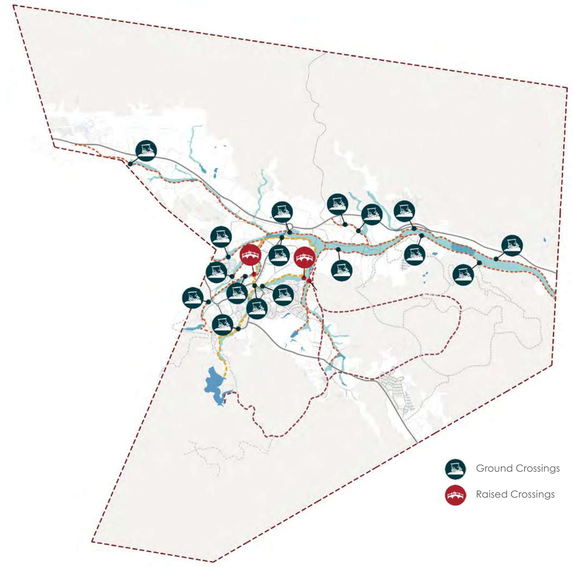



*Illustration 5.4 Wadi Bridges and Crossings*

# 5.5 Public Realm & Landscape: Wadi, Palm Groves & Heritage Farms Paths

**Primary Wadi Shared Pathways**

Construction details complement the surrounding landscape and guidelines include the following:

| Forecourts Parking Guidelines | |
|---|---|
| **General Guidelines** | |
| M | Access routes through the Wadi should be situated outside the flood risk zone. |
| A | Small sections of the Wadi Shared Path shall include crossings to create continuous access and interesting long-distance view-points *(Refer to Wadi Character Guidelines: Ground & Raised Crossings Section)*. |
| M | eScooters hubs and bicycle hubs may be provided at regular centres along the Wadi routes, allowing people to make trips of a comfortable length between character areas and key destinations. |
| M | Removal of important historic agricultural walls and structures should be avoided due to its cultural significance wherever possible. |

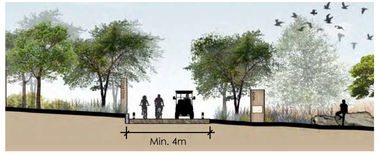



*Illustration 5.5 Proposed Primary Wadi Shared Path Illustrative Section*

| Details | |
|---|---|
| Dimensions | Min. 4m Wide |
| Construction Make-up / Sub-base | Compacted sub-base to Engineers specification. |
| Kerbs (where required) | Natural stone or pre-cast concrete, laid flush to the surrounding ground |
| Wearing Course | Bonded gravels with a mixed gauge between 6mm-25mm. |
| Colours | Buff/beige tones complementing the wadi where the sand layers are more prevalent. |

**Pedestrian Wadi Footpaths**

Construction details will visually complement the surrounding landscape as follows:

| Forecourts Parking Guidelines | |
|---|---|
| **General Guidelines** | |
| A | Compacted ground in outer reaches of the network is encouraged. |
| M | Materials should include bonded-gravel and bound aggregate to withstand potential flooding and assimilate with the surrounding base colours of Hatta landscape. |
| M | Existing pedestrian routes should be located at grade within the wadi corridors. They are subject to potential erosion during times of flood. |
| M | Footpaths with a limited footfall should be constructed out of compacted gravels. |
| M | Footpaths in highly trafficked areas should be constructed with a bonded finish. |

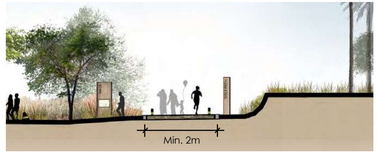



*Illustration 5.6 Proposed Pedestrian Wadi Paths Illustrative Section*

| Details | |
|---|---|
| Dimensions | Min. 2m Wide |
| Construction Make-up / Sub-base | Compacted ground in outer reaches of the network. |
| Kerbs (where required) | Compacted sub-base to Engineers specification. |
| Wearing Course-High Trafficked Areas | Bonded gravels with a mixed gauge between 6mm-25mm. (As per S5 proprietary mix.) |
| Wearing Course-Low Trafficked Areas | Compacted gravels with a mixed gauge between 6mm-25mm for repairs only |
| Colours | Buff tones (to compliment the mountains) |

**Heritage Pathways**

Construction details will visually complement the surrounding landscape as follows:

| Forecourts Parking Guidelines | |
|---|---|
| **General Guidelines** | |
| M | Traverse the landscape and provide access to the existing farmlands and the traditional Falaj system. |
| M | Existing footpath and alleyways utilised to avoid disturbing the natural and the archaeological landscape. |
| M | Signage and wayfinding integrated within the trail to provide historical information and directional navigation throughout the . |
| M | Construction materials will be limited to the wearing course and for future footpath repairs. |

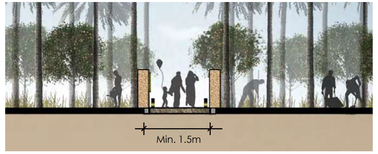



*Illustration 5.7 Proposed Heritage Pathway Illustrative Section*

| Details | |
|---|---|
| Dimensions | Min. 1.5m Wide (varies according to the existing alleyways widths) |
| Construction Make-up / Sub-base | Compacted ground |
| Wearing Course-High Trafficked Areas | Locally sourced stone pavers |
| Colours | Mid grey to light beige to match the existing boundary walls and to assimilate with the surrounding base/tone colours within the landscape. |





# 5.6 Public Realm & Landscape: Wadi Open Space

The Wadi park provide amenity facilities for the small neighborhood population as well as the entire district population.

1. The level of hierarchy is primarily defined by size, therefore a recommended size as well as a size range are provided for the wadi parks to allow flexibility.
2. Size: 0.3 to 0.75 Hectares/up to 7,500m2
3. Ratio: 0.5ha/1000 people

The following are an outline description of the characteristics that should associated with Wadi Parks:

1. Recreational, ecological landscape, cultural and green infrastructure benefits
2. Area held within a flood/Wadi area designated as natural, rural and preserved.
3. Flood zone designated as a passive recreational park
4. Natural landscapes, which are publicly accessible
5. Natural features


*Illustration 5.8 Wadi Park Treatment 3-Dimensional Illustration*

*Wadi Edge Treatment*

*Wadi Natural Landscape*

- A Informal Wadi Edge
- B Viewing Area with Seating
- C Shade Structures
- D Stepping Stones
- E Arid / Native Planting
- F Soft Mobility Path
- G Terraced Wadi Edge
- H Wadi Regeneration

# 5.7 Public Realm & Landscape: Wadi Terrain

**Flat Across the Open Landscape** — **GENERATE**

The relatively flat wadi provides great opportunity to form an accessible open space network and allow users to have a close contact with nature. The following are an outline guidance of the character associated with the flat wadi:

M 1. The shared path should run along the upper level of the wadi outside the 100 year floodplain extent to avoid flooding, while secondary footpaths allow users to move down into the wadi whilst it is dry.

M 2. Ensure easy access and permeability of the route from local settlements and public transport.

M 3. Opportunities for informal, shaded rest stops should be introduced along the routes, to rest in the shade, experience views, watch and learn about local wildlife.

**Wide and Shallow Through Settlements** — **ENHANCE**

The shallow wadi naturally exists through settlements and the open landscape in the middle ground. Its rocks, sands and the movement of water has developed a uniquely sculpted landscape, supported by a specific community of plants species. The following are an outline guidance of the character associated with the wide and shallow wadi:

M 1. Add native species that represent local provenance to restore and enhance local habitat *(Refer to Wadi Character Guidelines: Wadi Planting Section)*.

A 2. Create opportunities for walking and horse trails along its length to activate the wadi pedestrian experience.

M 3. Footpath and furniture materials should reflect the informal and natural character of the wadi landscape and to be selected to withstand any flood event.

**Steep and Contained** — **CONSERVE**

The steep wadi which is located predominantly within the higher ground offers opportunities for hiking, walking and enjoying views across the wadi landscape. The following are an outline guidance of the character associated with the steep and contained wadi:

M 1. The shared path should run along the upper level of the wadi outside the 100 year flood plaing extent to avoid flooding.

M 2. Protect native species *(Refer to Wadi Character Guidelines: Wadi Planting Section)*.

A 3. Create opportunities for walking and horse trails within the wadi valley.


*Illustration 5.9 Wadi Terrian Treatments 3-Dimensional Illustrations*





# 5.8 Public Realm & Landscape: Wadi Edges

The adjacent section illustrates the proposed typical interface between the Wadi and urban edge.

This interface / transect should include the following:

M 1. Continuous biodiversity corridor along the length of the Wadi (Wadi Channel).

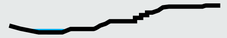
A 2. May include a promenade corniche which must connect to other footpaths along the wadi.

A 3. May provide urban civic spaces which encourage users to stop and linger.

A 4. May use more contemporary 'urban' materials and finishes including cut stone steps and terraces.

M 5. Adjacent commercial developments should have active frontages facing the wadi and may introduce privately owned public space (POPS)

**WADI/URBAN**



The Wadi Mountain transect is typically a rural typology and may have considerable ecological and biodiversity value. The mountains are typically conservation areas and the conservation status is proposed to be extended in to and along the Wadis.

This interface / transect should include the following:

M 1. Continuous uninterrupted biodiversity corridor

M 2. Pedestrian footpaths. If busy shared soft mobility network exists in this condition, it should not be positioned on the Mountain side of the Wadi and should be located as far from the wadi channel as ownership boundaries and other constraints allow.

A 3. Where possible footpaths should be located outside the central Wadi Channel

**WADI/MOUNTAIN**

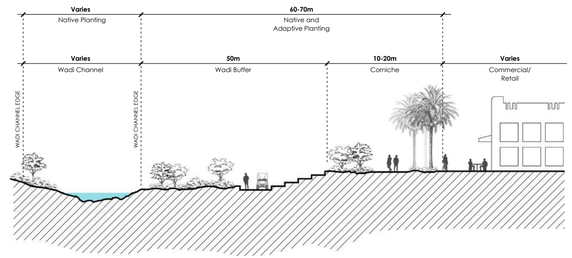




*Illustration 5.10 Wadi/Urban Edge Treatments Section*

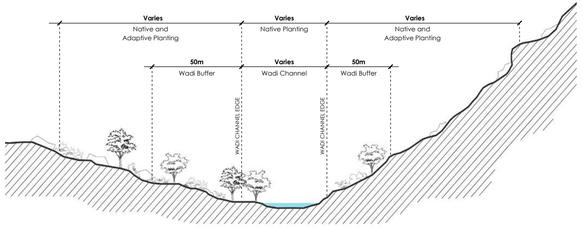



*Illustration 5.11 Wadi/Mountain Edge Treatments Section*

# Public Realm & Landscape: Wadi Edges

The Wadi / Rural interface is typified by the Wadi passing through rural agricultural landscapes with Farms surrounded by high boundary walls.

This interface / transect should include the following:

- (M) 1. Enhanced boundary treatments, removing concrete block walls to be replaced with stone, mud or rammed earth.
- (M) 2. A landscape planted buffer adjacent to the boundary walls. (100% native, desert, low water consumption species)
- (A) 3. This typology may accommodate high use soft mobility corridors.
- (M) 4. Vehicular access must be prohibited to remote farms except where no alternative access arrangement can be established.

**WADI/RURAL**

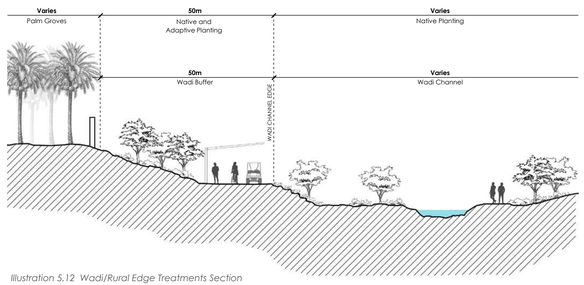



*Illustration 5.12 Wadi/Rural Edge Treatments Section*

This transect occurs where the Wadi corridor passes designated public open space, local parks & civic spaces etc.

This interface / transect should include the following:

- (M) 1. Strong and legible connections from the Wadi path network in to the public open spaces.
- (M) 2. Strong ecological and visual connectivity between the Wadi corridor and the public open space.
- (A) 3. Where the open space is urban / civic, a plaza or similar typology, the space may interface directly with the Wadi with no boundaries. The space may terrace down in to the edges of the Wadi and use the Wadi as a physical and visual backdrop.

**WADI/OPEN SPACE**

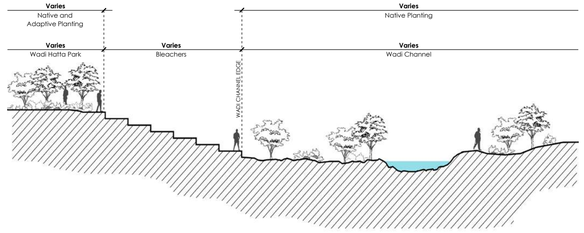



*Illustration 5.13 Wadi/Open Space Edge Treatments Section*





# 5.9 Public Realm & Landscape: Wadi Play

An essential part of the Wadi activation is to engage a wide spectrum of users. Encouraging visitors and the community to use the soft mobility modes of transport in Hatta is also a pivotal strategy in reducing vehicle trips, improving the environment and promoting active and healthy lifestyles. Play for all age groups forms a key component of this objective and will inspire children on a journey through the Wadis. There are many types of play suitable for the Wadi corridor aside form formal play equipment typically associated with a children's playground.

- (A) 1. The types of play more appropriate to the wadi corridor are elements of informal play that can be integrated in to the landscape and can form part of a child's journey through it.
- (A) 2. Play equipment can be positioned to act as 'play along the way', located adjacent to paths and routes, adjacent to points of interest, and collocated with rest stops and other conveniences.
- (A) 3. Play elements could be grouped, however no more than two or three items together.
- (M) 4. Play elements should be of natural materials, mostly wood and stone, although other materials could be considered so long as they are visually aligned with the colours and textures of the local setting.
- (A) 5. Play elements that are educational in terms of making the user more familiar with how the wadi functions are encouraged.
- (A) 6. Interactive play including water elements are encouraged.
- (M) 7. Educational signage and wayfinding aimed at children should form part of this strategy

*Informal Play-Wadi Rocks*

*Informal Play-Wadi Soil and Water*

*Informal Play-Wadi Soil and Water*

*Informal Play-Wood Stacks and Wadi Rocks*

# 5.10 Public Realm & Landscape: Wadi Art

The is a significant opportunity to integrate Art and Sculpture in to the landscape of Hatta and in Particular the Wadis. As part of the activation strategy and encouraging visitors and the community to recognise and love these important landscape elements, an ambitious art strategy is proposed.

- (A) 1. Permanent and temporary art is encouraged and a variety of scales should be considered. Large land art sculptures or elements of sufficient scale to be visible across the Valley. Smaller scale pieces as part of a sculpture trail could also be explored.
- (A) 2. Art which is integrated in to the landscape and architectural build form is also encouraged such as signage and wayfinding, landscape furniture or building facades.
- (A) 3. Temporary installations as part of a festival or event could be positioned within or adjacent to the Wadi corridors.
- (M) 4. A bold world-class art programme should be created with local communities and stakeholders to celebrate the achievements of Hatta through the presentation of site-responsive artworks and projects.
- (M) 5. All artworks, temporary and permanent should respond to site and situation.
- (M) 6. Briefing documentation should highlight the unique project-wide identity that expresses the transformational importance of the Wadis.
- (M) 7. Briefing documentation should deliver world-class artworks and projects, which engage, inspire diverse audiences locally, nationally and internationally.

*Vertical Artscape*

*Horizontal Artscape*

*Utilizing the shade structure as an art piece*

*Vertical Artscape*

# 5.11 Public Realm & Landscape: Wadi Furnishing

## Benches

Color Type

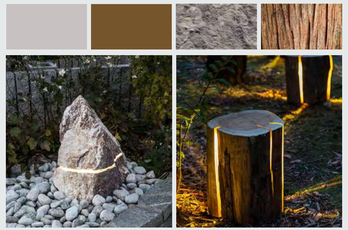
*Recommended Bench Type*

The following guidelines apply for the selection of benches in the wadi area:

- (M) 1. Benches should be well coordinated with the wadi soft mobility network, and should be placed along wadi shared path and at rest stops to offer views and vistas towards wadis, open landscapes, or public open spaces.
- (M) 2. Primary materials should consist of solid/monolithic natural stone and concrete, and be durable, resistant to food events and harsh local climate, with no maintenance requirements.
- (M) 3. Seating should be 450 to 550mm in height.
- (M) 4. Seating should be placed to respect pedestrian and cyclist flows and to avoid creating obstacles along the wadi paths.
- (A) 5. Seating can be accommodated as part of a traditional rammed earth wall, dry-stone walls or bleachers at the wadi edge.
- (M) 6. Avoid the use of metal surfaces for seating.

## Lighting

Color Type



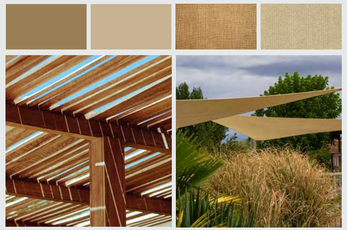
*Recommended Lighting Types*

The following guidelines apply for the selection of lighting in the wadi area:

- (M) 1. Lighting should only be used along shared path, amenities and rest stops to highlight specific landscape features/ spaces.
- (M) 2. Lighting fixtures should be robust and durable to align with the wadi character area.
- (M) 3. Primary Materials should include natural stone or hard timber, and can be embedded in natural rocks, boulders, and tree logs.
- (A) 4. Lighting Fixtures include Bollard lights, footpath lights and ground-level floodlights.
- (M) 5. Lighting shall be downward facing to mitigate upward light pollution.
- (M) 6. Avoid the use of bright lights.
- (M) 7. Fixtures should comply with the dark sky protocol and to be dark sky friendly *(Refer to General Guidelines: Dark Sky Strategy Section)*

## Shade Structures

Color Type



*Recommended Shade Structure Types*

The following guidelines apply for the selection of Shade Structures in the wadi area:

- (M) 1. Shade structures should be provided along the wadi edge at principle pedestrian spaces such as rest stops to provide comfortable environment, improve thermal comfort, and encourage the use of the public realm throughout the year.
- (M) 2. Shade Structures within the wadi corridor shall be made from a robust material appropriate to the local climate. These include pergola shade structure and tensile shade structures.
- (M) 3. Appropriate materials should include treated weathered timber, powder coated aluminium in appropriately applied colors to align with the wadi character area, and PTFE.
- (A) 4. Freestanding shade structures should be located approximately 1m from wadi edge, pathway edges.
- (A) 5. Shade structures should have a minimum clear height of 2.4m and a width of 2m





# 5.12 Public Realm & Landscape: Rest Stops & Public Toilets

Primary rest stops are located at key junctions within the wadi area. Rest stops provide respite to visitors exploring the more remote corners of both landscapes and are located along the wadi shared path as its the primary soft mobility corridor in the wadi.

Rest stops are simple structures that complement the adjoining heritage assets and will utilise the natural materials found within the wadi character area. Rest stops should include the following guidelines:

| Rest Stops Guidelines | |
|---|---|
| **General Guidelines** | |
| (A) | Shaded Rest stops should be located at 2km intervals. |
| (M) | Materials should complement the wadi landscape character areas such as compacted gravel and rubble stone. |
| (M) | Colours should respond to the wadi character typology such as Cream-buff to match the existing gravels and rocks. |
| (M) | Shade structures should extend the comfort zone and shall consist of tensile fabric |
| (M) | Furniture materials are to reflect the informal and natural character of the wadi landscape *(Refer to Wadi Character Guidelines: Wadi Furnishing Section)*. |
| (M) | Public Toilet Cabins shall be provided at every two rest stops. |
| (A) | Existing Rest Stops within the heritage farmlands shall be maintained and enhanced inorder to provide pedestrian comfort. |

*Recommended Public Toilet Cabins*

*Recommended Rest Stops Types*

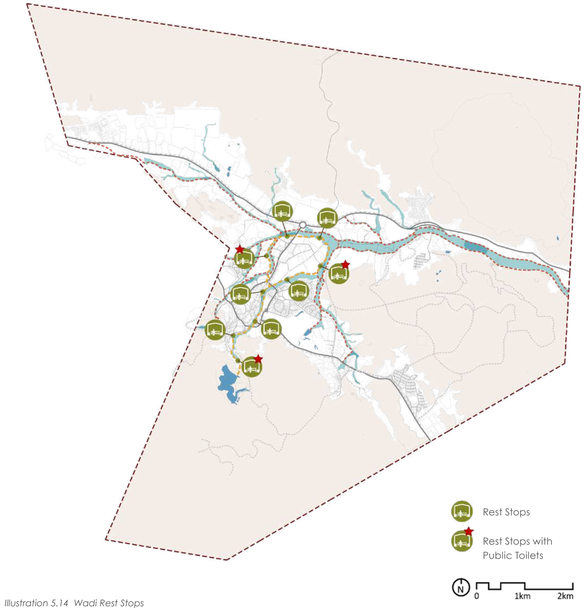



*Illustration 5.14 Wadi Rest Stops*

# 5.13 Public Realm & Landscape: Dams & Standing Water

Dams, although man-made, now form a key visual amenity and biodiversity component of the Hatta landscape. They also offer an opportunity for added amenity value and enhancement for the benefit of local ecology and biodiversity.

Areas adjacent to permanent standing water represent an added visual and amenity value and may be more suited to open space interventions such as rest stops, seating areas, terraces, and small plazas spaced associated with commercial developments.

M 1. Such landscape elements must be outside of the 100 year flood zone and if they are within it they must be robust to withstand being submerged and subjected to the velocity of moving flood water.

M 2. All landscape elements which facilitate or encourage human access should be offset from permanent water line by five meters. This offset zone should include native planting and riparian edge natural habitat.

M 3. Permanent waterbodies should be protected by inconspicuous barriers or edge protection such as planting, strategically placed rocks, street furniture, low stone walls or kick rails from natural materials. Balustrade's or fences must be avoided / limited to locations where water interfaces directly with high use areas and where deemed absolutely necessary for safety.

M 4. Access into or on to the dams and areas of permanent standing water throughout the wadis must be prohibited, with the exception of the two larger dams which are established tourism amenities.

A 5. A varied edge typology should be developed along the length of the water system to promote plant community diversity. This approach can host a varied selection of aquatic and marginal plants as well as supporting aquatic and water depended fauna.

M 6. Natural edge detail supported by erosion control as required using natural materials especially rocks. Localised area of cut stone terraces in the core areas adjacent to urban development.

*Pathway alongside waterbody for touristic larger dam*

*Edge Treatment*

*Offset from permanent water line*

*Natural Edge Treatment*





# 5.14 Public Realm & Landscape: Wadi Planting

Native Species
Site Specific

Wadi Planting

The Wadi channel naturally connects the Wadi rugged escarpment, where rocks, sands and the movement of water has developed a uniquely sculpted landscape, supported by a specific community of plant species. The following are an outline guidance of the planting selection associated with the Wadi Area:

M 1. Preserve the natural form of the wadi, protect and enhance existing habitats along its route.

M 2. Use native and adapted species that represent local provenance to restore, expand and enrich local habitat.

M 3. Existing patterns of vegetation should be studied and enhanced or emulated in similar conditions elsewhere in the Wadis.

M 4. Other more fully intact and undisturbed Wadis in the region should be studied as examples of patterns of vegetation and species diversity.

M 5. Any invasive species must be eradicated or otherwise managed to maintain species diversity and safeguard valuable habitat.

Salvadora persica



Acacia Arabica

Acacia tortilis

Tamarix aphylla

Ziziphus spina christi

Phoenix dactylifera

Calligonum comosum

Haloxylon salicornicum

Aerva javanica

Salvadora persica

Dipterygium glaucum

Ochradenus arabicus

Heliotropium arbainense

Limeum arabicum

Retama raetam

Ochradenus baccatus

Ochradenus aucheri

Pluchea dioscoridis

Cyperus conglomeratus

Cymbopogon commutatus

Carnulaca aucheru

Crotalaria aegyptiaca

Salsola imbricate

Leptadenia pyrotechnica

Pennisetum divisum

Convolvulus virgatus

Senna italica

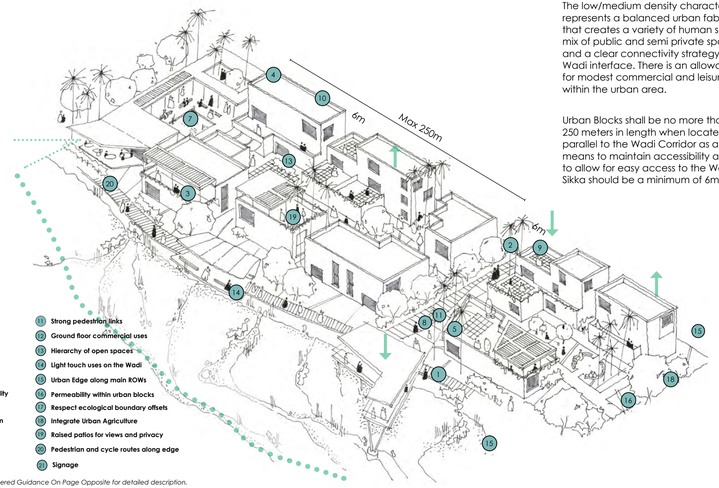
Lawsonia inermis

Cenchrus ciliaris

Rhazya stricta




# 5.15 The Wadi Edge: Typical Low-Medium Density (T5) Design Response Diagram




1. Clear permeability
2. Level access
3. Provision for ground floor privacy
4. Height emphasis on corners
5. Density along main ROWs
6. Pedestrian/ecological permeability
7. Hierarchy of spaces
8. Topographic responsive built form
9. Upper floor setbacks
10. Urban block widths
11. Strong pedestrian links
12. Ground floor commercial uses
13. Hierarchy of open spaces
14. Light touch uses on the Wadi
15. Urban Edge along main ROWs
16. Permeability within urban blocks
17. Respect ecological boundary offsets
18. Integrate Urban Agriculture
19. Raised patios for views and privacy
20. Pedestrian and cycle routes along edge
21. Signage

*Please Refer To Corresponding Numbered Guidance On Page Opposite for detailed description.*

The low/medium density character represents a balanced urban fabric that creates a variety of human scaled mix of public and semi private spaces and a clear connectivity strategy to the Wadi interface. There is an allowance for modest commercial and leisure uses within the urban area.

Urban Blocks shall be no more than 250 meters in length when located parallel to the Wadi Corridor as a means to maintain accessibility and to allow for easy access to the Wadi. Sikka should be a minimum of 6m wide

- In order to attract retail uses, glazing shall cover a minimum of 75% of the ground floor facade of new buildings.
- New, or retrofitted blocks, shall create strong pedestrian oriented links that are both parallel, and perpendicular, to the Wadi Corridor

- Buildings that line the Wadi edge shall be stepped, with the lowest elements closest to the Wadi Corridor.
- Buildings shall be designed and oriented in a manner that enables natural ventilation along and through the wadi.

- Buildings should be single storey and have a maximum height of 5m.
- Facilities should be located within gateways along the wadi and at set intervals to serve the Wadi's visitors.
- Designs shall be simple, functional, and flexible and include wayfinding elements.
- Materials used shall be durable.

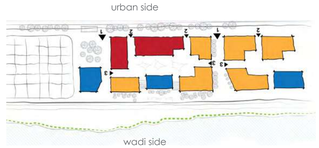
Visitor Facilities within the Wadi Corridor

The basic facilities that shall be provided along the wadi are:

- Toilets
- Information point/ Visitor centre
- Kiosks/ Food and beverage
- Prayer areas
- Mosques

| | |
|---|---|
| Facade | Rhythm based on design grid |
| Spatial Objective | Enclosure, permeability |
| % of opening (Ground + Above ground) | 40% window to wall<br>60% glazing at ground level |
| Projections | Semi open balconies, recessed balcony, canopy |
| Roofs | Inclined, Pitched, flat, green roofs |
| Opening treatment | Opening setback, vertical louvers |
| Orientation | Horizontal |
| Materials and Colour | Wood, rendered walls, Local Stone, Shades of beige and sandy colours |

# 5.16 The Wadi Edge: Typical Low Medium Density (T5) Design Response Description

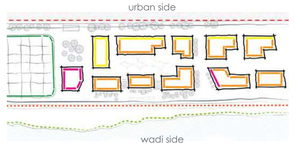




Wadi edge
Low Density
Medium Density
High Density

*Illustration 5.15 Density and Height*


Pedestrian permeability
Wadi edge
Semi Public
Public realm
Private terrace
Ecological corridors

*Illustration 5.16 Permeability*




Farmland edge
ROW and edge
Wadi edge
Green connectors
Commercial
Residential
Leisure / entertainment

*Illustration 5.17 Land Uses and Edges*

## Accessibility

(A) 1. Clear permeability to be provided for pedestrians and select locations for micro mobility/cyclists.

(A) 2. Level access to be provided off main ROW with appropriate security measures when required.

(A) 3. Raised ground floor to be provided on Wadi side of urban environment to provide privacy and semi-private internal spaces from Wadi side pedestrian ROW.

## Urban Density

(M) 4. Create height emphasis on key corners for way finding, orientation and wind channelling.

(M) 5. Allocate density towards major ROWs and step-down density towards the wadi boundary edge.

## Urban Structure and Form

(M) 6. Provide a structure that is fine grained with a clear pedestrian and ecological permeability.

(A) 7. Create a hierarchy of public, semi public and private spaces via courtyards and other design elements in line with Hatta's cultural context.

(A) 8. Provide a form that responds to the topography, contours and hydrology of the site, be it Wadis, Palm groves or agriculture.

(M) 9. Create upper floor set backs to allow for privacy, daylight and usable roof terraces.

(M) 10. Block Design: Urban Blocks shall be no more than 100 meters in length when located parallel to the Wadi Corridor as a means to maintain accessibility and to allow for easy access to the Wadi.

(M) 11. New, or retrofitted blocks, shall create strong pedestrian oriented links that are both parallel, and perpendicular, to the Wadi Corridor.

## Land Use

(A) 12. Allocate commercial uses to ground floor of frontages facing the main ROW, in particular corner units.

(M) 13. Create a hierarchy of open space providing public, semi private and private within the block.

(A) 14. Provide 'light touch' functions within the Wadi buffer zone where applicable and/or appropriate.

## Urban Edges

(A) 15. Activate urban edges along main ROWs with commercial ground floor units without setback and ground floor residential with setback and appropriate privacy provisions.

(M) 16. Create defined breaks within block but with clear connectivity to adjacent blocks to promote permeability.

(M) 17. Respect boundary offsets of wadi/ palm grove/agriculture land use edges.

(A) 18. Integrate urban agriculture into the edges adjacent to agriculture land uses.

(A) 19. Introduce raised patios along urban edge adjacent to Wadis to provide views and privacy from public pedestrian routes.

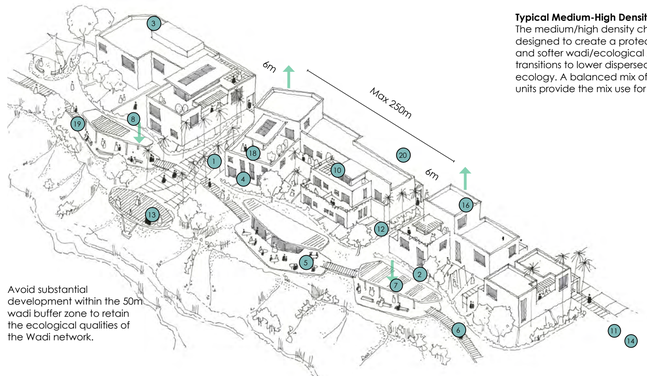
(M) 20. Provide public pedestrian/cycle routes along the interface edge between the built environment and wadi buffer zone.

(M) 21. To the rear, signage on buildings should reinforce the pedestrian scale of the Wadi and should be located at or near pedestrian eye level for viewing from pavements. Signage should be integrated into the layout and composition of building facades.





# 5.17 The Wadi: Typical Medium-High (T5) Density Response Diagram




Avoid substantial development within the 50m wadi buffer zone to retain the ecological qualities of the Wadi network.

**Typical Medium-High Density (T5) Characteristics**
The medium/high density character represents an urban fabric designed to create a protective divide between major ROW's and softer wadi/ecological zones. Higher density at the ROW transitions to lower dispersed urban form interfacing with the ecology. A balanced mix of commercial, leisure and residential units provide the mix use for this larger typology.

Block depth should be 18m to allow for interchangeable and adaptable commercial use and dual aspect residential use.

Sikka width to be a minimum of 6m between blocks

Mid Block Building Height: Prevailing maximum building height of 3 storey

Corner Blocks Building Height: To achieve architectural emphasis, it is encouraged to consider a maximum of 4 storey on a case by case basis, for appropriate locations.

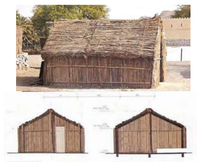
- Urban Blocks shall be no more than 250 meters in length when located parallel to the Wadi Corridor as a means to maintain accessibility and to allow for easy access to the Wadi. Sikka should be a minimum of 6m wide
- Fixed zero setbacks along key mixed use frontages.
- In order to attract retail uses, glazing shall cover a minimum of 75% of the ground floor facade of new buildings.
- No vehicular access is provided to the Wadi. The street network is set back, and only pedestrian and cycle footpaths provide direct access to and along the Wadi Edge.
- New, or retrofitted blocks, shall create strong pedestrian oriented links that are both parallel, and perpendicular, to the Wadi Corridor.

| Facade | Rhythm based on design grid or solid and void |
|---|---|
| Spatial Objective | Enclosure, permeability |
| % of opening (Ground + Above ground) | 40% window to wall<br><br>60% glazing at ground level |
| Projections | Semi open balconies, recessed balcony, Canopy |
| Roofs | Flat, green roofs, accessible roofs |
| Opening treatment | Opening setback, horizontal louvers |
| Orientation | Horizontal massing |
| Materials and Colour | Wood, rendered walls, Local Stone, Shades of beige & sandy colours. |

Local materials should be used in rough finishes, using local patterns.

Designs should be inspired by the local vernacular of Hatta, its local traditions and architecture, while also considering the natural environment of the context.

- Buildings should be single storey and have a maximum height of 5m.
- Facilities should be located within gateways along the wadi and at set intervals to serve the Wadi's visitors.
- Designs shall be simple, functional, and flexible and include wayfinding elements.
- Materials used shall be durable.



*Please Refer To Corresponding Numbered Guidance On previous Page for detailed description.*

1. Clear permeability
2. 'Soft' side accessibility
3. Higher density along major ROWs
4. Height gradient step down
5. Stand alone 'event 'structure'
6. Use of landscape materials for unity
7. Pedestrian and ecological permeability
8. Urban structure edge responsive
9. Contextual responsive design solution
10. Upper floor setbacks
11. Ground floor commercial units
12. 'Soft' side ground floor uses
13. Light touch and flood tolerant functions
14. Major ROW urban edge
15. Inner block pedestrian permeability
16. Defined corners and transitions
17. Activate the soft inner core
18. Soft urban edge to utilise root terraces
19. Pedestrian and cycle routes along wadi
20. Urban Block Widths

# 5.18 The Wadi: Typical Medium-High (T6) Density Response Description

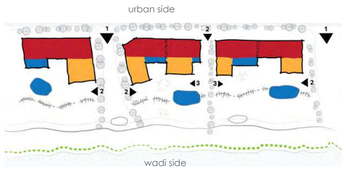




*Illustration 5.18 Density and Accessibility*


*Illustration 5.19 Permeability*


*Illustration 5.20 Land Uses and Edges*

## Accessibility

- (M) 1. Clear permeability to be provided for pedestrians and select locations for micro mobility/cyclists with a clear movement hierarchy.
- (A) 2. 'Soft' side built environment to be accessible from pedestrian and micro mobility corridors along wadi/ecological/ agricultural interface zone.

## Urban Density

- (M) 3. Allocate density along urban edge facing major ROWs or other source of noise/visual pollution.
- (M) 4. Step density down towards the wadi/ecological/agricultural interface.
- (M) 5. Provide low density, single-storey structures that can be utilized for leisure and community functions within courtyards transitioning to the ecological/agricultural interface.
- (M) 6. Physically or visually tie together the low density stand alone structures with paving, materials or shading structures to add an extra level of connectivity and way finding.

## Urban Structure & Form

- (M) 7. Create a robust but human scale structure allowing for pedestrian and ecological permeability.
- (M) 8. Provide a structure that can accommodate high density and a protective edge to major rights of way (ROW) i.e. Dubai-Hatta highway that creates a gentler edge along the wadi/ecological/agricultural interface.
- (A) 9. Provide a form that responds to the topography, contours and hydrology of the context.
- (M) 10. Create upper floor setbacks to allow for privacy, daylight and usable roof terraces.

## Land Use

- (M) 11. Allocate commercial uses to ground floor of frontages facing the main ROW, in particular corner units.
- (A) 12. Provide a mix of residential and leisure/entertainment land uses in the 'soft' side built environment interfacing with the wadi/ecological/agricultural interface.
- (A) 13. Provide 'light touch' functions within the wadi/ecological/ agricultural buffer zone including walk ways, viewing platforms and stand alone structures elevated on posts designed to be used in 'sacrificial' space prone to flooding.

## Urban Edges

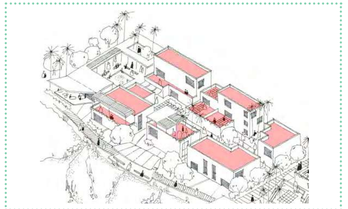
- (M) 14. Activate urban edges along main ROWs with community and commercial ground floor units without setbacks. Provide tree planting along ROW facing urban edge.
- (M) 15. Create clear division between main urban clusters with secondary divisions in the form of double height passageways for pedestrian permeability.
- (A) 16. Provide defined corners at meeting of urban edges to signify a change in scale geometry and orientation.
- (A) 17. Urban edges facing the soft ecological/agricultural interface to have a mix of residential and leisure/entertainment functions to activate the softer inner core of the built environment.
- (M) 18. Urban edges facing the wadi/ecological/agricultural interface to step down where possible to provide views and roof terraces facing areas of visual interest.
- (M) 19. Provide public pedestrian/cycle routes along the interface edge between the built environment and wadi/ecological/ agricultural buffer zone.
- (M) 20. Block Design: Urban Blocks shall be no more than 200 meters in length when located parallel to the Wadi Corridor.





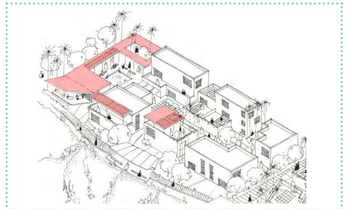
# 5.19 Built Form Design Elements & Design Interpretation

### Terraces



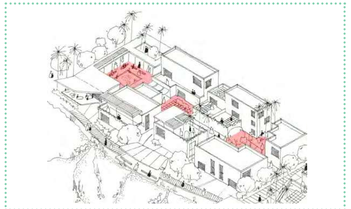
- (M) • Maintain flat roofs wherever possible, following the tradition of Hatta Region
- (M) • For accessible flat roofs, provide an adequate parapet wall or subtly decorated balustrade
- (M) • Ornamental balustrade should be subtle and should tie in with the surrounding landscape avoiding striking details and colours
- (A) • It is advisable the use of canopies or sails on rooftops to provide shading
- (A) • Rooftop terraces can be screened by decorative panels, walls and shade canopies if privacy is needed
- (A) • It is advisable to locate terraces with open views to the landscape

### Roof & Canopies



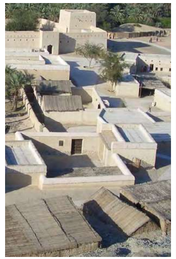
- (A) • Roof profiles can be characterised by different shapes, colours or patterns
- (M) • A variation of tones could be used, it is advisable to use a few colours (max. 3) and maintain a suitable and subtle colour palette
- (A) • It is permitted and advisable to design flat green roofs in those locations where roofs are not made accessible as terraces
- (A) • Flat roofs are preferable and the facades can be decorated with roof profiles or top bands

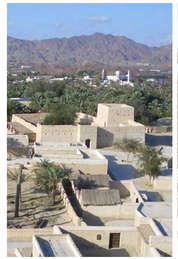
### Courtyards



- (M) • Courtyards are a common space of the traditional architecture, both private and public, where social interaction takes place and it is therefore a recommended building layout
- (A) • Courtyards can be sunken in order to obtain even more cooling and shading effect from buildings
- (A) • Courtyards can be ornamented with water features, planting, shading structures and colonnades to create a more comfortable and inviting space

*Illustration 5.21 Design Elements for Wadis & Waterbodies (Terraces, canopies, roofs, and courtyards)*

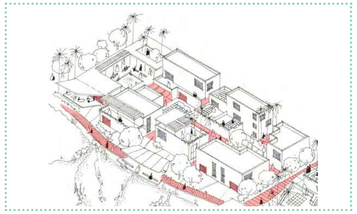





*Photos of Hatta's heritage Village and modern interpretation of historical built form for Wadis & Waterbodies*

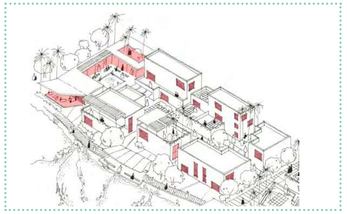
# Built Form Design Elements & Design Interpretation

## Gateways & Walkways



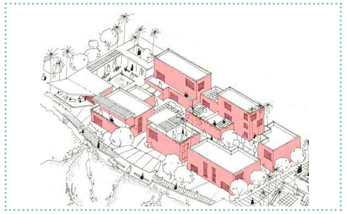
- M • Use of local and natural materials, both for paving surfaces and building facades
- A • Alleys between buildings to be narrow enough to provide shaded walkways and increase natural ventilation
- A • Use of shading elements such as trees or shade sail and canopies, tying in with traditional colour hues and material textures
- A • Mark main entrances and key public walkways with architectural elements such as arches to provide sense of place and wayfinding
- A • Use suitable night lighting within narrow alleys and on key entrances to provide safety
- M • The walkway along the edge of the wadi should be kept sinuous and natural possibly within planting

## Colonnades & Openings



- A • Prefer simple geometry for openings and colonnades such as round arches and rectangular windows
- A • Prefer thick walls as in the vernacular architecture that contribute marking the entrances with regular shapes
- A • Use small openings where privacy is needed and on facades that are exposed to the sun
- A • Arcades can be designed along commercial ground floors to provide a comfortable and continuous environment for pedestrians
- A • In order to maintain proportion, it is advisable to avoid the use of very thin columns in colonnades against monolithic volumes

## Facades Treatment



- M • Maintain consistency with the traditional use of materials on the facades
- M • Use a few materials (1 or 2) and textures within a single building and within a single cluster of buildings
- A • It is possible to mark openings with frames of a different material, texture or colour
- A • Decorations on facades can be achieved through traditional extrusions or recesses
- M • In the heritage areas it is mandatory to avoid excessive use of glass on facades

*Illustration 5.22 Design Elements for Wadis & Waterbodies (Gateways, walkways, colonades, openings, and Facades)*

*Photos of Hatta's heritage Village and modern interpretation of historical built form for Wadis & Waterbodies*





# 5.20 The Wadi Edge

## Objectives

***To protect the natural characteristic of the Wadi network***

***Buildings along the Wadi Edge should reflect the character and context of the Wadi. Materials, colour, texture and shading create a strong urban edge to the natural open character of the wadi corridor.***

### Height & Massing

- M • Buildings that line the Wadi edge shall be stepped, with the lowest elements closest to the Wadi Corridor.
- M • Buildings shall be designed and oriented in a manner that enables natural ventilation along and through the wadi.

### Land Use Distribution

- M • Commercial and mixed uses should be distributed both horizontally (by floor) as well as vertically.

### Floor Area Ratio (FAR)

- M • The minimum FAR identified in the development Framework will ensure a consistent density along the Wadi Corridor and will support the activation of the edge while providing a clearly defined visual edge.

### Ground Level

- M • In the urban areas of the Wadi, a maximum of 20% of a building's main vertical facade can front the Wadi Edge (for buildings that are four storeys or higher).
- M • Lengthwise, no more than 50% of the main vertical structure of a building can be parallel to the Wadi Edge (for buildings that are four storeys).

### Frontages & Siganage

- M • New buildings shall provide balconies and/or other occupied spaces which create views that overlook the wadi.
- M • In order to attract retail uses, glazing shall cover a minimum of 75% of the ground floor facade of new buildings.
- M • Signage on buildings should reinforce the pedestrian scale of the Wadi, and should be located at or near pedestrian eye level for viewing from pavements.
- M • Signage should be Integrated into the layout and composition of building facades.

### Roofscapes

- M • Plant and other extrusions from buildings shall be concealed and must not be visible from the Wadi.
- A • The development of green roofs shall be encouraged, in order to complement the Wadi's sustainability goals, as well as to contribute to cooling the micro-climate along the Wadi.

### Setbacks

- M • Residential developments shall include setbacks, depending upon the size of the plot, from the public right of way, whether streets, open space, or the Wadi Corridor, in order to create areas of privacy and maintain the public perception of clear, direct links to the Wadi.
- M • Commercial developments shall not include setbacks along the Wadi-facing sides of buildings, in order to bring activity directly to the Wadi Edge, and create visual interest and permeability between public space and commercial venues.

## Objectives

***To protect the natural characteristic of the Wadi network***
***Buildings along the Wadi Edge should reflect the character and context of the Wadi. Materials etc***

### Active Edges

- M • Create "active" edges along the length of the Wadi Corridor, where possible, where buildings front onto the Wadi and contain entrances, windows, balconies or active uses.
- M • Provide new links between open spaces and community facilities to the Wadi Corridor.

### Entrances/Threshold

- M • Public entrances and/or thresholds to buildings should face onto the wadi corridor and be clearly identifiable.
- M • Primary entrances to buildings should include awnings, canopies, or arcades to protect pedestrians from the sun and inclement weather and include architectural features to further distinguish entrances.

### Services/Parking

- M • Service areas, such as rubbish collection, delivery entrances and vehicle storage, shall not front onto the Wadi's Edge, on side or rear streets.
- M • Parking garages and courts must be placed to the rear or interior of the property and not be visible from the wadi edge.

### Building Lighting

- M • Lighting from buildings shall not be directed into the Wadi as a means to prevent light pollution.
- M • Building lighting should be used to indicate the location of public entrances and orient visitors, but should not overwhelm the public environment.
- A • Materials: Permeable paving within building courtyards, and on adjacent public right of ways shall be encouraged as a means to reduce stormwater runoff entering the Wadi corridor.
- M • Smooth and even materials shall be used at building entrances to enhance barrier-free access to buildings.

# 5.21 Conservation & Revitalisation: Palm Groves & Heritage Farms

## Palm Groves & Heritage Farms

The Heritage Village, adjacent Heritage Farms and Palm Groves represent the cultural heart of Hatta and for most visitors will be the key destination. These heritage farms and their associated landscape typology is a key part to the character of Hatta and must be preserve ed and enhanced. The Palm Groves offer a huge opportunity for light touch development with visitor attractions integrated in to the landscape in a way that does not alter the character of the landscape

## Built Form

The following guidelines seek to enhance the palm groves and heritage farm environment, limiting building massing to protect the natural and maximizing the quality of the visitor experience.


*Hatta's Heritage farms & Palm groves*

### Objective

***As the primary asset of this development context, the enhancement and the ongoing management of these cultural significant areas is a priority for Hatta.***

***To reinforce the local character of the land, and to improve biodiversity and greater water resource usage.***

***Palm grove and heritage farms landscape and heritage conservation***

### Mandatory Guidance

- Native vegetation and planting must be enhanced as part of any development proposal
- Where multiple development sites sit within a single entity, they should read as a continuous visual entity. Planting patterns and mixes should blend smoothly between various entity to become a collective.
- Heritage structures including earthern architecture and traditional water management structures within these areas must be identified and assessed for their significance and value prior to the commencement of any works that may impact their site or setting.
- Where possible heritage buildings and structures should brought back into contemporary active use through restoration, adaption or modification.
- Where heritage structures are beyond repair, they should be sensitively incorporated into development strategies and landscapes designs as features.
- Where development incorporates existing village and hamlet buildings, new buildings should be located to enhance the setting of the village.
- Demolition of significant fabric is generally not acceptable. However, in some cases minor demolition may be appropriate as part of conservation. Removed significant fabric should be reinstated when circumstances permit.

### Advisory Guidance

- Traditional multi-layered planting is encouraged; typically it is composed of palm trees (of a variety of species), fruit trees (oranges, lemons, limes, mangos, olives, figs, pomegranates), and fodder grasses.
- Plants of poorer quality may require replacement ahead of or concurrent with development.

### Decision Guidance

- Heritage structures including earthern architecture and traditional water management structures within these areas must be identified and assessed for their significance and value prior to the commencement of any works that may impact their site or setting.

*Appropriate built-form for Heritage farms*





# 5.22 Edges & Boundaries

### Objective

***To protect the palm grove edge***

### Guidance

Buildings should be set back from the edges of palm groves a minimum of three rows of tree canopy.

- To frame with the trees views outward to the wider landscape.
- To benefit from natural shading.
- To minimise visual impact of the building on the sensitive landscape character.

### Objective

***Sustain local craft skills***

***Preserve the landscape setting and cultural heritage of the palm groves***

***Support the use of local material and circular economy***

### Guidance

Boundary walls

- Boundary walls should contribute to the landscape character and setting of the palm groves and heritage farms .
- Traditional materials such as woven palm fronds, tamarisk hedges, local stone and mud brick are preferred.
- The use of bare cinderblock is discouraged.
- Where existing cinderblock boundary walls exist, it may be upgraded by rendering in earthen tones.
- To enhance the character of the landscape.

Interfaces

- Existing property lines may prevent the full utilization of palm grove by the public.
- Where settlements or development areas are adjacent to public areas, provide public pedestrian access to them with sufficient frequency.
- Private properties may be required to provide public pedestrian access to heritage farm and palm groves in strategic locations identified.
- To provide outdoor amenity to settlement inhabitants, and to extend the value of the palm groves environment to more people.

*Walkways through Hatta's Heritage farms*

*Organic built form to blend with nature*

*AlFalaj as part of the visitors' experience*

### Objective

***The ehance the image and perception of these areas can be strongly influenced by roadside buildings.***

***To mitigate the presence of vehicles in these areas and its impact on the visitor experience.***

### Guidance

- Roadside buildings must improve the sense of arrival into the Palm Grove or heritage farm
- Preserve the landscape setting and character of the palm grove or heritage farm
- Views of the plantation from the roadway should not be obstructed.
- The presence of private and service vehicles should be mitigated in hospitality-oriented developments within the area.
- Approach driveways should be located away from sensitive areas and screened.
- Parking spots should be dispersed within the landscape, with planting areas spaced three car stalls apart or less.

## 5.23 Built Form: Palette of Materials

In the natural heritage areas built form should maintain a natural aesthetic, look and feel. The use of mono-material and mono-colour is advisable to foster visual integration. It is permitted to use of up to two materials and colours on each building or group of buildings.

Local stone

It can be used for walls or for paving surfaces

Beige rendered walls

Sandy coloured walls

Wood: Architectural and decorative elements on buildings, such as window frames or shading canopies

*Illustration 5.23 Palette of Materials in Rural Areas*

For further guidance on materiality & Colours, refer to General Design Elements, Section 7.6, 7.7, 7.8.

## 5.24 Landscape: Palette of Materials

Since the emphasis will be on regenerating the wadi into an ecological corridor with soft mobility routes, the palette of materials should be properly integrated within the Wadi environment to accentuate the Wadi identity, create a sense of place and encourage a wider appreciation of the natural landscape. The Palette should be made of permeable, high-quality and robust surfaces to withstand flood and storm events while at the same time reflect the informal and natural character of the wadi landscape.

Light-Colored Concrete

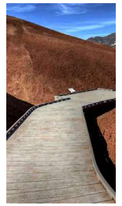
Improve accessibility and visibility towards the wadi bed by enhancing the wadi edge treatment

Stabilized Fines

Enhance the Wadi Shared Path to accommodate soft mobility circulation

Stabilized Ground

The regeneration of the wadi bed enhances the natural footpath



Wood

Provide recreational viewpoints, platforms and rest stops for pedestrian comfort

**Suggested Finish**

- Vernacular: Distressed finish of surfaces in plaster, in combination of heavy textured paint finish
- Contemporary Vernacular: Stone cladding (beige shade spectrum), with combination of smooth plaster & paint finish
- Contemporary: Combination of textured paint, stone finish with shaded to foster integration and reduce visual impact



This page is intentionally left blank


# 06

## Mountains & Hillsides

# 6.1 Public Realm & Landscape: Hatta Mountain Conservation Area (T1)

The following guidelines apply for the environmental protection of the Mountain Areas:

M 1. Mountains area are significant aspect of Hatta's ecology as they host endemic species such as the endangered Arabian Tahr and should follow strict protection guidelines.

M 2. It is recommended that Hatta's Mountains be subject to Environmental Management Plan(s) inspired by internationally recognized conventions such as IUCN, Dark Sky Initiatives and UNESCO's Man And Biosphere (MAB) Program. This however does not necessarily entail their legal designation. Delineation of Natural Conservation Areas shall be validated by seasonal ecological surveys to create an approach that responds to the ecological trends of the areas.

M 3. Designs within the mountains shall consider the use of native flora throughout development to protect Hatta from invasive species.

M 4. Any design should be mindful of habitat hotspots, ensuring that habitats are not fragmented, and that ecological corridors are provided for native fauna to meet its ecological needs.

M 5. Any development is subject to an EIA and an EMP, and should abide by the protection strategy.


*Existing Hatta Mountain Conservation Area*

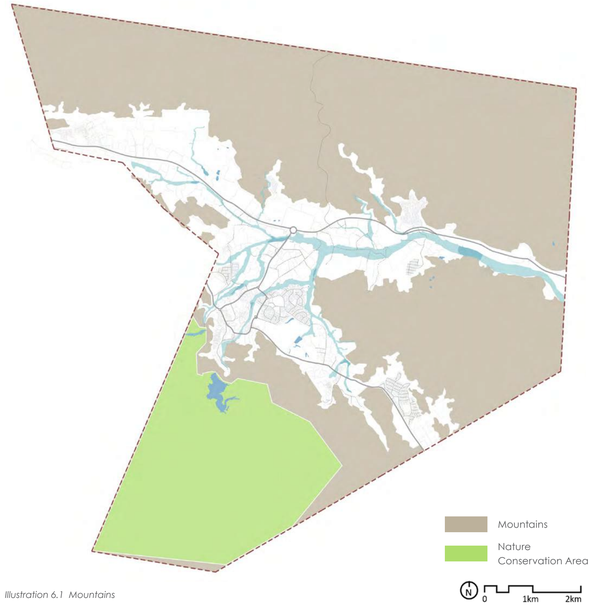



*Illustration 6.1 Mountains*





# 6.2 Hatta Mountain Conservation Area: RAMSAR areas

## Hatta Mountain Conservation & Ramsar Areas

Development in the RAMSAR should be managed so that it will help Hatta, and Dubai, become a model of sustainable development in the Gulf Region and maintain natural landscapes and ecological integrity. The RAMSAR Reserve's major purpose is to be a well-established Ramsar site and maintain its ecological characters. Further information is available in the Hatta Mountain Reserve Environmental Management Plan (HMR EMP).

The RAMSAR sites consists of:

- The CORE ZONE contains habitats that have high conservation values, are vulnerable to disturbances, and can tolerate only a minimum interventions.
- The BUFFER ZONE contains areas surrounding the core zone where only low impact activities allowed. Development should be limited to supporting infrastructure for wildlife conservation and monitoring (viewing platforms/ observations decks, etc), and for limited eco-tourism interventions (walking trails in non-sensitive areas). The development should be environmentally sensitive and in synergy with the landscape

Mountain areas in Hatta (slope above 15%) are more sensitive and require more stringent design controls and guidance.

Exceptional Circumstances: Development in the core area should only be allowed under exceptional circumstances and must be pre-approved by the team managing the RAMSAR site to ensure the development does not detract from the RAMSAR site.

Permitted development in theses areas may will be subject to a rigorous design review process with the keep aim to safeguard Hatta's unique cultural landscape and heritage.

**Submission Requirements:**

- Developers should provide visual impact assessments from critical view points agreed with the planning authority.
- Visual impact assessment should follow an internationally recognised methodology.
- Should be informed by Hatta's Comprehensive Development Plan i.e. protected views etc.
- Before and after conditions should be presented side by side for comparison and assessment.
- Image data must include date, time, geo-spatial coordinates, height above ground level, camera model, and focal length of lens.
- These assessments should form part of the submission for design review.

*Illustration 6.2 Giants Causeway Visitor Centre, Northern Ireland*

*Illustration 6.4 : Visitor Centre resembles folds in the landscape at the base of the mountains, On Fogo Island*

*Illustration 6.3 Visitor Centre Cape Verde, On Fogo Island: Folds in the landscape*

*Illustration 6.5 Visitor Centre Cape Verde, On Fogo Island: Architecture is secondary to the landscape.*

## Appropriate Architecture

Landform building typologies offer opportunities for development within the more sensitive areas of the Hatta Mountains. The are inhabitable structures that are partially or fully embedded within the earth. The key characteristics of landform buildings include:

- Low impact design secondary to the natural landscape
- "Invisible" from agreed critical and protected viewpoints
- Architecture integrated with topography
- Light touch architecture
- Framing of important views
- Seamless integration and access to the surrounding landscape.
- Naturally occurring locally sourced material.
- Simplistic with sensitive architectural components and lighting
- Existing geological features and topography can inform the layout of landform buildings. Where possible, natural topography should be incorporated into the configuration of the landform building.
- Cut and fill quantities should be minimised

# 6.3 Protecting Distinctive Character & Landscape (T1)

The massing of permissible development in Hatta's Mountains/Hillside should respect and complement the natural silhouette of the topography.

- Buildings above 15% limit should not generally exceed more than one storey above the ridge line.
- New development should not adversely affect the enjoyment of the skyline by the general public and should contribute positively to Hatta's Vision.
- Building profiles and materials should not impose inappropriate or harsh geometries on the landscape.
- Massing should be designed to step harmoniously with the contours of the mountain range.

## Built Form

The majestic Hajar mountains have a unique visual character that is considered as an attraction point for visitors. The location of Hatta in between two mountains created its special character that encouraged development in this area of land for years.

Hatta, excluding Hatta Mountain Conservation Area, is divided into several new Nature Conservation Areas (NCAs) as well as areas that are not part of NCAs.

The Environmental Constraints Map is based on the environmental features that shall be protected in Hatta.

1. Distribution of species richness within Hatta

2. Wadis and their inundation area, and

3. Mountainous areas with slopes more than 15%

Each NCA will have it's own Environmental Management Plan (EMP), since each on has it's own IUCN criteria and environmental features that shall be preserved and maintained.

EMPs will support the implementation of the proposed activities/projects/initiatives without disturbing Hatta's environment.

Development should be sensitively designed so as not to impact the visual character of Hatta's mountains.

One off development with NCA's will be subject to more stringent policies. Refer to Hatta Comprehensive Development Framework.

Mountain environments are subject to erosion by various forces. Developments must consider potentials for rockfall and land slides in their design.

### Objectives

- *To maintain safe conditions for development in close proximity to Mountain areas including areas that are < 15% slope.*
- *To foster architectural design with the environmental character of the mountains*
- *To integrate buildings into the landscape and improve their site specificity.*
- *Development should be set back from the rock slope depending on the degree of slope.*
- *Mountains have a natural character that should be reflected in how development respond to them*

### (M) Mandatory Standards

- Site design and building arrangements should respond to the natural context, topography and character of the development setting.
- Where possible, natural topography should be incorporated into the configuration of the landform building.
- Cut and fill quantities should be balanced to minimize earth movement and transport-related carbon emissions.
- Conceptual and architectural references to traditional nomadic forms of inhabitation are encouraged.

*Hatta Grand Mosque*

*Hatta Fort Hotel*

*Hatta Dam*

*Hatta Mountains*





# 6.4 Public Realm & Landscape: Mountain Trails (T1)

The following principles are to be used as a foundation for the mountain trail network, in order to create a consistent landscape outcome.

1. Trails provide comfortable and heightened experiences allowing pedestrians to access unique locations and connect with extraordinary views from the Hajar mountains
2. Trails should be designed in a way that offers diverse experiences for a variety of user groups
3. Trails will employ a 'light touch' approach towards the landscape, limiting disruption to the natural character and ecosystems
4. Trails should be designed to be robust, resistant and of low maintenance

**EXPERIENCE** **ACCESSIBLE** **SUSTAINABILITY** **RESILIENT**

The following guidelines apply to all trails:

| Maintain Trail Guidelines | |
|---|---|
| **General Guidelines** | |
| (M) | Trails are to be designed in a way that considers site sensitivity, avoiding the clearing of vegetation and reducing the impact on the natural terrain. |
| (M) | Prioritise user safety whilst creating opportunities for a number of significant viewpoints. |
| (M) | Trails should be designed to allow for a range of difficulties, while remaining safely accessible. |
| (M) | The use of materials. textures and colors are to be appropriately selected as to create trails that are low maintenance and sustainable. |
| (A) | Consider observation platforms, star gazing and fauna viewing platforms. |
| (M) | Trails should aim to minimize design intervention, in order to preserve and highlight the mountain geological features, which can include minor trail markers, conservation and cultural signage and wayfinding at key locations |

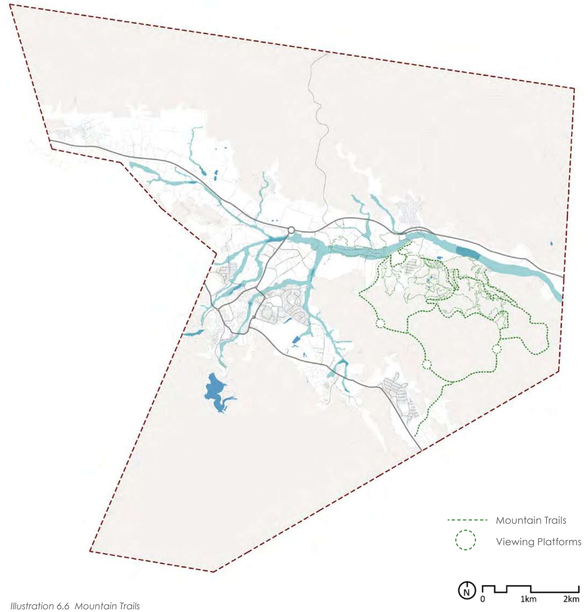



*Illustration 6.6 Mountain Trails*

# Public Realm & Landscape: Mountain Trails (T1)

The Mountain Trail network provides comprehensive access through the craggy mountains of Hatta and into the archaeological sites, and allows users to explore and discover the varied terrain, from sandy patches to sharp rocks. The Trail offers the most exceptional views of Hatta from higher vantage points. The trails include Hiking Trails, Biking Trails and Bridleways.

Guidelines include the following:

M 1. Existing footpath and mountain trails utilised should avoid disturbing the natural and the archaeological landscape.

M 2. Viewing platforms and rest areas should be integrated at key destinations along the trail to provide refuge for hikers while offering beautiful views towards Hatta.

M 3. Rest areas should be carefully designed with minimal disturbance to the existing rich landscape.

M 4. Construction materials should be limited to future maintenance and repairing any routes that suffer during times of flood or through general wear and tear.

| Mountain Trail Guidelines | | |
|---|---|---|
| Details | | Biodiversity Guidelines |
| Dimensions | Min. 1.5m Wide | M Minimize the amount of disturbance when developing trails to reduce the zone of influence. Locate construction staging away from habitat areas. |
| Construction Make-up / Sub-base | Compacted ground in outer reaches of the network. | M Keep native soil in-situ whenever possible. |
| Kerbs (where required) | N/A | M Maintain current drainage patterns. |
| Wearing Course | Crushed aggregate with a mixed gauge between 6mm-25mm for repairs only.May include Boardwalks at scenic routes and resting stops. | M Use permeable material in trail surfaces, or install elevated trails in areas where soil compaction is an issue. |
| Colours | Material to assimilate with the surrounding base/tone colours within the landscape. Mountains: Mid-grey/ beige | A Adopt zigzag patterns and into trails that bisect natural areas to minimize long lines that could result in more impacts to wildlife.<br>Avoid potential for erosion by avoiding side cutting on slopes and planting exposed surfaces.<br>Minimize the trail footprint and amount of land use and vegetation disturbance. |

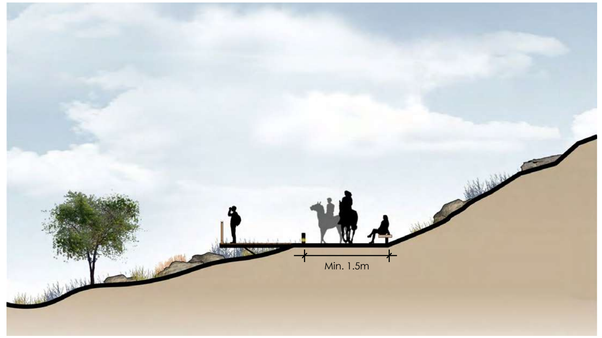



*Illustration 6.7 Proposed Hiking Trails and Bridleways Illustrative Section*

Hardscape

Compacted Surface Material

Softscape

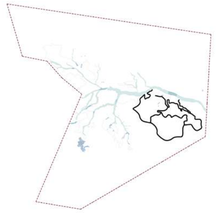
Viewing Platform Material

Furniture

Robust and Durable

Signage

Resilient



Key Plan





# 6.5 Mountain Built Form Character (Outside Conservation Area)

Hatta is characterised by its dramatic mountainous landscape
The Urban and Agricultural lands are surrounded by high peaks and steep rocky outcrops. There are some opportunities for small scale developments on the fringes of these hillsides as their slopes become more gentle towards the Farms, Wadis and Urban Valleys

- Development proposals must consider visual impact and maintaining protected views from key locations around Hatta.
- No development of any kind may occur within the mountain conservation areas
- Urban form must reflect the vernacular patterns or development
- Limit development to the slower edges of slopes

## Objectives

In this section the Mountain type specific guidelines are applied in the following order:

- Urban Structure and Form
- Urban Density
- Urban Edges
- Land Use
- Accessibility

**Mountain Low Density Characteristics**
The mountain low density typology places emphasis on working with the diverse and valuable topography and hydrology. The use of stand alone built form with generous ecological permeability and minimised road coverage are key design drivers.

*Illustration 6.12 Contemporary Housing Form*

*Illustration 6.8 Traditional Mountain Areesh in Hatta*

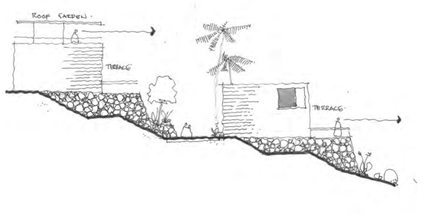


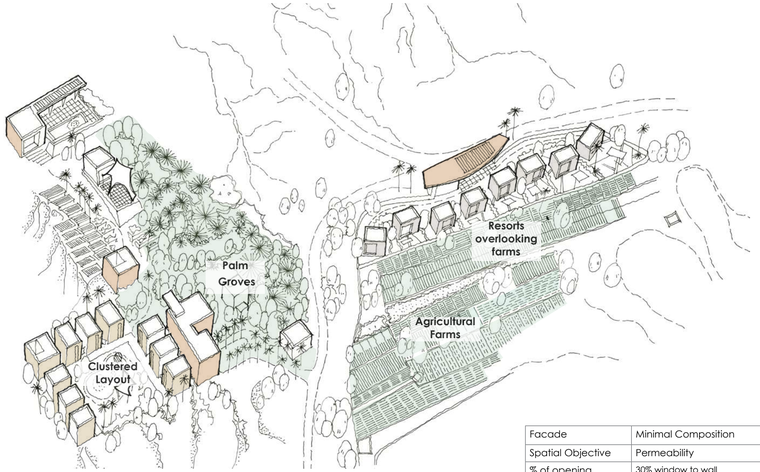

*Illustration 6.11 Terracing Housing Typology Appropriate for Mountains Area*

*Illustration 6.9 Traditional Mountain Areesh Huts in Hatta*

*Illustration 6.10 Traditional Mountain Areesh Huts in Hatta*

*The Following guidance relates to areas ,15% slope or areas that are located adjacent to mountainous/hillside areas.*

# 6.6 Hillside Hospitality & Farm Resort (SD)




*Terraced housing typolgises can step with the topography in appropriate areas.*

*Built form in mountain locations should be harmonious in scale and colour.*

| | |
|---|---|
| Facade | Minimal Composition |
| Spatial Objective | Permeability |
| % of opening | 30% window to wall |
| Projections | Semi open balconies, recessed balcony, Canopy |
| Roofs | Inclined, Pitched, flat, green roofs |
| Opening treatment | Opening setback, vertical louvres |
| Orientation | Predominantly Horizontal |
| Materials and Colour | Wood, rendered walls, Local Stone, Shades of beige |

- Buildings within the Palm groves farm areas should have a roof height beneath the level of canopy up to a maximum of two storey.

*Relationship between material and planting*

*Native Planting*

*Mountain Riesling Space Planting*

# 6.7 Built Form Palette of Materials

In the mountains areas, material should be limited to naturally harmonious materials and that integrate with the surroundings, reducing the visual impact within the mountainous landscape setting. The use of a limited material and colour palette is advisable to obtain a subtle and non-invasive character within the Hatta region and respect the natural environment.

Local stone

Can be used for walls or for paving surfaces.

Wood

For architectural and decorative elements on buildings, such as window frames or shading canopies

Earth coloured paving treatment

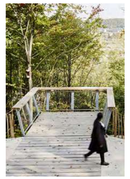
Sandy coloured hues to integrate with Mountain backdrop.

For further guidance on materiality & Colours, refer to General Design Elements, Section 7.6, 7.7, 7.8.

# 6.8 Landscape Palette of Materials

There are a number of informal routes across the natural landscape and rock formations of the Mountains which are ideal for hiking and trekking. Often linking key local landmarks and destinations such as Hatta Wadi Hub and the Nature reserve, they form a series of informal cross-country routes through the natural landscape that can be improved for use by hikers, cyclists and riders through the integration of site amenities. The palette of materials should be local, made of natural elements, environmentally-friendly and complementing the varied terrain from sandy patches to sharp rocks.

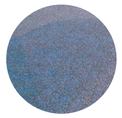
Stabilized Gravel



Wood

Natural Stone

Resin-Bound



**Suggested Finish**

- Vernacular: Distressed finish of surfaces in plaster, in combination of heavy textured paint finish
- Contemporary Vernacular: Stone cladding (beige shade spectrum), with combination of smooth plaster & paint finish
- Contemporary: Combination of textured paint, stone finish with shaded to foster visual integration with mountain backdrop. The use of contemporary materials can be considered on a case by case basis.

*For detailed guidance on materials palette for mountain areas refer to the guidelines 'Elements of Traditional Architecture in Hatta'.*





# 6.9 Public Realm & Landscape: Mountain Planting

Mountain Planting

The following guidelines apply for the planting selection within the Mountain Areas:

M 1. The planting design within the mountain areas should consist of 100% native species to enhance the existing mountain ecology and biodiversity and limit water demand.

M 2. Planting should encourage short- and long-term water conservation through the use of native and drought tolerant species.

A 3. Typical species include *Ziziphus Spina Christi, Acacia Aarabica,* and *Prosopis cineraria*

M 4. Trees and planting should create a diversity of native and/or indigenous species that reflect local character in order to support growth of local flora and fauna and form connected habitats

A 5. The use of native species with a xeriscape inspired landscape should be considered. Species include *Pennisetum divisum, Euphorbia larica* and *Cyperus conglomeratus*

N Native Species
Site Specific

Prosopis cineraria

Acacia Arabica

Tecomella undulata

Tamarix aphylla

Ziziphus spina christi

Phoenix dactylifera

Acacia farnesiana

Acacia nilotica

Acacia ehrenbergiana

Salvadora persica

Dipterygium glaucum

Ochradenus arabicus

Rhanterium epapposum

Cleome droserifolia

Euphorbia larica

Ochradenus baccatus

Ochradenus aucheri

Pluchea dioscoridis

Cyperus conglomeratus

Searsia tripartita

Carnulaca aucheru

Crotalaria aegyptiaca

Salsola imbricate

Dodonaea viscosa



Pennisetum divisum



Convolvulus virgatus



Zilla spinosa



Heliotropium curassavicum



Capparis decidua



Calligonum comosum


# 07

## Design Elements

# 7.1 Integration of Infrastructure & Servicing

## Integration

Mobile phone masts and telecom towers/water systems/air conditioning units/ solar panels and photo voltaic cells

The integration of utilities within the heritage character area should be executed according to special guidelines to minimize any negative impact on the heritage values of significant buildings This should include utility related structures that affect building's within Hatta's urban character area as well the streetscapes that have unique heritage value.

All new utilities and service instalments should follow those guidelines

- All utilities and services should avoid or have minimal visual impacts on the character area especially when viewed from the public domain.
- All installations related to utilities and services should be fully reversible. Any anchorage/mount points should use existing locations whenever possible. If any new anchorage/mount points are required they should cause minimal irreversible damage to the built fabric.
- The finish and\or colour for all services should where possible match the adjacent roofing and/or walling as appropriate to minimize the visual intrusion.
- Solar panels should have minimal angles to the roof and be as flush as possible and preferably on rear or side roofs or as free standing in back areas of buildings. Solar panels should have neutral or dark color
- Free standing constructions such as water tanks should be located behind the building line. The color of water tanks should be unobstrusive from the public domain. This will often be achieved by selecting a colour as close as possible to the adjacent wall colour.
- Air conditioner units should not be visible from the public domain.
- Visual impacts should be minimized by placing satellite dishes and antennas at the rear of the building. Cabling or conduit should not run along the surface of external walls.

## Orientation Of Streets & Block

Cranking the alignments of streets and paths or curving them even by relatively small degrees can help offset views of pylons and do much to reduce the perception of their visual impact. The visibility of pylons and power lines from within a development is affected by the orientation of streets, and similarly by the orientation of public footpaths through public open space. Offsetting the views of pylons will help to make them less prominent.

Orientating development blocks parallel to the transmission route could increase the numbers of homes with views of the line. Whereas orientating development blocks perpendicular to the route can reduce this problem-but might increase the potential impact on the public realm.

Mobile and Telecom Towers

Visual accessibility should not be contaminated by the allocation of telecom masts

Water System

Water utilities can adopt to similar design features to the area character

Air Conditioning Systems

Air conditioner units should not be visible from the public domain

Solar Panels

Solar panels should have neutral or dark color and can be placed away from pedestrian and scenic routes.





# Integration of Infrastructure & Servicing

## Wider Context & Spatial Planning: Make services and utilities subservient to urban structure and identity

To protect the distinctive landscape of Hatta, careful spatial planning is required to ensure infrastructural and industrial uses occur in less sensitive areas.

- Standalone infrastructural elements should not be located in pedestrianised urban areas.
- Integration of utilities and servicing should be considered early in the design process.
- An understanding of the effect of topography will help to establish which pylons may be more prominent when viewed from a development site.
- Good quality screening should be used to conceal utilities for public view.
- Avoid locating vertical elements within view shafts or urban design overlay areas.
- There are two variations on the standard services corridor design:
  - Routing the services away from the main street, for instance down a back street or through rear courtyards. This may be more direct and economic, and make life easier for those living in the area when the services have to be dug up;
  - Fitting the services into the landscape, for instance by bunching them to avoid features such as trees.

## Streetscape

Technical features should not be visible on the exterior of buildings in any form, including on roof tops overlooked by taller buildings.

All equipment must be enclosed and adopt a design language that complies with the regulations relating to facade material, and application screens etc.

Equipment should not impose on residents and visitors to the building. Noise should be reduced by acoustic measures. Exhaust vents should face away from areas where regular pedestrian traffic occurs. Visual mess and clutter should be hidden and integrated into the building design.

*Standalone utility unit deteriorating quality of public realm.*

*Architecturally designed substations as part of successful place making.*

*Informal road parking*

*Designated bus stops & parking*

# 7.2 Integration of Infrastructure & Servicing

Facade Elements:

Technical equipment such as transformer rooms placed at ground level should be placed inside the building envelope. The rooms should be placed to the side of the building facing the vehicle and utilities access point.

If placed facing the street they should be placed near the corner of the building, in proximity to the vehicle and utilities access point.

The facade treatment,ventilation grill or service doors should be integrated within and in compliance with the overall design of the building facade.

Facade Elements:

All building facades are to be free of fixtures or utility fittings such as storm-water pipes, electrical ducting, air-condition units and ducting etc.

All AC equipment should be integrated in the building structure. AC-equipment attached on the outside of the exterior wall is prohibited. All technical equipment should be covered where possible, but should still be accessible for service and maintenance.

Any fixtures, fittings or equipment such as pipes, tanks, compressors, air vents etc. proposed for roof-top installation shall be screened by a solid parapet of at least equal height to the equipment.

Roof Elements

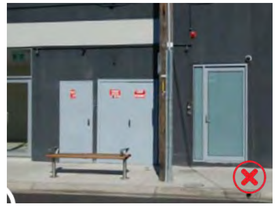
Applicable where rooftop equipment are not visible from adjacent buildings

- Providing screening at parapet level to obstruct visibility of equipment from street level.
- Providing low maintenance potted plants and green buffer, wherever applicable as per site conditions, in addition to parapet level screening.

Roof Elements

Applicable where rooftop equipment are partly visible from adjacent buildings.

- Providing pergolas and dome elements.
- Providing green walls, low maintenance potted plants and green buffer in addition to pergolas
- Providing parapet walls, as per applicable corridor theming, to obstruct visibility of equipment from street level



*Maintenance doors should be integrated in facade design.*

*Building facades free of fixtures or utilities.*

*Screening panels around equipment*

*Decorative panels*

*Exposed AC units deteriorate facade quality*

*Recycling bin compromise facade quality.*

*Designed utility units.*

*Roof Gardens*





# 7.3 Public Facilities & Temporary Structures (Toilets & Bus stops)

Public facilities will follow the general design guidelines of each development area, inlcuding guidelines for lighting, colors, and wayfinding.

- Public toilet facilities in the Wadis & Waterbodies area, and Mountains & Hillside will need to use more durable and robust materials, and be built to be resilient to existing weather conditions. They should be designed to require low maintenance, and may be serviced less often, especially if they are along natural trails etc.
- Public toilets design should be articulated and expressed through simple architectural forms and detailing.
- The design language should have variations in height, projection, punctuation and change in roof line.
- Locate access points where they are minimally visible to the public realm, preferably at the rear of buildings.

*Illustration 7.1 Examples of facilities that have been designed to be harmonious with sensitive locations*

- Bus Stops shall be integrated and follow the architectural character of the area that are located so they blend within the development.
- Bus Stops should address public streets (or public spaces) and should be signed clearly.
- The design language should aim for a transparent, not intrusive design and should be setback from the road edge.

**Temporary Structures**

*Illustration 7.2 Examples of low impact temporary structures*

# 7.4 Building Signage

## Signage Typologies

New developments should refer to DM's Advertising Department regulations

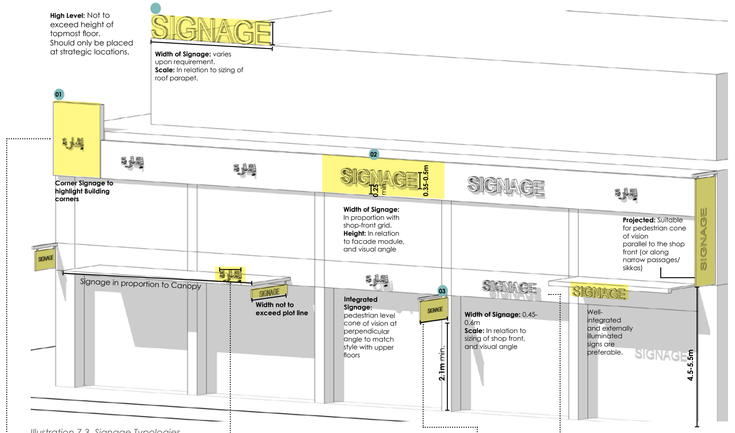



*Illustration 7.3 Signage Typologies*

**01 High-level / Corner Signage**

**02 Integrated Shop-front**

**03 Projected Signage**

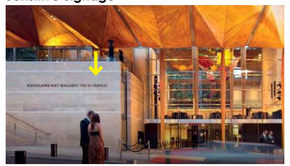
Illuminated signs must be backlit or have light coming from an indirect light source. Spotlights are permitted. Neon colours are not allowed.

All lighting must conform to Dark Sky guidelines.

## Inappropriate Signage

Poor signage, visual clutter and a lack of coherency can lead to low quality facades.

## Sensitive Signage



## Sensitive Signage

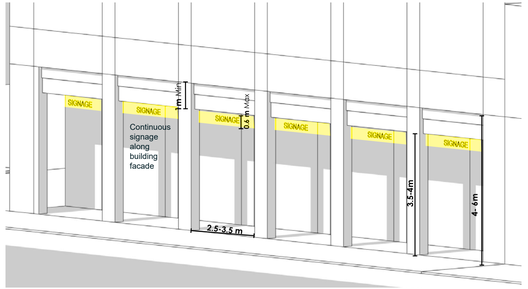
Signage should be designed and incorporated into the overall composition of the facade. Successful signage should be to secondary to the facade, especially in sensitive areas.





# Building Signage

## Colonnade Signage




Colonnades: the sign should be placed on the interior facade of the colonnade and should not be more than 60cm in height.

*Illustration 7.4 Colonnade Signage*

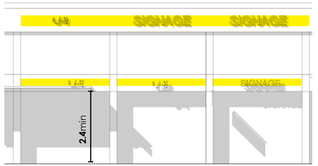
## Heritage Conservation Area Signage

If the shop is located in a Conservation area, materials should be considerate to the heritage character to ensure sensitive design is achieved. Lettering, openings and opening dimensions should respond to regulations.
Solid shutters should not be allowed in sensitive areas.


*For further guidance on signage in heritage areas, please refer to DM's 'Elements of traditional architecture in Hatta'.*



## Local Retail




Uniform height & signage alignment across the facade. All canopies or awnings should should not be fixed to the building any higher than ground floor level.

Facades should be subdivided by marking floor levels with horizontal and vertical elements such as canopies, signs etc. to add variation and human scale.

## Inappropriate Signage


Building clarity and integrity can be comprised by excessive signage.

Media screens should be prohibited across Hatta.

## Signage


Signage, lighting and facade elements should be in proportion with the overall shop front to ensure they do not dominate the character and context.

# 7.5 Mandatory Materiality & Colors

| | Style | Contemporary | | Vernacular | % Stone/ % Render | Window-to-Wall* |
|---|---|---|---|---|---|---|
| | **Materials** | **RALs** | | | | |
| T6 (Town) | Brick, Glass, masonry, Rendered walls | Combination of metal cladding, aluminium cladding, textured paint, stone finish as per design<br>RAL 1013 RAL 9003 PURE WHITE RAL 210-2 RAL 1015 RAL 1014 | Stone cladding in neutral shades<br>RAL 210-3 RAL9001 RAL 9002 RAL9001 | Distressed finish of surfaces in plaster, in combination of heavy textured paint finish<br>RAL 1015 RAL 210-3 RAL 1013 | Varied** | max. 40% window |
| T5 (Mixed-use) | Glass, rendered walls, bricks, Local Stone | | | | 20-30% Stone /60- 70% Render | max. 40% window |
| T4 (Residential) | Stone cladding, smooth paint finishes | Combinations of smooth (light textured) paint finish, stone finish as per design<br>RAL 1015 RAL 1014 RAL 9003 PURE WHITE | Stone cladding (beige shade spectrum), light-medium textured finish<br>RAL 210-2 RAL9001 RAL 1013 | | 100% Render<br>Porcelain cladding or high-quality acrylic render can be used for a more luxurious appearance. | max. 40% window |
| SD | Local Stone | The use of contemporary materials can be considered on a case by case basis. | Restricted colours | Distressed Finish, heavy textured paint finish | 50-60% Stone / 40-50% Render | max. 20% window |
| T3 (Farm Clusters) | Rendered walls, stone cladding, masonry, bricks | Stone finish as per design<br>Combinations of light and medium textured paint finish | Stone cladding (beige shade spectrum) | Distressed Finish, heavy textured paint finish, Stone finish as per design. | 70-80% Stone / 20-30% Render | max. 30% window |
| T2 (Farm-stays) | Mixed wood, rendered walls, masonry, stone cladding, bricks | RAL 1013 RAL 9003 RAL 1014 RAL 9003 RAL 1015 RAL 210-2<br>RAL 9010 RAL9001 RAL 9002 RAL 210-2 RAL 210-3<br>RAL 9001 RAL 6019 RAL 1015 RAL 9003 RAL 1013 | | | Varied** | max. 30% window |
| SD | Rendered walls, stone cladding, masonry, bricks | The use of contemporary materials can be considered on a case by case basis. | Restricted colours near heritage areas | Distressed Finish, heavy textured paint finish, Stone finish as per design. | Varied** | max. 20% window |
| Wadis & Waterbodies- T1 | Mixed — wood, rendered walls, local stone<br>Beige, sandy colour palette | Combinations of smooth (light textured) paint finish, stone finish as per design<br>RAL 210-2 RAL 9010 RAL 210-2 RAL 1015 | RAL 1014 RAL 9010 RAL 6019<br>RAL 210-3 RAL 9002 RAL9001 | RAL 1015 RAL 1013 RALR001 | 70-80% Stone / 20-30% Render | max. 40% window |
| Mountains T1 | Mixed — wood and masonry<br>Earthy colours | The use of contemporary materials can be considered on a case by case basis. | Combination of textured paint, stone finish with shades to foster visual integration with mountain backdrop<br>RAL 1013 RAL 1014 RAL 1015 RAL 1019 RAL 1020 | Stone cladding(beige shade spectrum), with combination of smooth plaster & paint finish<br>RAL 1015 RAL 1013 RAL 210-2 RAL 1001 RAL 1000 | Varied** | max. 30% window |

* The window-to-wall ratio is calculated by dividing the total glazing area by the total wall area of a building.

** Stone to render ratio vary per design and location.

Primary Materials are stone and render. For banding see next page.





# 7.6 Mandatory Texture & Finishes

| | Contemporary → Vernacular | | | | Balconies | Guidance |
|---|---|---|---|---|---|---|
| | **Texture and Finishes** | | | | | |
| T6 (Town) | | | | | Same material as walls | Contemporary materials such as steel, glass, polished concrete are encouraged. |
| T5 (Mixed-use) | | | | | Same material as walls | wooden panels/louvres, clear glass, metal frames |
| T4 (Residential) | | | | | | Simple, uncomplicated cladding & wall finishes are encouraged which are devoid of decoration |
| SD | | | | | | Minimum use of glass, traditional shading devices are encouraged (pergolas, palm leaves, mashrabiya) |
| T3 (Farm Clusters) | | | | | | A range of wooden louvers, stone and wood cladding panels, glass doors and openings. |
| T2 (Farm-stays) | | | | | | |
| SD | | | | | | Traditional shading devices are encouraged (pergolas, palm leaves, mashrabiya) |
| Wadis & Waterbodies- T1 | | | | | | Contemporary materials such as steel, glass, polished concrete are encouraged. |
| Mountains T1 | | | | | | Traditional shading devices are encouraged (pergolas, palm leaves, mashrabiya) |

Use of Aluminium panels, curtain wall glazing, pneumatic forms, steel, sail structures, spaceframes, etc. and any industrial aesthetics are discouraged.

External finishes such sand/cement render, applied texture coatings and paint should be used to create a traditional yet contemporary character for the buildings

# 7.7 Facade Banding & Color Palette

## Facade Banding

The landscape of Hatta is predominantly horizontal, new developments should utilize a layering architectural language that responds to dramatic horizons and maximizes views to the mountains.

- Massing of new developments should remain horizontal, compact and climate- sensitive.
- Vertical building elements should be reserved for important buildings at the top of the civic hierarchy, such as mosques, cultural centres, and government buildings.
- A rhythm of vertical elements should create a fine grained character breaking down wide frontages.
- Vertical elements should be used to mark important buildings, for instance: mosques and government buildings.
- Changes in material should occur, when there is a change in plane of the façade.
- Large, un-subdivided panes of glass should not be used, as they can distort the visual scale of the building


The colour palette originates from predominant hues found in Hatta's historical buildings and natural landscape. New building designs should follow permissible colours with RAL values for new buildings in Hatta.

- The materiality of new developments should contribute to the character and the quality of the local context.
- Materials used in new developments should support the sustainability principles of Hatta and enhance its landscape character and setting of any heritage sites.
- New buildings should use materials and construction methods that create interesting surface relief and tactile characteristics, especially on facades facing the public realm.
- Limited use of metal panels and large glass panels, or use should be combined with rich materials.
- Bold colours should be prohibited
- Extra consideration should be given to key buildings, and those which frame heritage areas and key views.

| | | |
|---|---|---|
| RAL 9003 | RAL 210-2 | RAL 1015 |
| RAL 1015 | RAL 1014 | RAL 1013 |
| RAL 9003 | RAL 9010 | RAL 9001 |
| RAL 9002 | PURE WHITE | RAL 210-3 |
| RAL 210-3 | RAL9001 | RAL 9002 |
| RAL 210-2 | RAL 210-2 | RAL 9001 |
| RAL 6019 | RAL 1013 | RAL 9003 |
| RAL 1019 | RAL 1020 | RAL 1000 |
| RAL 210-4 | RAL 7044 | RAL 1001 |

*Illustration 7.5 Mandatory RALs*





# 7.8 Water Conservation

- It is advisable to undertake a rainwater harvesting initiative. The collection and storage of rainwater can then be used for landscape irrigation and water flushing.
- Where possible, it is recommended to install green roofs that contribute to the storm water drainage management.
- It is advisable to integrate water saving measures to minimise the use of potable water through the integration of reduced flow taps and other similar devices.

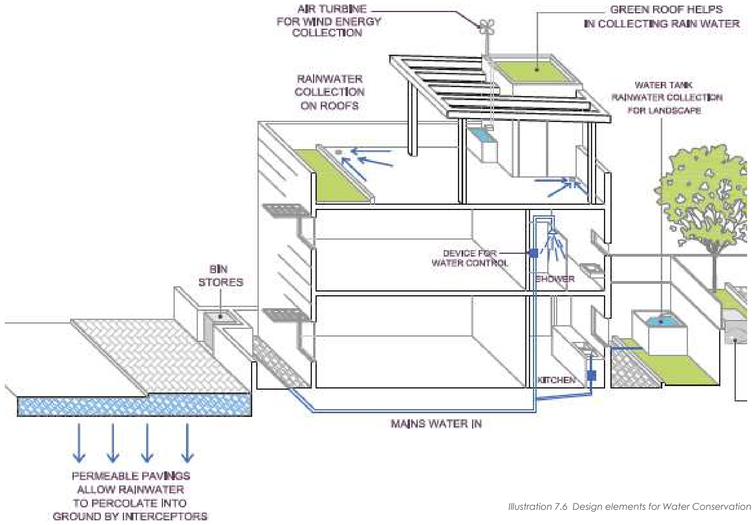



*Illustration 7.6 Design elements for Water Conservation*

# 7.9 Passive Design

- Natural ventilation systems will be adopted over air conditioning and mechanical ventilation in all building types. Such systems and window design should be capable of being easily adjusted by the user.
- The usage of Low E Glass or Double glazing within the building skin will optimise day lighting levels and the resulting heat entering the building.
- Free cooling could be obtained through the exposure by aligning windows to create a good cross ventilation or natural air current flow within the interiors.
- External measures, such as louvres and overhangs, will be used to control thermal heat gain and minimise the impacts of low angle sun, particularly in the winter months. Day light will be considered in conjunction with thermal performance and glare, to reduce heat gain and glare issues.

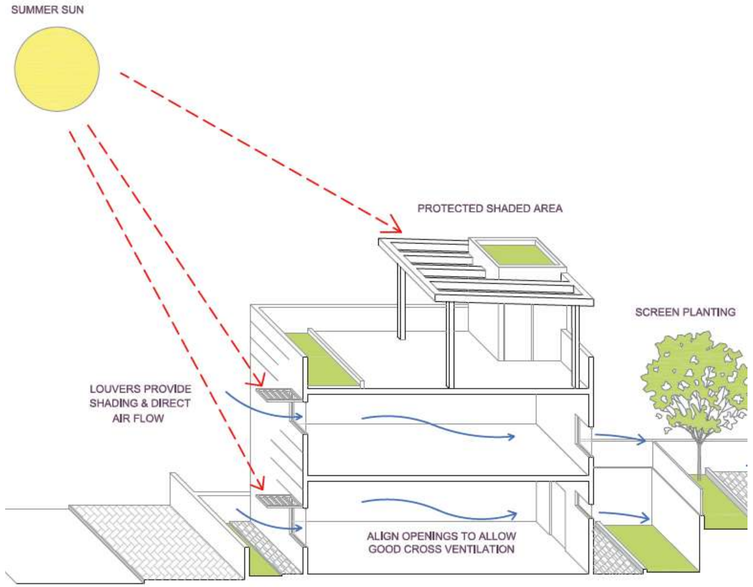



*Illustration 7.7 Passive Design Elements*





# 7.10 Public Realm & Landscape: Hardscape

Generally the hardscape (paving finishes) should have a natural look and feel, with colours and textures selected to match the natural colours and textures of Hatta. Where concrete or other non -natural materials are used they should be chosen to compliment the colour tones of the local rocks and sand / gravel tones.

Appropriate surface materials need to be selected within the public realm. It is important that materials are stable, delineate zones, provide warning and are not hazardous to the public. Correct material choices are important to help mitigate urban heat island effects and should follow sustainable principles.

It is important that within the open space, hardscape creates durable all-weather surfaces able to accommodate pedestrian activity and outdoor gatherings safely. Wherever possible, hardscape materials shall be chosen to increase the permeable surface area, allowing storm-water to infiltrate naturally into the ground and reduce potential flood risks.

The character area of the open space must be considered when selecting hard materials as well as the design intent and function. Attention must be given to the transition of hardscape to the surrounding urban context, which may include adjoining streetscapes or public spaces.

Use local materials, Where possible and limit the distance that materials need to be transported.

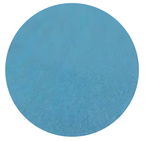
The adjacent general hardscape materials apply to all public realm and open spaces throughout Hatta and include all character areas.

| Hardscape Guidelines | |
|---|---|
| **General Guidelines** | |
| M | Ensure the hard surface is accessible to people of all ages and abilities.<br><br>Include a matte, slip-resistant finish to avoid glare and slippery surfaces when wet or dusty. |
| A | Choose material that is light coloured to avoid heat absorption. |
| M | Materials shall be resistant to damage caused by salts and chemicals in irrigation water. |
| M | Materials shall be resistant to discolouration caused by intense sunlight. |
| M | Ensure pavers are sourced from sustainable materials. |
| M | All exterior paving is required to carry either a pedestrian or vehicular load depending upon location, and to provide an appropriate durable surface. |

URBAN / STREETSCAPE / PARKING


Cobble stone for **driving/ shared path**


Concrete block pavers red / buff tones for **sidewalk and parking**


colored asphalt blue for **cycle track**


Geogrid for **parking bays**

PLAZAS / EVENT SPACES


Basalt pavers for **plazas**


Natural stone for **plazas**


Rubber tiles for **playgrounds**


Exposed aggregate /textured concrete for **event spaces**

PUBLIC FOOTPATHS


Exposed Stabilised aggregate for **mountain trails**


Wood for **raised crossings and platforms**


Resin bound surface for **wadi shared path**


Stabilised Gravel for **wadi pedestrian path**

# 7.11 Public Realm & Landscape: Softscape

Promote Biodiversity:

Selection of trees and plants that are either native, or thrive within the project area or region is always preferred. Native planting is encouraged due to their water saving potential, natural resilience to pests and disease and relevance to local culture. All these attributes are beneficial to the environment and potentially reduce the burden of future maintenance.

A natural environment is a complex system where synergies between fauna and flora exists. Native plants support wildlife and augment existing habitats. The project plant palette should contain a bio-diverse mix of species appropriate to the site context and scale.

Selection of Native Species:

It is important to determine the style of the planting scheme and consider desirable form, colour, scent and seasonal interest of individual plants. Native species should be used to supplement the indigenous landscapes and environments associated with the village hubs. When selecting both native and ornamental plants, within the public realm, it is important to take into account the growing habits and spread of the plants.

Percentage Mix And Distribution Of Native Species:

Generally the percentage of native planting will be made up primarily with trees, however some shrub and ground cover planting should be encouraged. To determine the percentage mix and distribution of native species within a planting plan, the following method is advised:

The following guidelines should be applied to native planting schemes:

| Softscape Guidelines | |
|---|---|
| **General Guidelines** | |
| M | Planting plans for village streetscapes should include a minimum of 55% native plants. |
| M | Planting plans for refurbishment works to the high-density palm groves should include 75% native plants, low density palm groves should include 90% native plants. |
| A | Designers are encouraged to use native, medicinal, historical and culturally significant species. |
| A | Designers are encouraged to include educational information to accompany native schemes. |
| M | Native species should be used for both naturalised and/or native representative planting schemes and also for more ornamental design schemes. |
| A | Native species suitable for clipping and topiary could be considered. |
| A | Ornamental plants may be included within the village refurbishment schemes. |

*Acacia Torltilis-Native Vegetation*

Green Infrastructure:

The planting at Hatta will play a key role in providing vital green infrastructure services. Abundant tree planting and large-species tree will help provide attractive green leafy sidewalks, squares and parks, to encourage walking and cycling and social interaction. The benefits of this are multiple, improving safety, physical and mental health, shade and weather protection, helping to build new communities, and creating wildlife habitat.

Native Planting within Hatta:

The Arid climate of Hatta dictates a very robust and site specific planting palette which be can largely be expanded on with local native vegetation. Plants within these areas will need to tolerate extremes of heat, desert winds and potential droughts.

The primary function of the planting palette will be to create green links. These components include greenways, ecological corridors and green bridges connecting different green spaces and other natural elements to create continuous wildlife habitats and support biodiversity. They create opportunities for healthier traffic-free routes and pedestrian crossings over waterways and roads, and provide natural drainage solutions and better airflows for climate change resilience.

Native Planting within the Wadi Corridors, Wetlands and Floodplains:

Existing plant communities include Acacia and Sidr Tree which is found along the main Wadi Corridors. Juncus rigidus, Cyperus laevigatus and Bacopa monnieri are prominent along the wadi channels and shallow marshes.

A planting selection has been developed for the Wadi Corridor that will support habitat enhancement and rehabilitation, protection of soil health and to conserve the exiting vegetation within the wadi. Additional, emphasis on plants that do not attract beehives have been considered in order to reduce the detrimental effect that bees have on local farming and livestock. Plants will be further expanded and explored through further stakeholder and community engagement.





# Public Realm & Landscape: Softscape

Design for Shade:

Planting material should be used to screen or delineate edges, to create a special identity to spaces within the town or simply add a visual rhythm to a street. The primary purpose of the planting material may simply be to strengthen the overall design of the streetscape. Trees, shrubs and ground cover planting should be installed where they are most effective.

Street trees provide shade and lower the perceived ambient temperature of the public realm. People instinctively associate trees with shading and it is therefore preferable to include street tree planting with dense, wide canopies wherever possible.

In paved areas, such as plazas, plant large shade trees in groups to form urban groves and avenues. Also, Continuous shade in the pedestrian zones is preferred and will support the concept of 'primary shadeways'. Shade structures shall be limited to rest stops, transit stops and petrol stations along highways and main roads.

To ensure a successful scheme, undertake a careful investigation of site conditions and always select plant material that thrives within the public realm, including many desert adaptive and drought tolerant trees.

Tree Pits in Paved Areas:

Tree pits should be designed to allow for healthy root growth for trees within paved areas. Well designed tree pits extend the life of street trees and result in less root interference with paved surfaces and underground utilities.

Tree pits can be individual or grouped into trenches. They may be constructed with urban tree soil and then covered with pavers or gravel that allow water to readily flow to the root zone. Alternatively they can be left within the soft-landscape areas and simply mulched. Tree pits should be sized to fit the mature tree to be planted as detailed within the cross section.

| Softscape Guidelines | |
|---|---|
| **Details** | |
| Dimensions | 2 m minimum width<br>0.8 m minimum depth |
| Horticultural Construction | Urban Tree Soil |
| Cover | Various: pavers, gravel or planting |
| Utilities | Exclude large tree and palm planting from all major utility easements. Easements will vary from 3m to 6m depending on the utility type.<br>Trees and palms may be planted over existing utility corridors within raised planters. The planters need to be easily removed and reinstated and all utilities should be protected |

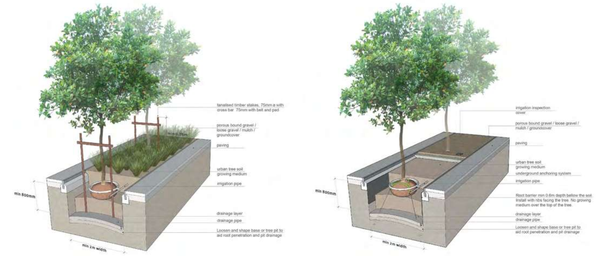



*Illustration 7.8 Proposed Illustrative Tree Pits*


*Illustration 7.9 Proposed Illustrative Tree Pits and Site Utilities*



*Resin Tree Pit (Refer to General Guidelines: Furnishing Section for Proposed Locations)*

# Public Realm & Landscape: Softscape

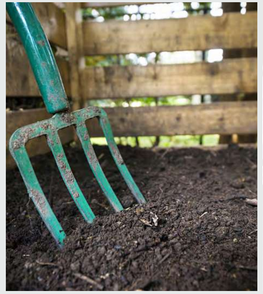
Maintenance

Future maintenance of a planting scheme should be carefully considered at the design stage to ensure the longevity of the scheme. A management and maintenance plan will need to reference the Ecological Management Plan for the site and be submitted for approval. This should highlight the maintenance plan for the first five years after construction and include detailed proposals for plant care and weed and pest control. This will require careful review over time, particularly as landscape features develop and management requirements change.

Proposals must be developed for replacement planting and maintenance operations in accordance with sound horticultural practice. Discussions must be held with DM regarding an appropriate mechanism for the future management of trees and soft landscape within the public realm throughout the life of the project.

Invasive Species

The introduction of any new plant into an eco-system should be carefully considered, as often new plants have a tendency to spread, causing an adverse effect on the local environment, human economy and human health. Introduced species that adversely affect habitats and out-compete native species are invasive. Therefore plants being introduced by the Designer that are not listed in this document should be extensively researched and discussed with DM to identify for any potential adverse local affects. Under no circumstances must species known to be invasive be used in any design scheme.



*On-site Compost Areas*

*Fertilizer Application, Pest Control and Disease Treatment*

| Maintenance Guidelines | |
|---|---|
| **General Guidelines** | |
| M | Maintain the healthy appearance of all trees and large shrubs to the appropriate form and growth habit of the species concerned. |
| M | Formative tree works must be undertaken during the appropriate months outside of the bird-breeding season. |
| M | Where young trees are staked, the stakes and ties should be checked annually. |
| M | Weed control should be limited to spot application of translocated herbicide to control noxious weeds. |
| M | Maintenance of trees should aim to facilitate establishment and canopy closure. A qualified professional such as an Arboriculturist or Tree Surgeon must be consulted prior to undertaking any major tree works on site. |
| A | Outline the acceptable levels and frequency of irrigation and plant in hydro-zones where possible to avoid an unbalanced water budget. |
| M | Include native and low water demanding species as replacement planting wherever possible. |
| M | Apply a slow release fertiliser to enhance plant growth, in accordance with manufacturers' instructions. |
| M | Trees, shrubs and ornamental planting shall be maintained in a healthy, vigorous growing condition, free from pests and disease. |
| M | Pruning and the removal of dead and unhealthy material is required to keep plants healthy, tidy and visually appealing. |
| M | Carry out weeding and pruning/dead-heading during the growing season where feasible to promote the longevity of flowering species and promote healthy growth. |
| M | The long term use of chemicals should be reduced and alternative weed control strategies should be encouraged wherever possible. |
| M | Recover and re-use organic landscape waste and compost on-site wherever possible. |





# 7.12 Public Realm & Landscape: Streetscape Components

The following provides general design guidance for the streetscape. The guidance includes images and supporting text that describe the design principles for the street components in each typology:

Crossings

To prioritize pedestrian safety, traffic shall be slowed down through the use of pedestrian crossings on streets. In streets with traditional kerb heights, raised tables are to be used to calm traffic, which are made of concrete blocks (clear material change from carriageway) and use blister paving in accordance with ADA Standards. Zebra crossings shall be provided, as long as they use zebra crossing signs and markings. The transverse bar markings on the street must be of reflective white material.

All pedestrian crossings and adjacent areas shall be kept clear of any obstructions, such as street trees, street lighting, signage and furniture.

Plot Entrances

Plot entrances within tertiary roads shall be free of obstruction for clear visibility in order to not obscure the driver's ability to locate the entrances. The entrances shall be designed to ensure pedestrians have the right-of-way over vehicles. Vehicles shall be required to change grade, not pedestrians. That said, a slight ramp shall be provided in order to connect the level of the carriageway to the level of the plot entrances. The material shall withstand vehicular load and complement the sidewalk finish with a distinct shade of colour.

In areas where residential development abuts on to streets a wall along the edge of the public realm is recommended. The wall should complement the building facade and integrate the local heritage through the use of local materials such as Stucco Plaster.

Parking Bays

The parking bays that are situated within the primary roads (Hatta Gateway and Highway) are back-in diagonal parking/back-in angle parking. That said, the parking bays for the primary roads are used for the purpose of services (i.e. retail).

As for the tertiary roads, it should be solved by on-plot, in-line parking. Where required the resident typology should allow for access to a second allocated parking space within the back garden. Visitor parking should be integrated through perpendicular parking bays.

Cycle Lanes

The bicycle network shall be prioritized by dedicating strategies for cycling within all streets of Hatta. An allocated cycle lane shall be provided along the Hatta Gateway. The cycle lane will be situated between the sidewalk and the main road with the use of clear road markings to divided each lane. Additionally, the cycle lane will differ in color (blue) from that of the main road to create a clear segregation for safety and security purposes.

As for the secondary, tertiary, and shared roads, the cycle path will be situated within the proposed shared sidewalk.

SuDs

Sustainable urban drainage systems (SuDS) should be integrated into the streets of the secondary, tertiary roads, a and designed to integrate within the wider systems managing storm water. Within the streets, SuDS features can be used to collect runoff from the carriageway, runoff from the pavements and cycleways, and/or runoff from adjacent rooftops (within the residential zone) based upon their capacity and unique site conditions.

The sidewalk of the streets of the secondary and tertiary roads allows for either a SuDS feature with defined concrete walls or to use more naturalistic swales. A swale has also been integrated within the median of the Dubai-Hatta highway to collect storm water runoff from the carriageway.

*Zebra Crossing Point*

*Plot Entrance-Slight Ramp Towards Entrance*

*Perpendicular Parking Bay*

*Cycle Lane*

*Suds Feature with Concrete Walls*

# 7.13 Public Realm & Landscape: Furnishing

Street Furniture

Throughout Hatta, the street furniture should consist of high-quality materials and be characterized by a robust, natural style and sustainable use of materials. Precedent images of site furnishing elements have been provided on the following pages to convey the design intent and support this table.

Street furniture should utilize a limited palette of quality materials to establish consistency across Hatta. Careful consideration must be given to the suitability of the material, with respect to its resistance to vandalism, potential damage, ease of repair and the maintenance requirements.

The range of street furniture may be varied by the introduction of custom elements such as bespoke seating or specialized furniture elements (e.g, timber benches attached to planters) within specific public spaces. These should be integrated into the design of the space and should be used to create a unique identity for the space.

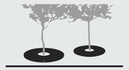
Furniture consists of a wide variety of elements for the use and convenience of the public. Familiar examples include, but are not limited to:

Benches

Litter Bins

Bicycle Racks


Tree Grilles/Surrounds



Shade Structures

Bollards

| Element | Benches | Litter Bins | Bicycle Racks | Tree Grilles | Bollards | Shade Structures |
|---|---|---|---|---|---|---|
| General Description | Timber Slats with Precast Concrete support. Some benches with arm rests and backrests | Contemporary Concrete or UHPC. Some with or without a roof/cover and optional ashtray with cigarette extinguisher | Steel Cycle Stands | Contemporary Suitable for various locations, both historical and modern context | Contemporary which responds to the urban and rural and wadi environment. Some integrate Lighting | Recycled Timber Posts and Beams to complement the architectural design of buildings |
| Relevant Quality Standards | Timber: FCS Certified<br><br>(Alternative: Wood Plastic Composite)<br><br>Concrete or UHPC slim concrete: Etched and Waterproofed<br><br>All screws and fittings are supplied in stainless steel AISI 316L | Concrete or UHPC slim concrete: Etched and Waterproofed or smooth natural concrete finish or smooth anthracite concrete finish<br><br>Hot Dip Galvanized (Metal Parts): BS EN ISO 1461<br><br>Polyester Powder Coated: BS EN 13438 | Concrete or UHPC slim concrete: Etched and Waterproofed<br><br>Reinforced with Stainless Steel AISI 316L<br><br>All screws and fittings are supplied in stainless steel AISI 316L | Brushed Stainless Steel: Grade 316 or 316L<br><br>Hot Dip Galvanized: BS EN ISO 1461<br><br>Polyester Powder Coated: BS EN 13438 (steel)<br><br>Concrete: Etched and Waterproofed<br><br>Permeable Resin Bound Aggregate | Concrete or UHPC slim concrete: Etched and Waterproofed<br><br>All screws and fittings are supplied in stainless steel AISI 316L | Treated Weathered Timber<br><br>Polyester Powder Coated: BS 6496 and BS EN 12206-1 (Aluminium) BS EN 13438 (steel).<br><br>Aluminium Passivated against corrosion and weathering |
| Additional Notes & Considerations | See Site-Wide design Guidance | Should allow for separate compartments for waste and recycling | See Site-Wide design Guidance | See Site-Wide design Guidance | See Site-Wide design Guidance | See Site-Wide design Guidance |

*Table 7.1: Furnishing elements*

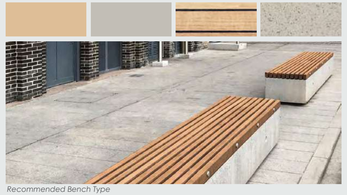




# Public Realm & Landscape: Furnishing

Benches

Color Type



*Recommended Bench Type*

The following guidelines apply for the selection of benches for the overall Hatta town:

- (M) 1. Seating should be simple, contemporary, robust and support inclusive design.
- (M) 2. Seating with back rests and armrests should be considered the predominant typology across Hatta for optimum comfort for all users. they will mainly be located within parks, open spaces, commercial areas and residential neighborhoods.
- (A) 3. Backless benches can be located only in civic spaces and in secondary/collector streets.
- (M) 4. Primary materials should be timber or timber top (for seating surface) and concrete or ultra-high-performance concrete (for seating structural supports). Avoid the use of metal surfaces.
- (M) 5. Seating should be 450 to 550mm in height.
- (M) 6. Regarding Streetscape: Seating should be placed within the furnishing zone to respect pedestrian and cyclist flows and to avoid obstruction along the streets.
- (M) 7. Seating should be mainly located under trees and shade structures for optimal comfort for pedestrians.

Litter Bins

Color Type

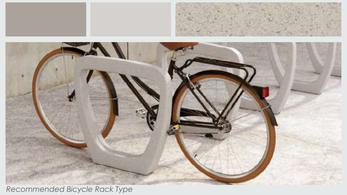
*Recommended Bin Type*

The following guidelines apply for the selection of litter bins for the overall Hatta town:

- (M) 1. Litter bins design should utilize a limited palette of high-quality materials to establish consistency with other street furniture elements across Hatta.
- (M) 2. Litter bins shall be robust and durable and shall be made from concrete or ultra-high-performance concrete to respond to the bench design/style.
- (M) 3. Litter bins with ash trays should be located in civic spaces and plazas, while covered/hooded litter bins should be located at activity hubs such as parks and open spaces, playgrounds, sport fields, etc. Litter bins opening height should be between 700 to 1000mm
- (M) 4. Open top litter bins should be placed near important entrances to public buildings or commercial frontages.
- (A) 5. Increase number of litter bins in areas of high pedestrian traffic such as parks and open spaces, commercial and mixed-use areas.
- (M) 6. Avoid the placement of litter bins within pedestrian desire lines, i.e. bins should be placed within the furnishing zone of the streets.

Bicycle Racks

Color Type



*Recommended Bicycle Rack Type*

The following guidelines apply for the selection of bicycle racks for the overall Hatta town:

- (M) 1. Bicycle stand should be simple, contemporary in style, elegant, robust and durable to align with the harsh local climatic conditions.
- (M) 2. Bicycle stand design/style should complement the design of benches and litter bins, in order to be read together as a family of elements, and align with the overarching character of Hatta.
- (M) 3. Primary materials should be concrete/UHPC, or powder-coated stainless steel
- (M) 4. Bicycle stands should be placed adjacent to all bus stops within the furnishing zone and included with all streetscapes to provide public bike parking for locals and visitors
- (M) 5. Bicycle stands should be placed close to important destinations and entrances.
- (M) 6. Bicycle stands should be provided at all parks and public squares/plazas and placed to limit potential conflicts with pedestrians.

# Public Realm & Landscape: Furnishing

Tree Grilles

Color Type

*Recommended Tree Grille Type*

The following guidelines apply for the selection of Tree Grilles for the overall Hatta town:

M 1. Tree grilles should be placed around the trunk of the tree in hardscaped areas to provide protection for the soil, and allow continuous pedestrian circulation.

M 2. Tree grilles should be robust, durable to align with the harsh local climate.

M 3. Circular-shaped metal tree grilles should be located in civic spaces, parks and open spaces, while square-shaped concrete surrounds should be located in areas of high pedestrian traffic such as urban and commercial areas.

M 4. Porous resin bound aggregate should be considered in rural areas and heritage village, as well as in areas of compacted granular surfaces.

M 5. Frame should be minimum 1500 x 1500mm.

M 6. Tree grilles should terminate flush with the adjacent surfaces to avoid trip hazards.

Bollards

Color Type

*Recommended Bollard Type*

The following guidelines apply for the selection of Bollards for the overall Hatta town:

M 1. Bollards should be used to retain public safety by restricting vehicle access within the public realm. They should be located at junctions, raised tables, pedestrian crossing points, open space entrances.

M 2. Bollards should be minimal, robust and contemporary in design as to blend in with their surroundings.

M 3. Primary materials should be concrete to complement the surrounding architectural design.

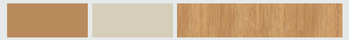
A 4. Lighting should be integrated within the bollards to illuminate paths along key pedestrian routes such as shared paths within the wadi.

M 5. To control vehicular access, spacing between bollards should be 1200mm to 1800mm apart, and offset 450mm minimum from the curb side.

M 6. Removable bollards should be placed at sikkas to facilitate emergency access and service parking.

Shade Structures

Color Type



*Recommended Shade Structure Type*

The following guidelines apply for the selection of Shade Structures for the overall Hatta town:

M 1. Shade structures within Hatta should enhance the overall representation of the building façade as permanent structures which complement the architectural language.

M 2. Appropriate materials shall include treated weathered timber, powder-coated aluminium in appropriately applied colors to surrounding areas.

M 3. Shade structures should be located at rest stops, parks and open spaces, plazas and areas with high pedestrian gathering.

A 4. A variety of shading techniques should be considered such as pergola attached to the building and freestanding shade structure with patterned shading in order to block high or low angle sun.

M 5. Shade structures should have a minimum clear height of 2400mm and a minimum width of 2000mm





# 7.14 Public Realm & Landscape: Artscape

The purpose of this art strategy is to ensure that the masterplan area, including new areas of public realm have both design quality and a cultural richness which resonates with the context of each site. This strategy is an introduction to the requirements and ambition for public art, the objectives and approach.

There is an increasing body of research that demonstrates the impact and value of commissioning public art in creating a sense of place and contributing to a distinctive identity, engaging communities and supporting way-finding as well as contributing to the wider cultural offer.

It is recommended that the DM should appoint a local art consultant to prepare and co-ordinate the art interpretation strategy. The briefing document to commission local and regional artists should include the following guidelines:

The following guidelines applies for Public Arts:

A 1. For all the permanent commissions, the rich historical context and character of each site, should be articulated in the artist's brief and intended as an initial starting point rather than fixed subject matter.

M 2. Art in the Hatta Heritage area should respond to the Historic Cultural and the Natural Area as a new cultural venue.

M 3. A bold world-class art programme should be created with local communities and stakeholders to celebrate the achievements of Hatta through the presentation of site-responsive artworks and projects.

M 4. All artworks, temporary and permanent should respond to site and situation.

*Vertical Artscape*

*Vertical Artscape*

*Context Sensitive Artscape*

*Context Sensitive Artscape*

# 7.15 Public Realm & Landscape: Boundary Wall

Historic walls will be restored within the key public spaces. A combination of natural and high-quality materials will be applied to improve the definition of the public realm network and to enrich the aesthetic quality of the master plan.

Proposals will be sympathetic to the existing environment and assimilate with the building style, while the refurbishment of key boundary walls within the heritage will ensure Hatta is recognized as a destination for tourism, culture and heritage.

The following guidelines applies for new and existing boundary walls:

M 1. Use vernacular details such as mud bricks, local beige sandstone blocks and woven palm fronds to reinforce local character.

A 2. Use landscaping and planting to articulate boundaries in a softer manner.

M 3. Walls should have a maximum height of 2.5 meters.

M 4. The use of bare cinderblock is discouraged in the , Where existing cinderblock boundary walls already exist, it shall be upgraded and covered by earth coating.

M 5. Wall lighting and any other features should not be higher than the average top height of the wall.

M 6. Do not harden of boundaries through defensive measures such as razor or barbed wire.

M 7. The design of the walls should be plain and be in line with the vernacular tradition. Overly ornate designs should be avoided.

A 8. Where community trust is established and security concerns are low, boundary walls should be lowered and made more open.

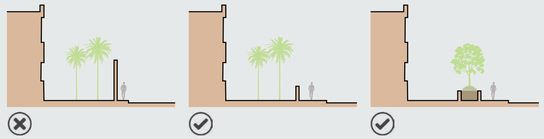


*Illustration 3.13 Boundary wall recommendations*

# 7.16 Public Realm & Landscape: Signage and Wayfinding

The signage and wayfinding strategy for Hatta will be developed and supported by both physical signs located throughout the access and circulation network as well as a digital wayfinding strategy which visitors can access through personal devices and digital information kiosks located within the main hubs. Tourism road signage with a unique graphic identity will provide wayfinding to a hierarchy of tourism destination types including: destination landscapes, trail Networks, Museums and visitor centres and Mixed use visitor hubs.

Typical Signage Family: Pedestrian Directional; Destination Arrival ID Signs; Vertical Arrival ID Signs; Vehicular Directional Signs; Vehicular regulatory Signs; Parking Information Signs; Map Signs; Small Map Directional Signs; Street Signs.

Signage Identity: Tourism road signage, signage within the neighbourhood clusters and the digital signage content should be developed to form a unique brand identity which is similar and complementary to the established brand identity of Hatta. Each of the wayfinding typologies will be integrated and use the same branding and appearance. A family of signage typologies should be developed alongside street furniture to ensure a continuity of aesthetic, quality and longevity is achieved. The public realm should be a manifestation of the Hatta brand and so the signage in the environment will present a series of branding signatures that can be used to express a sense of place, inform, direct and inspire the visitor. Exploring the integration of digital information to expand the potential information bank available through the signage and wayfinding should also be developed as part of the strategy.

| Signage and Wayfinding Guidelines | | | |
|---|---|---|---|
| **General Guidelines** | | **Biodiversity Guidelines** | |
| M | Orientation and wayfinding to be integrated in to the public realm using design elements such as materiality to create legible routes | M | Focus messaging within key biodiversity themes; protecting biodiversity; importance of natural assets; encouraging appreciation of local species and ecosystems and solutions that residents and visitors can partake in. |
| M | Signage materials to use materials sympathetic to the historic setting and vernacular identity. | A | It is important to keep educational signages simple, limiting the text in the main body to a couple of sentences with graphics. |
| M | Suggested materiality: timber or high quality composite woods, dark patented bronze, stone & reconstituted cast stone. | M | Biodiversity signs should serve as a simple warning to ensure safe human-nature interactions as well as educational and awareness initiatives. |
| A | Vehicle regulatory signs to be co located with other furniture and mounted on buildings, walls, light columns or CCTV posts to avoid street clutter. | A | Emphasize biodiversity conservation at a local, rather than regional, scale and frame messaging using local knowledge and issues. |
| M | Vehicle regulatory signs to have profiled edge frame, backing panel and hidden fixings. Posts, frame and backing painted dark bronze | M | Warning Signals should consider using reflective paint on high contrast colour visible in both day and night with minimal text. |
| M | Ensure the signs are relevant to Hatta's residents and visitors, translated in both English and Arabic. | M | Warning signs should be specific to key locations. |

BUILDING MOUNTED SIGNS


TOTEM DIRECTIONAL SIGNS



GROUND-LEVEL SIGNS




BIODIVERSITY SIGNS







# 7.17 Public Realm & Landscape: Lighting

The purpose of this section is to introduce and explain the lighting design strategy and key considerations for lighting that will ensure Hatta becomes a world class dark sky zone.

The key objectives will be to reduce unnecessary lighting in order to preserve dark skies, nature and the local ecology and biodiversity and to manage light spillage by careful specification, orientation and intensity of light.

While lighting will be subject to a detail study, the main routes through each of Hatta's character areas will be energy efficient and address safety and security for vehicles, cyclists and pedestrians and enhance the public realm during the evening. Important architectural facades, feature landscape details and focal trees will be up lit using spotlights. In addition, a range of lighting furniture is to be developed to handle a broad range of uses that promotes the efficient, sustainable and attractive use of lighting in the public realm.

Many open spaces within the masterplan will be used during the night-time, therefore appropriate lighting is essential. Safety and the aesthetic value of a space at night depend on the quality and location of the lighting fixtures. In addition, the strategy demands to reduce, and minimize street lighting along the streets to promote a dark night skies strategy across all of Hatta. Focused lighting only to be used around public transport stops and key access points.

Lighting design is to utilize energy efficient long-life light sources, such as LED, manage the use of lighting during quiet times of the night, incorporate the latest technology and use alternative energy sources where possible. The creation of SMART columns could be considered to integrate lighting with other uses, such as CCTV or electric car charging. Avoid the use of lighting in sensitive natural habitats or where light disrupts views and experiences at night. However, it will be essential to illuminate primary and secondary paths, treads, risers and other level differences using a range of lighting typologies.

External Lighting Considerations:

1. The scale and rhythm and intensity of light shall respond to the surroundings. In more built up areas such as commercial and urban areas, larger scale lighting elements can be used (always adhering to best practice in terms of minimizing light pollution).

2. In darker, more naturally landscaped areas such as the wadis, the lighting elements should be lower scale and intensity, where provided, with all light sources shielded from view.

3. In intrinsically dark natural areas (mountain trails, star gazing area) the aspiration is to have no permanent artificial lighting. Opportunities should be provided for portable lighting and light-on demand services.

The following five principles for responsible outdoor lighting, adopted from the International Dark Sky Association (IDSA) should be considered:

**USEFUL**

All light should have a clear purpose.

**TARGETED**

Light should be directed only to where needed.

**LOW LIGHT LEVELS**

Light should be no brighter than necessary.

**CONTROLLED**

Light should be used only when it is useful.

**COLOR**

Use warmer color lights where possible.




*Dark Sky Strategy to be the principle design driver*

Source: Shutterstock

# Public Realm & Landscape: Dark Sky Lighting

The following lighting design principles comply with the International Dark Sky Protocols and shall be considered within the proposed design strategies:

1. Eliminate upward spill light
2. Direct light downwards, not upwards
3. Use shielded fittings
4. Avoid 'over' lighting
5. Switch lights off when not required
6. Use energy efficient bulbs
7. Use asymmetric beams, where floodlights are used
8. Ensure lights are not directed towards reflective surfaces
9. Use warm white colours

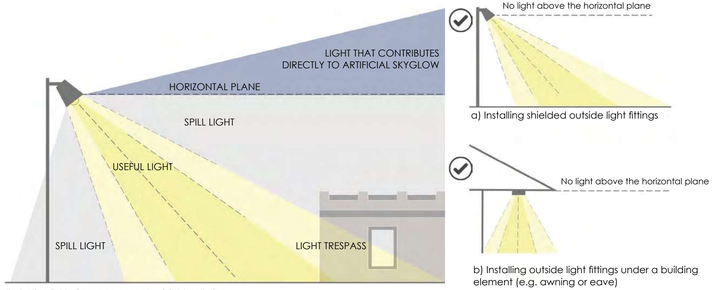



*Illustration 7.11 Common aspects of light pollution*







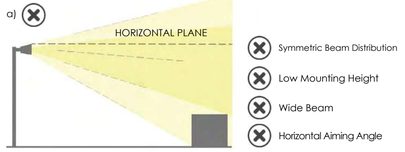



*Illustration 7.10 Application of mounting height and vertical aiming angle to control light spill*


*Illustration 3.14 Light Spill*





# Public Realm & Landscape: Lighting

The following criteria should be considered for the selection of the lighting designs for Hatta:

1. Function – Task, Levels, safety and security, environmental considerations and efficiency
2. Aesthetic – Look, feel, color, texture, equipment, mounting and locations.
3. Balanced holistic design approach – hierarchy, transitions, and surrounds.

| Lighting Guidelines | | | |
|---|---|---|---|
| **General Guidelines** | | **Biodiversity Guidelines** | |
| M | Carefully locate lighting in the public realm to avoid light spill into environmentally sensitive areas such as wadis and mountains. | M | Account for lumens as a factor when selecting light, rather than energy used. Low glare lighting reduces excessive brightness and diffuse light. Low glare options can also require less energy. Light should be directed rather than scattered to reduce unnecessary skyglow. |
| A | Effective and efficient long-life technologies with low-energy sources should be considered within the urban areas. | M | Avoid the use of Artificial light that disrupts natural light cycles between daytime and nighttime due to the negative affect it has on biodiversity. |
| M | Use fixtures that are durable with environmentally friendly materials and finishes. | M | It is recommended to avoid use of white LEDs that contain high short wave blue light components since most wildlife species are sensitive to shortwave blue/violet light. This light also scatters more readily and contributes to skyglow. |
| M | Avoid excessive lighting or unnecessarily bright screens or bright features. | A | Wildlife is more sensitive to shortwave blue/violet and ultraviolet light (400-500nm). Short wavelength light scatters more than long wavelength light and contributes more to skyglow. |
| M | Reduce light intensity – Use light sources with little or no ultraviolet light. | M | It is recommended to use longer wave (higher than 560nm) light sources. Amber with minimal blue is best. "Amber" is defined as light in the wavelength of 500 – 700nm. |
| A | Position and orientate lights such that they are naturally shielded by buildings or structures, planted vegetation and/or natural landscape features as much as is possible. | M | It is recommended keeping the light below 3 lux near species-rich areas (Pelsmakers, 2019). |
| M | Use lower intensity/ lower wavelengths of light + concealed (shielded) sources within the rural and environmentally sensitive areas. | M | Lighting guidelines should begin with natural darkness and only add light for specific purposes where lighting is used for appropriate locations and only for as long as needed. |
| M | Avoid permanent architectural lighting within the wadi buffer area. | A | Use the minimum number and intensity of lights that is appropriate for the use and/or activity. |
| M | Avoid unmanaged / unshielded uplight. | M | These recommendations should be considered as a general guideline wherever outdoor lighting is required. |

FEATURE LIGHTING

Rural Character Area:

STREET LIGHTING

Streetscape

INFORMAL LIGHTING

Wadi and Mountain Character Areas:


# 08

## Appendix

# 8.1 Public Realm & Landscape: Street (RoW) Hierarchy

(FUTURE INITIATIVE)

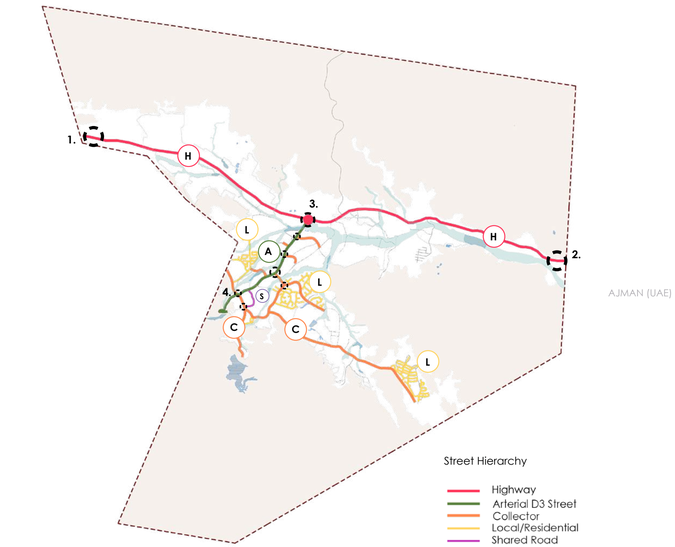



*Illustration 2.8 Street (RoW) hierarchy map for Hatta*

1. 

*Dubai-Hatta Gateway*

2. 

*Hatta- Oman customs gateway*

3. 

*Strategic Arrival*

4. 

*Gateway To New Proposed Core*





# 8.2 Public Realm & Landscape: Street (RoW) Hierarchy Matrix

| | Highway (H) | Arterial | Collector (C) | Local/Residential (L) | Heritage Shared Road (S) |
|---|---|---|---|---|---|
| | **E44 Dubai-Hatta Road** | **D30 Street** | | | |
| **Street Character/Role** | This road that connects Dubai to Oman while passing through Hatta, is designed to draw the natural elements together by enhancing the native landscape and providing a shared path to connect settlements. In addition, This road is designed to attract people and activities into the Hatta community. | Provide strong connection between the Highway and Hatta Town. Strong pedestrian connection to retails and commercial areas to be created with wider footpath and raised crossings. This footpath must also connect pedestrians with the wadi paths. | Provide vehicular access to the development and residential hubs within the town. This road typology provides a moderate traffic impact solution. Special landscape treatment and traffic calming to be considered. | Streets intended to be community spaces for pedestrians, cyclists and cars and overlooked by residential housing. Potential for raised table. | Allowing community space, pedestrian movement and traffic movement. |
| **Reference** as per RTA sections | 59.90m | 38.10m | 30.50m | 24.40m | Varies |
| **Intended Operating Speed** | 80 km per hour | 60 km per hour | 50 km per hour | 40 km per hour | 30 km per hour |
| **Vehicular / Cyclist Definition** *Refer to Cross Sections* | Shared provision for cyclists and pedestrians -2.5m width | Separate provision for cycleway to be provided | Shared provision for cyclists and pedestrians -3 to 4m width | Shared provision for cyclists and pedestrians -3 to 4m width | No separated cycling provision provided |
| **Street Design** | As per Street Design<br>Refer to Streetscape Guidance: Vehicular Access: Dubai-Hatta Highway | As per Street Design<br>Refer to Streetscape Guidance: Vehicular Access: Hatta Gateway Access Road-Arterial | As per Street Design<br>Refer to Streetscape Guidance: Vehicular Access: Hatta Secondary Roads-Collector | As per Street Design<br>Refer to Streetscape Guidance: Vehicular Access: Hatta Tertiary Roads-Local | As per Street Design<br>Refer to Streetscape Guidance: Vehicular Access: Hatta Shared Road |
| **Street Trees Species** *Shall be in accordance with Urban & Rural Planting* | Central Swale planted with native species. Street trees to be native with large canopy. | Abundant street trees shall be provided to create a high amenity street environment. Tree species shall be continued to create a continuous widlife habitas. | Street trees should be predominantly native, contributing to ecological corridor and consistent with species planted in the Arterial Street. SuDS to be provided to manage stormwater. | Street trees shall be provided to create a high amenity neighbourhood street environment. Rain gardens to be provided to capture water run-off, and filter pollutants. Residential Streets to have accent tree species. | Native trees shall be provided along the edges to create a high amenity street referencing the heritage value of the street. |
| **Visual** |  |  |  |  |  |

*Table 2.3: Street (RoW) Hierarchy Matrix for Hatta*

# 8.3 Streetscape: Hatta Highway

## Vehicular Access: Dubai-Hatta Highway

Passing alongside the agricultural fields and natural landscape, the Dubai-Hatta Road E44 forms the main transportation route that connects Dubai to the town of Hatta and is a key connection between UAE with Oman. The road is predominantly for transportation purposes with pedestrian access to retail shops. Hence, in order to improve the visitors' experience and invite them to explore the geological, heritage and landscape of Hatta, the emphasis for the landscape design will be to:

M 1. The roadside margins along the existing carriageway should be enhanced to improve the visual appearance, ecology and biodiversity, ensuring that key views across the picturesque landscape of the Hajar mountains are maintained.

M 2. Bio-retention swales within the median and naturally shaped depressions alongside the carriageway should be Integrated to support the collection of surface water runoff during storms and which help to support indigenous planting.

M 3. Street trees in to the median should be Integrated to further green the approach to Hatta.

A 4. Unnecessary clutter including redundant signage, columns etc, construction debris, redundant structures and non-compliant materials shall be removed/reduced.

A 5. In the interest of complying with dark sky's strategy, street lighting shall be reduced and limited to locations where strictly necessary for safety. Street lighting columns and luminaires to coordinate & integrate with Hatta lighting palette.

M 6. Walls, fences, gateways & interfaces with private property along this road corridor should strictly comply with the relevant boundary guidelines *(Refer to General Guidelines: Boundary Wall Section)*.

Streetscape elements to be determined at detailed design stage in collaboration with DM, RTA and other relevant authorities.

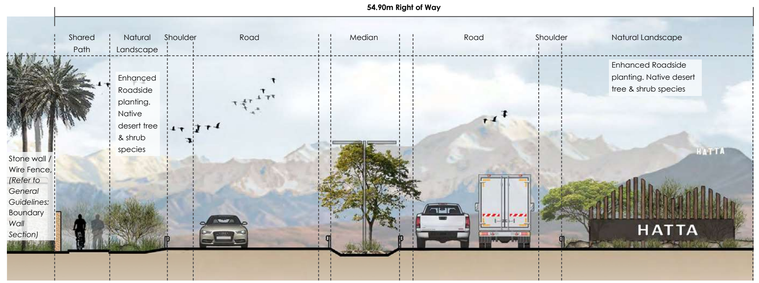
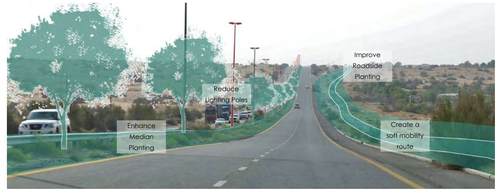



*Illustration 1.4 Highway Road Treatment Section*




*Existing Highway Road*

*Section depicts the public realm design intent and mood at Hatta Highway and is based on RTA 54.90m ROW*

| Highway Guidelines | |
|---|---|
| **Items** | **Details** |
| Dimensions | 20-30m wide |
| Construction Make-up / Sub-base | Compacted sub-base to engineers specifications |
| Kerbs | N/A |
| Wearing Course | Asphalt Finish |
| Wearing Course-Parking bays | Asphalt Finish |
| Colours | Grey |

Furniture

Median Lighting

Softscape

Native Planting

Median Trees

Swale Median





# Streetscape: Hatta Highway




B Swale Median

1. Designed to integrate within the wider systems managing stormwater.

*Illustration 2.1 Hatta Highway Road treatment 3-Dimensional Illustration*

A Highway Road

1. Future road upgrades to consider traffic calming measure to improve the road corridor for other users including pedestrians and cyclists.

B Swale Median

1. Native and habitat-friendly vegetation
2. Tree planting every 6 meters

C Enhanced Natural Desert Road Margins

1. Drought tolerant species
2. Sand and gravel surface

D Commercial/Retail Forecourts

1. Asphalt finish with delineated marking lines
2. 45 degrees diagonal parking

E Private Farmlands

1. Walls, fences and gates to comply with boundary standards *(Refer to General Guidelines: Boundary Wall Section)*

F Shared Path

1. Asphalt finish with delineated marking lines

# 8.4 Streetscape: Hatta Gateway & Arterial

## Vehicular Access: Hatta Gateway Access Road-Arterial

Visitors arriving from either Dubai or Oman arrive at Hatta Arterial Road via Dubai Hatta Road E44. This Arterial road cuts across the site from north to south and provide a Gateway to the heart of Hatta. It provides major opportunities for public realm and streetscape interventions as its the first entryway and threshold to the city. Construction details will visually complement the surrounding landscape as follows:

(A) 1. Street may be characterized by surface finish that includes red cinders to establish the street as the primary gateway to Hatta and visually blend in with the surrounding terrain which morphs from golden sands to deep red mountains.

(M) 2. Street should be characterized by abundant native tree planting (6-8m meters apart) and grouped. Trees to be planted in a naturalistic way.

(M) 3. The road margins from property boundary to back of footpaths should be planted with an understorey of native desert species establish wildlife and biodiversity corridors linking to the Wadis.

(M) 4. Cycle paths should be clearly demarcated in a coloured asphalt that conforms with local/municipal regulations.

(A) 5. In the interest of complying with dark sky's strategy, street lighting shall be reduced and limited to locations where strictly necessary for safety. Street lighting columns and luminaires to coordinate & integrate with Hatta lighting palette

(M) 6. Seating should be placed on sidewalks away from pedestrian and bicycle routes.

Streetscape elements to be determined at detailed design stage in collaboration with DM, RTA and other relevant authorities.

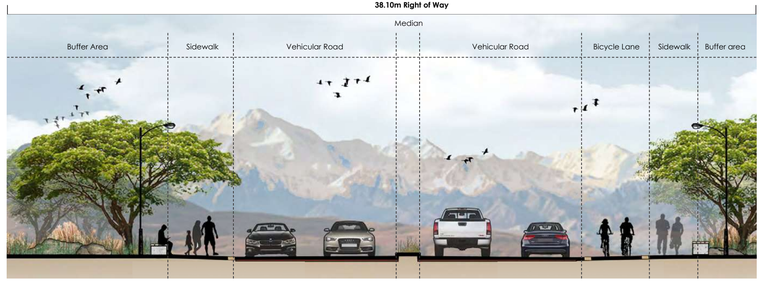



*Illustration 1.5 Hatta Gateway Access Road Treatment Section*

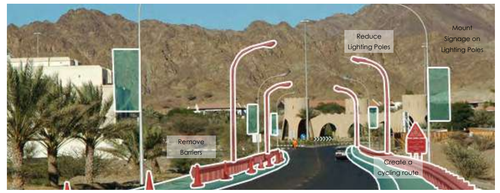



*Illustration 2.2 Existing Hatta Gateway Road-View Towards the Fort Roundabout* Source: Shutterstock

*Section depicts the public realm design intent and mood at Hatta Highway and is based on RTA 38.10m ROW*

| Gateway Access Road Guidelines | |
|---|---|
| **Items** | **Details** |
| Dimensions | 12-16m wide |
| Construction Make-up / Sub-base | Compacted sub-base to engineers specifications |
| Kerbs | Natural stone, laid flush to the surrounding ground |
| Wearing Course | Asphalt Finish with red cinders |
| Wearing Course-Parking bays | Compacted gravels with a mixed gauge between 6mm-25mm for repairs only. |
| Colours | Red tones |

Hardscape

Concrete Block Paving

Cycle lane

Softscape

Tree planting

Lighting

Directional lighting Poles





# Streetscape: Hatta Gateway & Arterial


*Illustration 2.1 Hatta Gateway Access Road treatment 3-Dimensional Illustration*

**D** Parking Bay

1. Visitor parking should be integrated through perpendicular parking bays.

**E** Bicycle Lane

1. The cycle lane will be situated between the sidewalk and the main road with the use of clear road markings to divide each lane.

**A** Sidewalk

1. Decorative Block paving 60 mm thick
2. Width = 3m wide (4m adjacent to commercial)

**B** Native Planting

1. Street tree planted at 8-10m interval
2. Drought tolerant understorey planting

**C** Seating

1. Concrete & timber benches and litter bins at 20-30 m intervals associated with shade trees or structures

**D** Parking Bay

1. Concrete block paving 80 mm thick
2. Length = 5.5 m

**E** Bicycle Lane

1. Asphalt bike path-blue color
2. Width = 2.4m

**F** Rest Stop

1. Timber and steel Structure to follow quick design

**G** Carriageway

1. Asphalt with red cinders, subject to approval by RTA

# 8.5 Streetscape: Secondary Roads-Collector

## Vehicular Access: Hatta Secondary Roads-Collector

Hatta's secondary roads connect the arterial road with the local roads and provide vehicular access to the development and residential hubs within the city. This road typology provides a moderate traffic impact solution while construction details will visually complement the surrounding landscape as follows:

M 1. Streets should be characterized by strong green character and integration of SuDS within the public realm to improve water absorption, reduce water run-off, and better cope with increasing extreme weather events.

M 2. Streets should include Bioswales with soft edge, flush with the surround road to allow for the carriageway to drain directly into the swale

M 3. Plants should be selected to suit the swale conditions.

M 4. Streets should integrate pedestrian crossing points to slow traffic and give pedestrian priority. Crossings should be clearly outlined, made of consistent concrete block (clear material change from carriageway) and use blister paving.

M 5. Pavements should be level and consistent throughout the streets.

A 6. A Pedestrian crossing may be considered for swale and road maintenance purposes.

Streetscape elements to be determined at detailed design stage in collaboration with DM, RTA and other relevant authorities.

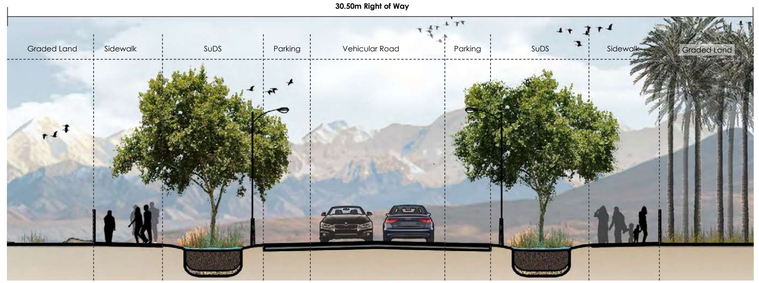



*Illustration 1.6 Local Road Treatment Section*

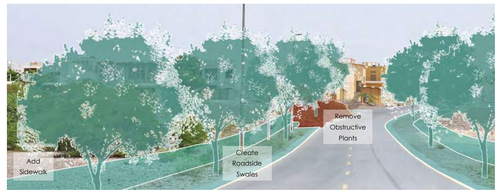



*Illustration 2.2 Existing Collector Road through the Residential Areas*

*Section depicts the public realm design intent and mood at Hatta Highway and is based on RTA 30.50m ROW*

| Gateway Access Road Guidelines | |
|---|---|
| **Items** | **Details** |
| Dimensions | 8m-12m wide |
| Construction Make-up / Sub-base | Compacted sub-base to engineers specifications |
| Kerbs | Natural stone, laid flush to the surrounding ground |
| Wearing Course | Asphalt Finish |
| Wearing Course-Parking bays | Block Paving |
| Colours | Material to assimilate with the surrounding base/tone colours within the landscape. |

Hardscape

Concrete Block Paving

Softscape

SuDS

Furniture

Crossing

Lighting

Directional lighting Poles





# Streetscape: Secondary Roads-Collector




E Zebra Crossing

1. Utilize zebra crossing signs and markings. The transverse bar markings on the street must be reflective white material.



B SuDS

1. Designed to integrate within the wider systems managing stormwater.

A Shared Path-Pedestrian /cycle

1. Min 3m clearway
2. Pedestrian priority signage
3. Stone or exposed aggregate concrete finish

B SuDS

1. Road and sidewalk to drain to roadside swales
2. Swales with native trees desert planting

C Seating

1. Seating every 25m or 50m at commercial areas
2. Seating combined with shade trees or structures where possible

D Passageway

1. Passageway every 100m to 200m
2. Timber finish with a width of 1.2m

E Pedestrian Crossing

1. Adjacent to all commercial areas & all sides of junctions
2. To be fully accessible for all users

F Carriageway

*Illustration 2.1 Hatta Gateway Access Road treatment 3-Dimensional Illustration*

# 8.6 Streetscape: Hatta Tertiary Roads-Local

## Vehicular Access: Hatta Tertiary Roads-Local

Hatta's Local Roads provide access to neighborhood clusters and local subdivisions. This road typology provides a low traffic impact solution while construction details will visually complement the surrounding landscape as follows:

M 1. Streets should include abundant tree planting to provide vital urban cooling and reduce urban heat island effect while providing attractive green leafy neighborhoods.

M 2. Formal rain gardens with hard edges should be Incorporated to guide people around them.

M 3. Plants should be selected to suit rain garden conditions.

A 4. Sidewalks maybe be no less than 3 meters wide in order to encourage local residents to walk and cycle.

M 5. Raised tables should be used at neighborhood junctions and crossing points to calm traffic, and should include tactile paving.

M 6. Carriageways should be predominately asphalt with points of block paving used for traffic calming, while kerb heights are considered to help reinforce the domestic character.

Streetscape elements to be determined at detailed design stage in collaboration with DM, RTA and other relevant authorities.

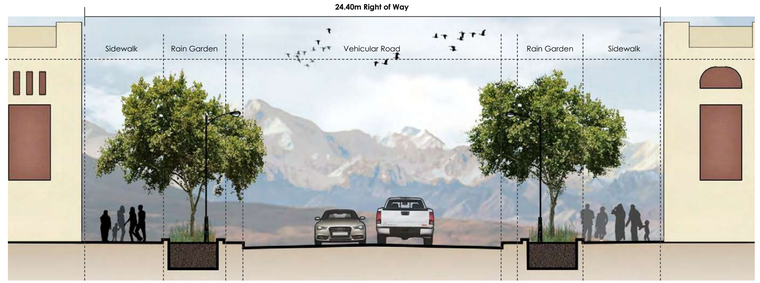



*Illustration 1.7 Local Road Treatment Section*


*Illustration 2.2 Existing Local Road through the Residential Areas*

*Section depicts the public realm design intent and mood at Hatta Highway and is based on RTA 24.40m ROW*

| Gateway Access Road Guidelines | |
|---|---|
| **Items** | **Details** |
| Dimensions | 8m wide |
| Construction Make-up / Sub-base | Compacted sub-base to engineers specifications |
| Kerbs | Natural stone, laid flush to the surrounding ground |
| Wearing Course | Asphalt Finish |
| Wearing Course-Parking bays | Block Paving |
| Colours | Red Brick Color Concrete Pavers |

Hardscape

Red Concrete Pavers

Softscape

Rain Garden

Furniture

Quick Win Mobility Hub

Lighting

Directional lighting Poles





# Streetscape: Hatta Tertiary Roads-Local

B Plot Entrance

1. Vehicles shall be required to change grade, not pedestrians. That said, a slight ramp shall be provided in order to connect the level of the carriageway to the level of the plot entrances.






D Perpendicular Parking

1. Visitor parking should be integrated through perpendicular parking bays.



C Rain Garden

1. Designed to integrate within the wider systems managing stormwater.

*Illustration 2.1 Hatta Gateway Access Road treatment 3-Dimensional Illustration*

A Sidewalk

1. Min 2m clearway
2. Flush pedestrian crossings at house access
3. Exposed agg' concrete paved surface

B Plot Entrance

1. Raised table to facilitate flush pedestrian crossing
2. Material same as sidewalk or carriageway

C Rain Garden

1. Sidewalk and carriageway storm water runoff to drain to swales.
2. To contain native trees and desert plants

D Perpendicular Parking

1. Parking integrated in to the design where overall street width allows.
2. Consider locating on alternate sides of road with road shikane for traffic calming

E Carriageway

F Raised table

1. Pedestrian crossings level with sidewalks / raised table for traffic calming / pedestrian priority

G Sikka

1. Paved as per sidewalk
2. Include trees , planting & seating where possible

# 8.7 Streetscape: Hatta Proposed Shared Road

## Vehicular Access: Hatta Proposed Shared Road

Shared surfaces are access routes which are shared by all road users. Pedestrians (the most vulnerable user group) will have priority, followed by cyclists and then vehicles. Shared surfaces provide a low traffic impact solution to the scheme and provide direct access into the Heritage Village. Construction details will visually complement the surrounding landscape as follows:

(A) 1. All traffic shall respect a strict 20mph speed limit.

(A) 2. Kerbs where required, shall be laid flush.

(M) 3. Materials should include cobble stone and bound aggregate to assimilate with the surrounding base colours within the landscape.

(M) 4. There should be no lane markings. Carriageways will be defined, where required, with reflective studs.

(M) 5. Shared surfaces with limited traffic should be constructed out of natural cobble stone.

Streetscape elements to be determined at detailed design stage in collaboration with DM, RTA and other relevant authorities.

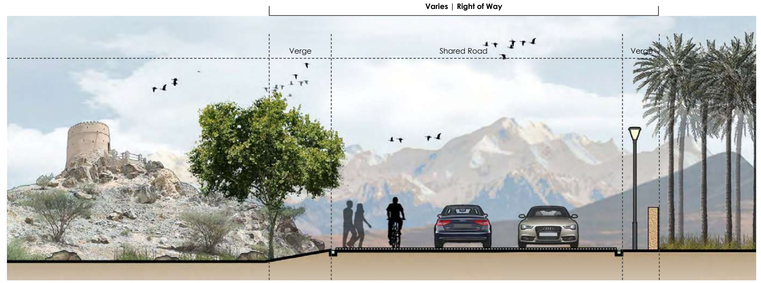



*Illustration 1.8 Shared Road Treatment Section*


*Illustration 2.2 Existing Collector Road through the Residential Areas*

Hardscape

Cobble Stone

Drainage Channel

Softscape

Natural Roadside Plants

Lighting

Directional lighting Poles

| Gateway Access Road Guidelines | |
|---|---|
| **Items** | **Details** |
| Dimensions | 6m wide |
| Construction Make-up / Sub-base | Compacted sub-base to engineers specifications |
| Kerbs | Natural stone or pre-cast concrete, laid flush to the surrounding ground |
| Wearing Course | Cobble Stone 100x100mm-200x200mm |
| Wearing Course-Parking bays | Bonded gravels with a mixed gauge between 6mm-25mm. |
| Colours | Buff tones |





# 8.8 Public Realm & Landscape: Roundabout

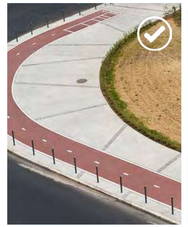


*Illustration 1.9 Location of Roundabout*

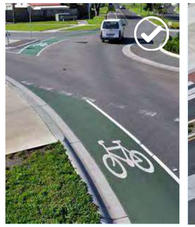
Landscaping in the central island, in splitter islands (where appropriate)can benefit both public safety and community enhancement. The following guidelines shall be applied when landscaping roundabouts:

| Civic Spaces Guidelines | |
|---|---|
| **General Guidelines** | |
| (M) | Avoid plant material or objects that obscure visibility, plant material shall be no higher than 500mm within the clear zone |
| (M) | Ensure safety by including visual elements that discourage drivers from driving straight through |
| (M) | Discourage pedestrian access to the roundabouts |
| (A) | Use drought resistant plants and hardscape that are sensitive to the site's context and to reduce the need for irrigation and maintenance |
| (A) | Minimize oncoming glare by contouring soft landscape design |
| (M) | Help blind and visually impaired pedestrians locate sidewalks and crosswalks. |
| (A) | Minimize introducing hazards to the intersection, such as poles, walls, guide rail, statues, or large rocks |

*Recommendations for Roundabout-use of native planting*



Provide sidewalk along roundabout



Dedicate 2.4 meters for cycle lane

Provide zebra crossings for pedestrian safety

*Comparison between existing and recommended street components*

**Related Policy**

1. Promote safe, active mobility-friendly streets that encourage walking, cycling and congregation within the communities
2. Integrate shading and protection, such as tree canopies, awnings and canopies, to encourage pedestrian activity along the street
3. Prioritise sidewalk shading and other climate-responsive strategies for cyclists with Friendly Safe Streets design
4. Promote accessibility and a safe walking environment to public realm and open spaces with an emphasis given in the ability to access them by foot, bicycle and public transport.

# Streetscape: Hatta Shared Road


*Illustration 2.1 Hatta Shared Road treatment 3-Dimensional Illustration*

**A Natural Landscape**

1. Area to be cleared and graded
2. Native drought tolerant species

**B Shared Road**

1. Low traffic urban areas to support pedestrian priority allowing it to be pedestrian friendly
2. Must be clearly signposted and entrance to shared surface area
3. Carriageway and adjacent public realm to have same material

**C Lighting**

1. Feature column lights may be used to set this zone apart form other streets

**D Farmlands**

1. Heritage farmlands developed as a showcase including crops and fruiting trees.
2. Varying wall heights to facilitate views inwards

**E Drainage Channel**

1. To be located along the road edge for the purpose of collecting storm water.





# 8.9 Public Realm & Landscape: Roundabout Elements

**D Zebra Crossing**

1. Utilize zebra crossing signs and markings. The transverse bar markings on the street must be reflective white material.






**E Raised Table**

1. Raised Pedestrian crosswalk should be added at entrance to Hatta's Gateway Road to create a safe, slow-speed crossing for pedestrians and cyclists.



**F Bicycle Lane**

1. A dedicated cycle lane to be added along the edge of the road which links to Hatta's wider Cycling Network and soft mobility routes.

**A Water Feature**

1. Water features shall be introduced in the roundabout design for aesthetic improvement
2. Water feature design can be integrated with the terraced walls to provide cascading water effect

**B Terraced Walls**

1. Made from traditional materials like mud-brick or local stone to contribute to Hatta's Landscape Character
2. Integrate Native shrubs, ground covers and flowering perennials
3. Standalone Walls can integrate Signage

**C Palm Trees**

1. Palm Trees to be integrated within the Roundabout design to reflect Hatta's Agricultural fields and Palm Groves
2. Should follow the radial pattern of the design

**D Zebra Crossing**

1. Utilize zebra crossing signs and markings. The transverse bar markings on the street must be reflective white material.

**E Raised table**

**F Bicycle Lane**

**G Shared Path**

1. Asphalt finish with delineated marking lines.

**H Sidewalk**

1. Decorative Block paving 60 mm thick
2. Width = 3m wide (4m adjacent to commercial)

*Illustration 1.10 Hatta Gateway Access Roundabout treatment 3-Dimensional Illustration*

# 8.10 Public Realm & Open Space Strategy

## Movement & Mobility

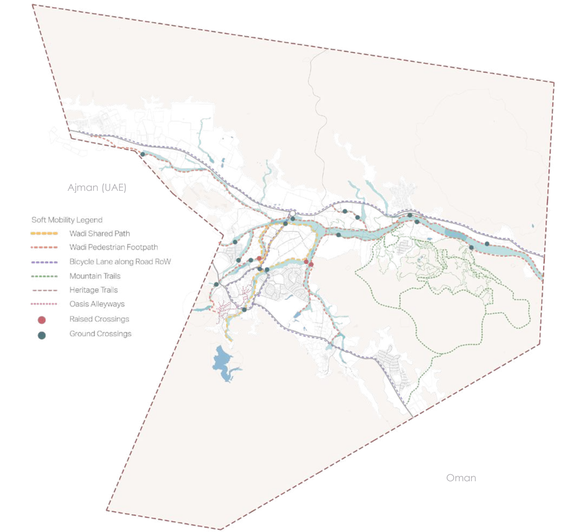



*Illustration 2.1 Hatta's Movement & Mobility Map*

## Open Space Strategy

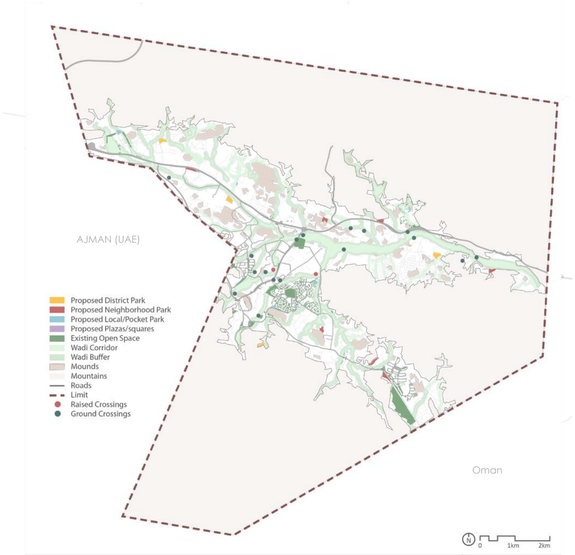



*Illustration 2.2 Hatta's Open Space Strategy Map*





# 8.11 Open Space Typology Matrix

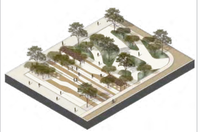
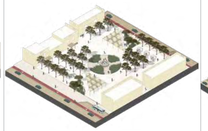
| | District Park | Neigbourhood Park | Local/Pocket Park | Plazas/Squares | Wadi Park |
|---|---|---|---|---|---|
| **Open Space Character** | District parks provide community based recreational needs, preserve unique localized environmental features, and accommodate community based social/civic events.<br><br>They intend to consolidate programmed adult and youth athletic fields, promote passive recreation through the creation of trails and picnic areas, and promote connectivity between adjacent neighborhoods | Neighborhood parks serve as an extension of residential activities that cannot be accommodated in residential yards.<br><br>The goal of neighborhood parks is to facilitate informal recreational activities, encourage social interaction among neighborhood residents and preserve usable open space. | Pocket parks are small outdoor spaces in which the local community transform into an amenity in a way that responds to local needs.<br><br>They provide a quiet for locals or a small-sized play area for children. These unique parks often take advantage of vacant lots, abandoned alleyways, and other forgotten and unused spaces. | Plazas and squares are open public spaces which reflect the towns' identity and the communities' cultural background.<br><br>They are the intersection, gathering and waiting points for both the pedestrian and vehicle traffic, they are also civic centers where citizens engage in commercial activities (i.e. Market activities are one of the essential elements found within plazas and squares). | Wadi Parks bring together the various town neighbourhoods around its ecological corridor. Its linking function also works in reconnecting the urban development to its context.<br><br>They become places where different natural environments meet as well as the setting for small public spaces to exist. Wadi parks will eventually act as sanctuaries for various types of faunas. |
| **Intended Size** | Ranges from 3 to 5 hectares | Ranges from 0.5 to 1 hectares | Ranges from 0.1 to 0.3 hectares | Ranges from 0.05 to 0.5 Hectares | Ranges from 0.3 to 0.75 Hectares |
| **User Ratio** | Complies with a ratio of 0.5ha/1000 people. Serves populations within 800 meters. | Complies with a ratio of 0.5ha/1000 people. Mainly focused around Hatta's neighbourhood centres. | Complies with a ratio of 0.2ha/1000 people. Serves the needs of the immediate residential population. | Complies with a ratio of 0.1ha/1000 people. | Complies with a ratio of 0.5ha/1000 people. |
| **Open Space Design** | As per Open Space Design<br>Refer to Urban development Character: Open Spaces: District Park | As per Open Space Design<br>Refer to Urban development Character: Open Spaces: Neighbourhood Park | As per Open Space Design<br>Refer to Urban development Character: Open Spaces: Local/Pocket Park | As per Open Space Design<br>Refer to Rural development Character: Plazas and Squares | As per Open Space Design<br>Refer to Wadis, Palm Groves & Heritage Character: Wadi Open Space: Wadi Park |
| **Open Space Native-Adaptive Softscape Ratio**<br>*Shall be in accordance with Wadi, Urban & Rural Planting* | Softscape ratios for district open spaces is 80%<br><br>80% Softscape = 70% locally specific natives and 30% adaptive | Softscape ratios for neighbourhood open spaces is 50%.<br><br>50% Softscape = 70% locally specific natives and 30% adaptive | Softscape ratios for local open spaces is 60%.<br><br>60% Softscape = 60% locally specific natives and 40% adaptive | Softscape ratios for plaza open spaces is 60%.<br><br>60% Softscape = 80% locally specific natives and 20% adaptive | Softscape ratios for local open spaces is 100% locally specific natives. |
| **Visual** |  |  |  |  |  |

*Table 2.4: Hatta's Open Space Typology Matrix*

# 8.12 Public Realm & Landscape: Open Space Classification-Programming Summary

| OPEN SPACE CLASS | Shading | Rest Areas | Event Spaces | Play Areas | Sports Activities | Picnic Areas | Community Gardens | F&B | Trails |
|---|---|---|---|---|---|---|---|---|---|
| DISTRICT PARK | ● | ● | ● | ● | ● | ○ | ● | ● | ○ |
| NEIGHBORHOOD PARK | ● | ● | ● | ● | ● | ● | ● | ● | ○ |
| LOCAL PARK | ● | ● | ○ | ● | ○ | ○ | ● | ○ | ○ |
| PLAZA | ● | ● | ○ | ○ | ○ | ○ | ● | ● | ○ |
| WADI PARK | ● | ● | ○ | ○ | ○ | ● | ○ | ● | ● |

*Illustration 2.3 Hatta's Open Space Classifications*

*Play and Recreation*

*Sports Activities*

*Shade*

**Refer to urban, wadi, mountains and rural sections for more detailed open space guidance.*





**General Site Wide***

Plant Palette

*Applicable to two or more character areas


Prosopis cineraria


Acacia Arabica


Acacia tortilis


Tamarix aphylla


Ziziphus spina christi


Phoenix dactylifera


Calligonum comosum


Haloxylon salicornicum


Acacia ehrenbergiana


Salvadora persica


Dipterygium glaucum


Ochradenus arabicus


Rhanterium epapposum


Limeum arabicum


Euphorbia larica


Ochradenus baccatus


Ochradenus aucheri


Pluchea dioscoridis


Cyperus conglomeratus


Cymbopogon commutatus


Camulaca aucheru


Crotalaria aegyptiaca


Salsola imbricate


Heliotropium kotschyi


Pennisetum divisum


Convolvulus virgatus


Senna italica


Heliotropium curassavicum


Cenchrus ciliaris


Capparis decidua

**Urban Development**

Plant Palette


Hyphaene thebaica


Bauhinia variegata


Albizia julibrissin


Delonix regia


Plumeria obtusa


Lavandula vera


Cortaderia selloana


Muhlenbergia capillaris


Pennisetum setaceum


Plumeria rubra


Canna indica


Tecoma smithii


Malvaviscus arboreus


Thunbergia alata

**Rural Development**

Plant Palette


Punica granatum


Citrus sinensis


Opuntia spp.


Ficus sycomorus


Prunus persica


Citrus reticulata


Matricaria chamomilla


Mentha spicata


Solanum lycopersicum


Thymus vulgaris

**Wadi**

Plant Palette


Aerva javanica


Rhazya stricta


Lawsonia inermis


Salvadora persica


Leptadenia pyrotechnica


Heliotropium arbainense


Retama raetam

**Mountain**

Plant Palette


Acacia farnesiana


Acacia nilotica


Dodonaea viscosa


Tecomella undulata


Cleome droserifolia


Zilla spinosa


Searsia tripartita

*Illustration 2.4 Plant Palette for Hatta*

## 8.13 Planting

| | Trees | Shrubs | Groundcover |
|---|---|---|---|
| **Street-Median Planting** | Prosopis cineraria<br>Tamarix aphylla | – | Heliotropium curassavicum<br>Cenchrus ciliaris |
| **Street-Sidewalk Planting** | Ziziphus spina christi<br>Albizia julibrissin<br>Delonix regia | Ochradenus arabicus<br>Euphorbia larica<br>Ochradenus aucheri<br>Pennisetum divisum<br>Convolvulus virgatus<br>Muhlenbergia capillaris<br>Pennisetum setaceum | – |
| **Urban Square-Edge Planting** | – | Lavandula vera<br>Cortaderia selloana<br>Muhlenbergia capillaris<br>Pennisetum setaceum | – |
| **Urban Square-Feature Planting** | Phoenix dactylifera<br>Bauhinia variegata<br>Albizia julibrissin<br>Delonix regia | – | – |
| **Surface Parking Planting** | Acacia Arabica<br>Ziziphus spina christi<br>Plumeria obtusa | Rhanterium epapposum<br>Lavandula vera<br>Salsola imbricate<br>Pennisetum divisum<br>Muhlenbergia capillaris<br>Pennisetum setaceum<br>Plumeria rubra | – |
| **Screening Planting** | – | Calligonum comosum<br>Haloxylon salicornicum<br>Salvadora persica<br>Dipterygium glaucum | Tecoma smithii<br>Malvaviscus arboreus<br>Thunbergia alata |

*Table 2.5: Hatta's Planting Typology Matrix*



This page is intentionally left blank

HATTA

# URBAN DESIGN & PUBLIC REALM GUIDELINES

October 2023

Prepared by

بلدية دبي
Dubai Municipality

Baniyas Road, Deira

P.O. Box 67, Dubai, UAE



About Dubai Municipality

Dubai Municipality is one of the largest governmental institutions in the United Arab Emirates (UAE). It is considered as one of Dubai's leading growth and development institutions in terms of its smart projects and services.