



# **Development Regulation Guidelines**

Deerat Aloyoun Residential Villa Type A1

6 June 2018

# Booklet 2

## Issue and Revision Record

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# Contents

<b>1</b>	<b>Plot Regulations &amp; Guidelines</b>	<b>1</b>	<b>3</b>	<b>Plot Regulations Table</b>	<b>14</b>
1.1	Land Use Product Definition	1	3.1	Plot Regulations Table	14
1.2	Summary of key development controls	1	<b>4</b>	<b>Definitions</b>	<b>15</b>
1.3	Boundary Wall	2	4.1	Gross Floor Area Definition (GFA)	15
1.4	Entrance Gates	2	4.2	Villa GFA	15
1.5	Architectural Facade Type	3	4.3	TIO	15
1.5.1	Classical Art Deco	3	4.4	Floor Area Ratio (FAR)	15
1.5.2	French Chateau	4	4.5	Occupant	15
1.5.3	Modern Tropical	5		<b>Appendices</b>	<b>16</b>
1.6	Permitted Modifications	6	A.	Parapet Wall Privacy Screen Location Plan	17
1.7	Prohibited Modifications	10	B.	Option 01 Aluminium Louvre	18
<b>2</b>	<b>Structure and MEP</b>	<b>11</b>	C.	Option 02 GRC Privacy Panel.	19
2.1	Structure	11	D.	Mock Up Photo of Option 01 & 02	20
2.2	Mechanical Services	11	E.	Gulf Arabesque Brochure	21
2.2.1	Cooling	11	F.	Other Patterns for GRC Parapet Wall	22
2.2.2	Exhaust fans	12			
2.3	Electrical Services	12			
2.4	ELV System	12			
2.5	Public Health Services	12			
2.5.1	Water Supply System	12			
2.5.2	Sanitary Drainage System	12			
2.5.3	Storm Water System	13			
2.6	Gas Services	13			

# 1 Plot Regulations & Guidelines

## 1.1 Land Use Product Definition

This product covers only a single plot size within the Deerat Aloyoun development which is a carefully crafted housing community within the Diyar Al Muharra (DAM) Master Plan. The A1 type villa forms part of a neighbourhood theming within this development. This typology is defined as an attached villa. There are limited opportunities for development i.e. building extensions and the property must be occupied for residential purposes and by a single family only. The following schematic drawings represent the villa as purchased by the Occupant. Detailed architectural and engineering drawings are available from the TIO upon request. As per the sale agreement, and in order to maintain the high standards of the neighbourhood for the benefit of the Occupant, the following regulations must be adhered to by the Occupant:

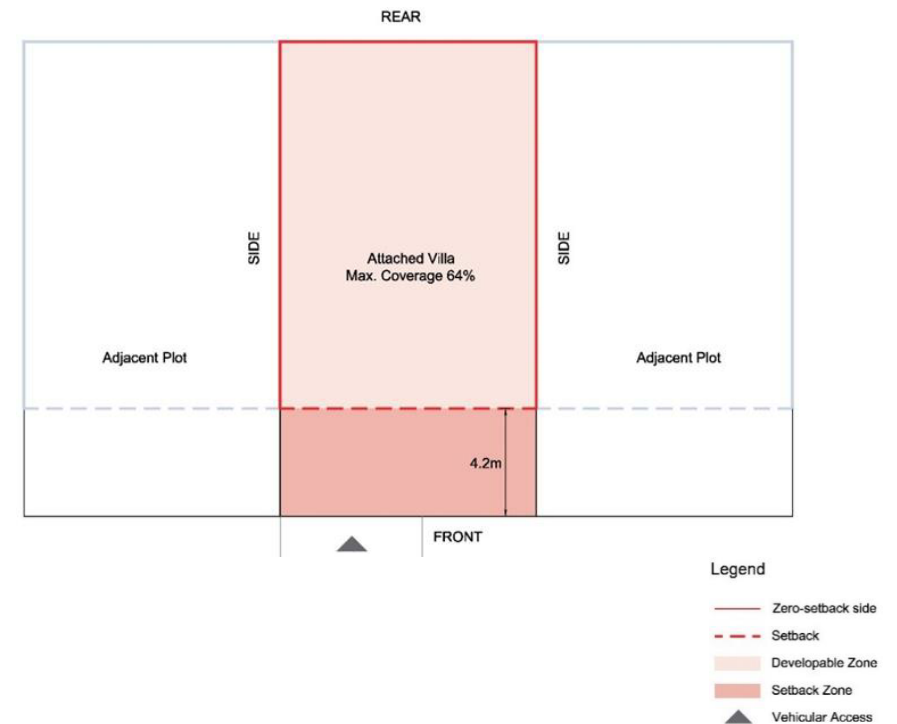
- No modifications to the villa are permitted except those described in this document. See Sub-Section 1.6 of this document.
- Approvals need to be obtained prior to undertaking any/all permanent or temporary modifications, please refer to the process described in Booklet 1, provided separately.

## 1.2 Summary of key development controls

- **Setbacks**
  - Front = 4.2m Min.
  - Side = No setback
  - Rear = No setback
- **Car Parking:** 2 spaces on plot

- **Garden Area:** Must remain permeable; Subject to any Permitted Modification installed by the Occupant in accordance with Sub-Section.
- **As-built Gross Floor Area (GFA):** 238.24 sq. m.
- **Maximum GFA after allowed expansion:** 271 sq. m.
- **Maximum Height:** 15m

Figure 1: Plot Regulations Layout



1.3 Boundary Wall

The Figure 2 below shows the front boundary wall elevation for this villa. The front boundary wall forms the street facing facade and is meant to add to the public realm. It is designed as a continuation of the building facade theme to add interest to the streetscape. Any exposed cable boxes for lighting or utilities have been concealed within a covered unit, integrated into the wall.

Side boundary walls are located 25mm within the plot boundary to allow for a 50mm expansion joint between the boundary walls of two adjacent villas

Figure 2: Boundary Wall Plan

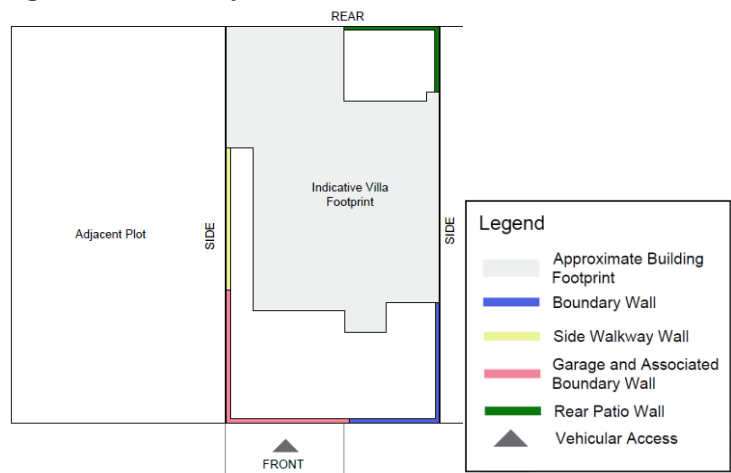


Table 1: Maximum Boundary Height

	Classical Art Deco	Modern Tropical	French Chateau
Boundary Wall	2.0	2.0	2.0
Garage and Associated wall	3.5	3.5	3.5
Rear Patio wall	5.7	5.7	5.7
Side Walk way wall	3.0/6.3	3.0/6.3	3.0/6.3

1.4 Entrance Gates

A vehicular (garage) and pedestrian gate have been provided on the front boundary. The maximum height of the boundary wall is 2m and the maximum height of the garage is 3.5m. The boundary wall and garage may not be changed as these reflect the desired design theme.

Figure 3: Front Boundary Wall and Entrance



## 1.5 Architectural Facade Type

### 1.5.1 Classical Art Deco

A creative but short-lived movement, the Art Deco style takes its name from the Exposition Internationale des Arts Decoratifs held in Paris in 1925 as a showcase for new inspiration. The style is essentially one of applied decoration. Buildings were richly embellished with hard-edged, low relief designs, geometric shapes, floral and sunrise patterns.

In classic Art Deco, rectangular block forms were often arranged in geometric fashion, then broken up by curved ornamental elements. The aim was always a monolithic appearance with applied decorative motifs.

Visual interest was created using bands of brick, canopies, or copings. Windows were often arranged in continuous horizontal bands of glass. Elaborate pilasters and door surrounds are prominent features.

#### 1.5.1.1 Facade Colour Scheme

- Villa External Wall and Boundary Wall<sup>1</sup>: Jotun 8082
- Window Frames: Aluminium RAL 8080
- Window Glass: Green
- Garage / Patio Pergola: Aluminium RAL 8080
- Gate: Aluminium RAL 8080

**Figure 4: 3D Perspective View of the Street Facing Elevation – Classical Art Deco**



**Figure 5: Front Elevation – Classical Art Deco**



<sup>1</sup> Refer to Figure 2 for extent of Boundary Wall

### 1.5.2 French Chateau

The French Chateau Style takes its name from the monumental 16<sup>th</sup> century French country houses or 'Chateaux'. Typically built in an asymmetrical plan, these homes feature complex roof lines and facades with many recessed and protruding planes. Architectural details are elaborate and feature quoins and keystones.

Steeply pitched roofs, busy roof lines with many vertical elements, multiple dormers are part of the characteristics of this style. Gables, doorways, windows and other facade elements are commonly ornamented with shallow relief carving. Windows and doorways may be arched. Stone, brick and stucco are common exterior materials.

#### 1.5.2.1 Facade Colour Scheme

- Villa External Wall: Jotun 1108, 10394
- Boundary Wall<sup>2</sup>: Jotun 10394
- Window Frames: Aluminium RAL 8014
- Window Glass: Bronze
- Garage / Patio Pergola: Aluminium RAL 8014
- Gate: Aluminium RAL 8014

**Figure 6: 3D Perspective View of the Street Facing Elevation - French Chateau**



**Figure 7: Front Elevation - French Chateau**



<sup>2</sup> Refer to Figure 2 for extent of Boundary Wall



### 1.5.3 Modern Tropical

As in modern style homes, these houses feature clean lines with minimal ornamentation and simple proportions. Simplicity is the main feature of houses in this style. Roofs are normally flat or shallow-pitched and windows are large expanses of glass bringing in an abundance of natural light and creating a strong connection to outdoor space. This facade style features elevations having orthogonal forms with colour variations and very simple boxing around windows for enhancement. Wall cladding or

grooves in render are added to the external walls to give it character, both being very minimalist in appearance.

#### 1.5.3.1 Facade Colour Scheme

- Villa External Wall: Jotun 1244, 9981, 1973
- Boundary Wall<sup>3</sup>: Jotun 1417
- Window Frames: Aluminium RAL 9016
- Window glass: Brown
- Garage/Patio Pergola: Aluminium RAL 8014
- Gate: Aluminium M 102 Pitch Pine.

**Figure 8: 3D Perspective View of the Street Facing Elevation – Modern Tropical**



**Figure 9: Front Elevation – Modern Tropical**



<sup>3</sup> Refer to Figure 2 for extent of Boundary Wall



## 1.6 Permitted Modifications

At the time of designing the Deerat Aloyoun development, careful consideration was given to the changing needs of its present and future residents. Consequently, the villas were designed keeping in mind the provisions for future expansion. As part of the permitted expansion, each Occupant may add up to a maximum of one bedroom and one bathroom, a maximum additional GFA of 33 sq. m., subject to these being constructed in the area hatched in green in Figure 11. Any modification must comply with the 3D perspective facades shown at the end of this section. All the Permitted Modifications must be fully rendered and painted with the approved colours, as described in Section 1.5, for each specific Façade Type.

### **A B** Additional structures in the ground floor garden

- The Occupant is permitted to build a swimming pool, gazebo, sun shade, children's play equipment, etc. in the garden subject to these not being visible from the street. Where these items require a foundation or are otherwise constructed below ground, a setback of 1m shall be provided from the plot boundary. Structures A and B can be located anywhere in the garden area as long as the 1m clearance to the boundary is maintained, as shown in Figure 10

### **C** Additional bedroom and bathroom on roof level

To ensure that the permitted developments on the roof do not have a detrimental effect on the streetscape, these newly constructed structures must adhere to certain general controls, namely:

- The Occupant can construct additional areas in a way that blends in with the existing design theme and building elevations; this includes the use of same or compatible materials and paint colours.
- Any development on the roof level must be confined within the footprint hatched in green in Figure 11.
- The maximum height of all development within the permitted development zone should not exceed the height of the existing maid room and stair room on the roof.
- The villa can be expanded by upto a maximum of 33 sq.m. subject to utility demands and other controls.

#### 1.6.1.1 Other permitted modifications include the following:

- The Occupant may undertake internal modifications like moving a door, dividing a room, etc. subject to these modifications having no effect on the outward appearance of the villa.
- The Occupant may install a lift/elevator however full engineering drawings will have to be provided to the TIO as there is no provision to install an elevator.
- The Occupant may introduce privacy screen to the roof parapet as described below. The location of parapet wall privacy screen is indicated in Appendix A

#### Option 01 Aluminium Louvre

Powder coated Aluminium louvre sections are mechanically mounted to top of parapet wall. See Engineers concept sketch in Appendix B. Louvres sections can be manufactured to increase/decrease visual transparency however final designs are subject to Engineers calculations & recommendations. Powder coated sections are available in an array of sizes, RAL colours to meet end user requirements (Subject to supplier availability).

This system is robust, light weight and requires little maintenance. The life expectancy of the Aluminium panel system is in accordance with the 25 years life expectancy of the building.

#### Option 02 GRC Privacy Panel

Decorative GRC panels sections are mechanically mounted to top of parapet wall. See Engineers concept sketch in Appendix C. Panels can be manufactured in array of sizes, patterns & RAL colours to meet end user requirements (Subject to supplier availability). See extract from supplier Catalogue in appendix D & is visually opaque (Offers full privacy)

The panels are inserted & mechanically fixed into powder coated Aluminium sections which can be manufactured in array of RAL colours to meet end user requirements (Subject to supplier availability). This system offers both robustness & aesthetical qualities to the building & requires maintenance every 5 – 10 years (Subject to supplier recommendations for the applied paint). The life expectancy of the GRC system is in accordance with the 25 year life expectancy of the building.

The approval of design of the extended structures will be at the discretion of the TIO.

**Figure 10: Ground Floor      Figure 11: Roof Level**

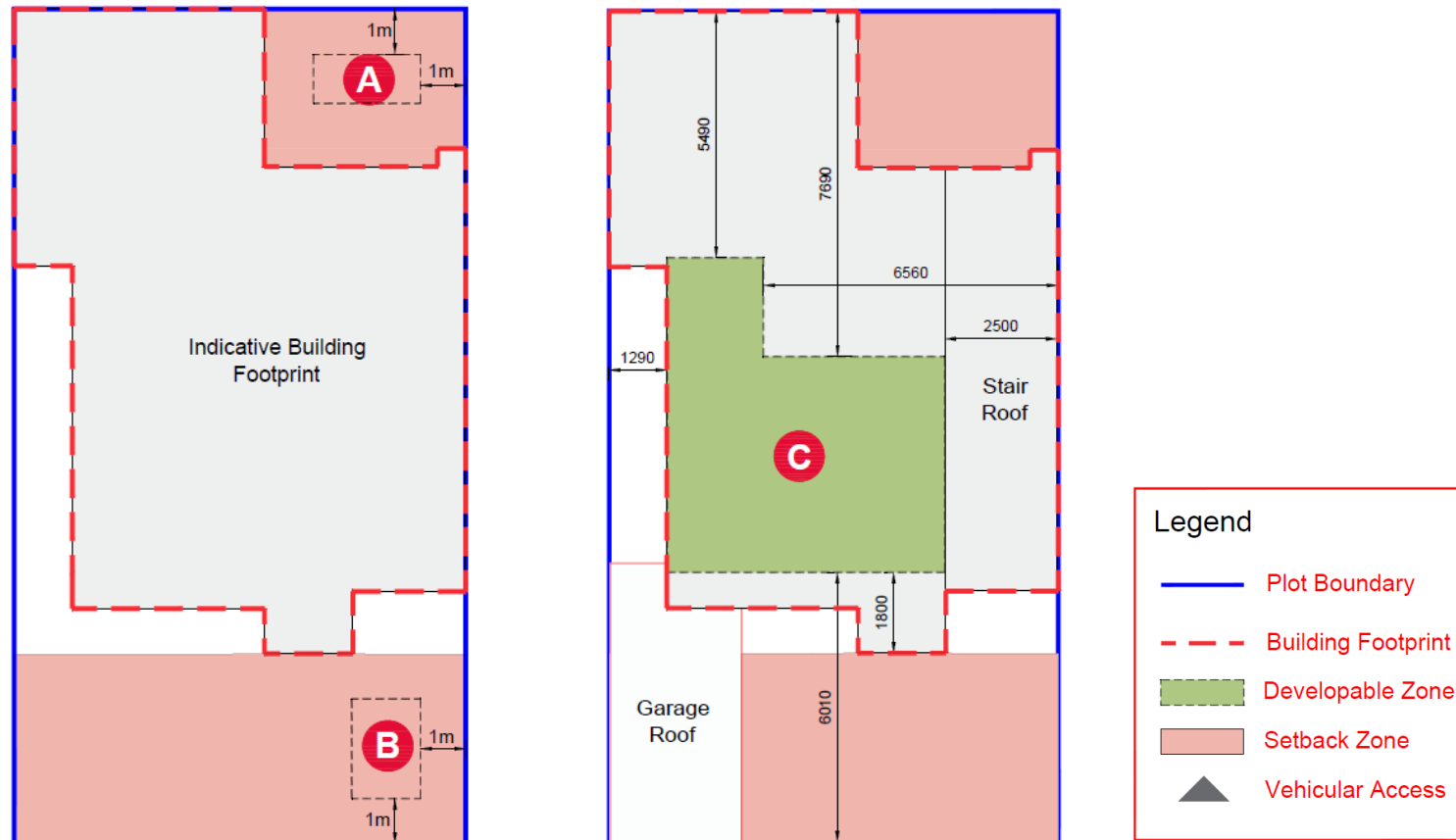


Figure 12: Side Elevation showing permitted modification

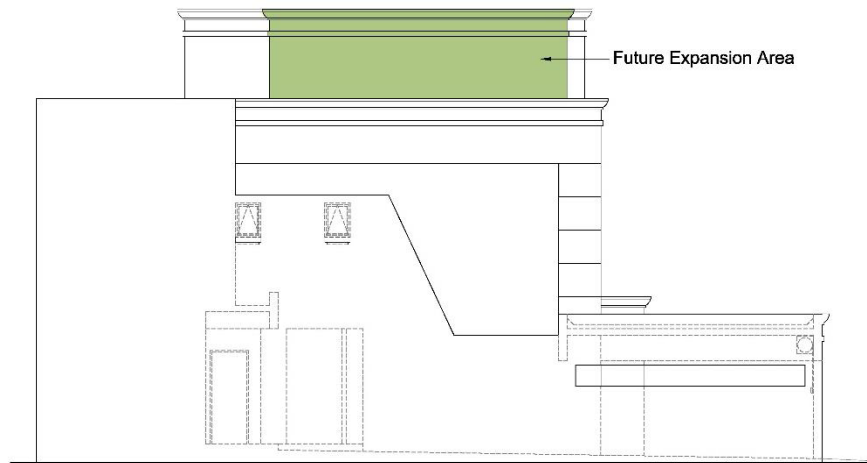
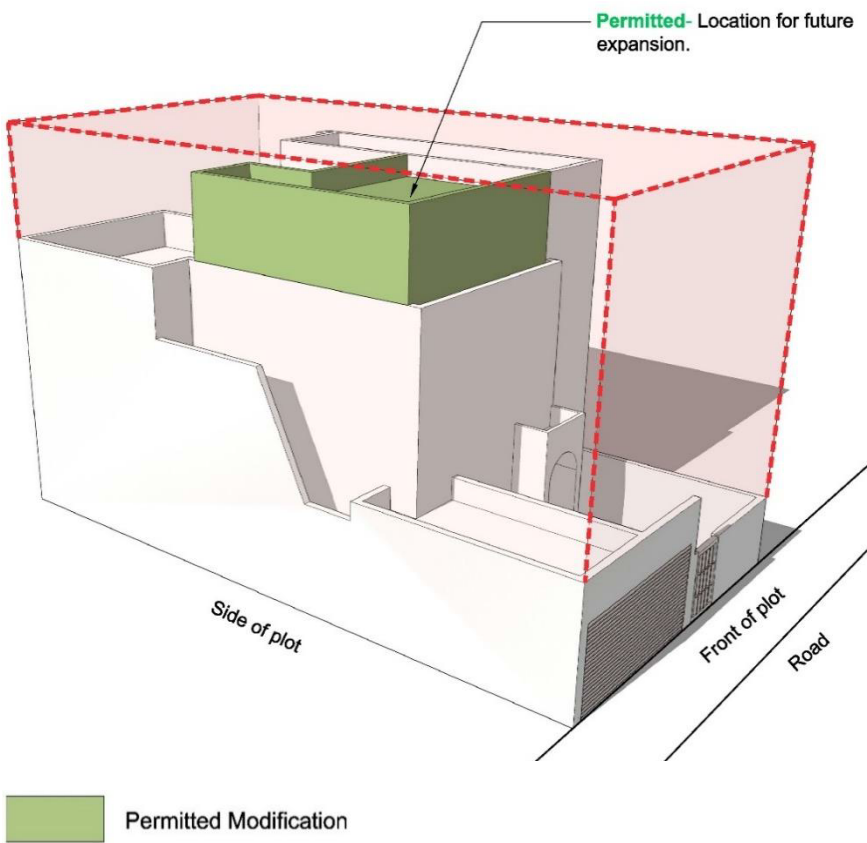


Figure 13: 3D massing of the villa showing permitted modification



**Figure 14: 3D Perspective View of the Street Facing Elevation Expansion – Classical Art Deco**



**Figure 15: 3D Perspective View of the Street Facing Elevation Expansion – French Chateau**



**Figure 16: 3D Perspective View of the Street Facing Elevation Expansion – Modern Tropical**



## 1.7 Prohibited Modifications

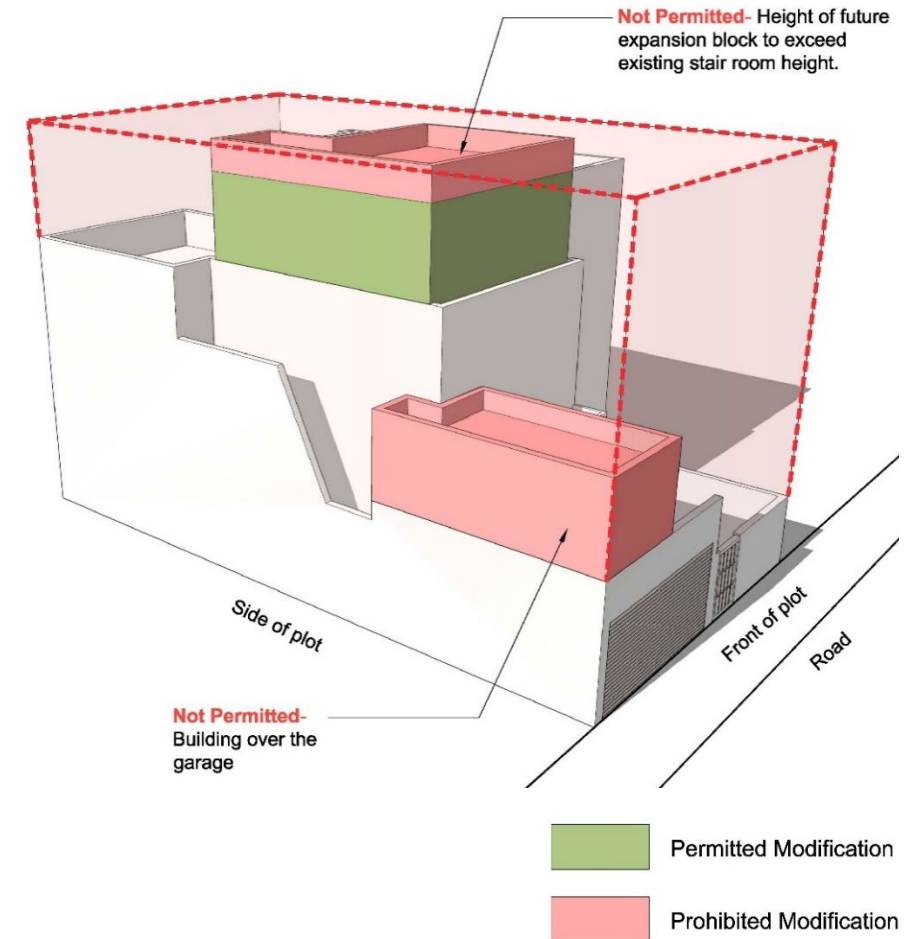
In general terms, any changes that affect the external appearance of the building are, unless specifically allowed in the Sub-Section 1.6, prohibited.

**The following permanent or temporary modifications or changes to the building are not permitted.**

- Cladding, painting or decorating the building façade in a colour or with a material different from the original or with the intention to change the design theme of the home. This includes the window frames and glass.
- Any work that exceeds in the maximum footprint, GFA or building height, or that acts to reduce the building footprint.
- Majlis or store room outside the building footprint.
- Enclosing the garage for use as a room.
- Building on top of the garage.
- Enclosing the balcony.
- Enclosing the service shaft.
- Building a shed, green-house, shelter, or cage on the roof.
- Installing additional equipment, satellite dishes or other items on the outside of the building or on the roof, unless this is screened to the approval of the TIO.
- Altering or increasing the height of the boundary wall.
- Building a shed, green-house, shelter, or a car port on the ground floor.
- Demolishing any part of the villa.
- Installing exposed piping, conduits or other services which are visible from outside the plot.
- The garage roof may not be used as a terrace or balcony
- Any modifications that affect the utility provisions to the plot, i.e. electrical, water, sewer, telecom, and storm water, will need to be designed, and the design approved before proceeding.

- The electrical panel and wiring within the home is designed with a spare breaker and has a spare connected load in reserve for any Permitted Modification as described in Sub-Section 1.6.

**Figure 17: 3D massing of the villa showing Prohibited Modifications**





## 2 Structure and MEP

### 2.1 Structure

The A1 type villas have been designed as a Reinforced Concrete (RC) framed structure supported by a raft foundation with local thickenings as required.

The structural elements include:

- Reinforced concrete cast in situ raft, columns, beams, lintels, slabs, walls.
- Precast hollow core concrete slab.
- Blockwork including hollow, solid as well as concrete filled.
- External and internal load bearing walls.
- External and internal render.
- Parapet walls.
- Floor finish with concrete screed.
- Precast / cast in-situ stair case.
- Balcony to suit the individual facade type.

Additional floor loads have been considered into the foundation design subject to the following restrictions:

The Occupant is not permitted to change the columns and beams layout.

The Occupant is not permitted to demolish any part of the villa.

Openings within the load bearing walls is not permitted.

Openings into hollow core slab is not permitted.

For heavy fixing and fixtures to the structural elements, the Occupant is to seek advice from a structural engineer/ designer.

Any changes which may affect the load bearing design is not permitted.

Any alteration on the structural elements must be confirmed by a registered structural engineer/designer and approved by Diyar Al Muharraq TIO.

### 2.2 Mechanical Services

#### 2.2.1 Cooling

Cooling within the villas is provided via DX split units. The purchase and installation of the outdoor and indoor units will be the responsibility of the Occupant with capacities intended for each space provided within the Ventilation and Air-conditioning equipment schedules. Indoor units shall be of the wall-mounted type and the outdoor units shall be installed in accordance with supplier recommendations. ODUs are to be selected based on an outdoor temperature of 46°C.

Nine 80mm diameter refrigerant pipe sleeves are provided as part of the base build to facilitate the of refrigerant pipes between the indoor and outdoor units on different levels. Depending on where the condenser units are planned to be installed, units may need to be of the horizontal or vertical discharge type – refer to the as-built drawings to identify the types needed at each location.

Provisions to supply fresh air directly to the rooms via mechanical means are unavailable and infiltration will be relied principally to provide a measure of outside air.

Refrigerants used shall be environmentally friendly HFCs with a comparatively low Global Warming Potential (GWP) and 0 Ozone Depletion Potential (ODP). The usage of CFCs and HCFCs is prohibited.

### 2.2.2 Exhaust fans

Toilet foul air and kitchen fumes will be extracted via wall mounted axial fans. Fans are supplied.

## 2.3 Electrical Services

Electrical Power supply provided to the villa is through three phase and neutral feeder distribution at 400/230V, 50Hz and the final electrical distribution to various electrical amenities through single phase distribution.

Two nos. distribution board been allowed i.e. at Ground floor and 1<sup>st</sup> floor within the villa. Each distribution board feeding the lighting, air-conditioning, socket outlets and fixed electrical amenities within the respective floor.

The electrical load design for the villa in the as-built and future scenario has been outlined in table 2.

**Table 2:** Electrical Load Summary

	Connected Load (kW)	Maximum Demand (kVA)
As-built condition	74.2	44.3
Expansion allowance (i.e. fountain patio, landscape, roof deck area, etc.)	15	9.1
Maximum electrical load		53.4

## 2.4 ELV System

Telephone, television, and intercom system within the villa has been provided with containments, recessed junction boxes, accessory plates.

## 2.5 Public Health Services

### 2.5.1 Water Supply System

The water supply system for the Villa has been provided to supply plumbing fixtures, with their demand for cold and hot water at the required flow rate and pressure with minimum noise, contamination, and risk leakage

The incoming domestic cold water supply will be provided from site infrastructure with a dedicated water meter.

The water is stored in above ground water storage tank and transferred to the overhead tank for human consumption.

The water velocity in cold and hot water piping network for mains and branches shouldn't exceed velocities of 1.8 m/s and 1.2 m/s respectively.

Hose bib taps will be provided in garden, car parking, open fry kitchen. Roof area water 'capped off' connection is provided for Permitted Modifications (Bedroom and Bathroom) at roof level.

Hot water shall be supplied through electrical water heaters.

### 2.5.2 Sanitary Drainage System

The foul water system for the Villa has been provided as single stack pipe drainage system for collecting soil and waste and shall be discharged into dedicated external foul systems.

All sanitary fixtures to be vented, connecting to the vent stack discharging to atmosphere at the roof level.

Drainage 'capped off' connection is provided for Permitted Modifications (Bedroom and Bathroom) at roof level.

Adequate cleaning access for all drainage pipes, has been provided



Self-cleaning velocities to be achieved if the velocities are approx. 0.7 m/s.

### **2.5.3 Storm Water System**

The roof top water of the various units will be collected through suitably designed down pipes. These down pipes are integrated into a piping network which discharges into an on site soakaway.

Rain water down pipes provided are of size 50mm diameter only and should not be exposed at any time.

## **2.6 Gas Services**

A gas enclosure has been provided as part of contract. Provision for gas cooking will be available in the fry kitchen while the internal kitchen will only be provided with a connection for an electric hob.

## 3 Plot Regulations Table

### 3.1 Plot Regulations Table

Land Use Zone / Product Name	Permitted land use	Maximum height (m)	Maximum Gross Floor Area (GFA) (sq. m.)	Plot Setbacks (m)				Car Parking Provision	Ancillary buildings Allowable extensions	Building Appurtenances and Screening	Boundary Treatments	Signage Regulations	Special Requirements
				Front	Side	Side	Rear						
Deerat Aloyoun Residential type A1	Single family residence	15	271	4.2	-	-	-	2 parking bays	Please refer to Sub-Section 1.6 of the DRG	All roof top systems such as water tanks, satellite dishes, air conditioning units and other mechanical or communications equipment shall be located or screened so that they are not visible from the street. Roof top systems should be setback from the parapet line and concealed behind an appropriately designed parapet wall or screen. Roof appurtenances will not exceed 4m above the top of the building and should be contained within the building envelope. Roof appurtenances will cover an area of no more than 30% of the total roof area.	Please refer to Section 1.3, boundary treatments in level of way-finding within the asset	Each villa will have one appropriately sized address sign to ensure a good established grade	The maximum building height is measured from the established grade level to the top of the highest structure attached to the building. This includes all roof top features such as skylights, pergolas, domes, wind-towers, stair rooms, elevator rooms, MEP equipment and the screens for the same.

## 4 Definitions

### 4.1 Gross Floor Area Definition (GFA)

The sum of the total area of buildings, existing and future, to be constructed on a Plot, measured from the exterior faces of the external walls or from the centre line of common walls of adjoining areas.

### 4.2 Villa GFA

The current GFA is 238.24 sq.m.

Once constructed the permitted modifications will add to this and the maximum overall villa GFA will be 271 sq. m.

### 4.3 TIO

Diyar Al Muharraq Technical Interface Office, refer to Booklet 1, provided separately.

### 4.4 Floor Area Ratio (FAR)

Floor area ratio (FAR) is the ratio of a building's GFA to the total plot area.

### 4.5 Occupant

Means Occupant, tenant, or any other person as defined in the sales agreement.

# Appendices

**A. Parapet wall Privacy Screen Location Plan.**

**B. Option 01 Aluminium Louvre.**

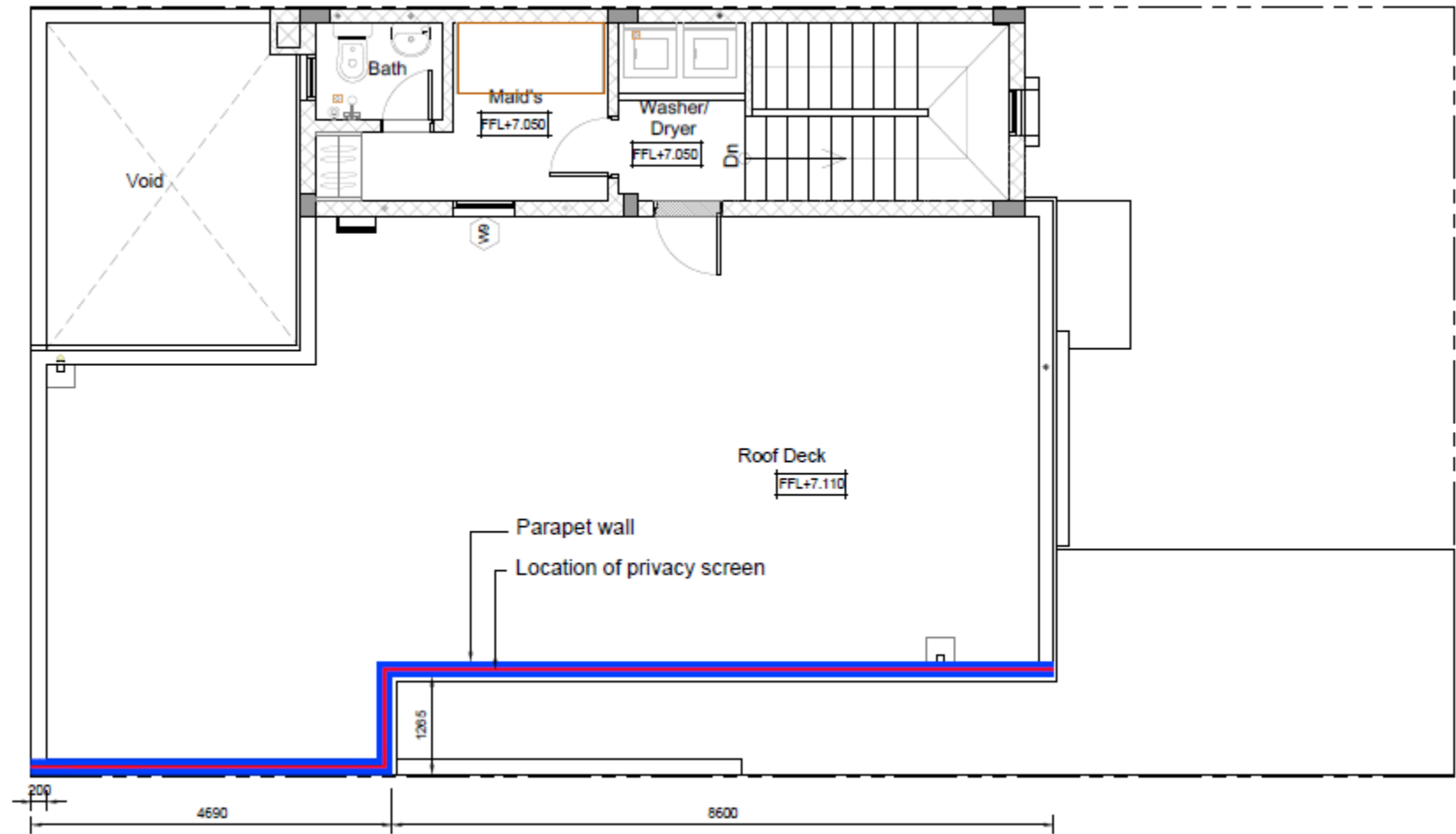
**C. Option 02 GRC Privacy Panel.**

**D. Mock Up Photo of Option 01 & 02.**

**E. Gulf Arabesque Brochure.**

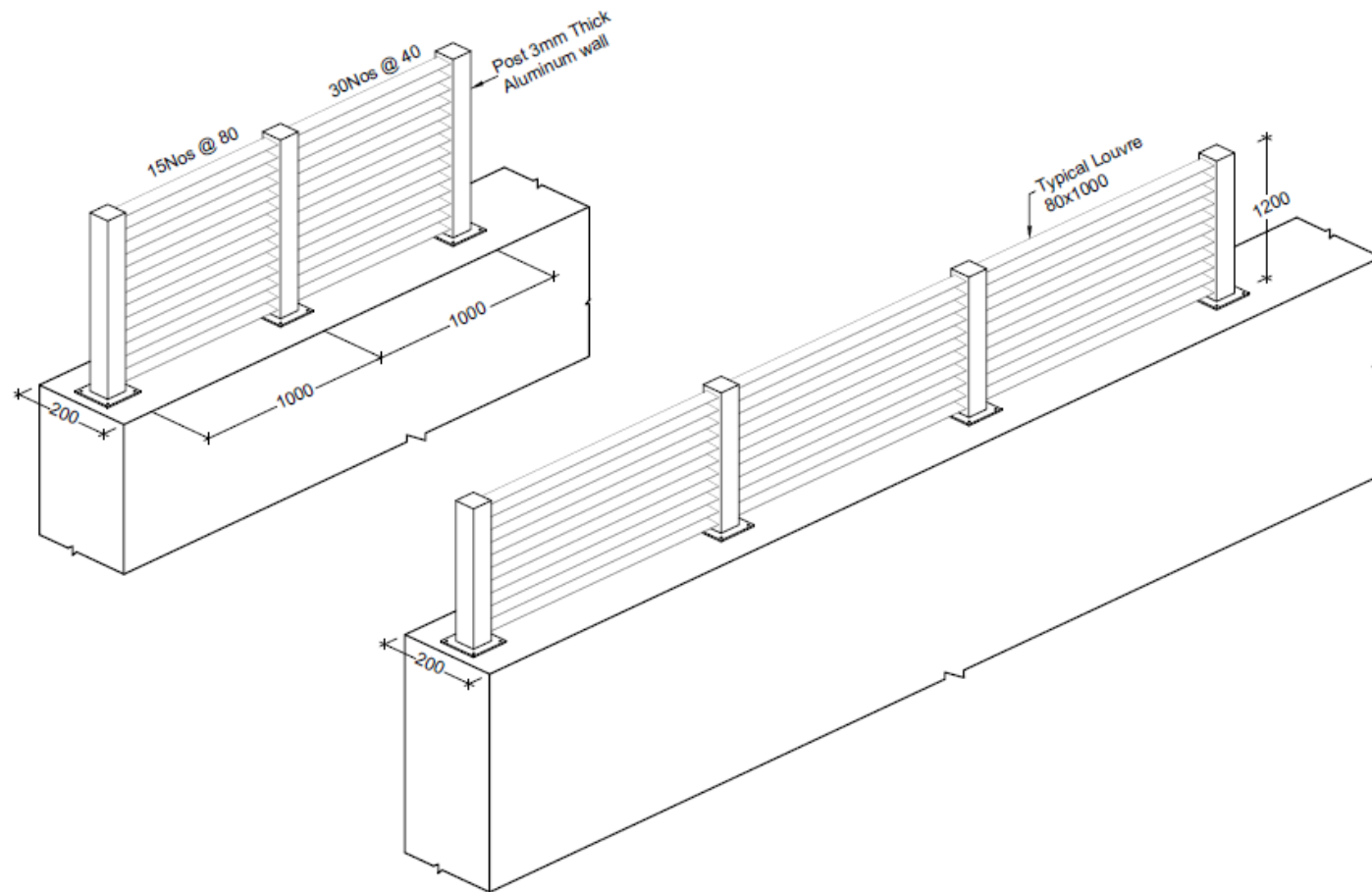
**F. Other Patterns for GRC parapet wall.**

# A. Parapet Wall Privacy Screen Location Plan



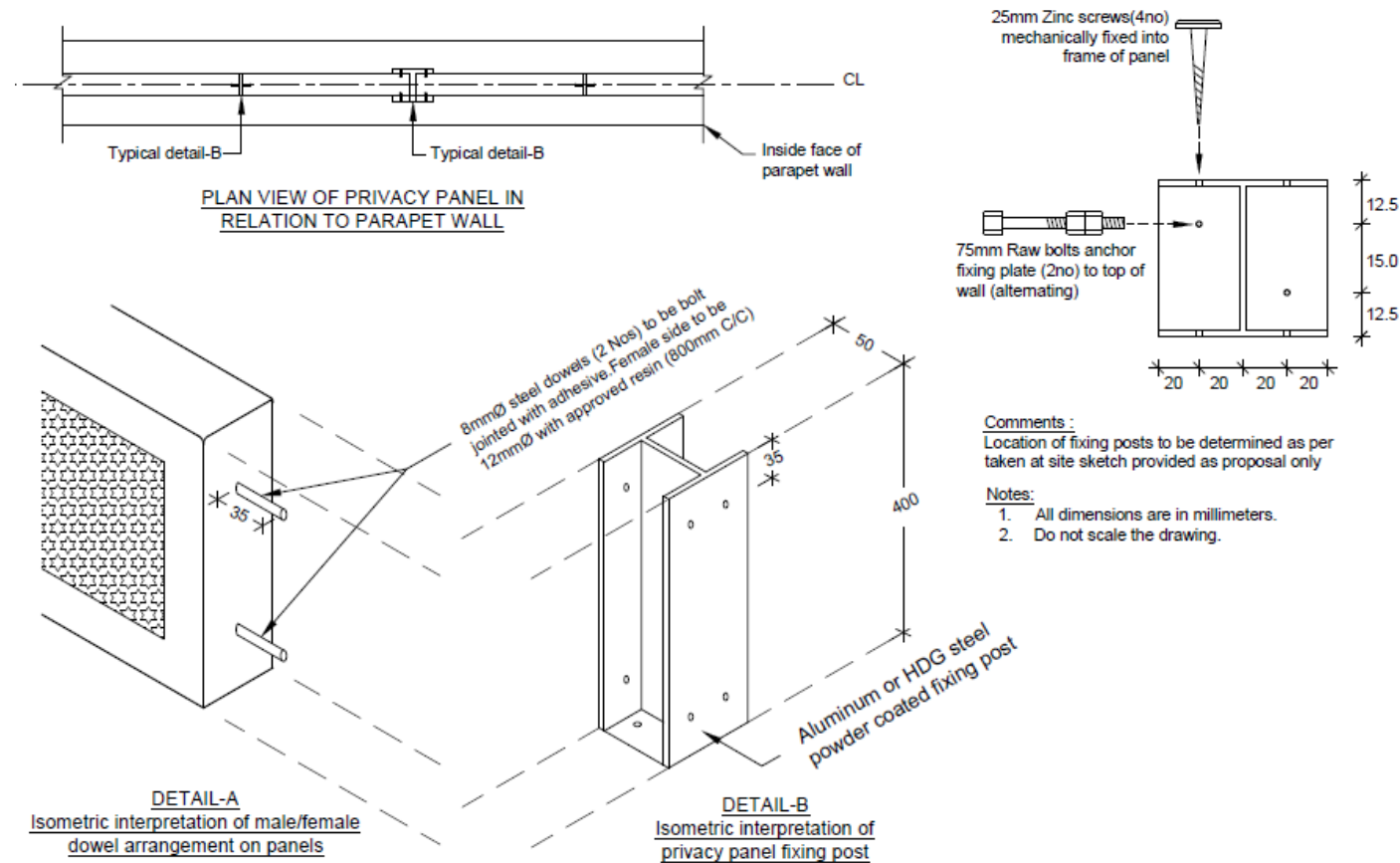
## B. Option 01 Aluminium Louvre

Powder coated aluminum louvre sections can be mechanically mounted to top of the parapet wall (See engineers concept below sketch & above A. location layout plan) Louvre sections can be manufactured to increase/decrease visual transparency however final designs are subject to Engineers calculations & recommendations Powder coated sections are available in an array of sizes and RAL colours to meet the requirements in section 1.5. This system is robust, light weight and requires little maintenance. The life expectancy of the Aluminum panel system is in accordance with the 25 year life expectancy of the building.



## C. Option 02 GRC Privacy Panel.

Decorative GRC panels sections are mechanically mounted to top of parapet wall (See engineers concept below sketch above A. location layout plan) Panels can manufactured in array of sizes, patterns & RAL colours to meet end user requirements (Subject to supplier availability, See extract from supplier Catalogue Att:01) & is visually opaque (Offers full privacy) The panels are inserted & mechanically fixed into Powder coated Aluminum sections which can manufactured in array of RAL colours to meet end user requirements (Subject to supplier availability) This system offers both robustness & aesthetical qualities to the building & requires maintenance every 5 – 10 years (Subject to supplier recommendations for the applied paint). The life expectancy of the GRC system is in accordance with the 25 year life expectancy of the building.





## D. Mock Up Photo of Option 01 & 02



## **E. Gulf Arabesque Brochure**

## **F. Other Patterns for GRC Parapet Wall**