Coordinated Assessment for the Demolition of the Ex-Jerma Palace Hotel and Redevelopment of the Site

As per ERA requirements for PA 00437/23

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1 INTRODUCTION

An Environmental Impact Assessment (EIA) is hereby being presented in relation to the proposed redevelopment of the ex-Jerma Palace, covered under development permit PA/00437/23. The application encompasses the *"Demolition of the ex-Jerma Palace Hotel, excavation of site and construction of a mixed use resort consisting of 155 Residential Units (Class 1), Tourism Accommodation (Class 3B) consisting of 258 Serviced Apartments and a 134 Room 5 Star Hotel, Retail (Class 4B) and Food & Beverage outlets (Class 4C and Class 4D), a below grade shopping mall (Class 4B), 570 Parking spaces, and 13,600sqm of open space available to the general public. The proposal consists of the construction of a two-storey basement below the landscaped public plaza and two eight storey blocks above the plaza, extensive landscaping works, repairs and changes to the existing coastal defences and the construction of a swimming pool on the existing concrete platform below the project."*

The EIA identifies the potential environmental impacts arising from the physical characteristics of the whole project and the land use requirements during the construction, operational and decommissioning phases. Detailed Terms of Reference (ToRs) for this EIA were issued by the Environment and Resources Authority (ERA) in May 2024, in accordance with the ENVIRONMENTAL IMPACT REGULATIONS (S.L. 549.46). Jerma Developments Ltd. commissioned AIS Environment Ltd. to coordinate the EIA process and compile all the necessary studies.

1.1 STRUCTURE OF THE EIA

The structure of this EIA is detailed in Table 1, along with the relevant sections of ERA's Terms of Reference (ToRs) for ease of reference.

TABLE 1: STRUCTURE OF THE EIA

CHAPTER IN COORDINATED ASSESSMENT REPORT (EIA)	DESCRIPTION	RELEVANT SECTIONS OF ERA'S TORS
1	Introduction	N/A
2	Description of the proposed development and its context. This section includes the justification of the proposal and a description of the physical characteristics of the whole project and the land use requirements during the construction and operational phases.	Section 1
3	Assessment of alternatives	Section 2
4	A description of aspects of the site and its surroundings (i.e., environmental baseline)	Section 3
5	Assessment of environmental impacts and environmental risks of the proposed development	Section 4
6	Summary of impacts tables	Section 4
7	Required measures, identification of residual impacts and monitoring programme	Section 5
8	Conclusions	N/A

2 DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1 GENERAL INTRODUCTION

The proposed project, henceforth referred to as the "Scheme", involves the demolition of the ex-Jerma Palace Hotel and redevelopment of the site. The former hotel occupied a large footprint to incorporate a wide range of luxury hotel facilities, including 345 guest rooms, restaurants and swimming pools. It was commissioned by Libyan Foreign Investment, but the operations on site were managed by Corinthia Hotels International until 2007 when the hotel closed down. Since its closure, the site has remained abandoned and the remaining structures have fallen into a serious state of disrepair.

The proposed redevelopment will be confined to within the existing site footprint. It will consist of a mixed-use complex featuring a 5-star hotel with supporting amenities, residential apartments, retail outlets, food & beverage establishments, landscaped open areas and dedicated parking facilities to cater for those visiting/residing on the site.

2.2 SCHEME SITE AND IMMEDIATE SURROUNDINGS

The proposed site is located in the South-East coastal zone of Malta, as shown in Figure 1 and Figure 2. The area surrounding the ex-Jerma site is characterised by residential properties, promenades, salt pans, natural coastal communities and the coastal fortification of St. Thomas Tower. A satellite map of the Scheme site and immediate surrounding area is presented in Figure 3.



FIGURE 1: THE GEOGRAPHICAL LOCATION WITHIN THE MALTESE ISLANDS (SOURCE: GOOGLE EARTH)



FIGURE 2: SCHEME LOCATION IN MALTA (Source: Google Earth)



FIGURE 3: PROPOSED SCHEME SITE FOOTPRINT AND IMMEDIATE SURROUNDINGS

2.2.1 Present Land Uses and Environmental Characteristics of the Site

The ex-Jerma hotel has been abandoned since its closure in 2007 and has consequently fallen into a state of disrepair. The grounds of the ex-hotel cover a total area of 17,600m^2; 8,700m^2 of which are occupied by built structures and the remaining 8,900m^2 consists of landscaping or outdoor facilities.

The eastern most area of the site, and both the northern and southern boarders comprise of the foreshore and are therefore undeveloped. The foreshore comprises of a natural low-lying rocky coastline that provides expansive views of the sea from the outskirts of Marsascala bay. The low-lying shoreline has been heavily weathered over the years. despite it being partially protected at the southern edge of the site by a small seawall which protrudes out from the coastline.

The Scheme site abuts the historic St Thomas Tower at the western periphery. Built in 1614 by the Order of the Knights of St John, the largest watchtower on the island stands as a prominent landmark in the locality and forms an important part of the Malta's history and cultural heritage. The tower has recently been converted and inaugurated as the Corsair and Piracy Museum, offering guided tours and educational programmes about Malta's swashbuckling maritime history.

The proposed development does not intersect any protected Natura 2000 sites. Two Natura 2000 sites are located in proximity of the development:

- Terrestrial
  MT000023 - *Il-Magħluq tal-Baħar ta' Marsaskala* designated as a Special area of Conservation of International Importance via Government Notice 311 of 2006.

- Marine
  MT0000108 - *Iż-Żona fil-Baħar tal-Lvant* designated as a Special Protection Area of International Importance via Government Notice 1311 of 2016.

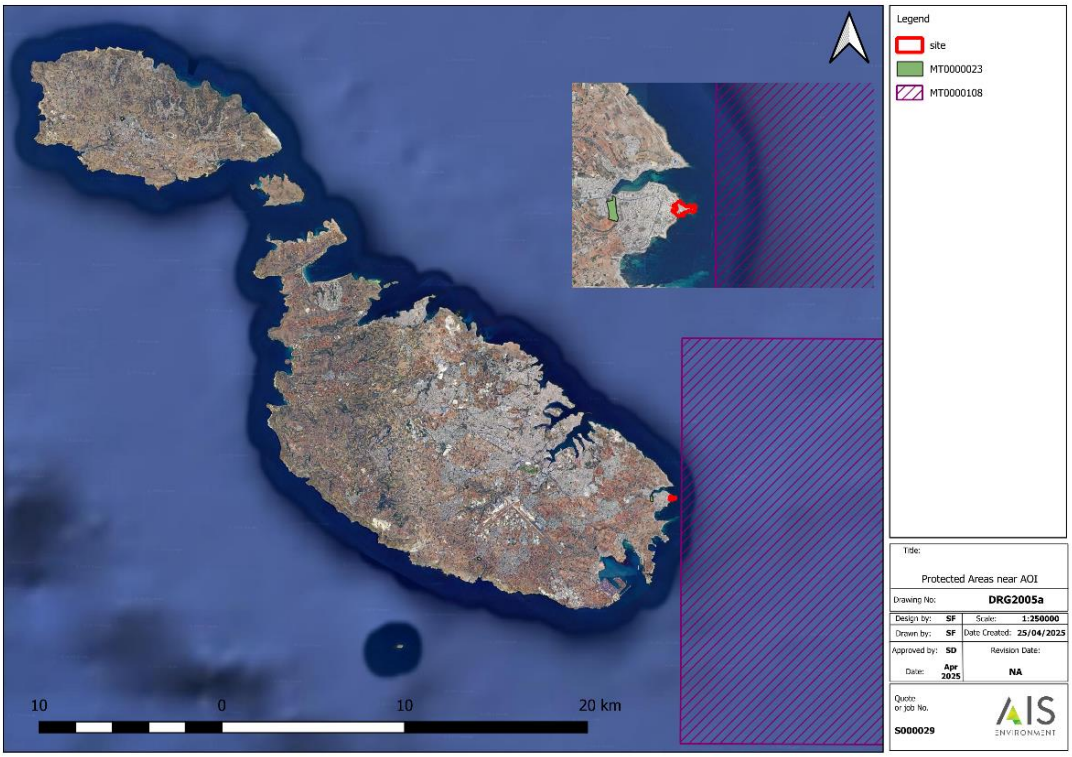


FIGURE 4: NEARBY SITES PROTECTED WITHIN THE NATURA 2000 FRAMEWORK

2.3 JUSTIFICATION FOR THE PROPOSAL

The existing dilapidated hotel is an eyesore along the otherwise rural coastline, detracting from the character of the area when viewed from both the land and sea. The abandonment of the site has led to extensive deterioration of the complex over the years, rendering the buildings unsafe and posing a potential hazard to the general public.

Given the site's prominent coastal location and sizeable footprint along the shoreline, it provides a prime opportunity for a redevelopment project. The need for and potential of such a project are clearly identified in the SOUTH MALTA LOCAL PLAN, and further elaborated on in the site-specific DEVELOPMENT BRIEF DOCUMENT, which sets out a strategic framework for the site's regeneration.

2.3.1 Demand

Tourism within the Maltese islands is one of main the economic pillars of the nation. Each year, the country experiences increased numbers of visitors, when compared to the previous (with the exception of the Covid pandemic years). In 2025, inbound tourists totalled just over 4 million. Similarly, the resident population of the Maltese Islands has also been steadily increasing over the recent years. Taking both of these factors into account, the proposed Scheme will provide accommodation and leisure facilities for both local residents and tourists in the Southern region of Malta.

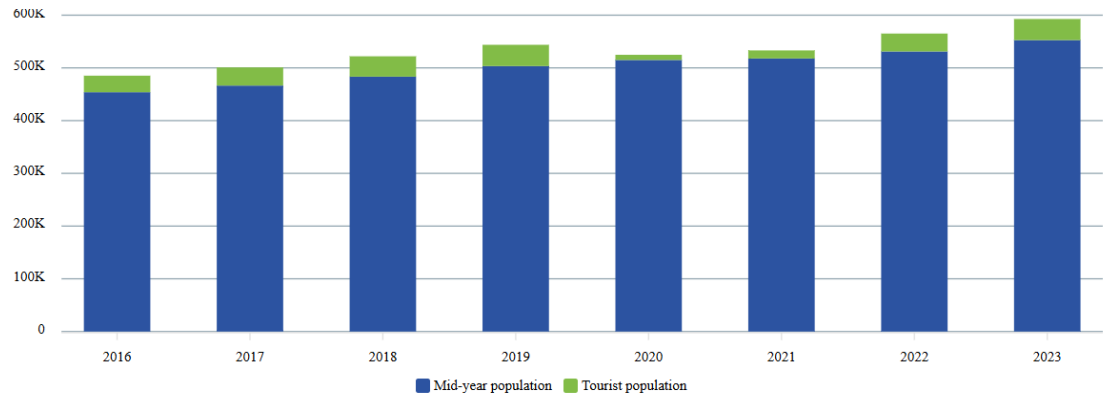


FIGURE 5: RESIDENT POPULATION AND TOURIST NUMBER TRENDS 2016 TO 2023 (SOURCE: NSO[1])

In addition to the growth of both the tourist and residential populations, the existence of a site-specific Development Brief indicates a recognised demand for the redevelopment of the site. The Brief highlights the importance of regenerating the area as a prominent feature of the urban coastline and promotes the inclusion of tourist accommodation, residential units, commercial uses, and other activities considered compatible with the urban coastal context and the surrounding residential area.

2.3.2 Policy Requisites

2.3.2.1 Ex-Jerma Palace Hotel Site, Marsascala: Development Brief

In line with the requirements of the South Malta Local Plan (SMLP), the Planning Authority prepared a Development Brief specifically for the Ex-Jerma Palace hotel site, entitled COMPREHENSIVE PLANNING AREA FOR REGENERATION OF THE URBAN COAST: EX-JERAM PALACE HOTEL SITE, MARSASCALA: DEVELOPMENT BRIEF (2020). The document was subject to public consultation and feedback, before being finalised in December 2020. The Development Brief has been written within the context of both the SMLP and the Strategic Plan for the Environment & Development (SPED, 2015). Where discrepancies arise between the SMLP and the Development Brief, the latter takes precedence.

The Development Brief outlines several factors which need to be taken into consideration when designing a new development for the site; including visual aesthetics, transportation links, infrastructural provisions, and environmental and social impacts. The Brief also provides guidelines that must be met when designing redevelopment proposals for the site:

- **Land uses and scale**
  New developments should include a mix of land uses; they should be predominately tourism focused, with residential and commercial components. Other uses may also be permitted if the PA deem them to be of benefit to the overall regeneration of the area. The Brief stipulates the maximum areas

[1] https://nso.gov.mt/statistical_insights/tourism-intensity/

permitted for each type of use (refer to Table 2); combining together to make a maximum gross floor area of 65,000 m^2. In regards to residential accommodation, the Brief stipulates that the average floor space of residential units should be 150 m^2.

TABLE 2: GROSS DEVELOPABLE FLOOR AREAS DEFINED IN THE DEVELOPMENT BRIEF

LAND-USE	GDF (M^2)
Tourism Including ancillary facilities Excluding parking and services	33,000
Residential Excluding parking and services	26,000
Commercial: Food and Drink Excluding parking and services	4,200
Commercial: Retail Excluding Parking and Services	1,800
TOTAL	**65,000**

- **Massing and built volumes**
  New developments within the site can have a maximum height of 32m above mean sea level; with the structure rising no higher than 9m above St Thomas Tower. The inclusion of a podium level, below street level at 7.8m, will be encouraged; however, it should not exceed 52% of the maximum site coverage.

- **Circulation and road access**
  Any new development is forecasted to lead to significant increases in traffic in the surrounding area; most notedly along Triq is-Salini and Triq il-Qaliet. Pressure will also increase substantially at the junctions within the local area. The Brief stipulates that an open space around St Thomas Tower must be created to support the possible re-routing of traffic from Triq is-Salini to and from the site. However, any traffic rerouting must not lead to severance of the pedestrian access to St Thomas Tower.

- **Utility infrastructure**
  Detailed studies will need to be carried out to assess the current infrastructure and new demands of any proposed projects on all the utility infrastructures. The Development Brief highlights that substantial changes to both the electrical and water networks will be required.

The Development Brief covers the entire area of the ex-Jerma Palace promontory. It divides the site into 4 distinctive zones based on their character and developmental constraints:

- Zone A: Developable area to accommodate new buildings and uses
- Zone B: Protected foreshore, to be left natural and open for public use
- Zone C: Protected scheduled building and immediate surrounding area
- Zone D: Public streets to provide unhindered access to nearby private property



FIGURE 6: SPATIAL AREA INCLUDED IN THE EX-JERMA PALACE DEVELOPMENT BRIEF DOCUMENT (2020)

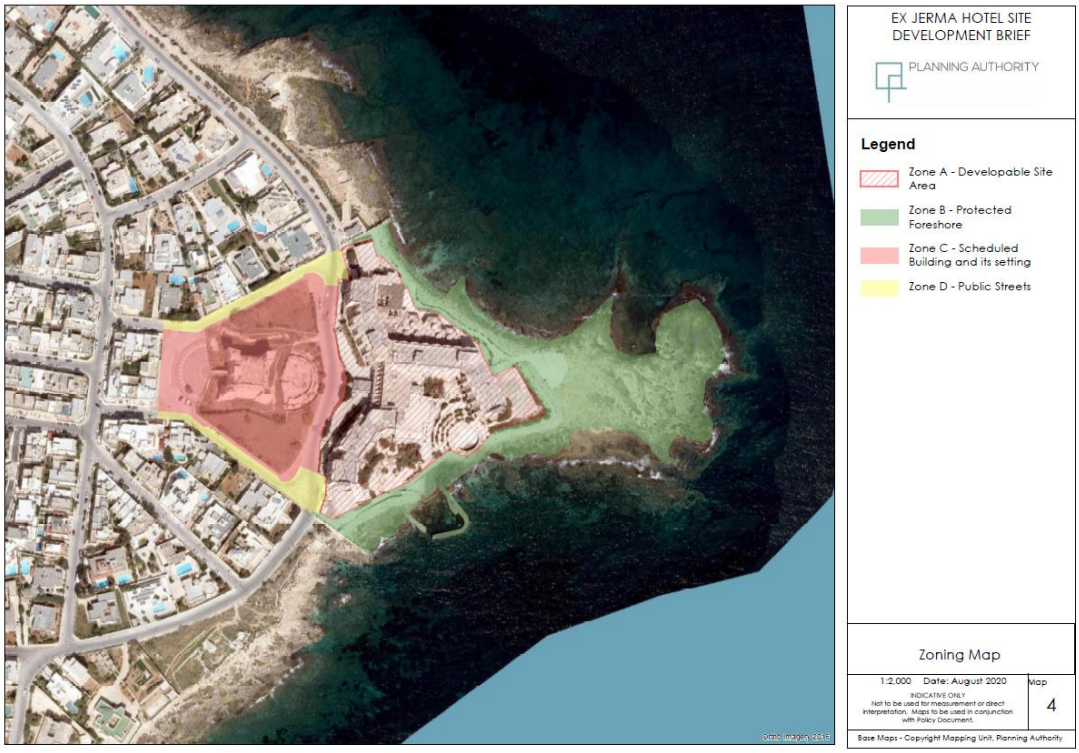


FIGURE 7: ZONING OF THE AREA INCLUDED IN THE EX-JERMA PALACE DEVELOPMENT BRIEF (2020)

The Brief provides specific guidelines and conditions which need to be adhered to when designing the various components of a new development within each of the four zones.

Zone A – Developable Site Area

Any proposed mixed-use development must include an international standard hotel with a wide range of amenities including conference rooms, sports facilities and recreational provisions. All commercial activities should be located below the podium level. The Brief also highlights the need for the residential properties to be easily accessible.

The site layout of any proposed development should be composed of several buildings on a podium level, around a central plaza with landscaped open areas. There should be a balance between built structures and open spaces. Most importantly, it is vital that a clear visual corridor between the historic St Thomas Tower and the sea is provided. There must be no impacts on the tower itself, or similarly on the natural foreshore.

The building height guidelines provided in the Brief need to be strictly adhered to and all vehicle parking and services should be located within the main structures. The overall building design and materials also need to be carefully selected to complement the surrounding features. Specifically, the inclusion of green roofs and walls is highly encouraged. In addition, in-depth analysis of outdoor ambient and safety lighting needs to be undertaken. All of these measures aim to minimise the adverse impacts of the redevelopment of the site.

New developments need to be environmentally sustainable and include indoor temperature control, waste water recycling, use of passive systems through environmental design and renewable energy infrastructure. The existing infrastructures should also be upgraded to mitigate the use intensification impacts. The inclusion of Green Infrastructures should be seriously investigated.

Zone B – Protected Foreshore
Developments must be contained within the spatial area of the ex-Jerma Palace site, so that the foreshore remains in its natural state with unobstructed public access. A network of walkways should provide the access routes to the foreshore.

Zone C – Scheduled Building and Surroundings
The Brief takes the opportunity to again highlight the importance of creating visual corridors of St Thomas Tower from several viewpoints. The development must not pose a threat to the tower e.g. the design needs to avoid wind tunneling around the tower. A continuous public pedestrian area, extending from the tower glacis to the foreshore, must also be created. In order to do this, the road which currently lies between the ex-hotel site and tower will need to be diverted.

The Superintendent for Cultural Heritage shall issue specific TORs for the tower's restoration and protection; these will need to be incorporated into development proposals.

Zone D - Public Streets
No specific guidelines

_____

NB: The Development Brief overpowers the building guidelines provided in the HEIGHT LIMITATION ADJUSTMENT POLICY FOR HOTELS (2014) and PLANNING POLICY GUIDE ON THE USE AND APPLICABILITY USE AND APPLICABILITY OF THE FLOOR AREA RATIO (FAR, 2014). This being said, in line with the new regulations TOURISM ACCOMMODATION REGULATIONS of 2025 (currently in draft format), design proposals for new hotels must conform with the height restrictions given in the site-specific Development Brief.

2.3.2.2 South Malta Local Plan

The Scheme site falls under the governance of the SOUTH MALTA LOCAL PLAN (SMLP, 2006). Two of the main areas of strategic development for the Southern Malta region are housing and tourism, both of which are highly relevant to the proposed project. Specific targets of the aforementioned areas include:

- **Housing**
  - *Protect and improve the amenity of residential areas*
  - *Allow the development of appropriate uses within residential areas*

- **Tourism**
  - *Consolidate Marsascala as the main tourist area*

- *Encourage tourism accommodation through rehabilitation of vacant buildings within the UCAs and in rural areas*
- *Safeguard existing and encourage development of new recreational areas and facilities*

As explained in Section 2.3.2.1, aspects of the SMLP are overpowered by the EX-JERMA PALACE DEVELOPMENT BRIEF. Therefore, Table 3 only includes policies/aspects which are still relevant in light of this and the context of the proposed Scheme.

TABLE 3: SITE RELEVANT ASPECTS OF THE SMLP, 2006

POLICY NAME	POLICY CODE	BRIEF DESCRIPTION AND RELEVANCE
Tourism Development Subject to a Development Brief	SMMS 15	Any development of the ex-Jerma Palace should incorporate tourist accommodation; and may also include residential and commercial uses. This being said, all development proposals are subject to the criteria outlined in the specific Development Brief document.
Heritage Sites (St Thomas Tower)	SMMS 13	St Thomas Tower is surrounded by the Scheme site on three sides. This policy focuses on the potential to develop St Thomas Tower (and Zonqor Battery) as a cultural attraction, including the potential for ancillary visitor facilities.
Public Urban Open Spaces, Squares and Green Areas	SMSE 04	The Scheme site coastal and eastern areas are classified as Green Areas. The open character of these areas must be retained and only low-key environmental improvements shall be permitted e.g. soft landscaping. The Policy also stipulates that new developments should include open urban spaces and upgrade any existing piazzas.
Promote and Safeguard Public Access Along the Coast	SMCO 05	The Scheme site incorporates a relatively long stretch of coast. This policy aims to protect and where necessary rehabilitate the natural coastline. Any development proposal which prohibits or restricts public access to the coast shall be rejected.

POLICY NAME	POLICY CODE	BRIEF DESCRIPTION AND RELEVANCE
Protection of Areas of Ecological Importance (AEIs) and Sites of Scientific Importance (SSIs)	SMCO 03	The coastal fringe within the Scheme site is classified as an area which is recommended for scheduling. In general, development in these areas shall not be viewed favourably.
Residential and Residential Priority Areas	SMHO 02 SMHO 04	The area around St Thomas Tower, within the Scheme site, and the areas to the north and south of the site are classified as Residential and Residential Priority areas respectively. Any developments within the residential areas need to either be residential in nature, or compatible with the overall character of residential neighbourhoods.

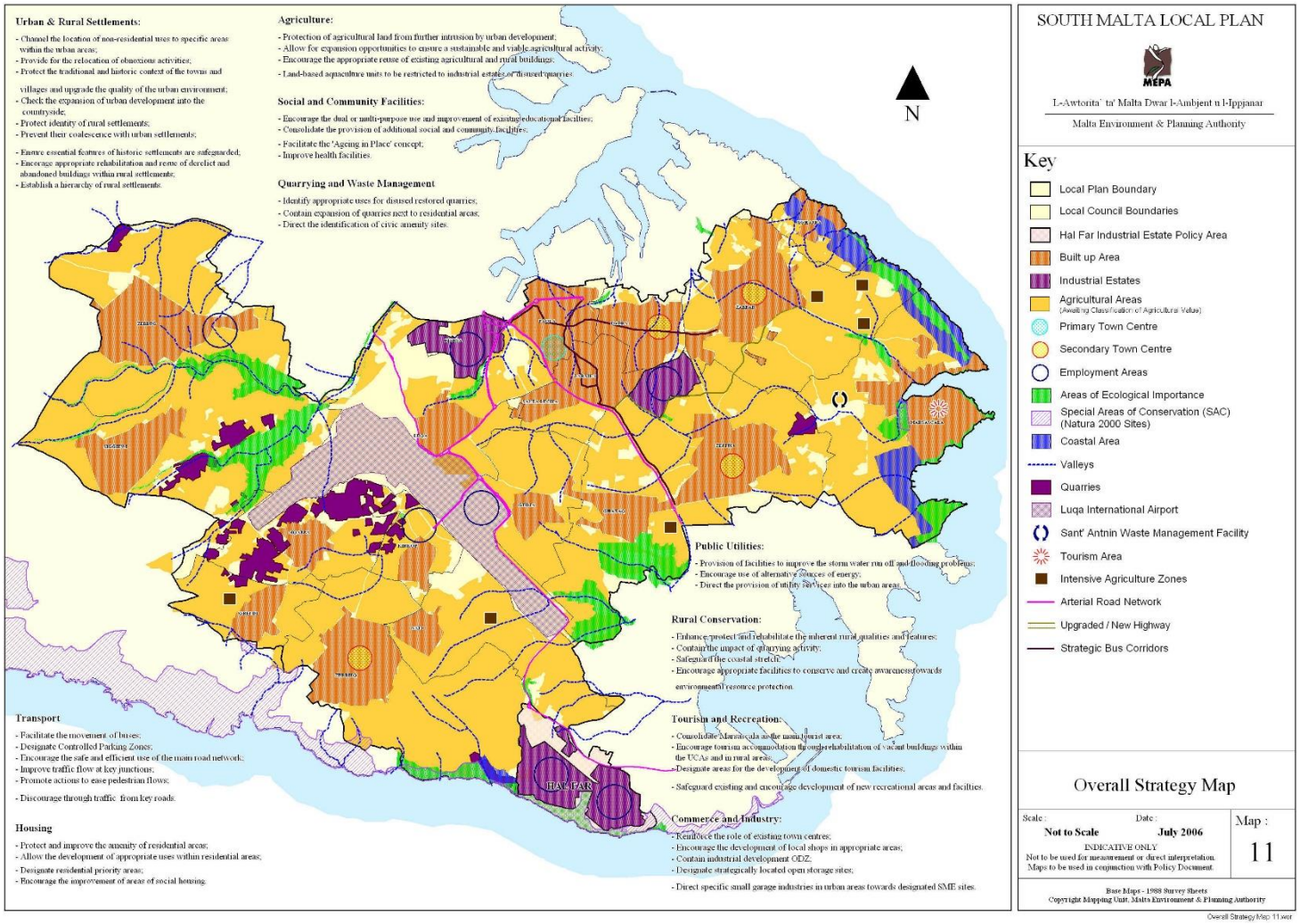


FIGURE 8: SOUTH MALTA LOCAL PLAN OVERALL STRATEGY (SOURCE: SMLP, 2006)

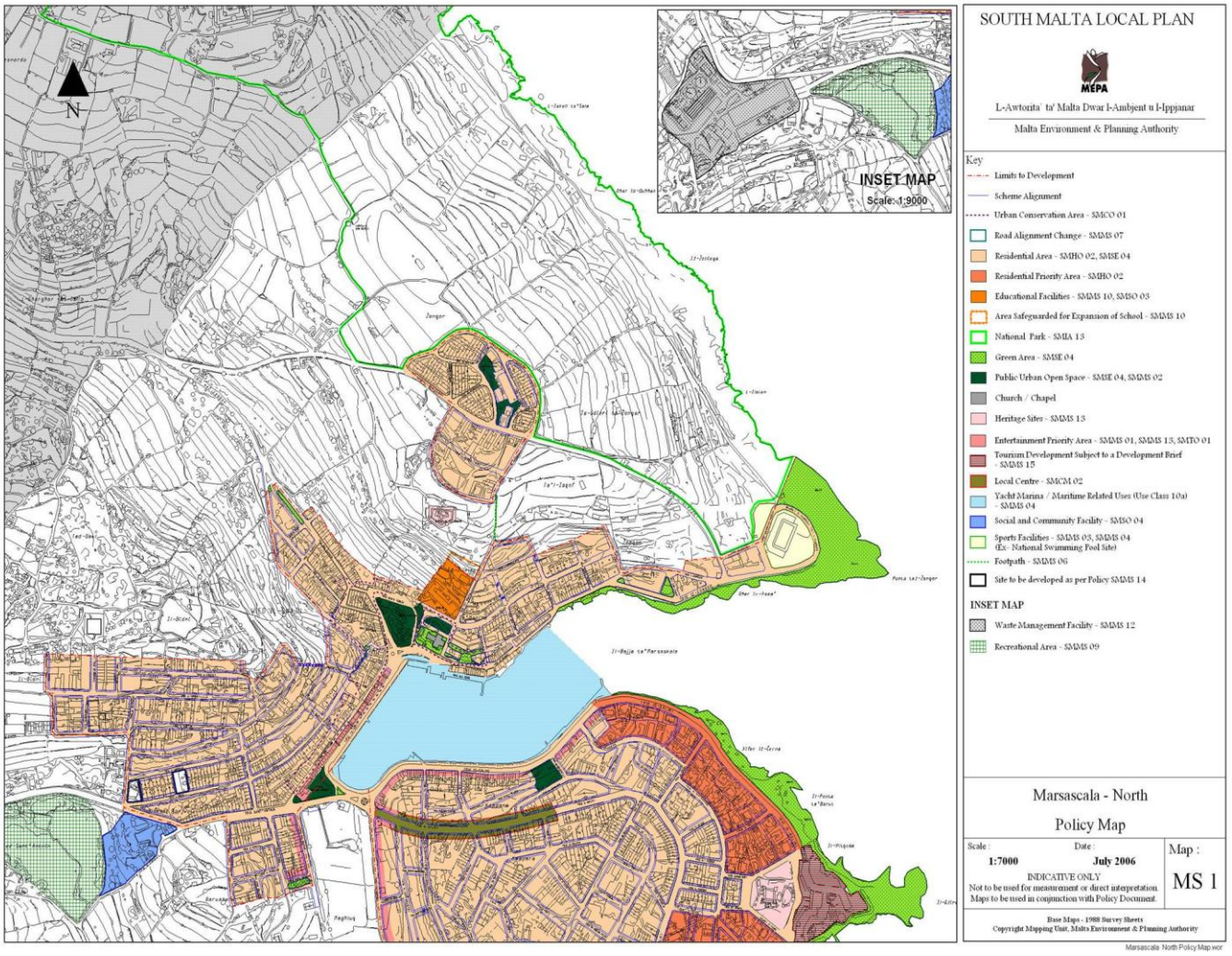


FIGURE 9: MARSASCALA NORTH POLICY (SOURCE: SMLP, 2006)

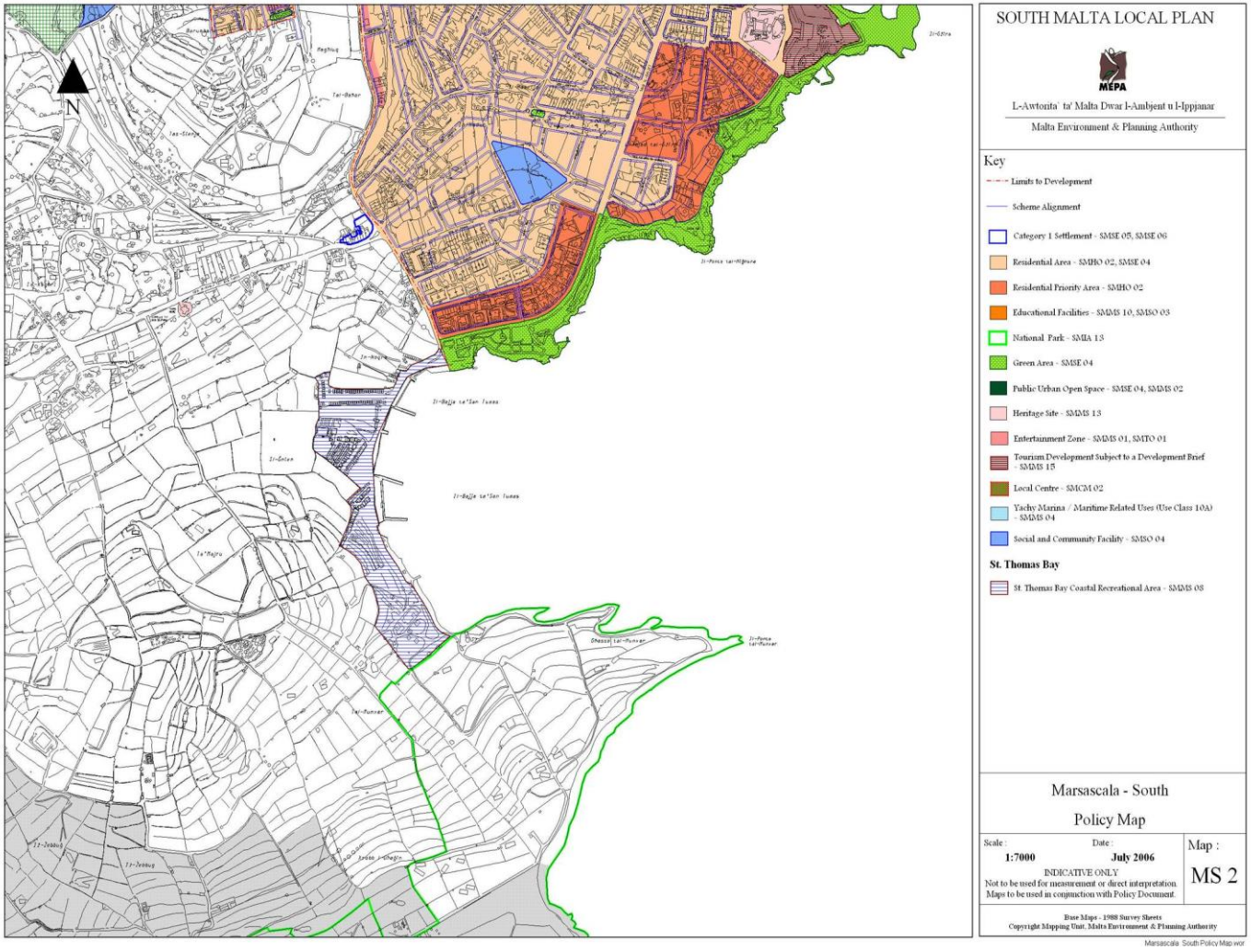


FIGURE 10: MARSASCALA SOUTH POLICY (SOURCE: SMLP, 2006)

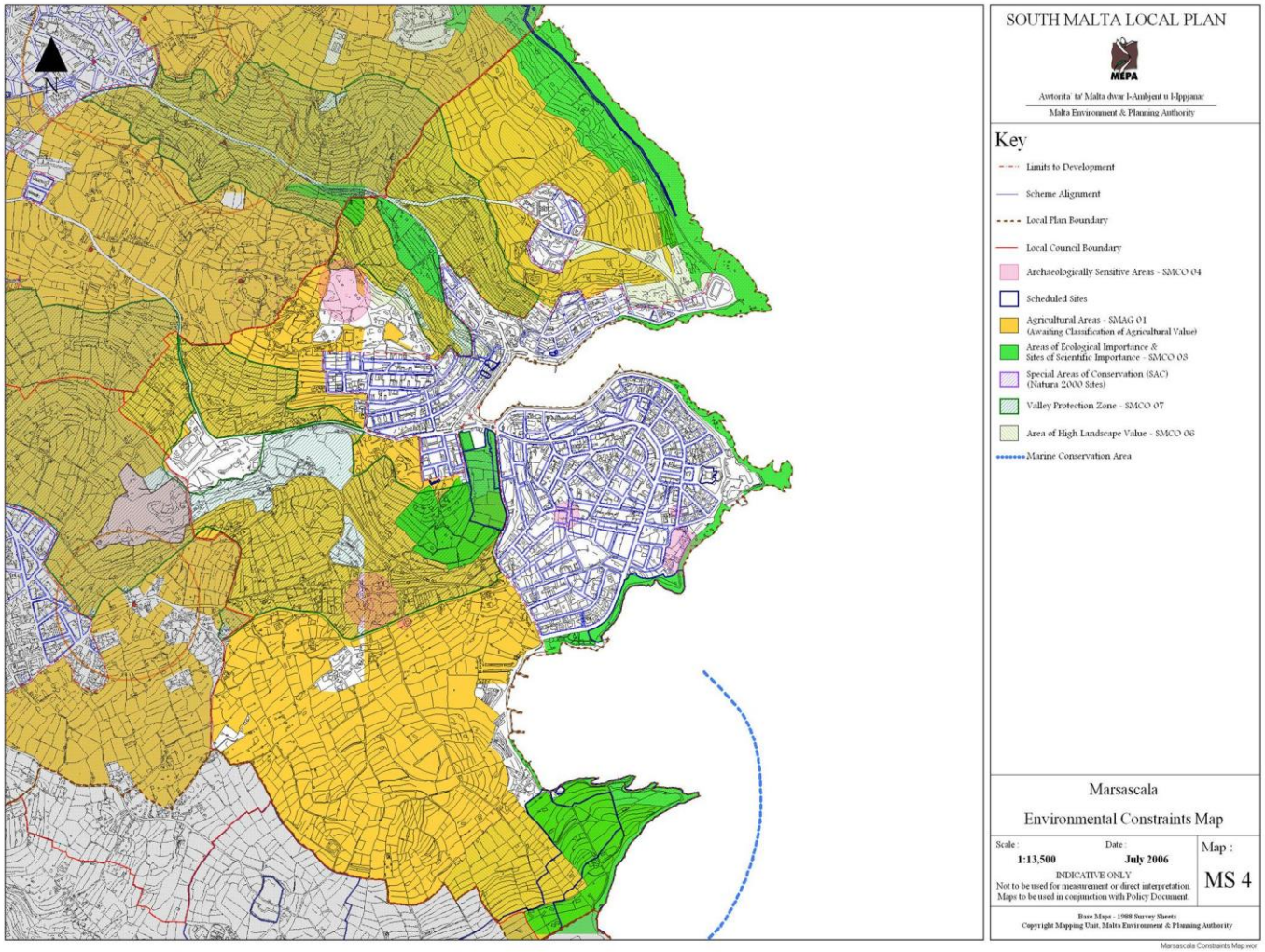


FIGURE 11: MARSASCALA ENVIRONMENTAL CONSTRAINTS (SOURCE: SMLP, 2006)

2.3.2.3 Strategic Plan for the Environment and Development (SPED, 2015)

The SPED provides an overall vision and guidelines for all development within the Maltese Islands. It is composed of several thematic areas, each of which is divided into more detailed objectives. As highlighted in the COMPREHENSIVE PLANNING AREA FOR REGENERATION OF THE URBAN COAST: EX-JERMA PALACE HOTEL SITE, MARSASCALA: DEVELOPMENT BRIEF (2020), the most relevant SPED objectives related to the proposed Scheme are:

- **Socio-Economic Development Objective 1**
  To manage the available potential space and environmental resources on land and sea sustainably to ensure that the socio-economic development needs are met whilst protecting the environment and limiting land take up within the Rural Area by …. Identifying degraded areas within the Urban Area for integrated regeneration particularly declining coastal resorts such as Marsascala, Qwara and Bugibba.

- **Environmental Thematic Objective 8**
  To safeguard and enhance biodiversity, cultural heritage, geology and geomorphology by …. Controlling activities which might have an impact on areas, buildings, structures, sites, spaces and species with a general presumption against the demolition of scheduled and vernacular buildings.

- **Coastal Objective 1**
  To prioritise uses that necessitate a location on the coastal zone and marine area in a manner which minimises user conflicts, does not accelerate coastal erosion, protects biodiversity, cultural heritage, landscapes and visual access to them, public access and use and increases resilience to climate change impacts by …. Designating a predominately terrestrial urban coast to promote compatible urban coastal uses, safeguard legitimise coastal uses and visual access from promenades, and enhance public use of bathing areas.

- **Urban Objective 3**
  To identify, protect and enhance the character and amenity of distinct urban areas by …. Identifying sites which are derelict, in a state of abandonment, of poor quality or include incompatible uses and seek their upgrading through high quality development …. Controlling the proximity of non-residential uses in urban areas …. Protecting and greening open spaces which contribute towards the character and amenity of urban areas, reduction of soil sealing and support biodiversity with a view of developing ecological corridors.

2.3.3 Other Planning Developments in the Area

Based on research conducted via the PA Geoportal, there are no recent significant development permits in place in the nearby surroundings of the Scheme site.

2.4 PHYSICAL CHARACTERISTICS AND LAND USE REQUIREMENTS

2.4.1 General Characteristics

The first stage of the proposed redevelopment involves the demolition of the dilapidated ex-Jerma Palace hotel buildings. Once these structures have been removed and the site cleared, the excavation works and construction of the new development would be able to commence. With a total developable footprint of 17,570 m^2, 1,325 m^2 of the site shall be soft landscaped, 7,785 m^2 shall be hard landscaped, and the remaining 8,460 m^2 shall be occupied by the proposed new structures and facilities.

The overall layout of the proposed development has been designed very carefully to prioritise the conservation objectives of St Thomas tower in the vicinity. To safeguard the views of the prestigious tower from the foreshore and sea, the proposed development has been purposely divided into two main blocks which are separated by a significant open plaza in between.

The two blocks are referred to as the North and South blocks. Each block shall be 7-storeys high, with two basement levels proposed underneath. The majority of the facilities within the two blocks are identical; however, subtle variations are evident due to the slightly different shapes and sizes of each block. Each building caters for a variety of mixed-use facilities, including tourist and residential accommodation, restaurants and retail outlets.

Basement Levels -2 and -1

The basement levels comprise of a single extensive floor. This differs from the distinctive separate overlying tower blocks. Car parking spaces dominate the subterranean levels, with 330 spaces and 191 garages spread over the two levels (refer to Table 4 for a full breakdown). The garages, which shall be reserved for residents, are located in the eastern and southern area of both floors. Whereas, the parking spaces for visitors of the restaurants, hotel and retail outlets are located in the western areas on both Level -2 and -1.

Two separate hotel spa areas are located at the lowest level. The basement levels also accommodate various ancillary facilities that would be necessary to operate such a complex; most notedly hotel back of house areas, plant rooms, store rooms, refuse rooms and vehicle unloading/loading areas.

TABLE 4: DETAILED BREAKDOWN OF THE PROPOSED PARKING PROVISION

LEVEL	GARAGES		SPACES
	NO. OF UNITS	NO. OF SPACES	
Level -1	Single: 62	62	165
	Double: 27	54	

LEVEL	GARAGES		SPACES
	NO. OF UNITS	NO. OF SPACES	
	Triple: 4	12	
	Total: 93	128	
Level -2	Single: 67	67	165
	Double: 27	54	
	Triple: 4	12	
	Total: 98	133	
TOTAL	**191**	**262**	**330**

Ground Level (inc. landscaped areas and coastal defences)
From the ground level up, the proposed development will appear as two distinctive blocks, the North and South Blocks. The ground level is designed to accommodate recreational land uses such as the hotel restaurants and two outdoor swimming pools; as well as numerous third-party restaurants and retail outlets. The pool facilities are expected to be utilised by the hotel guests and persons residing in the residential units. The main hotel lobbies and serviced apartment lobbies are also located on this floor.

The area between and around the two blocks comprises of soft and hard landscaping to create an appealing outdoor relaxation plaza and walkway. The plaza and pathways shall be built of a mixture of wood, concrete and natural stone to help them blend in the surrounding rural setting. A viewing platform will extend out from the eastern side between the two blocks to provide panoramic views of the foreshore and sea. Beyond these walkways/landscaped areas the foreshore shall be left undeveloped in its natural state.

Boulder revetments will be constructed along the boundary of the buildings at coastal level to provide protection during adverse sea conditions; in turn, providing protection to the proposed built structures and landscaped areas. The boulders may be piled to anchor them in place.

Level 1
Three types of accommodation are to be included within the development: luxury hotel rooms, serviced apartments and private residential apartments. All three categories of units shall be equipped with balconies to provide panoramic views of the area and to maximise the outdoor space offered. The serviced apartments are typically smaller in floor area when compared to those being sold for residential

purposes. All serviced apartments comprise of a single bedroom with a small open plan area, bathroom and study. In contrast, the larger residential apartments are predominately 2 or 3 bedrooms, with ensuites, bathrooms, walk-in wardrobes and more spacious open plan living areas.

Two swimming pools are also included at this level; one in each block. Both pools are indoor-outdoor pools, allowing guests and residents to enjoy them all year round, regardless of the weather conditions. A sauna and therapy room are also located next to each pool.

Levels 2 to 7

Similarly to the underlying level, Levels 2 to 7 entail a combination of hotel rooms, serviced apartments and residential apartments; all with their own private balcony. Some of the larger apartments have larger sized balconies, and are also equipped with small outdoor private swimming pools. In addition, there will be two 4-bedroom residential apartments, configured into a duplex layout at Levels 6 and 7 to accommodate the additional bedroom. The top floor also comprises of hotel common areas.

Roof

The roof level does not entail any guest or resident facilities; and therefore, the roof will not be accessible to the general public. The installation of solar panels is not considered appropriate for the site (refer to Section 2.4.4.2 for further details).

TABLE 5: SUMMARY OF THE MAIN FACILITIES PER FLOOR FOR BOTH THE NORTH AND SOUTH BLOCK

LEVEL	FACILITY	NORTH BLOCK (QUANTITY)	SOUTH BLOCK (QUANTITY)
-2	Plant room	3	
	Store room	15	
	Hotel spa	2	
	Hotel back of house	2	
	Car parking space	165	
	Residential garage	98	
-1	Plant room	2	
	Store room	9	
	Refuse room	7	
	Car parking space	165	

LEVEL	FACILITY	NORTH BLOCK (QUANTITY)	SOUTH BLOCK (QUANTITY)
	Residential garage	93	
0	Hotel restaurant	1	1
	Restaurant outlet	3	3
	Cafeteria outlet	1	0
	Retail outlet	6	5
	Outdoor swimming pool	1	1
1	Hotel room	5	5
	Residential apartment	8	8
	Serviced apartment	21	21
	Indoor/outdoor pool	1	1
	Sauna	1	1
	Therapy room	1	1
2	Hotel room	9	9
	Residential apartment	11	11
	Serviced apartment	25	25
3	Hotel room	9	9
	Residential apartment	11	11
	Serviced apartment	25	25
4	Hotel room	9	9
	Residential apartment	11	11
	Serviced apartment	25	25
5	Hotel room	8	8
	Residential apartment	11	11

LEVEL	FACILITY	NORTH BLOCK (QUANTITY)	SOUTH BLOCK (QUANTITY)
	Serviced apartment	25	25
6	Hotel room	5	5
	Residential apartment	11	11
	Serviced apartment	25	25
7	Hotel room	0	0
	Residential apartment	10	10
	Serviced apartment	25	25

TABLE 6: PROPOSED GROSS FLOOR AREA PER COMPLEX COMPONENT, COMPARED TO PERMISSIBLE AREAS OUTLINED IN THE DEVELOPMENT BRIEF

COMPLEX COMPONENT	ALLOWABLE GROSS FLOOR AREA (BASED ON DEVELOPMENT BRIEF GUIDELINES) (M^2)	PROPOSED GFA (M^2)
Tourism: Hotel	33 000	7 045
Tourism: Serviced apartments		25 822
Residential	26 000	25 822
Retail	1 800	1 287
Food and beverage	4 200	2 488
Total	**65 000**	**64 684**

Façade Design

The façade design of the Scheme has been inspired by the surrounding landscape and cultural heritage features. Consequently, the two blocks have both been split into 4 “stages”, each characterised by a unique façade design to complement the immediate surroundings. Stage 1 of the façade, which lies closest to St Thomas Tower, has minimal openings and is formed by a cladding of yellow limestone, to mimic the large limestone fortifications of the tower. In contrast, Stage 4, which is closest to the sea, entails large openings and open glass balconies. Stages 2 and 3 provide a gradual transition between the most landward and seaward sections. Figure 12 to Figure 16 indicate typical renders of each stage.

Additionally, the facades of the two blocks shall be completely constructed out of materials having natural colours. Predominately, light and dark grey travertines, limestone and wood panels.



FIGURE 12: FACADE STAGES OF THE PROPOSED SCHEME (SOURCE: EM ARCHITECTS)



FIGURE 13: STAGE 1 FACADE OF THE PROPOSED SCHEME, CLOSET TO ST THOMAS TOWER (SOURCE: EM ARCHITECTS)



FIGURE 14: STAGE 2 FACADE OF THE PROPOSED SCHEME (SOURCE: EM ARCHITECTS)



FIGURE 15: STAGE 3 FACADE OF THE PROPOSED SCHEME (SOURCE: EM ARCHITECTS)



FIGURE 16: STAGE 4 FACADE OF THE PROPOSED SCHEME, CLOSEST TO THE SEA (SOURCE: EM ARCHITECTS)

2.4.1 Site Plans

Overall proposed blocks plans are presented in Figure 23 to Figure 33.

Additional more detailed plans of each block on an individual floor level are provided in Appendix 1.

2.4.2 Construction Phase

A detailed Construction Management Plan (CMP) has not yet been developed. Consequently, the information presented in this section is based on preliminary estimates provided by the project architects and proponents and may be subject to revision as the project progresses.

Personnel, Timeframes and Phasing
A maximum of 80 employees are envisaged to be involved in the construction phase of the Scheme. The works on site are expected to begin shortly after the publication of the necessary clearances and executable permits. The construction phase is expected to last approximately 4 years and shall be divided into the following stages:

TABLE 7: INDICATIVE STAGES OF CONSTRUCTION WORKS

PHASE	INDICATIVE DURATION
Site mobilisation and preparation	1 month
Demolition of ex-Jerma Palace	6 months
Excavation	5 months

PHASE	INDICATIVE DURATION
Basement foundations	4 months
Basement construction	6 months
Above ground construction	14 months
Finishing and landscaping	12 months

Delays in the indicative timeframes may occur in the event of adverse weather conditions, due to the site's exposure to stormy sea conditions.

Working Hours

All demolition, excavation, and construction activities are anticipated to occur between 07:00 and 20:00, Monday to Saturday, in accordance with the CONSTRUCTION MANAGEMENT SITE REGULATIONS (2022). Should the project permits specify any variations to these hours, the Developer will comply with the conditions outlined therein.

If the Contractor is required to undertake work during nighttime hours or on Sundays, the Developer is committed to obtain all the necessary permits and authorisations prior to the commencement of such activities.

Spatial Requirements

Temporary areas required during the construction phase will be confined within the parcel of land defined by the Scheme site boundary. Coastal areas, particularly the foreshore, will not be utilised, as they are protected and subject to frequent wave action and sea inundation.

Machinery

The construction is expected to require a variety of machinery, as summarised in Table 8.

TABLE 8: INDICATION OF TYPE AND QUANTITY OF MACHINERY NEEDED FOR CONSTRUCTION

MACHINERY	QUANTITY
Bulldozer	5
Front loader	2
Heavy-duty truck	Ca. 5 per day
Mobile/truck-mounted crane	To vary depending on activities taking place and selected construction methodologies
Tower cranes	12

MACHINERY	QUANTITY
Trailers	To vary depending on activities taking place
Trencher	1

Materials

Given the scale and complexity of the project, the construction works necessitate a substantial quantity of raw materials. For the structural works alone, the buildings would require approximately 54,000m³ of concrete, 68,000m³ of hollow concrete blockwork and 6.3 tons of steel reinforcement. No information is currently available for the types and quantities of materials needed for the finishing works. However, it can be expected that the following will be required:

- Aluminium or PVC window and door frames
- Glass windows and doors
- Cables
- Pipes
- Gypsum boards
- Plaster
- Tiles
- Primer and paint
- Wood

Site Access, Parking and Vehicular Movements

On-site parking for both construction and employee vehicles will be limited to within the site boundary. Access during the construction phase will be provided through two gates, located at the northern and southern corners of the site. During peak construction periods, it is anticipated that approximately five trucks will access the site daily, with each vehicle undertaking around five trips per day.

2.4.3 Operational Phase

Operating Hours

The hotel, serviced apartments and residential premises would be operational 24 hours, 7 days a week. In contrast, the recreational facilities (restaurants, swimming pools, spas and retail outlets) shall operate under standard working hours for each type of facility. Typically, the spa, swimming pools and shops will open between 09:00 and 20:00; whereas the restaurants will stay open later until around 23:00 or midnight.

Staffing Requirements

Accurate staffing requirements required to operate the proposed Scheme are not available at this time. Crude approximations are provided in the table hereunder.

TABLE 9: ROUGH APPROXIMATIONS OF STAFFING REQUIREMENTS DURING OPERATIONAL PHASE

FACILITY	NUMBER OF WORKERS
Hotel rooms Serviced Apartments	90 per shift
Retail	25
Food & beverage outlets	50

Machinery

Typical machinery used during the operational phase include delivery vehicles to service the hotel, serviced apartments, shops and restaurants. Small back-hoe loaders and mechanical shovels may also be required for the maintenance and upkeep of the landscaped areas.

Site Access and Vehicular Movements

Private vehicle access to the underground parking shall be off Triq is-Salini in the north-west corner of the development. There shall be a single two-lane access ramp; one lane providing access to the residential garages and the other to the open visitor car parking spaces. Vehicles shall exit back onto Triq is-Salini from a dedicated exit ramp located in the southwest corner of the complex. Similar to the entrance, there shall be one lane to service the garages and a second lane to service the visitor parking spaces.

Scheduled loading and unloading of delivery vans, refuse trucks and other servicing vehicles shall be possible via separate access arrangements. Access (both entrance and exit) for these larger vehicles down to level -2 shall take place via the ramp in the south west corner of the development. These vehicles would share the lane used by people exiting from the private garages. The ramp lane and most of the dedicated route within the basement level shall be two-way for these larger vehicles. In order to enable smooth logistics, a large turning circle has been located next to the main unloading/loading bays at level -2. Figure 24 to Figure 26 indicate these access arrangements in further detail.

2.4.4 Water, Sewerage, Runoff Management, Energy, Telecommunications and Ancillary Infrastructure

2.4.4.1 Construction Phase

During the construction phase of the Scheme, both temporary water and electricity supplies shall be brought to the site. Water shall be delivered via bowser and stored in IBC tanks. The electricity needed to power the site offices, tools and equipment shall be provided via generators. It is expected that the electrical demand during the construction will not exceed 60kvA.

Mobile toilets will be brought on site for the convenience of the workers. They shall be emptied regularly to ensure that they do not overflow.

2.4.4.2 Operational Phase

New service connections and infrastructures (water supply, sewage, electricity and telecommunications) will be required to enable the operation of the proposed Scheme. The Developer shall be responsible to contact the relevant competent authorities to make the necessary arrangements.

Electricity

The electricity demand shall be met from the mains supply. This being said, a backup generator will also be on site to provide electricity during mains grid power outages.

A wide variety of low-energy/energy efficient technologies have been incorporated into the proposed building design to limit the overall energy requirements. Examples of such equipment and systems include:

- Use of LEDs
- Variable Refrigerant Flow (VRF) air-conditioning systems
- Electric heat-pump based water heating systems
- Inverter gearless lifts
- Inverter controlled fans
- Heat recovery systems

The option to install PV panels was investigated but was deemed inappropriate for the context of the site.

Water

Water will be reused on site wherever feasible, including the collection and use of greywater for non-potable purposes such as toilet flushing and landscape irrigation. These measures will help reduce overall water consumption and enhance resource efficiency.

All water used for the swimming pools will be sourced from freshwater supplies and treated with chlorine to ensure compliance with national health and sanitary standards. The initial filling of the pools will be undertaken using water delivered to the site by water bowsers.

Routine maintenance of swimming pools involves the daily backwashing of filters and the disposal of the resulting backwash water. Where the backwash is discharged into the public sewer system, the Operator will be required to obtain a sewer discharge permit from the Water Services Corporation. Alternatively, if the wastewater is discharged to the sea, the Environment and Resources Authority (ERA) must be informed, and appropriate monitoring procedures implemented.

Swimming pools are not regularly emptied as it is a timely and costly procedure and risks damage to the pool interior finish. In cases when the pools are required to be emptied to carry out repair/ maintenance work, the operator shall contact the ERA prior for guidance on the handling of the waste water.

Rainwater Handling and Surface Runoff
All rainwater falling on the roofs and immediate surroundings of the buildings shall be channelled into a dedicated water reservoir. The reservoir shall be of a considerable size, approximately 40% of the roof area. The collected water shall be used mainly for irrigation purposes and the topping up of heated pools.

Sewage
The sanitary facilities at and above ground floor level will be connected directly to the main sewage network. For the two basement levels, the sewage waste shall first be collected into cesspits, before being pumped up to the main sewage pipes.

2.4.5 Waste Management

The information provided in the following sections are based on estimates of the envisaged waste streams that may be generated during the various phases of the project. Any figures quoted are purely indicative and may be subject to change once/if the project progresses further.

Despite the lack of available information, the Applicant is committed to ensure that all the relevant national waste regulations are followed during both the construction and operational phases. The most relevant regulations, and their subsequent amendments, are:

- WASTE MANAGEMENT (LANDFILL) REGULATIONS (S.L. 549.29)
- WASTE MANAGEMENT (ACTIVITY REGISTRATION) REGULATIONS of 2007 (S.L. 549.45)
- WASTE MANAGEMENT (PACKAGING AND PACKAGING WASTE) REGULATIONS of 2006 (S.L. 549.43)
- WASTE MANAGEMENT (WASTE BATTERIES AND ACCUMULATORS) REGULATIONS of 2010 (S.L. 549.54)
- WASTE MANAGEMENT (ELECTRICAL AND ELECTRONIC EQUIPMENT) REGULATIONS of 2014 (S.L. 549.89)
- SINGLE USE PLASTICS (SUPS) FRAMEWORK REGULATIONS OF 2022 (S.L. 549.149)
- BEVERAGE CONTAINERS RECYCLING REGULATIONS (S.L. 549.134)

2.4.5.1 Construction Activities

The bulk of the waste is expected from the demolition and excavation material generated during the initial phases of the project. It has been calculated that ca. 30,000m^3 of such material shall be generated. As much as possible, the steel and concrete from the existing structures shall be reused or recycled; and limestone shall also be reused on site as backfill material. This will minimise the quantities of waste to be disposed of from the site.

As works progress, additional waste streams are expected to arise, including material offcuts, packaging from construction materials used on site, and domestic waste generated from daily worker activities. Each waste stream will be segregated on site and stored in clearly labelled, covered receptacles. Once these containers reach capacity, they will be emptied, and the waste will be transported off site by a licensed waste carrier to facilities approved by the ERA.

Given the size of the site, it is likely that multiple waste management areas will be established. The location of these areas may change throughout the construction phase, depending on the stage of works and the activities being undertaken.

It is not expected that the Scheme will generate any electrical or electronic waste. If such waste is uncovered or generated it will be handled in line with the WEEE Directive 2012/19/EU as transposed into S.L. 549.89 of 2014 (WASTE MANAGEMENT [ELECTRICAL AND ELECTRONIC EQUIPMENT] REGULATIONS) and later amendments. Any batteries and accumulators from machinery maintenance and repair will be recovered as per Directive 2006/66/EU, transposed into local legislation by S.L. 549.54 of 2010 (WASTE MANAGEMENT [WASTE BATTERIES AND ACCUMULATORS] REGULATIONS) and subsequent amendments.

2.4.5.2 Operations

The main waste streams projected during the operational phase are a domestic nature; comprising of organic and gardening waste, separated recyclable materials and mixed domestic waste. Small quantities of WEEE and batteries may also be generated from maintenance activities and the local residents.

All employees, residents, and guests will be expected to adhere to the Three Rs principle (Reduce, Reuse, and Recycle) in managing waste generated on site. During the operational phase, all commercial waste will be stored within two designated waste management areas located at Level -2. Large vehicle unloading bays will be positioned at the end of the access ramps, in close proximity to the waste storage rooms, to facilitate efficient private waste collection. Receptacles within these areas will be sealed to contain odours, and no on-site waste processing will take place.

Residential waste will be managed separately from other waste streams. Residents will be responsible for disposing of their segregated waste in accordance with designated national collection schedules for door-to-door collection.

Detailed information regarding the quantities of waste expected during the operational phase is not yet available. However, some crude estimations are compiled hereunder:

- **Hotel rooms and serviced apartments (including restaurants)**

Hotel guests in Malta typically generate 1.25 kg of waste per night.[2] Organic waste, followed by packaging materials such as plastic and cardboard, typically constitute the largest proportion of this waste.

Based on a 100% occupancy of the hotel and serviced apartments, with each having two persons, total guest-generated waste is estimated at approximately 980 kg per night. The proportion of organic and recyclable materials within this total will depend on the hotel operator's practices and operational procedures, such as the extent of reliance on single-use items.

- **Residential apartments**
  The average Maltese resident generates approximately 574 kg of waste per year[3]. Based on this figure, and assuming full apartment occupancy with an average three persons per apartment, it is broadly estimated that local residents will generate approximately 226,910 kg of waste annually. Of this total waste, a proportion can be processed or recycled.

- **Commercial and retail outlets**
  As the intended use of the outlets has not yet been determined, and given that this will significantly influence both the type and volume of waste generated, it is not currently possible to provide a reliable estimate. However, packaging waste is expected to constitute the predominant waste stream and should be suitable for recycling.

- **Restaurants**
  The quantities of waste generated from restaurants varies depending on the dining style, i.e. Al a carte, buffet etc. However, studies have revealed an average of 444 g of food waste is generated per cover.[4] Since, the seating capacities of each eating outlet has not yet been established, no further calculations are possible at this time.

- **Landscaped areas**
  The quantities of green waste generated from the maintenance of landscaped areas will depend on the variety of plants chosen; most notedly if they are annual, biennial or perennial; as well as the chosen level of pruning. Therefore, it is not possible to provide estimations of quantities at this time.

[2] Malta Today (2022). Tourists producing double the waste produced by Maltese. https://www.maltatoday.com.mt/news/national/119124/tourists_producing_double_the_waste_produced_by_maltese

[3] NSO (2025). NR 225/2025 Municipal Waste: 2024. https://nso.gov.mt/wp-content/uploads/NR-225-2025_r364y8.pdf

[4] Gatt and Bajada (2023). Food Waste Generation Within the Hospitality Sector in Malta. International Journal of Information Systems and Social Change. Volume 14, Issue 1.

Waste Summary Table

TABLE 10: WASTE GENERATION SUMMARY TABLE

WASTE STREAM	EWC CODE(S)	PROJECT PHASE	ACTIVITY	STORAGE	ERA WASTE CARRIER CLASS	TREATMENT/DISPOSAL LOCATION
Mixture of concrete, bricks and tiles	17 01 07	Construction	Material offcuts/excess Demolition	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	A1 Construction and demolition waste	ERA approved appropriate recycling/processing facility
Soil, stones and rock	17 05 04	Construction	Excavation	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	N/A To be reused on site	N/A To be reused on site
Iron and steel	17 04 05	Construction	Demolition Material offcuts	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	A1 Construction and demolition waste	ERA approved appropriate recycling/processing facility
Tiles	17 01 03	Construction	Material offcuts	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	A1 Construction and demolition waste	ERA approved appropriate recycling/processing facility
Gypsum boards	17 08 02	Construction	Material offcuts	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	A1 Construction and demolition waste	ERA approved appropriate recycling/processing facility
Cables	17 04 11	Construction	Material offcuts	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	A1 Construction and demolition waste	ERA approved appropriate recycling/processing facility
Wood	17 02 01	Construction	Material offcuts	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	A1 Construction and demolition waste	ERA approved appropriate recycling/processing facility
	15 01 03	Construction	Material packaging		A4 Separated waste (including non-hazardous packaging waste)	
		Operational	Commercial/ retail packaging			
Plastic	17 02 03	Construction	Material offcuts		A1 Construction and demolition waste	ERA approved appropriate recycling facility

Waste Stream	EWC Code(s)	Project Phase	Activity	Storage	ERA Waste Carrier Class	Treatment/Disposal Location
	15 01 02	Construction	Material packaging	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	A4 Separated waste (including non-hazardous packaging waste)	
		Operational	Commercial/ retail packaging			
	20 01 39	Construction	Workers			
		Operational	Guests, residents and employees			
Paper/cardboard	15 01 01	Construction	Material packaging	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	A4 Separated waste (including non-hazardous packaging waste)	ERA approved appropriate recycling facility
		Operational	Commercial/ retail packaging			
	20 01 01	Construction	Workers			
		Operational	Guests, residents & employees			
Glass	20 01 02	Operational	Guests, residents & employees	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	A4 Separated waste (including non-hazardous packaging waste)	ERA approved appropriate recycling facility
Organic	20 01 01	Construction	Workers	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	A4 Separated waste (including non-hazardous packaging waste)	ERA approved appropriate processing/treatment facility
		Operational	Guests, residents and employees			
	20 01 08		Restaurants and cafeteria		A3	

WASTE STREAM	EWC CODE(S)	PROJECT PHASE	ACTIVITY	STORAGE	ERA WASTE CARRIER CLASS	TREATMENT/DISPOSAL LOCATION
					Restaurants and canteen waste and municipal waste – RCVs only	
Cooking oils	20 01 25	Operational	Restaurants and cafeteria	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	A4 Separated waste (including non-hazardous packaging waste)	ERA approved appropriate processing/treatment facility
Oils and grease from grease traps	19 08 09	Operational	Restaurants and cafeteria	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	A4 Separated waste (including non-hazardous packaging waste)	ERA approved appropriate processing/treatment facility
Garden waste	20 02 01 20 02 02	Operational	Grounds maintenance	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	A4 Separated waste (including non-hazardous packaging waste)	ERA approved appropriate processing/treatment facility
Mixed municipal	20 03 01	Construction	Workers	Stored in clearly labelled dedicated receptacle in designated waste management area(s)	A4 Separated waste (including non-hazardous packaging waste)	ERA approved appropriate landfill facility
		Operational	All outlets, facilities, guests, residents and employees			

3 ASSESSMENT OF ALTERNATIVES

3.1 ALTERNATIVE SITES

Since the Scheme involves the redevelopment of the dilapidated ex-Jerma Palace Hotel, no other sites have been considered.

3.2 ALTERNATIVE LAYOUTS

The ex-Jerma Palace site has been subject to several redevelopment proposals since the closure of the original hotel in the early 2000s. All the proposals have involved the construction of a mixed tourist and residential complex. The early designs were very large and intensive. Over the years each design has been downscaled and refined to be more compatible with the surrounding environment.

This chapter of the EIA focuses on five contrasting designs. Each option is briefly described in its own section and a comparison table is provided at the end for a quick reference guide.

3.2.1 2013 Marine Based Design

This proposal was designed following a Government Expression of Interest (EOI) for land reclamation projects. Since the scope of the EOI was land reclamation, the proposal included a large marine component. It consisted of 18 distinctive towers. The majority, 12 blocks, were to be constructed along the foreshore; whilst the remaining six were to be built completely on reclaimed land. Access between the mainland and the offshore blocks was to be via bridges. A large semi-circular breakwater was a crucial aspect of the project to provide the necessary protection of the buildings from adverse sea conditions. The breakwater would function as a jetty and a sheltered marina.



FIGURE 17: 2013 MARINE BASED PROPOSAL

3.2.1 2016 Outline Development Application Design

The 2016 design was submitted as part of an outline planning application to the Planning Authority. The proposed building units were positioned at the tip of the promontory, within the natural foreshore area, and extended into the sea along the eastern side.

The proposal centred on the construction of three tall towers: two residential blocks and a smaller hotel tower. In front of these, a large artificial lagoon and an enclosing promenade were planned. An additional key feature was a small perched beach, located in the north-western corner of the site. The area surrounding St. Thomas Tower was to be landscaped into a park, providing an open public space.

To safeguard the new coastal structures, the Scheme incorporated a semi-circular breakwater along the southern side. This breakwater was designed to extend beyond the site boundary, forming a jetty suitable for small vessels.



FIGURE 18: 2016 OUTLINE DEVELOPMENT APPLICATION DESIGN

3.2.2 2017 Conventional Design

The 2017 conventional design focused on a single large building positioned further inland compared to the previous proposals. The structure was configured in a triangular form, enclosing a central open area that accommodated an outdoor swimming pool for the hotel. The area surrounding St. Thomas Tower was intended to be transformed into an open public park.

The proposal also included the construction of a breakwater along the low-lying foreshore on the southern side of the site, aimed at protecting the development from adverse sea conditions. Unlike earlier designs, this breakwater was to be constructed predominantly along the foreshore, rather than being located entirely within the marine environment.

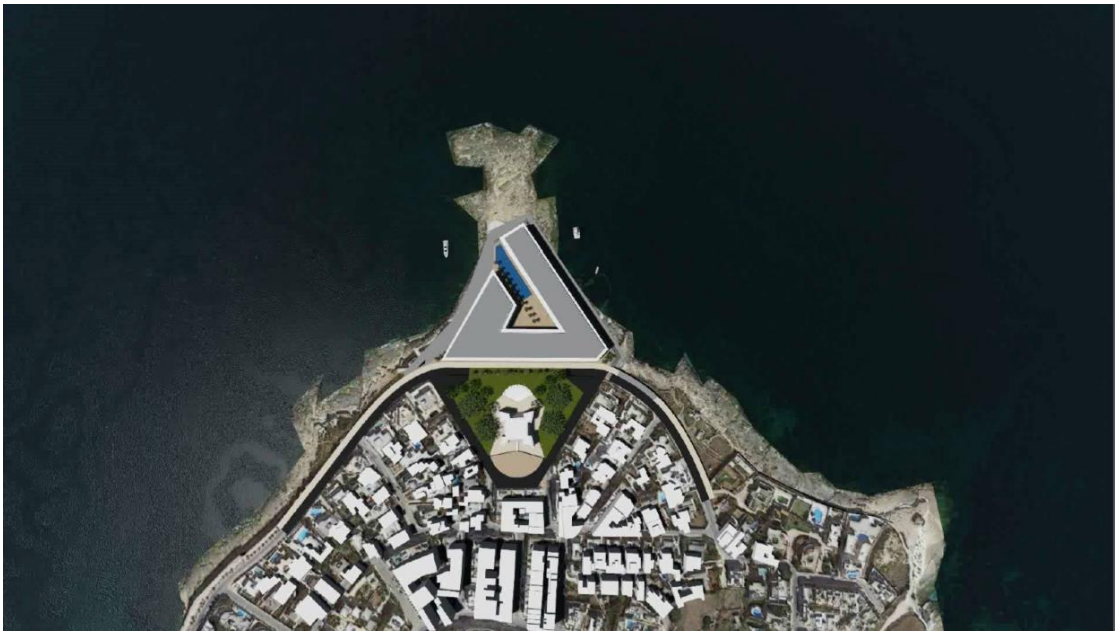


FIGURE 19: 2017 CONVENTIONAL PROPOSAL



FIGURE 20: 2017 CONVENTIONAL LAYOUT DESIGN

3.2.3 2017 Alternative Design

Following the 2017 conventional design, a series of alternative schemes were explored. Given their overall similarity, only one representative option is described in this report.

This alternative proposal comprised a main podium building rising to six storeys, accompanied by two towers of differing heights, one reaching 27 floors and the other 32 floors. An outdoor swimming pool was proposed along the southern edge of the

development, situated at the foreshore and extending slightly into the marine environment; this was to be enclosed by a breakwater to provide protection from sea conditions. A second outdoor pool was planned at the eastern end of the site, similarly enclosed by the proposed breakwater.

On the northern side of the development, a perched beach was proposed to offer an alternative to the site's natural rocky shoreline. As with the conventional scheme, the area surrounding St. Thomas Tower was to be converted into a public park.



FIGURE 21: 2017 PROPOSED LAYOUT

3.2.4 2019 Proposal

The 2019 proposal comprised a single building located on the southern side of the promontory. The residential component was designed to reach 15 storeys, while the hotel component was to rise to 13 storeys. The entire structure was underlain by a single basement level, providing 370 parking spaces and an additional 238 garages.

The hotel facilities were extensive, including 250 rooms and 128 serviced apartments, together with guest restaurants and swimming pools. The residential component was also substantial, comprising 166 apartments ranging from one- to three-bedroom units. The proposal further incorporated a lido, spa, gym, several restaurants, commercial and retail outlets, a business centre, a chapel, and numerous outdoor

public spaces. Notably, this was the first design that did not include any marine interventions.



FIGURE 22: 2019 PROPOSAL

3.2.5 Alternative Site Layout Comparison

TABLE 11: COMPARISON OF ALTERNATIVE SITE LAYOUTS CONSIDERED OVER THE RECENT YEARS

PROPOSAL	DEVELOPABLE SITE AREA (M^2)	GROUND LEVEL BUILDING FOOTPRINT (M^2)	NO. OF BUILDINGS	NO. OF FLOORS	MAIN TERRESTRIAL FACILITIES	MARINE COMPONENTS
2013 Marine Based Design	146,700	-	18	-	• Hotel • Residential apartments • Marina	• Off shore tower blocks • Connecting bridges • Semi-circular breakwater around tip of promontory
2016 Outline Development Application Design	-	-	3	-	• Hotel • Residential apartments • Lagoon • Promenade • Perched beach • Public park	• Breakwater • Small jetty
2017 Conventional Design	18,250	14,300	1	5 + penthouse	• Hotel • Outdoor pool	• Breakwater

PROPOSAL	DEVELOPABLE SITE AREA (M^2)	GROUND LEVEL BUILDING FOOTPRINT (M^2)	NO. OF BUILDINGS	NO. OF FLOORS	MAIN TERRESTRIAL FACILITIES	MARINE COMPONENTS
					• Residential apartments • Public park	
2017 Alternative Design	-	5,500	3	Podium: 6 Tower 1: 32 Tower 2: 27	• Hotel (rooms and serviced apartments) • Residential apartments • Outdoor pools • Chapel • Public plaza • Public park • Promenade • Perched beach	• Breakwater
2019 Proposal	18,250	6,400	1	Hotel tower: 15 Residential tower: 13 + 1 basement level	• Unground parking and garages • Hotel (rooms and serviced apartments) • Residential apartments	N/A

PROPOSAL	DEVELOPABLE SITE AREA (M^2)	GROUND LEVEL BUILDING FOOTPRINT (M^2)	NO. OF BUILDINGS	NO. OF FLOORS	MAIN TERRESTRIAL FACILITIES	MARINE COMPONENTS
					• Food and beverage outlets • Retail outlets • Chapel • Gym • Spa • Lido + other swimming pools • Business centre • Landscaped areas	

3.3 Downscaling of the Project or Elimination of Project Components

As outlined in the preceding sections, the redevelopment proposals for the former Jerma Palace Hotel have undergone a clear and progressive reduction in scale over time. Earlier schemes were characterised by a significantly larger built footprint and more intensive massing of structures, whereas the current proposal adopts a more restrained and context-sensitive approach. Notably, the present Scheme does not include any marine interventions or the creation of an artificial perched beach. Overall, these iterative changes have resulted in a proposal that is more proportionate to its surroundings when compared to previous designs.

Many of these revisions can be attributed to the Planning Authority's Development Brief for the site, published in 2020, which established defined parameters and thresholds that all subsequent proposals were required to follow.

3.4 Zero Option (Do-Nothing Scenario)

If the former Jerma Palace site remains in its current condition, it will inevitably continue to deteriorate, with the structural integrity of the buildings progressively declining and the associated safety risks increasing over time. Prolonged neglect is likely to accelerate material decay, resulting in further instability and potential hazards to both the general public and the surrounding environment.

In addition to structural and safety concerns, the site will continue to present a significant visual detractor along the coastline, adversely affecting the character and visual amenity of the area from both land and sea. This, in turn, diminishes the appeal of the location for both tourists and local visitors.

Maintaining the site in a state of abandonment is inconsistent with the policy direction established in the South Malta Local Plan (SMLP, 2006), which envisages a predominantly tourism-oriented development incorporating residential and commercial elements, designed to be safe, environmentally sensitive, and visually integrated within its surroundings. Further details regarding how the proposed redevelopment of the former Jerma Palace site should be carried out are also outlined in the Development Brief document.

3.5 Hybrids/Combination of the Above

Given the sites extensive development proposal history, the current design can be considered as the cumulation of a long process of refinement and reassessment. It builds on the collective ideas of the earlier proposals, selecting elements which are most suitable, while discarding those that have been considered overly ambitious or incompatible with the site and surrounding area.

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FIGURE 23: PROPOSED ELEVATIONS

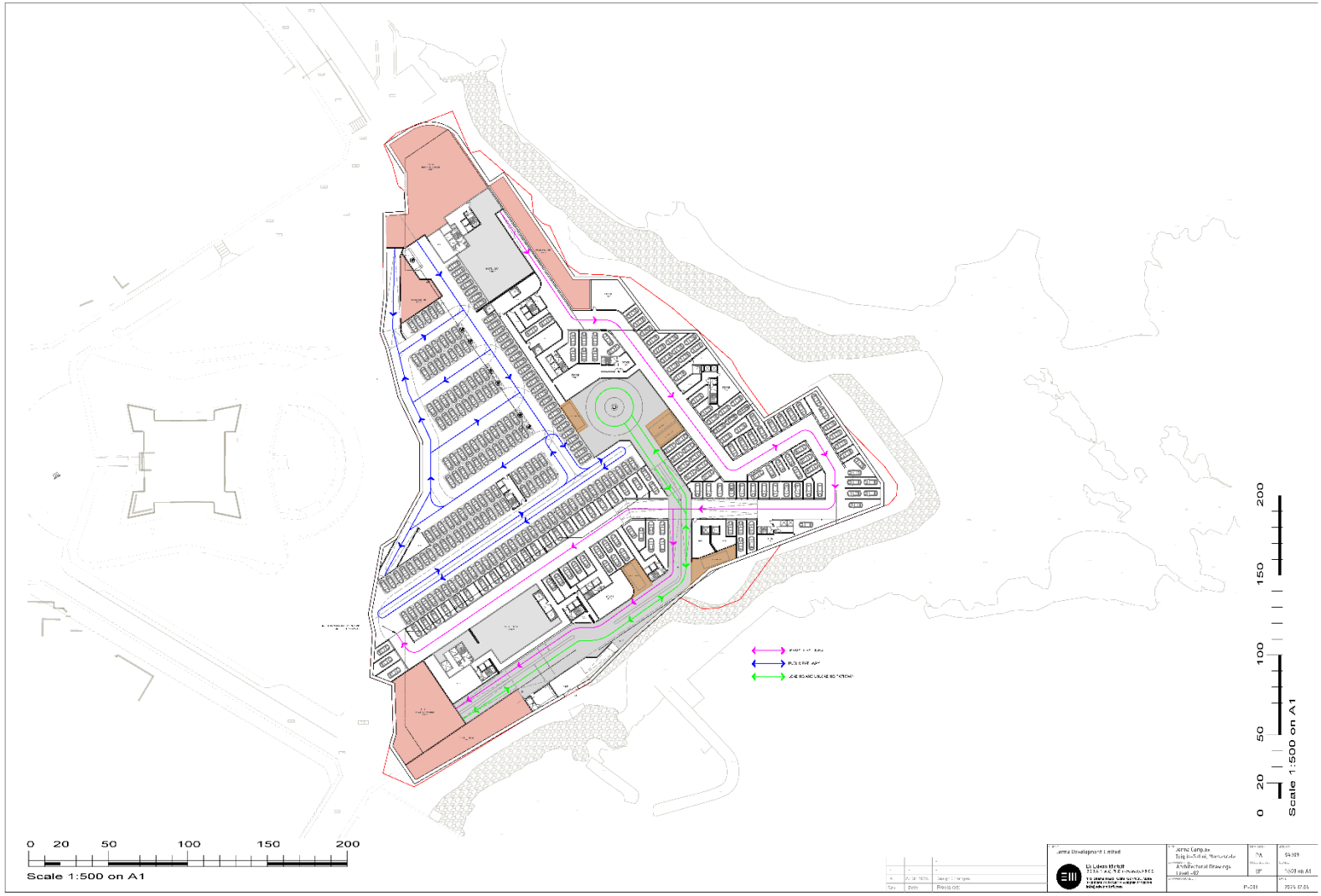


FIGURE 24: PROPOSED LEVEL -2 LAYOUT

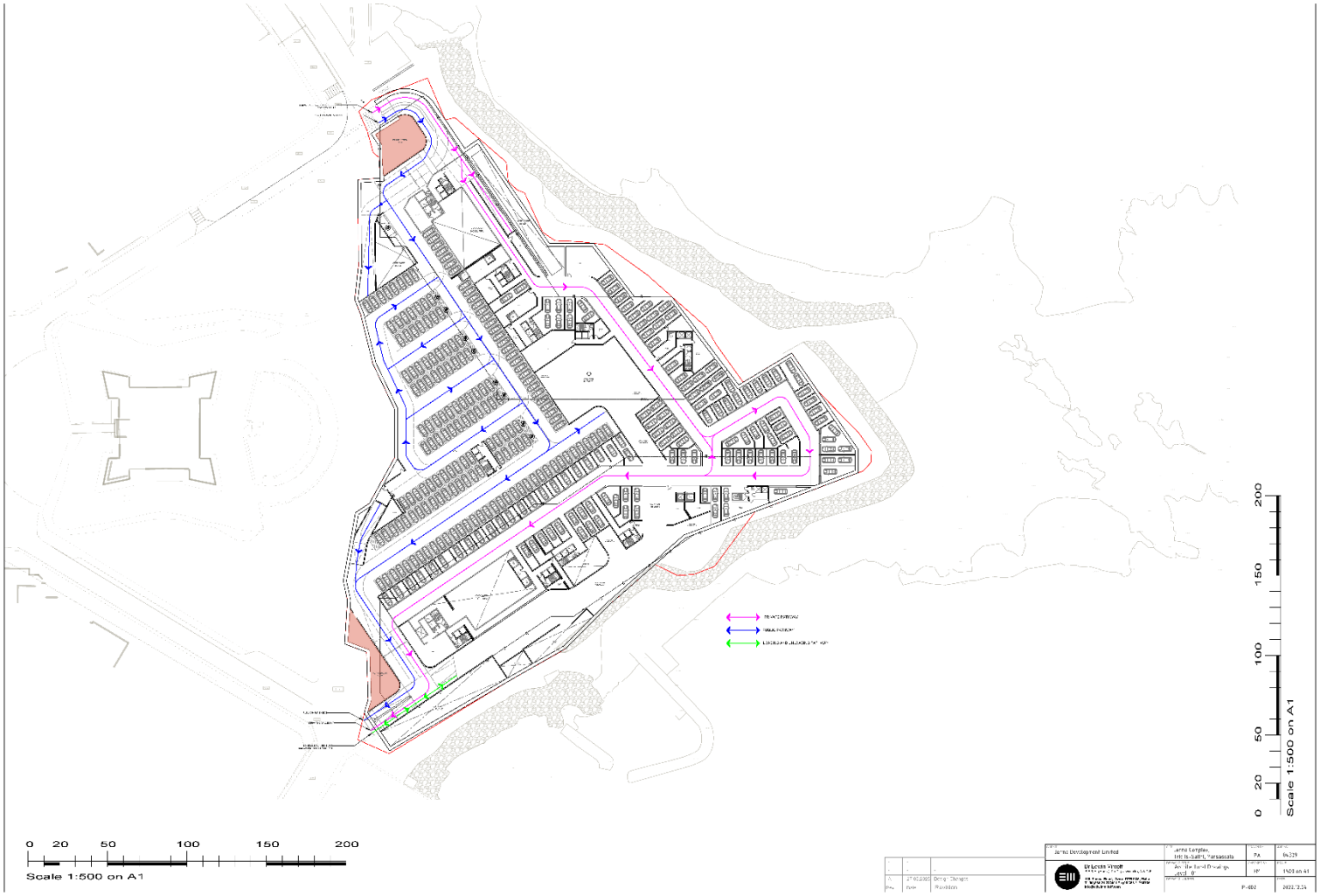


FIGURE 25: PROPOSED LEVEL -1 LAYOUT

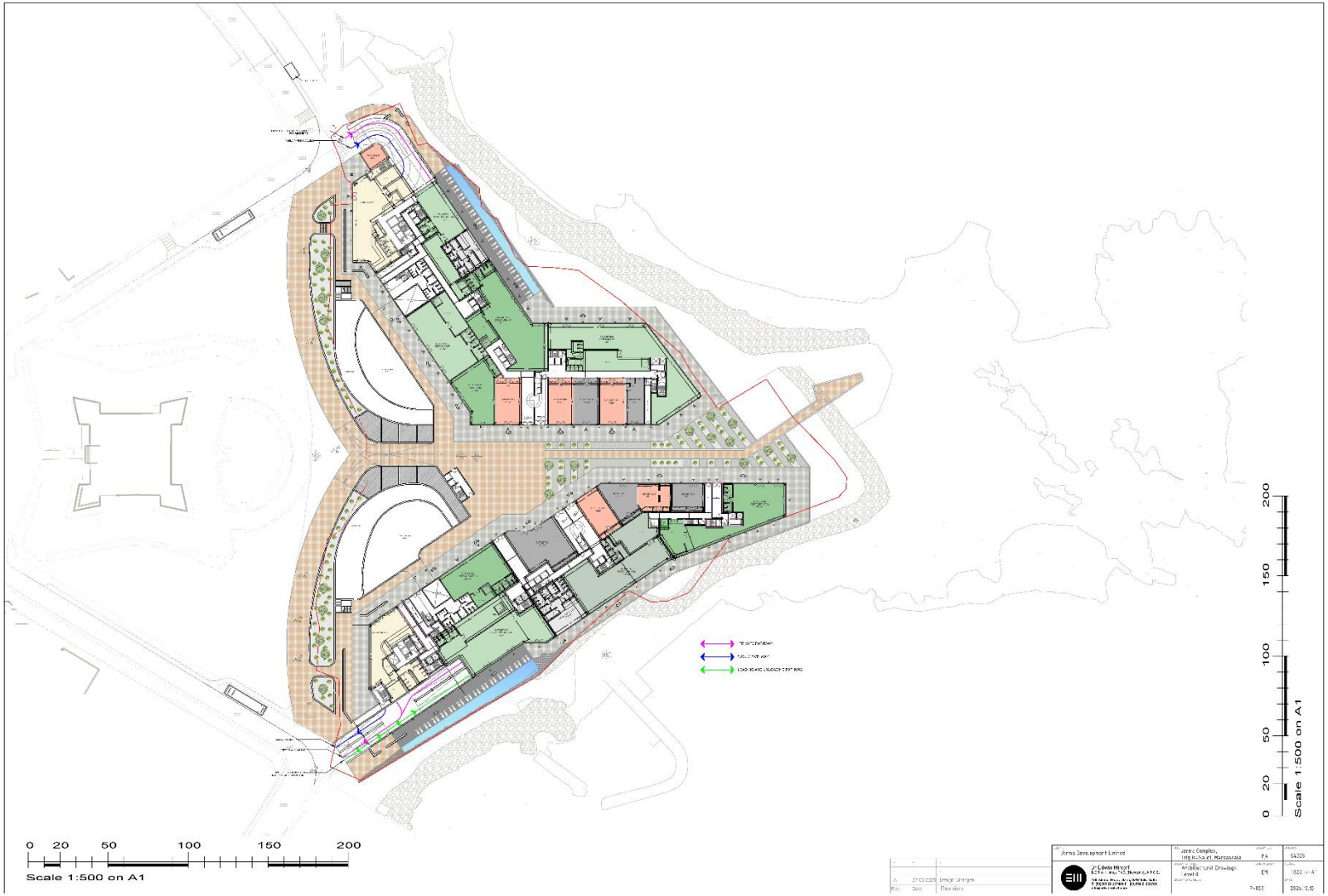


FIGURE 26: PROPOSED GROUND FLOOR LAYOUT

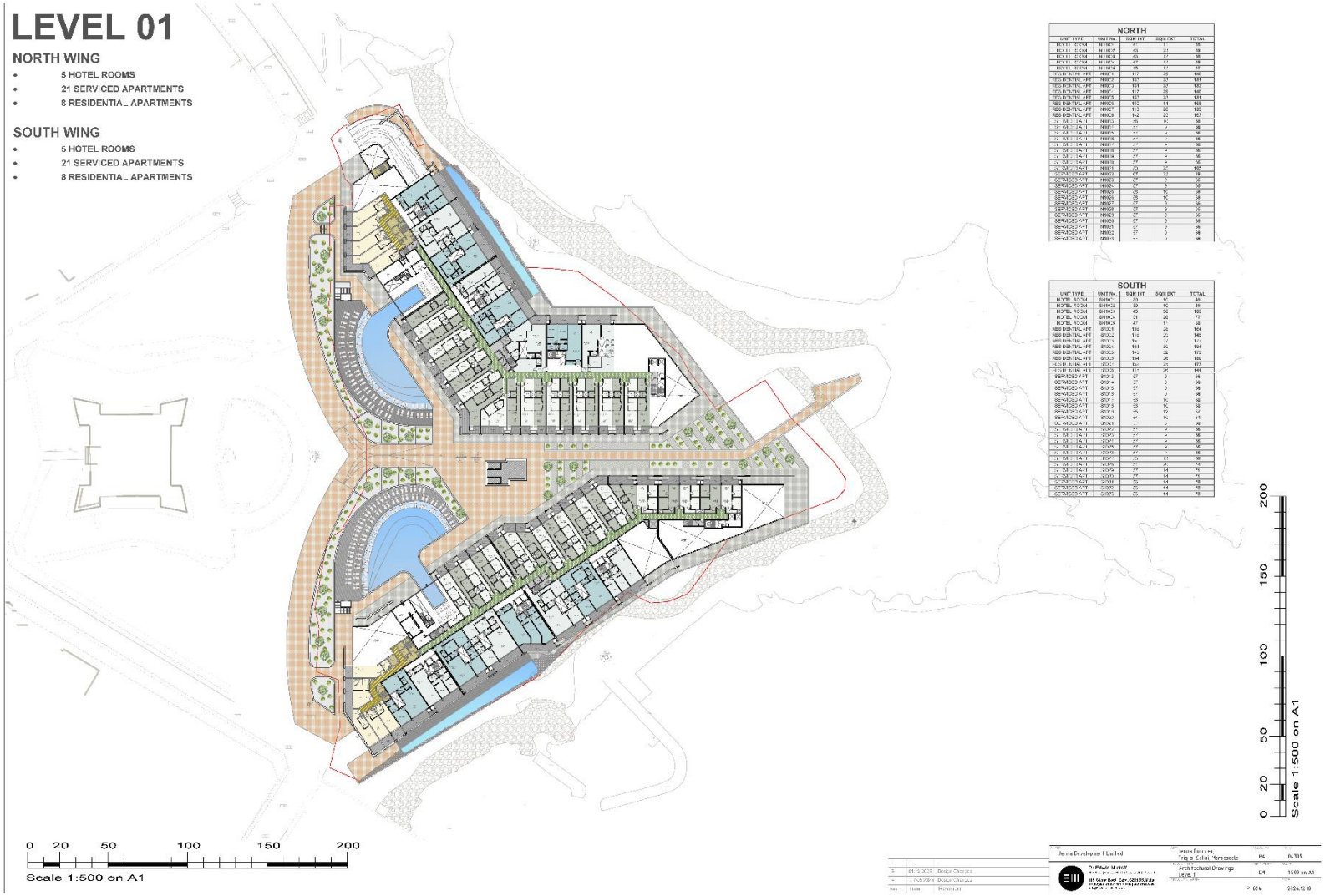


FIGURE 27: PROPOSED LEVEL 1 LAYOUT



FIGURE 28: PROPOSED LEVEL 3 LAYOUT



FIGURE 29: PROPOSED LEVEL 4 LAYOUT



FIGURE 30: PROPOSED LEVEL 5 LAYOUT



FIGURE 31: PROPOSED LEVEL 6 LAYOUT



FIGURE 32: PROPOSED LEVEL 7 LAYOUT

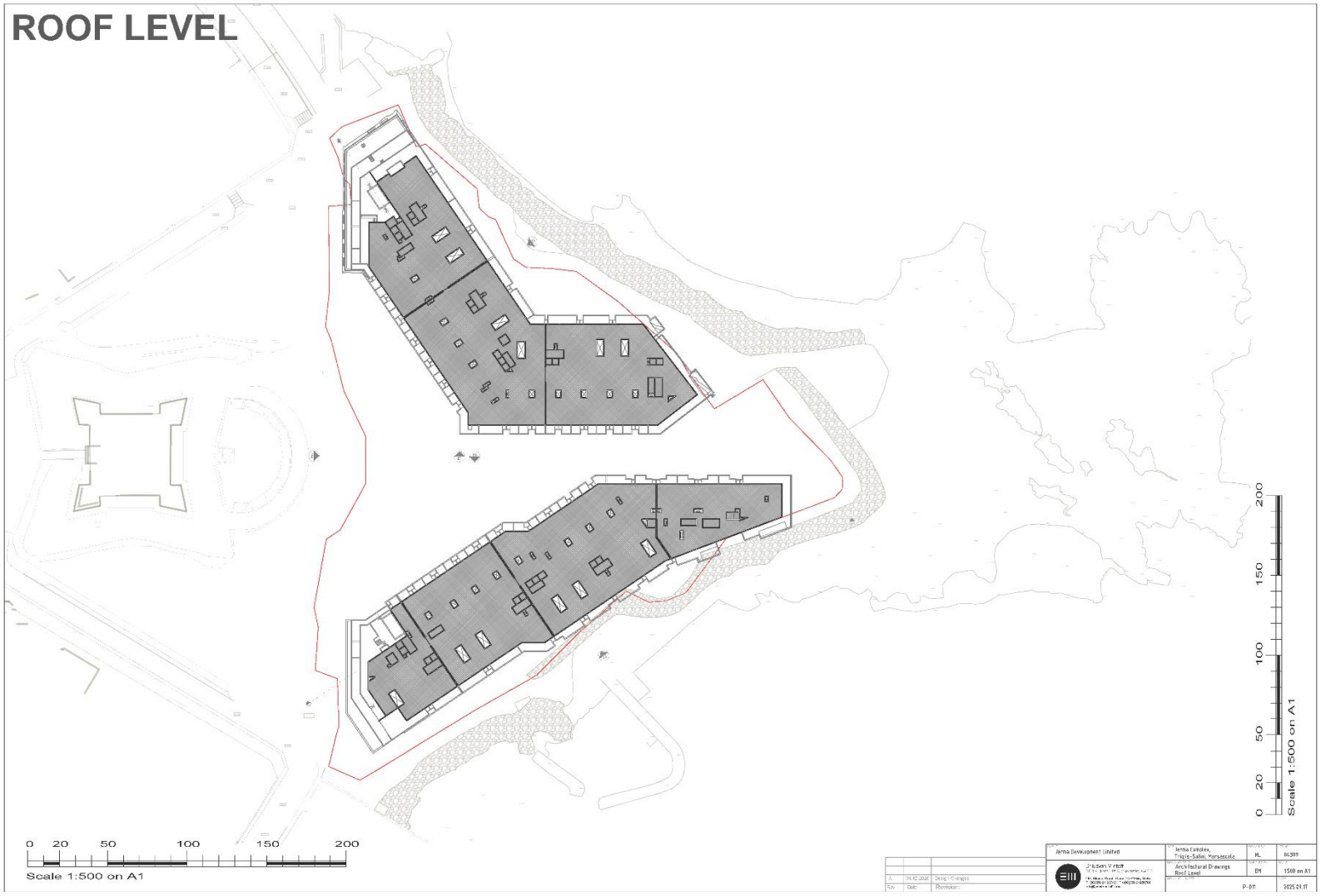


FIGURE 33: PROPOSED ROOF LAYOUT

4 DESCRIPTION OF ASPECTS OF THE ENVIRONMENT LIKELY TO BE SIGNIFICANTLY AFFECTED BY THE PROPOSED PROJECT

4.1 GENERAL STUDY AREA

With the exception of the Landscape, Geology, Water Bodies, Avian Ecology, Air Quality, Noise & Vibrations studies, the Scheme site and a 100m surrounding buffer zone was used as the study area. This is referred to as the general Area of Influence (AoI) and is mapped in Figure 2.

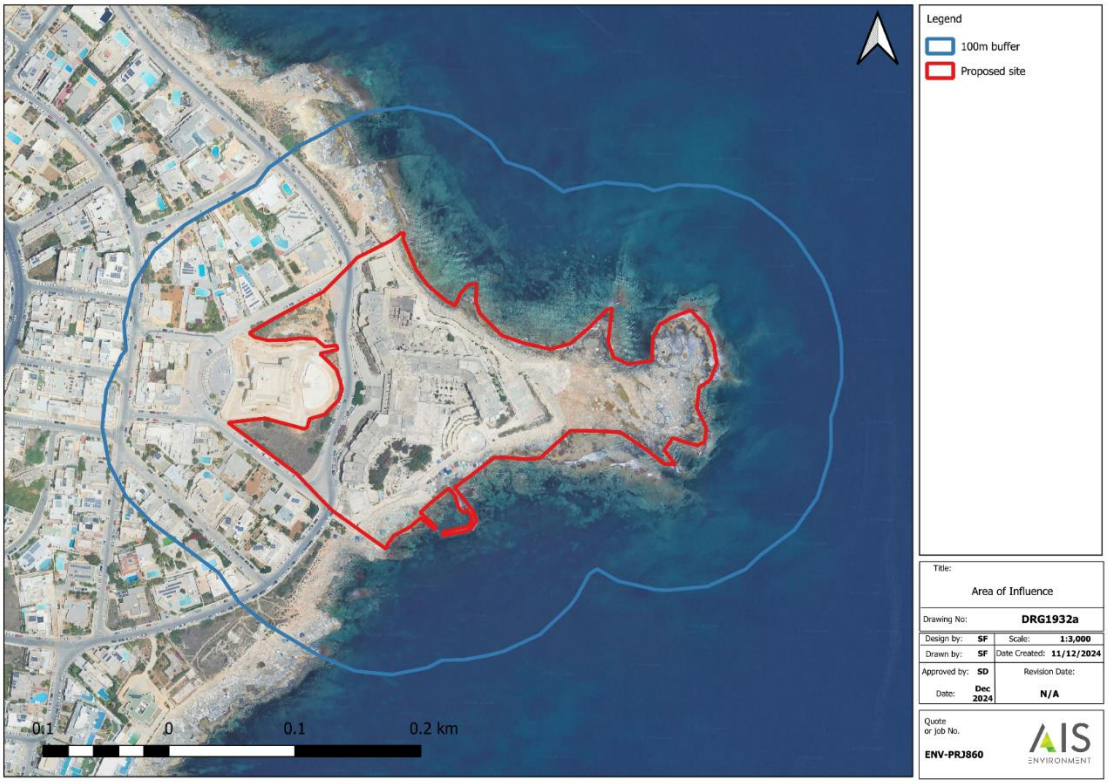


FIGURE 34: GENERAL AREA OF INFLUENCE

The AOI for the Landscape, Geology, Water Bodies, Avian Ecology, Air Quality and Noise studies are described in their respective sections (refer to Table 12).

TABLE 12: AOI REPORT REFERENCE SECTIONS FOR THE TECHNICAL STUDIES NOT USING THE GENERAL AOI

STUDY	AOI REPORT REFERENCE SECTION
Landscape	4.4.1
Geology	4.5.1
Water Bodies	4.6.1

Study	AoI Report Reference Section
Avian Ecology	4.8.1
Air Quality	4.10.1
Noise	4.11.1

4.2 Assessment Criteria

4.2.1 Qualitative Assessment

A qualitative assessment was carried out for all the technical studies to determine the potential impacts of the Scheme on the various aspects under investigation. The following tables provide definitions of the criteria used.

Table 13: Criteria for the sensitivity of resources to impact

Sensitivity of Receptors to Impact

Level	Definition
High	The receptors which will be highly sensitive to the impact and consequently impacted to a major degree.
Medium	The receptors which will be moderately sensitive to the impact and consequently impacted to a moderate degree.
Low	The receptors which will be minimally sensitive to the impact and consequently impacted to a minor degree.

Table 14: Criteria for the consequences of impact

Consequences of Impact

Level	Definition
Direct	Changes that result from direct cause-effect consequences of interactions between the result of action under consideration and the proposed project.
Indirect	Result from cause-effect consequences of interactions between the action under consideration and indirect impacts.

CONSEQUENCES OF IMPACT

Cumulative	Result from cause-effect consequences of interactions between the action under consideration and other related projects.

TABLE 15: CRITERIA FOR THE EFFECT OF IMPACT

EFFECT OF IMPACT

LEVEL	DEFINITION
Adverse	The aspect under analysis would suffer consequences as a direct result of the proposed development.
Beneficial	The aspect under analysis would benefit as a direct result of the proposed development.

TABLE 16: CRITERIA FOR THE SEVERITY OF IMPACT

SEVERITY OF IMPACT

LEVEL	DEFINITION
High	This action is a major contributor to the aspect under analysis in the area of influence.
Medium	This action is a moderate contributor to the aspect under analysis in the area of influence.
Low	This action is a minor contributor to the aspect under analysis in the area of influence.

TABLE 17: CRITERIA FOR THE PHYSICAL EXTENT OF THE IMPACT

PHYSICAL EXTENT OF IMPACT

LEVEL	DEFINITION
Local	Impact would affect the areas in the nearby surroundings.
National	Impact would affect Malta on a national scale.
International	Impact would affect Malta and/or other countries.

TABLE 18: DURATION OF IMPACT

DURATION OF IMPACT

LEVEL	DEFINITION
Permanent	Impact would still be detectable after the concerned phase.
Temporary	Impact would not persist through the whole duration of the concerned phase.

TABLE 19: CRITERIA FOR THE REVERSIBILITY OF THE IMPACT

REVERSIBILITY OF IMPACT

LEVEL	DEFINITION
Reversible	State of the activity/action is potentially expected to return to baseline background level following cessation of the source of impact.
Irreversible	Impact is expected to cause partial or total destruction of the action under consideration and a return of the state of the resource to baseline levels should be considered highly improbable.

TABLE 20: CRITERIA FOR THE PROBABILITY OF IMPACT OCCURRING

PROBABILITY OF IMPACT OCCURRING

LEVEL	DEFINITION
Inevitable	Level of certainty that impact will occur is greater than 90%
Likely	Level of certainty that impact will occur ranges between 50-90%
Unlikely	Level of certainty that impact will occur ranges between 30-50%
Remote	Level of certainty that impact will occur is below 30%

TABLE 21: CRITERIA FOR THE OVERALL IMPACT SIGNIFICANCE

IMPACT SIGNIFICANCE

LEVEL	DEFINITION

IMPACT SIGNIFICANCE

Not significant	Negligible significance.
Minor significance	Low order impact and therefore likely to have little real effect on infrastructure and utilities. In the case of adverse impacts, mitigation is either easily achieved or little will be required, or both.
Moderate significance	Impact on infrastructure and utilities is real but not substantial in relation to other impacts that might take effect within the bounds of those that could occur. In the case of adverse impacts, mitigation is both feasible and fairly easily possible.
Major significance	Of the highest order possible within the bounds of impacts on infrastructure and utilities that could occur. In the case of adverse impacts, there is little or no possible mitigation that could offset the impact.

4.2.2 Quantitative Assessment

Air Quality

A quantitative impact assessment was also conducted for the air quality study. This followed a significance criteria tool provided by the ERA that used to determine the significance of the impact on all sensitive receptors based on the following inputs:

- The annual limit value (µg/m³) as established by local legislation (S.L. 549.59).
- The baseline concentration (µg/m³) – the baseline concentration value considered was the average daily value
- The change (µg/m³) – the worst-case emissions reported from the air dispersion model was considered for the determination of the exchange rate

TABLE 22: SIGNIFICANCE CRITERIA FOR ANNUAL LEVELS OF NO_2/PM_{10} IN µG/M³ (SOURCE: ERA TORS)

BASELINE ANNUAL LEVELS CAA OF NO_2/PM_{10} (µG/M³)	CHANGE IN ANNUAL NO_2/PM_{10} (DAA) LEVELS DUE TO SCHEME (µG/M³)			
	DAA ≤ 0.4 µG/M³	0.8 ≤ DAA ≤ 2.0 µG/M³	2.4 ≤ DAA ≤4.0 µG/M³	DAA ≥ 4.0 µG/M³
CAA ≥ 44 µg/m³	Moderate	Substantial	Substantial	Substantial
43.6 ≤ CAA ≤ 41.2 µg/m³	Moderate	Moderate	Substantial	Substantial
40.8 ≤ CAA ≤ 38.0 µg/m³	Slight	Moderate	Moderate	Substantial

BASELINE ANNUAL LEVELS CAA OF NO_2/PM_{10} (µG/M³)	CHANGE IN ANNUAL NO_2/PM_{10} (DAA) LEVELS DUE TO SCHEME (µG/M³)			
	DAA ≤ 0.4 µG/M³	0.8 ≤ DAA ≤ 2.0 µG/M³	2.4 ≤ DAA ≤4.0 µG/M³	DAA ≥ 4.0 µG/M³
37.6 ≤ CAA ≤ 30.4 µg/m³	Negligible	Slight	Moderate	Moderate
CAA ≤ 30 µg/m³	Negligible	Negligible	Slight	Moderate

TABLE 23: SIGNIFICANCE CRITERIA FOR ANNUAL LEVELS OF 90.4TH PERCENTILE CRITERION FOR PM_{10} (SOURCE: ERA TORS)

BASELINE ANNUAL LEVELS PCT OF PM_{10} (µG/M³)	CHANGE IN THE PCT (DPCT) LEVELS DUE TO SCHEME (µG/M³)			
	DPCT ≤ 0.5 µG/M³	1.0 ≤ DPCT ≤ 2.5 µG/M³	3.0 ≤ DPCT ≤5.0 µG/M³	DPCT ≥ 5.0 µG/M³
PCT ≥ 55 µg/m³	Moderate	Substantial	Substantial	Substantial
54.5 ≤ PCT ≤ 51.5 µg/m³	Moderate	Moderate	Substantial	Substantial
51.0 ≤ PCT ≤ 47.5 µg/m³	Slight	Moderate	Moderate	Substantial
47.0 ≤ PCT ≤ 38.0 µg/m³	Negligible	Slight	Moderate	Moderate
PCT ≤ 37.5 µg/m³	Negligible	Negligible	Slight	Moderate

Construction Noise

The impact of construction noise upon existing residential receptors was determined with reference to the ABC method presented in BS 5228-1. The impact of construction noise upon existing residential receptors is as detailed in Table 24.

TABLE 24: CONSTRUCTION NOISE IMPACT MAGNITUDE

MAGNITUDE	DESCRIPTION
High	Threshold limit value exceeded by more than 5dB
Medium	Threshold limit value exceeded by a maximum of 4dB
Low	Threshold limit value exceeded by a maximum of 2dB
Negligible	Threshold value not exceeded

Operational Noise

The impact of operational noise from the Scheme upon existing residential receptors from road traffic noise was determined with reference to Table 3.54a of DMRB LA111. The impacts of Scheme-related traffic upon existing receptors in the short-term are detailed in Table 25.

TABLE 25: OPERATIONAL ROAD TRAFFIC NOISE IMPACT MAGNITUDE – RESIDENTIAL RECEPTORS

MAGNITUDE	NOISE CHANGE $L_{A10,18HR}$ dB
High	5.0 +
Medium	3.0 – 4.9
Low	1.0 – 2.9
Negligible	0..1– 0.9

The significance of the noise effect will depend on the receptor type and its sensitivity to the noise impact. The sensitivity of the receptor, together with the magnitude of the noise impact, defines the level of the noise effect, as shown in Table 26 below.

TABLE 26: LEVEL OF NOISE EFFECTS

		SENSITIVITY			
		HIGH	MEDIUM	LOW	NEGLIGIBLE
MAGNITUDE	High	Major	Major	Moderate	Minor
	Medium	Major	Moderate	Minor	Minor
	Low	Moderate	Minor	Minor	Not Significant
	Negligible	Minor	Minor	Not Significant	Not Significant

Where an effect is classified as Major or Moderate, this may be considered to represent a 'significant effect' but should always be subject to professional judgement and interpretation, particularly where the sensitivity or impact magnitude levels are not clear, or are borderline between categories, or the impact is temporary or intermittent.

The Level of Noise Effects matrix provided within Table 26 therefore provides a guide to decision making but is not a substitute for professional judgement.

Construction Vibrations
The impact of construction vibration upon existing residential receptors was determined with reference to the BS 5228-2. The impact of construction vibration upon existing residential receptors is as detailed in Table 27 below.

TABLE 27: CONSTRUCTION VIBRATION IMPACT MAGNITUDE

MAGNITUDE	DESCRIPTION
High	Threshold value exceeded by 10.0mms^{-1} or more
Medium	Threshold value exceeded between 1.0 to 9.9mms^{-1}
Low	Threshold value exceeded between 0.3 to 0.9mms^{-1}
Negligible	Threshold value of 0.3 mms^{-1} not exceeded

4.3 LAND COVER AND LAND/SEA USES

4.3.1 Study Methodology

The methodology comprised four main elements:

1. A preliminary desktop study to familiarise oneself with the study area;
2. A site survey;
3. A secondary literature review to combine the findings of the initial research and site observations;
4. Final evaluation of the current situation.

An assessment of the potential impacts of the Scheme on land cover and land/sea uses was carried out once the baseline was established.

Preliminary Literature Review
A preliminary literature review focused on the existing information on historic land cover and land/sea use studies within the AoI. A particularly important component during the review process was the analysis of satellite images on the *Google Earth* platform.

Integration and assimilation of the data collated during the review provided a framework for the formulation of a landscape character assessment and the design of a land/sea use classification. Care was taken to ensure that the distinction between different landscape types and land/sea uses was maintained. Once the draft classification had been finalised, a rough map of the land cover and land/sea uses in the area was drawn.

The preliminary literature review also included a review of the relevant national policy. The most important documents which were consulted included the STRATEGIC PLAN FOR THE ENVIRONMENT AND DEVELOPMENT (SPED, 2015) and the SOUTH MALTA LOCAL PLAN (2006). This helped provide a wider context for the proposed development.

Site Survey
The walk-over survey took into account all of the features and attributes which contribute towards the character of the area. It focused on the present use/s of the proposed Scheme site and surrounding area. Revisions to the draft map which had been designed during the initial literature review stage were made on site.

Secondary Literature Review
The map and general observations made during the site survey underwent a process of integration and analysis. Emphasis was placed on the assimilation and synthesis of information to be used to develop integrated descriptions of the area and its component landscape types and land/sea uses. Geographic Information Systems (GIS) were used to create the land cover and land/sea uses map.

Evaluation
An evaluation of the current land cover and land/sea use categories was undertaken to assess and provide judgement related to the inherent sensitivity of the landscape. This included analysis based on the proximity of the different land/sea uses to the Scheme. Current landscape condition (or quality) was based on qualitative judgements about the physical state of the landscape from visual, functional and ecological perspectives. It also reflected the state of repair of individual features and elements which make up the character of the area.

4.3.2 Baseline Conditions

Within the Scheme Footprint

Terrestrial
The abandoned ex-Jerma Palace hotel building and its peripheral facilities occupy a large percentage of the Scheme site. These buildings are mostly empty, stripped of from their original apertures, furniture and finishing features. Since they have been abandoned for nearly 20 years, the buildings have fallen into a serious state of disrepair.

Traditional saltpans are found along the coastal edge in the eastern and southern areas of the Scheme site. They are no longer actively used, but remain a unique feature of the Maltese rural coastline. The remaining coastal zone within the site footprint comprises of open foreshore; most of which comprises of undisturbed and rugged exposed limestone. In contrast, the foreshore to the south has been concreted over to form a smooth surface, which is easier to navigate on foot.

The perimeter of the Scheme is blocked by several large pre-cast blocks due to safety concerns. However, an entrance has been made by vandals on the south of the site allowing the area to be accessed by the public. It is through this illegal access

point that people are able to access the foreshore. People therefore, do frequent the site, specifically the foreshore, for informal recreational purposes such as sunbathing, coastal walks and fishing.

The Western side of the site differs in character. Landscaping areas surround the grounds of St Thomas tower, while a road running north to south bisects the scheme site, creating a physical separation between the ex-Jerma Palace site and the tower.



FIGURE 35: DERELICT EX-JERMA PALACE HOTEL BUILDINGS (MAY 2026)



FIGURE 36: SALT PANS WITHIN THE CONFINES OF THE SITE (MAY 2026)



FIGURE 37: SECTION OF THE NATURAL FORESHORE (MAY 2026)



FIGURE 38: GROUNDS AROUND ST THOMAS TOWER (MARCH 2025)

Marine

There is no marine area within the confines of the site boundary. However, a small sea wall, included within the confines of the Scheme site, protrudes from the southern boundary. It has a few small steps leading down to the sea, making it a convenient spot to embark and disembark small vessels.



FIGURE 39: SMALL SEA WALL, WITH ACCESS STEPS, PROTRUDING OUT FROM THE SOUTH OF THE SITE (MAY 2026)

Within the 100m Buffer Zone

Terrestrial

Residential accommodation dominates the western side of the AoI. The housing comprises of a mixture of spacious villas, traditional houses and a few modern apartment blocks. The streets are generally quite small, with pavements and parallel parking spaces on either side.

In the centre of the AoI, between the residential area and the ex-Jerma hotel site stands the historic St Thomas Tower. It is the largest watch tower built in the era of the Knights of St John as part of the national defense system in the Maltese islands. The interior has recently been refurbished to accommodate the national piracy and corsair museum.

The coastal zone within the AoI is typical of an urban Maltese coastline, with a flat promenade providing ideal opportunities for walking and running. Disturbed areas and small coastal garrigue communities lie between the promenade and sea. Two

additional areas containing salt pans are also present on the coast. One of these areas is located to the north of the site, whilst the other is located to south.



FIGURE 40: VILLAS, TRIQ IT-TORRI (GOOGLE EARTH)

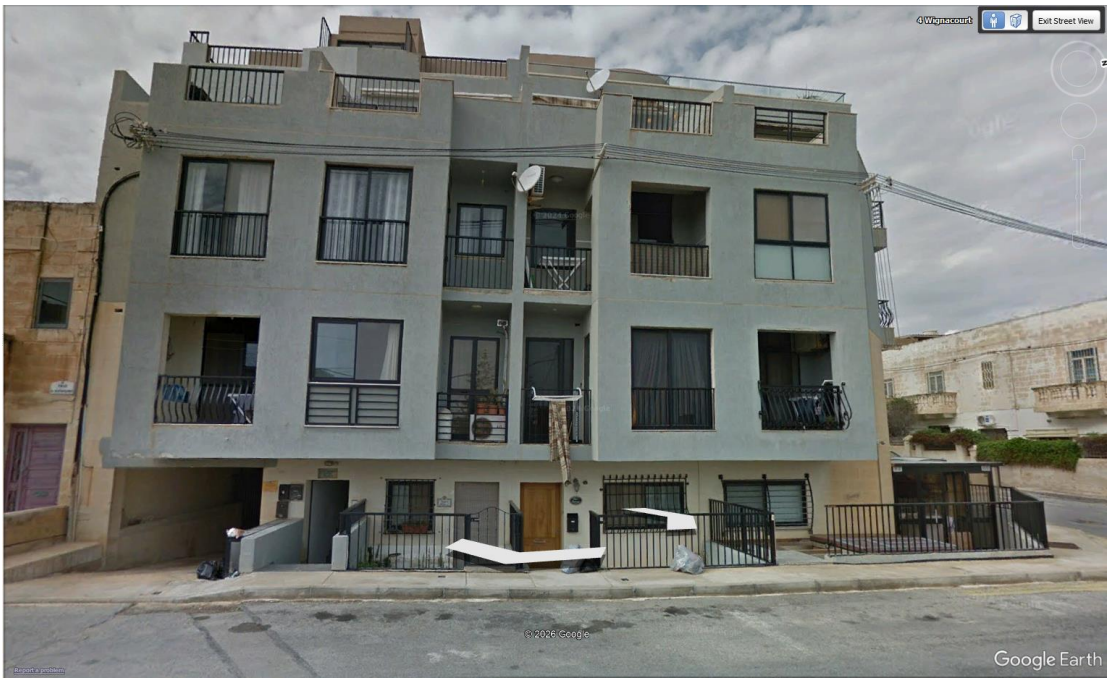


FIGURE 41: MODERN APARTMENT BLOCK, TRIQ IL-KATACOMBI (GOOGLE EARTH)



FIGURE 42: TERRACED HOUSES, TRIQ DE ROHAN (GOOGLE EARTH)



FIGURE 43: ST THOMAS TOWER (MARCH 2025)



FIGURE 44: WIDE PAVED PROMENADE IN THE NORTH OF THE STUDY AREA (MARCH 2025)



FIGURE 45: DISTURBED AREA BETWEEN THE PROMENADE AND SEA, TO THE SOUTH OF THE SITE (MARCH 2025)



FIGURE 46: COASTAL GARRIGUE AREA (MAY 2026)

Marine

Due to the natural configuration of the peninsula, the Scheme site is surrounded by sea to the north, east and south. As per the Local Notice to Mariners No. 076 of 2026, the marine area to the north is a designated swimming zone. Such areas are demarcated with bouys and ropes to prevent vessel entry. Swimming ladders and walkways are also typically installed along the coast in the summer months to enable swimmers easy and safe access into the sea. Despite the cordoned off safe swimming area, some people also swim outside of such areas. Due to the designation of this swimming area, the foreshore is frequented by both locals and tourists for relaxation time, sun bathing, swimming, fishing and socialising.

Outside of the swimming zone, there are no restrictions on vessel activity. However, due to the natural rocky configuration of coastline and relatively shallow bathymetry, mooring and navigation options are limited to the small seawall. Despite this, during the summer months, private vessels sometimes anchor in the area for the day to enjoy the peace and quiet of the locality.

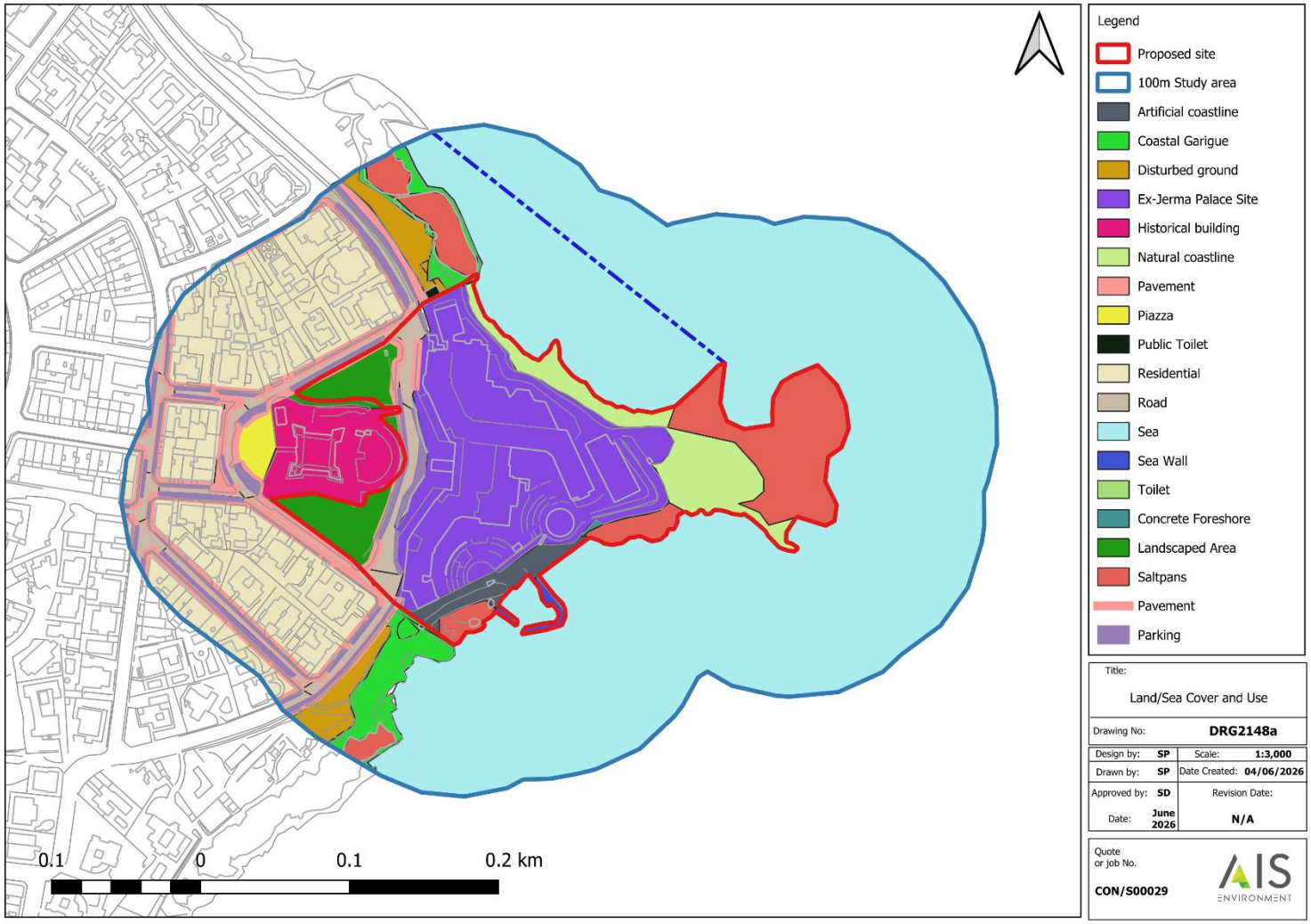


FIGURE 47: LAND AND SEA USES IN THE STUDY AREA

4.4 LANDSCAPE CHARACTER AND VISUAL AMENITY

4.4.1 Study Area

The zone of theoretical visual influence (ZTVI) within a range of 3.0 km from the Scheme was identified using Arc GIS Software as indicated in Figure 48. The ZTVI was based on the highest structure on site of +32m above MSL. The software illustrates a theoretical area where a human receiver (sensitive receptor) would be able to see the highest point of the proposed development. The basemap used incorporates a Digital Terrain Model for the Islands with a 1m resolution, thus taking into consideration all topographical features, excluding trees, buildings and other forms of visual intrusions.

The receptors found along the chosen viewpoints are:

- Residents who can view the Scheme from their homes or residences
- People walking in the streets, roads which have views of the Scheme or parts thereof
- Passengers and drivers in vehicles on the roads who would have views of the Scheme

A total of ten viewpoints were selected, including both short and long-distance views; the locations are shown in Figure 48. Each photograph was taken at a height of 1.5m above ground level and with a horizontal angular field of view of 39.60. The photographs for all viewpoints were taken on the 18th December 2024 between 14:00hrs and 15:00hrs. Each viewpoint has been analysed to assess the characteristics of each view, and the key visual elements that make up the sites visual character.

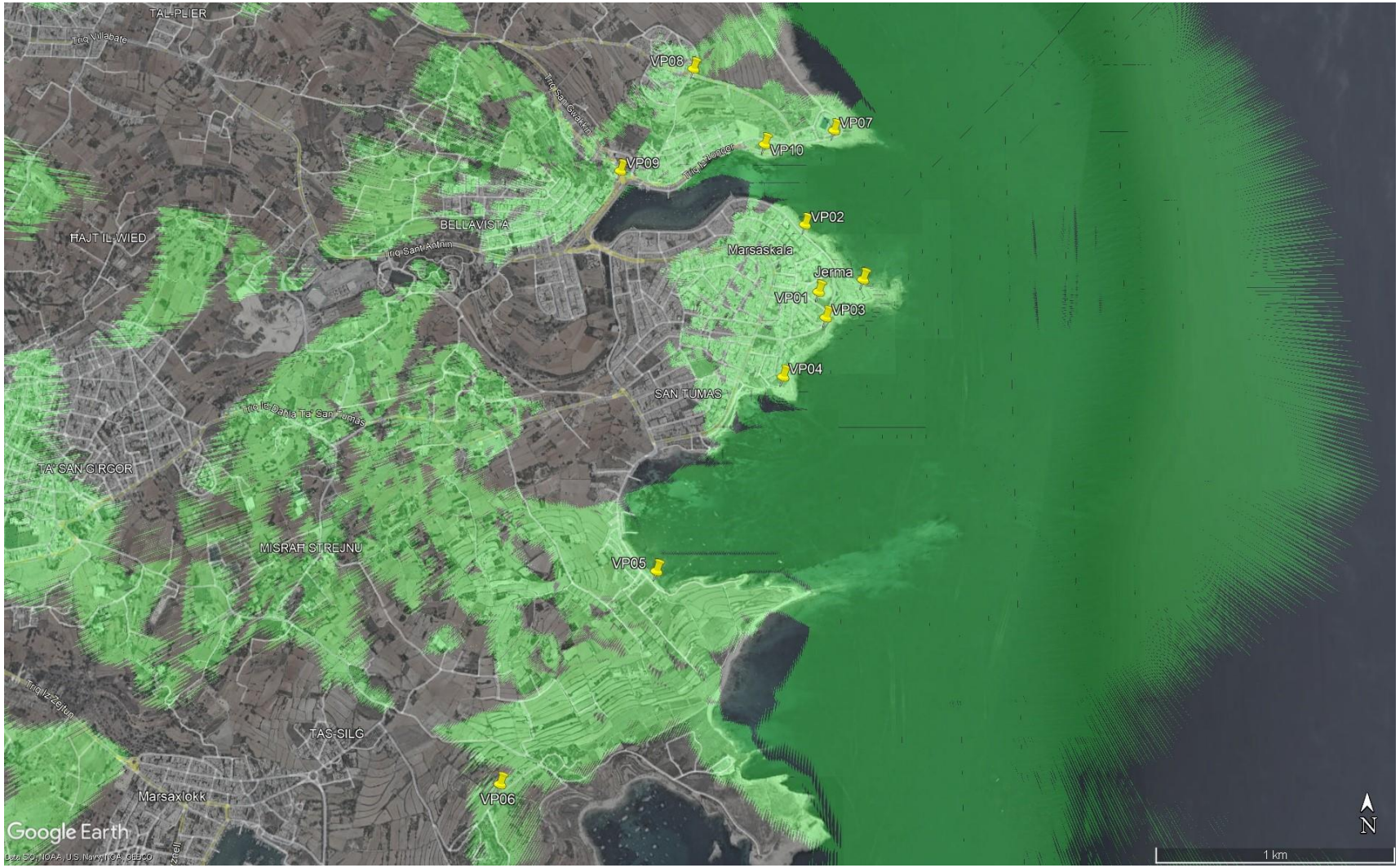


FIGURE 48: VIEWSHED ANALYSIS (IN GREEN) SHOWING THE SELECTED VIEWPOINT LOCATIONS

4.4.2 Study Methodology

The Scheme site's landscape character and visual amenity was described in detail. The number of receptors and their sensitivity to the Scheme at each viewpoint has been analysed and justified. Baseline surveys were determined through a desk study and field survey showing panoramas of each viewpoint.

The desk study incorporated a review of the following literature:

- A review of the features present within satellite images (aerial photographs) of the area to analyse land use trends;
- Reference to land use maps presented in the PDS and EIA;
- Research on previous environmental and planning studies undertaken in the area, historic maps and legislation and policy documents;
- A comprehensive field survey shall be conducted in accordance with the GUIDELINES FOR LANDSCAPE AND VISUAL IMPACT ASSESSMENT (The Landscape Institute and IEMA, 2013). This survey shall provide a delineation of landscape character areas and the identification of potential sensitive receptors in accordance with the Guidelines.

Assessment Guidelines

Landscape Character and Impact Assessment

THE GUIDELINES FOR LANDSCAPE AND VISUAL IMPACT ASSESSMENT, 2ND EDITION (The Landscape Institute and IEMA, 2002) were adopted to assess the landscape character of the scheme site. The existing structures and natural features of the site were examined and compared with the character of the proposed development.

Visual Amenity Impact Assessment

THE GUIDELINES FOR LANDSCAPE AND VISUAL IMPACT ASSESSMENT, 2ND EDITION (The Landscape Institute and IEMA, 2002) shall be adopted in this impact assessment study. The assessment of the impact on the visual amenity from the sensitive viewpoints would be assessed following approval of the Method Statement by the ERA.

The baseline photos were taken according to established standards and a photomontage of how the proposed development will look from the viewpoints will be prepared and used for assessment purposes. All viewpoints chosen were taken at locations where the Scheme site would be clearly visible.

4.4.3 Baseline Conditions

According to the STRUCTURE PLAN of the Maltese islands, Landscape is defined as the "*visual aesthetic component of the surrounding environment – that is, the views as appreciated and interpreted through the sense of sight*". The Landscape Assessment Study of the Maltese islands divides the islands into 61 landscape character units. Each unit encompasses a number of characteristic features that are confined to a particular tract or region of land. The landscape units falling within the areas of influence of the Scheme are listed and described in Table 28.

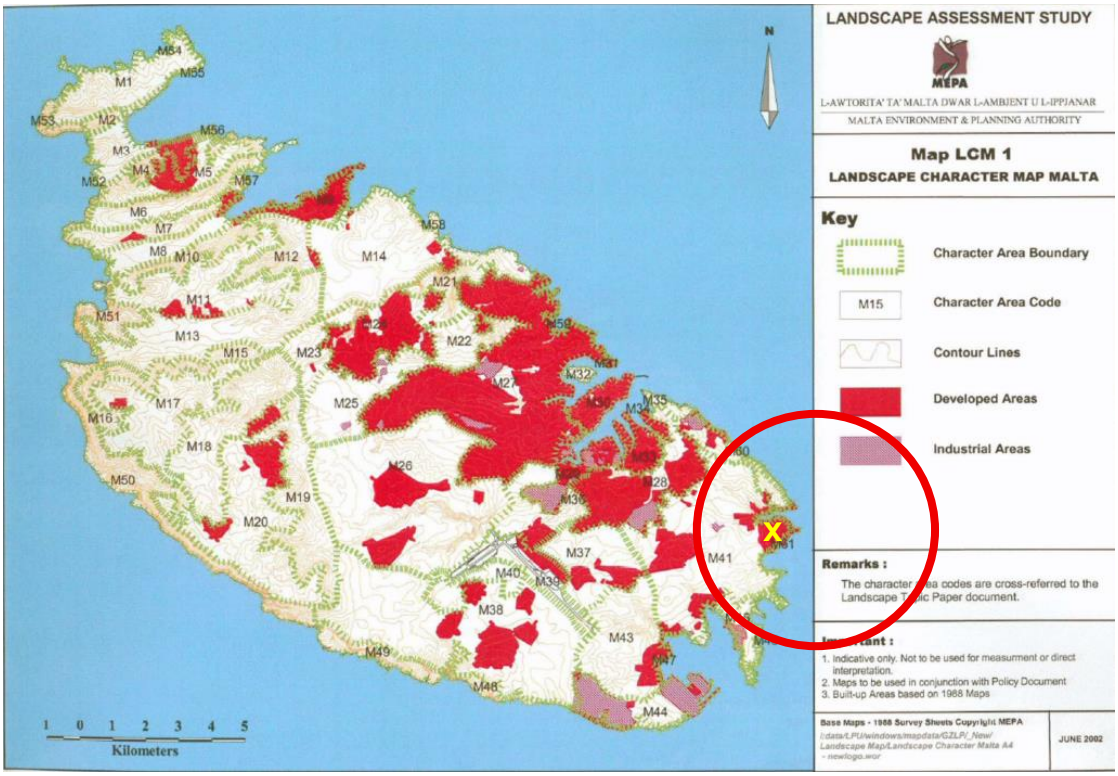


FIGURE 49: LANDSCAPE CHARACTER AREAS, APPROXIMATE SITE LOCATION MARKED BY YELLOW X AND APPROXIMATE 3KM STUDY AREA INDICATED BY RED CIRCLE (SOURCE: MEPA, 2004)[5]

[5] MEPA (2004). Landscape Assessment of the Maltese Islands. Review of the Structure Plan for the Maltese Islands.

TABLE 28: LANDSCAPE UNITS

SITE	GENERAL FEATURES	ENHANCING FEATURES	DETRACTING FEATURES
M41 / M61 Zejtun – Marsaskala Hinterland	This region is composed of gentle hills with intersecting shallow valleys. The two sizeable towns of Zejtun and Marsaskala are found in this area, along with several small hamlets. A number of notable roads, for example Tal-Barrani, cut through the region. Outside of the towns, the area is predominately agricultural hosting farms, warehouses and small industries, as is typical in the Maltese rural environment. There are 3 large visual distinct facilities: a hard stone quarry, sewage treatment plant and waste recycling plant. The coastline is indented with two bays: Marsaskala Creek and St Thomas Bay. The rest of the coast is rocky with some distinctive wave cut platforms.	Visual attractive built features in the area are the parish churches, old town cores, along with several scattered historic chapels and buildings. The natural coastline is also visually spectacular with a variety of distinct features ranging from Marsaskala Creek with its picturesque promenade, traditional salt pans near il-Gzira, Ic-Cirku (a natural cultivated subsidence structure), white cliffs of Munxar Point and the blue clear sea.	Modern developments on the outskirts of the towns are engulfing and detracting away from the visual appeal of the traditional buildings. The remaining traditional boathouses in Thomas Bay are falling into a state of disrepair creating a visual eyesore along the coastline. Similarly, abandoned small rural structures blot the landscape outside of the towns. The rural landscape is also degraded by the presences of the small structures which are still in use. The Sant Antnin sewage and solid waste treatment plant is a significant visually detracting feature in the area. The surrounding vicinity is further degraded by the presence of an operational quarry.
M42 / **M60**	This region comprises of a coastal strip of abandoned and dry agricultural land, extending from	Historic features are the main visual attractions in the area, most notedly batteries and forts, the largest of	The coastal area is considered to be in very poor condition with high rates of littering and building abandonment.

Site	General features	Enhancing features	Detracting features
Xgħajra Escarpment	Rikasoli to Zonqor. The coastal border is defined by rocky coastline. The main settlement in the area is Xgħajra, as well as farms, forts and batteries, an industrial estate and filming sets.	which is Rinella battery. While the coastal location provides long distance sea views of Valletta and Sliema.	The poor visual appeal of the coastline is further added to by the presence of a sewage outfall pipe. Further inland, the Rikasoli industrial estate creates a large eyesore in the area. It has developed overtime in a haphazard manner with no/little planning. Furthermore, many of the buildings are of poor quality and lack adequate maintenance. The depression within the estate itself has turned into a waste accumulation area over the years. The estate entrance is flanked by two large redundant towers. Due to the filming activities in the area, the coastline around the Mediterranean Film facility is often scattered with film props, ancillary facilities and even litter which detracts away from the overall visual amenity.

The Scheme falls under the provisions of the SOUTH MALTA LOCAL PLAN, 2006 (SMLP). The plan does not go into detail regarding Areas of High Landscape Value. However, in accordance with the maps presented on the PA map server, defined Areas of High Landscape Value are located to the south of the Scheme site, within the study area (refer to Figure 50). While the Scheme site itself does not lie within one of the defined areas, VP 4 and 6 are on the edge of such an area; and VP5 is within a defined Area of Landscape Value.



FIGURE 50: AREAS OF HIGH LANDSCAPE SENSITIVITY (AHLSS) AROUND THE SCHEME SITE (RED CROSS) (SOURCE: PA MAPSERVER, 2026)

4.5 GEOLOGY, GEOMORPHOLOGY, HYDROGEOLOGY AND SOILS

4.5.1 Study Area

The study area for the Geology, Geomorphology, Hydrogeology and Soils study was restricted to the site footprint itself.

4.5.2 Study Methodology

A literature search in relation to previous geo-environment survey work relevant to the AoI was undertaken. This, together with the Consultant's own knowledge of the area, provided the context for the baseline surveys.

The study established the existing geology, geomorphology and hydrogeological baseline. This involved:

- Identification and description of the geology, geomorphology and hydrogeology of the site within the Area of Influence;
- Identification, mapping and description of any structural features (such as faults) that may be present, outcrop formations, members, or bed sub-divisions, including their palaeontological content;
- Identification and description of aquifers, water courses, drainage patterns; surface run-off; and springs and wells (if any);
- Identification of features that are protected by legislation, or which warrant such protection and their appropriate level of protection, as necessary
- The stability of the walls of the proposed excavation will also be determined by the field survey.

The conservation importance of geologic, geomorphologic and hydrogeological features were determined by reference to the Marsascala Local Plan, Minerals Subject Plan and the Earth Conservation Strategy (The British Nature Conservancy Council, 1991) as well as the Strategic Plan for Environment and Development SPED, drawn in 2015 to replace the Structure Plan for the Maltese Islands drawn up in 1990.

4.5.3 Baseline Conditions

Geology

The field geological survey revealed that the rock formations and members preserved in the Study Area include:

1. Lower Coralline Limestone formation
    - il-Mara Mb

2. Globigerina Limestone formation
    - Middle Globigerina Limestone and
    - Lower Globigerina Limestone Mb

The overlying rock formations: Blue Clay, Greensand and Upper Coralline Limestone have not been preserved in the Study Area. Whilst quaternary deposits, occur mostly in the form of surface calcrete crusts, within the Study Area.

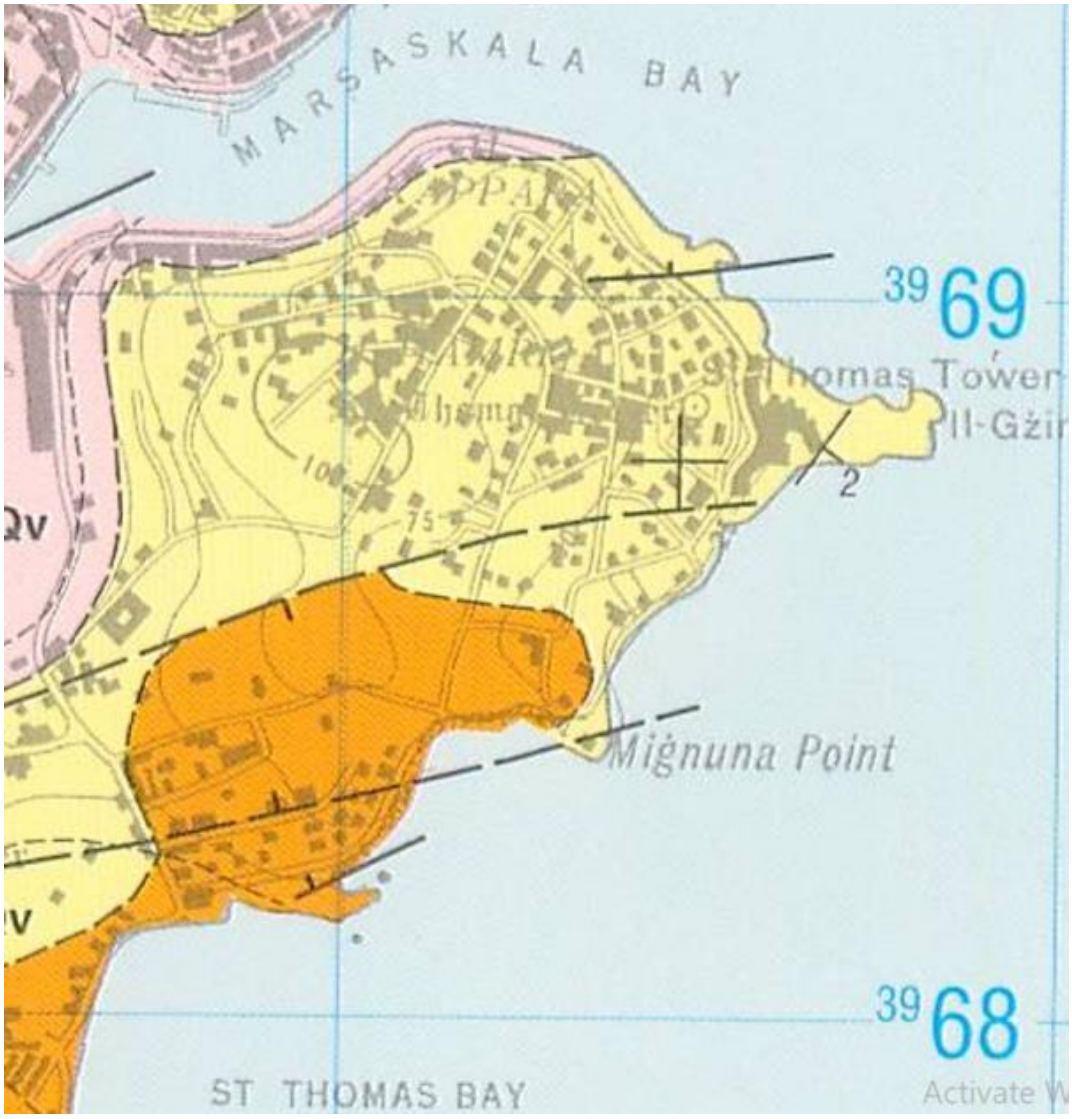


FIGURE 51: GEOLOGICAL MAP OF MARSASCALA (OED, 1993)

The Globigerina Limestone rock formation is subdivided into three layers (Rizzo, 1932). Only the lower two members are present in the Study Area.

Middle Globigerina Limestone

- In exposure it is usually white and highly fractured with anastomosing cracks which render it highly vulnerable to weathering and erosion and in contrast to bounding members, it usually forms a more gently sloping landscape. When freshly excavated it is bluish grey in colour. The basal 1 - 0.5m usually consists of a competent white, greyish white or yellow limestone rich in foraminifera and phospho-glauconitic clasts that pass upwards into a forma-coccolith marly limestone and marl interbeds of the order of 20cm to over 2m thick and often finely laminated. (Bennett, 1980).

- On the geological map it is seen to disappear to the west due to the presence of a fault. However, in the field it can be seen exposed inside the trench that surround the St Thomas Tower where it is about 1.8m thick (Figure 54).

- It is best exposed to the south away from the Ex-Jerma Palace Hotel where it forms a high cliff marking the northern boundary of St Thomas Bay (Figure 55).

- This bed is the most widespread and most representative of the bed composing the Middle Globigerina and attains its maximum thickness of 30m south of Grey Marl facies where Bennett, (1980) has established its type section. Giannelli and Salvatorini (1972) record a maximum thickness of over 45m at Fomm ir-Rih.

- The lower half of the unit is often characterised by silicified limestone and chert nodules and lenses. Chert nodules and thin lenses can best be observed at Fomm ir-Rih where they occur in layers about 25 cm thick in the bedding plane. The irregularly shaped concretions have a diameter of about 15-25 cm. Less conspicuous is a yellowish grey to greyish green chert.

- This rock unit is best exposed in the cliff section marking the western boundary of St Thomas Bay but it is very thin or is absent from the Jerma Palace site.

- This rock unit is characterised by its sparse macrofossils mainly consisting of rare bivalve shells.

- Owing to its marly composition this rock unit weathers very easily on exposure. This rock type deteriorates rapidly when exposed to the atmosphere - a phenomenon commonly known as weathering. Hence a rock which appears to have desirable structural properties when freshly exposed may be unacceptable after having been allowed to wear there for a few months. In some extreme cases soft rock specimens left exposed to the atmosphere between preparation and testing may disintegrated into heaps of rubble within a few days.

- The thin phosphate pebble bed marks its rapid transition to the Upper Globigerina Limestone Member is absent from this region.

Lower Globigerina Limestone

- It consists of pale-yellow brown to yellow medium grained moderately weak massive, often intensely bioturbated limestone. A thin phosphate pebble bed (sometimes two) and scour surface is developed at the top of the Lower Coralline Limestone. The rock is composed of whole and fragmented tests of microforaminifera. The macrofossils usually present are echinoid spines and echinoid tests and whole or fragmented bivalve shells. Trace fossils are commonly represented by Thalassinoides.

- This rock unit can be seen on the shore platform from the Beach Post on the east to the fault that interrupts the exposure on the west

- The Lower Globigerina Limestone in this region is about 20m thick.

- Thin Phosphate conglomerate bed marks the sharp transition to the Middle Globigerina Limestone Mb.

Phosphate pebble bed or conglomerates mark the contact between the Lower and Middle Globigerina and the contact between the Middle and Upper Globigerina Limestone Members. This bed is only about 3cm thick and is composed of small rounded brown granule to pebble-size clasts.

Quaternary deposits consist of brown calcrete crusts and a couple of consolidated small phosphate pebble dunes. The pebbles originate from the weathering of the phosphate pebble bed at the contact between the Lower Globigerina Limestone and the Middle Globigerina Limestone.



Figure 52: Exposure of Lower Globigerina Limestone at the shore platform and a thin phosphate conglomerate bed succeeded upwards by the lowermost beds of the Middle Globigerina Limestone Mb



FIGURE 53: PHOSPHATE CONGLOMERATE BED SEEN IN THE FOREGROUND AND LOWER GLOBIGERINA LIMESTONE EXPOSED ON THE SHORE PLATFORM. THE EX-JERMA PALACE HOTEL CAN BE SEEN IN THE BACKGROUND

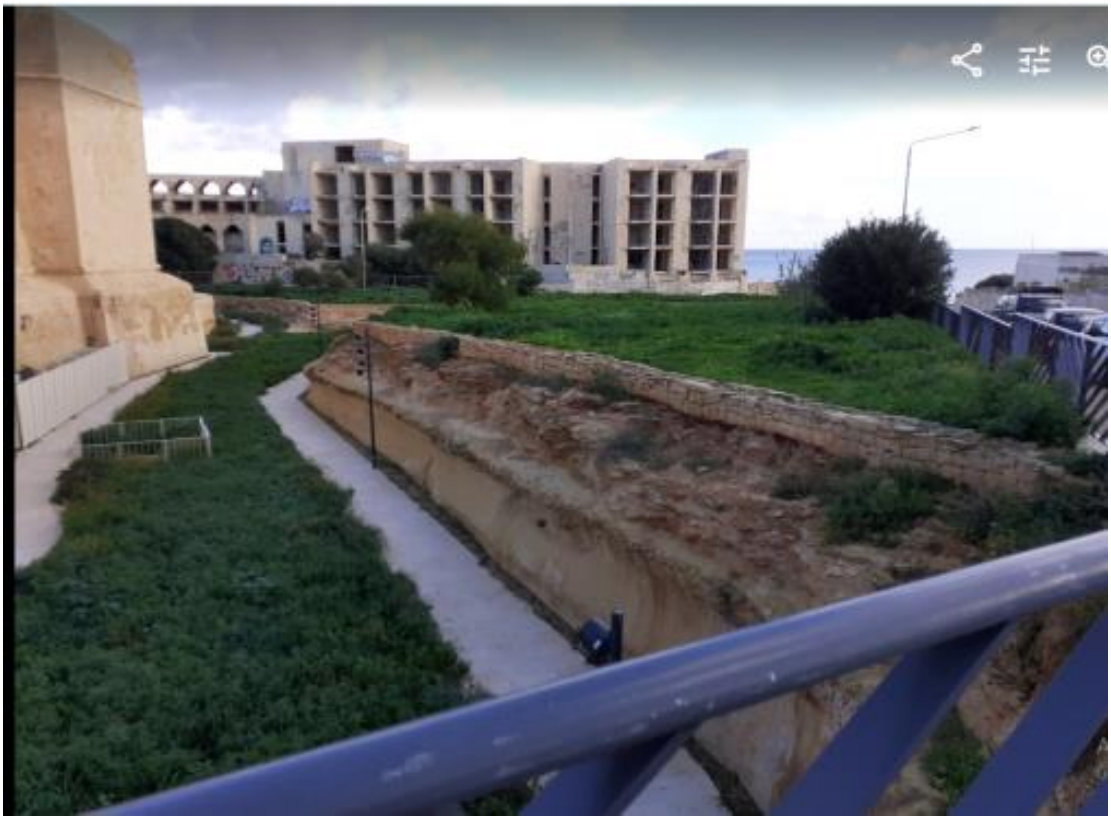


FIGURE 54: PHOTOGRAPH SHOWING THE TRENCH THAT SURROUNDS THE SAN TUMAS TOWER WHICH EXPOSES LOWER GLOBIGERINA LIMESTONE AT THE BASE AND MIDDLE GLOBIGERINA LIMESTONE (ABOUT 1.8M THICK AT THE TOP)



FIGURE 55: LOW CLIFF ON THE NORTHERN MARGIN OF ST THOMAS BAY ABOUT 6M HIGH, EXPOSING GREY MARLS AND MARLY LIMESTONE OF THE MIDDLE GLOBIGERINA LIMESTONE MB

Assessment of Excavation Material

The rock samples examined on site were composed of good quality Lower Globigerina Limestone. This rock normally has an average unconfined compressive strength ranging from 8MPa to 20MPa.

Material from the proposed excavation is inert and may be used as aggregate for mass concrete. Nowadays; it is finding frequent use to rebuild rubble walls when available in average fragments of a size ranging from about 10cm to 30cm.

Slope Stability

The terrain at the site is flat and is composed of Lower Globigerina Limestone a competent rock which is not subject to any movement.

However, the rock is fractured and depending on discontinuity orientation with respect to the proposed excavation boundary it may be subject to collapse (Figure 56). Monitoring of excavation as it proceeds is recommended.

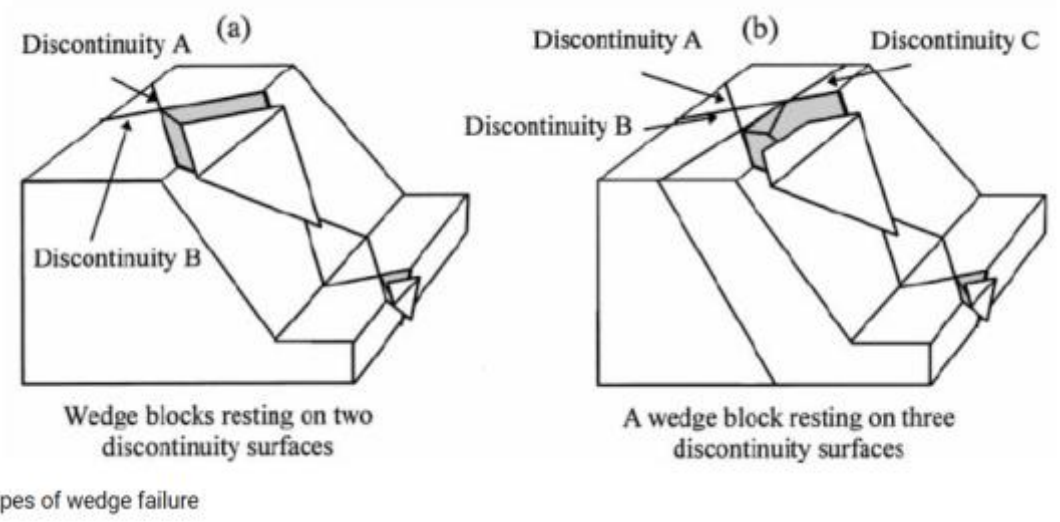


FIGURE 56: 3-D DIAGRAMS SHOWING TYPICAL ROCK WEDGE FAILURE

Geomorphologic Features

- Rounded hill slope
  The ex-Jerma Palace Hotel lies at the foot of the hill slope of Marsascala that takes the shape of a rounded hill with a nearly flat top and terminating at the shore platform that lines the coastline.

- Shore platform
  - The coastline close to the hotel is in the form a long shore platform that extends from the beach post on the south to il- Gzira and further north.
  - The phosphate pebble bed that marks the transition from Lower Globigerina Limestone to Middle Globigerina Limestone forms a weak bed. Hydraulic action of wave breakers act on this weak horizontal bed. Erosion of the weak overlying conglomerate bed thus exposes the top of the Lower Globigerina Limestone which is a flat surface. This contact recedes landward as the overlying bed is eroded, producing a planar surface which marks the shore platform.
  - The Lower Globigerina Limestone is bedded. North of the fault which raises the top of the Lower Globigerina, exposes bedding planes which when acted upon by the hydraulic action of wave breakers lift and break the limestone beds forming a boulder scree composed of planer rock slabs that mark the landward boundary of the shore platform.
  - As bedding planes are flat and have a horizontal attitude erosion also generate a roughly flat surface.
  - At the beach post minor NE-SW trending faults lower the top of the Lower Globigerina Limestone below sea level. The rock expose at sea level is Middle Globigerina Limestone.

- Wave action on Middle Globigerina Limestone produces undermining and collapse of the overhanging marl and marly limestone beds. In this way wave action generates a cliff which bounds the northern margin of St Thomas Bay.

- Il-Gzira headland

- Low cliff exposing Middle Globigerina Limestone marls on the west shoreline of St Thomas Bay.

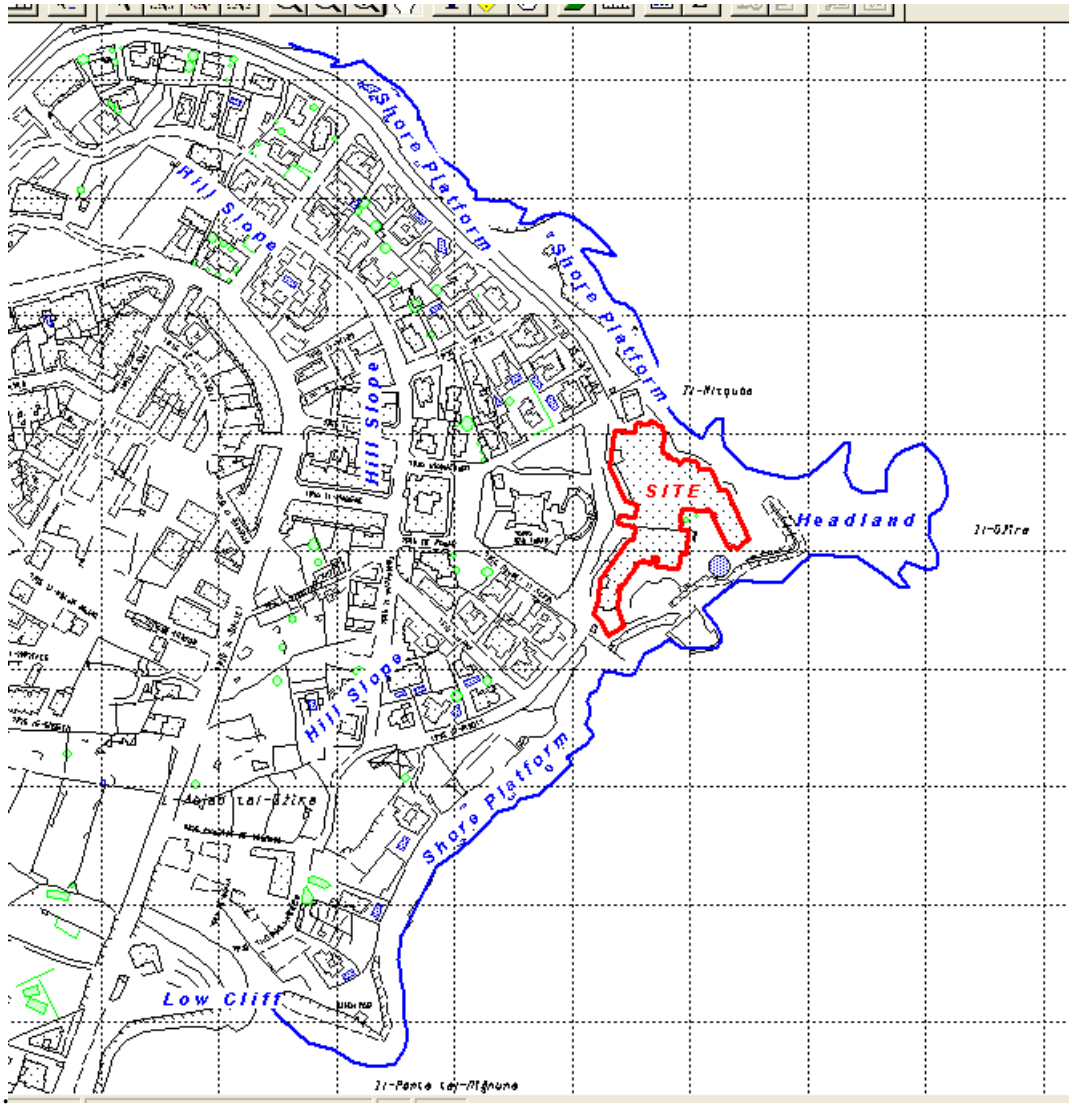


FIGURE 57: MAP SHOWING THE GEOMORPHOLOGICAL UNITS IN THE ENVIRONS OF THE EX-JERMA PALACE HOTEL



FIGURE 58: PHOTOGRAPH SHOWING PART OF THE SHORE PLATFORM THAT LINES THE COASTLINE ON THE EAST OF THE PROPOSED SCHEME. NOTE THE BOULDERS IN THE FOREGROUND AND THE EX-JERMA PALACE HOTEL IN THE BACKGROUND



FIGURE 59: PHOTOGRAPH SHOWING PART OF THE SHORE PLATFORM ON THE WEST OF THE PROPOSED DEVELOPMENT. ON THE BACKSHORE THE SHORE PLATFORM TERMINATES AT A LOW SCARP COMPOSED OF WEATHERED MIDDLE GLOBIGERINA LIMESTONE

Soils

The soils originally found in the area of influence and in the environs of the site are:

- Xaghra Series
- Tas-Sigra Series
- L-Inglin Complex
- San Biagio Soil Series

However, since the inception of Lang's soil map, with the exception of a corridor running along the coastline, most of the area of influence has been built up. Consequently, it can now be described as 'disturbed area'.

The only area that is not developed is the shore platform which in the Lang's soil map is represented by the Xaghra Soil Series consisting of a rocky shore platform composed of rock – exposed Lower Globigerina Limestone (Figure 21).

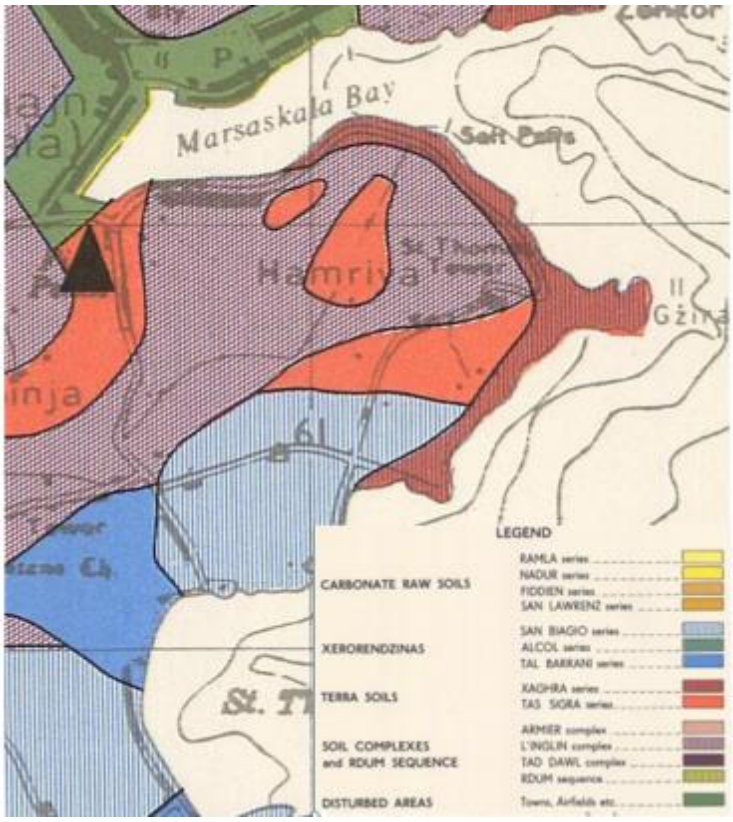


FIGURE 60: LANG'S SOIL MAP (PART OF) OF THE SITE AND ITS ENVIRONS (LANG, 1962)



FIGURE 61: PLAN OF MARSASCALA SHOWING THAT THE SITE IN THE REGION OF THE EX JERMA PLACE HOTEL IS COMPLETELY DEVELOPED. (SOURCE: HTTPS://PAMAPSERVER.PA.ORG.MT/



FIGURE 62: BARE ROCK EXPOSED AT THE COASTLINE REPRESENTING THE XAGHRA SOIL SERIES

Hydrology and Hydrogeology

Important hydrological and hydrogeological characteristics relevant to the present reconstruction project are:

The catchment upstream of the site

- The hydrological catchment upstream of the site is shown in Figure 63. It covers an area of approximately 105,000 m^2.
- Considering that the area is fully developed, the path taken by runoff is controlled by the road network.
- During a rain event on 2 Feb 2026, it was seen discharging next to the eastern margin of the ex-Jerma Palace Hotel.

Runoff characteristics

- The area upstream of the proposed development is a conical hill.
- There are no watercourses. The flow of runoff is controlled by the road network.
- Discharge is at the coastline and it is partly of a diffuse nature.

The Mean Sea Level Aquifer

- Fractured Lower Globigerina Limestone may act as an aquifer. However, the site lies at the coastline where the thickness of the Mean Sea Level Aquifer (MSLA) is zero (Figure 64), which means that the fractured rock underlying the site is saturated with seawater.
- It is also noted that the site lies outside of the Mean sea level aquifer water protection zone (Figure 65).

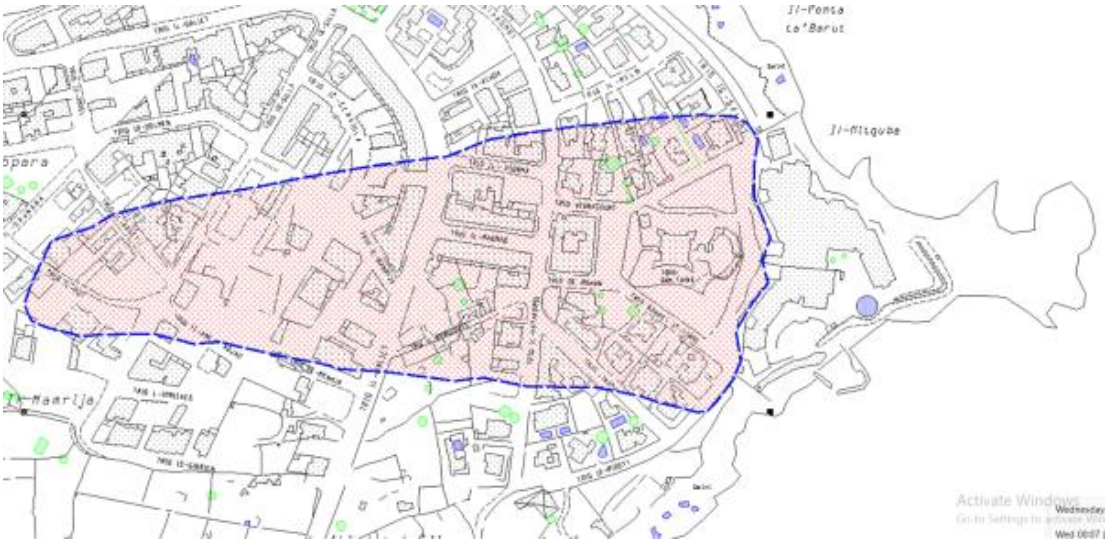


FIGURE 63: MAP SHOWING THE CATCHMENT UPSTREAM OF THE SITE

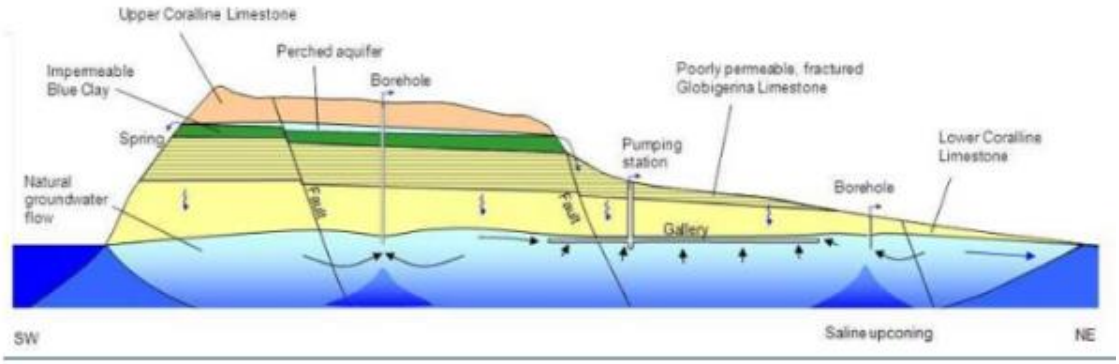


FIGURE 64: CROSS SECTION SHOWING THE GROUND WATER BODY TAPERING OUT AT THE COASTLINE

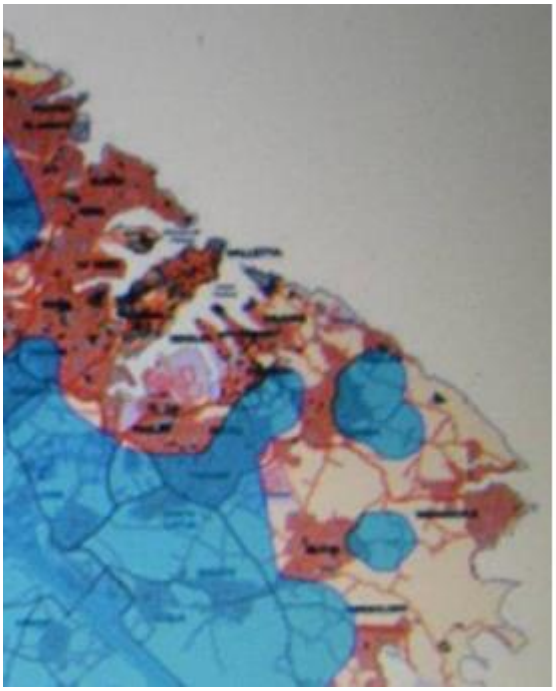


FIGURE 65: MAP SHOWING THE GROUNDWATER PROTECTION ZONE IN THE REGION OF MARSASCALA

4.6 WATER BODIES

4.6.1 Study Area

The study area for the water bodies study encompassed the site boundary, St Thomas Tower and immediate surrounding roads.

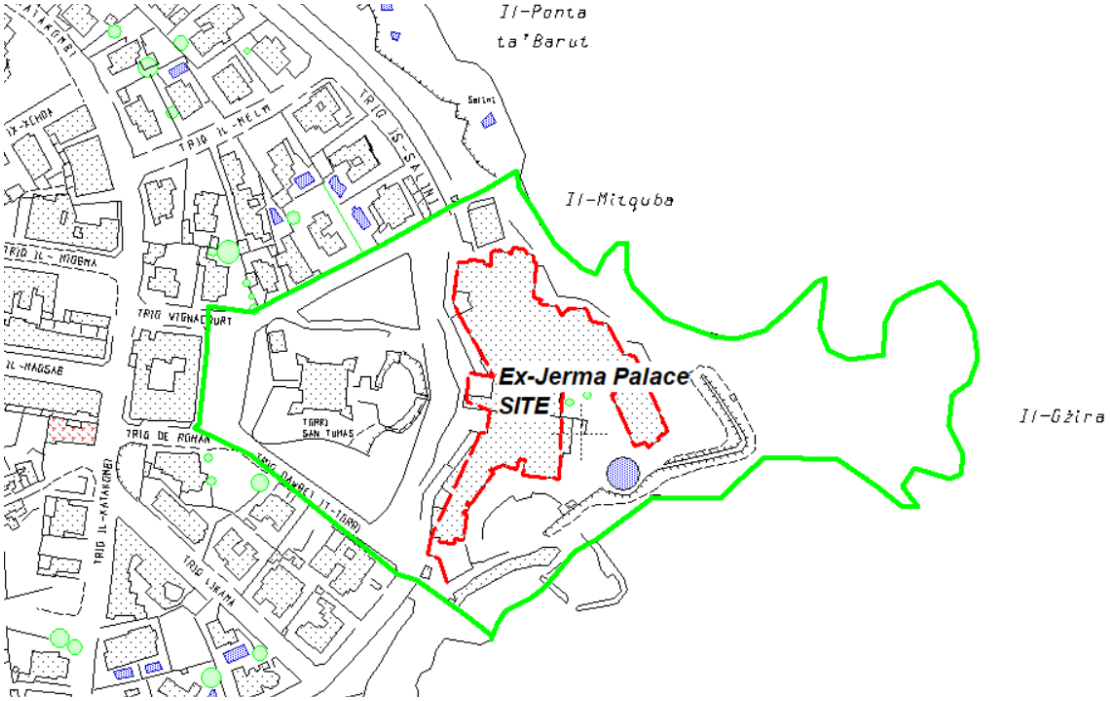


FIGURE 66: AREA OF INFLUENCE FOR WATER BODIES STUDY (GREEN LINE).

4.6.2 Study Methodology

Literature Review

A literature search in relation to previous geo-environment survey work relevant to the AoI was undertaken. This, together with the Consultant's own knowledge of the area, provided a context for the baseline surveys.

Field Survey

Desktop study accompanied by a field survey established the existing water bodies baseline conditions. This involved the identification and description of the water bodies within the Area of Influence; as well as the physical features with which the water interacts (Hydromorphology) such as the shore platform and the seabed within the area of influence.

4.6.3 Baseline Conditions

The Catchment Upstream of the Site

The hydrological catchment upstream of the site is shown in Figure 63. However, considering that the area is fully developed, the path taken by runoff is controlled by the road network.

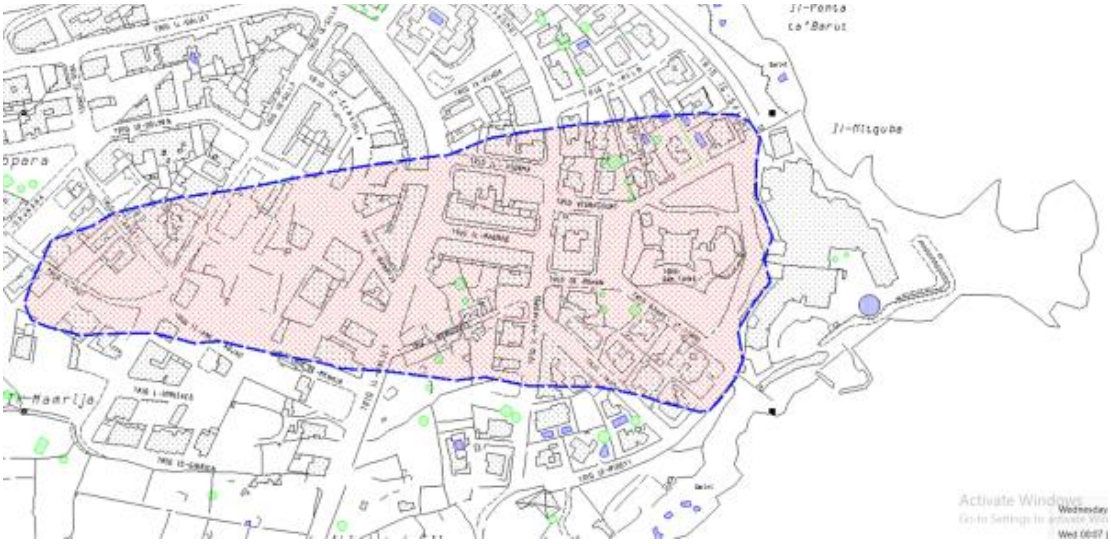


FIGURE 67: MAP SHOWING THE CATCHMENT UPSTREAM OF THE SITE

Runoff Characteristics

The area upstream of the proposed development is a conical hill. There are no watercourses. The flow of runoff is controlled by the road network. Discharge is at the coastline and it is of a diffuse nature.

The Mean Sea Level Aquifer

Fractured Lower Globigerina Limestone may act as an aquifer, however, the site lies at the coastline where the thickness of the freshwater body saturating the mean sea level aquifer is zero. This implies that the fractured rock underlying the site is saturated with seawater. In fact, the site lies outside of the water protection zone.

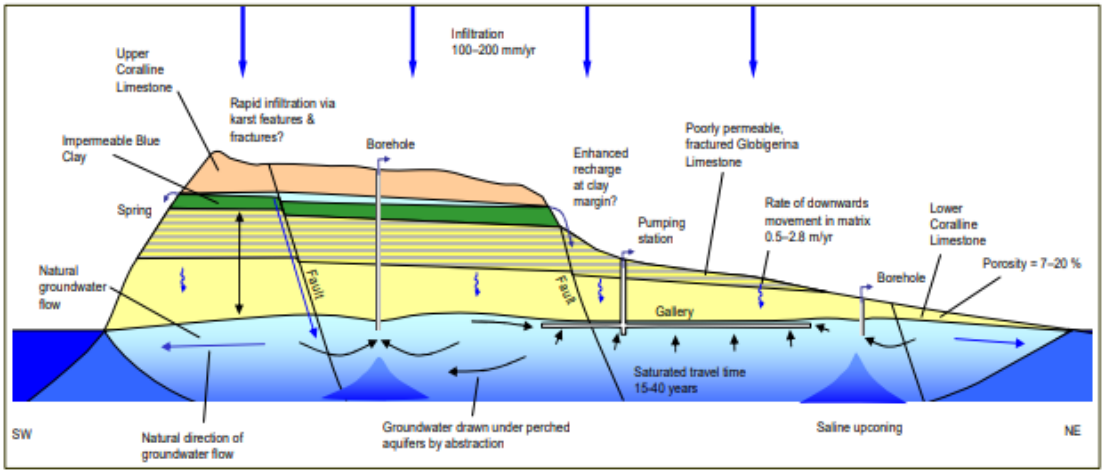


FIGURE 68: MALTA MSLA HYDROGEOLOGICAL CONCEPTUAL SCHEME – NE-SW CROSS-SECTION SHOWING THE THINNING OF THE GROUNDWATER BODY AT THE COASTLINE (SOURCE –ERA 2011- THE WATER CATCHMENT MANAGEMENT PLAN FOR THE MALTESE ISLANDS)

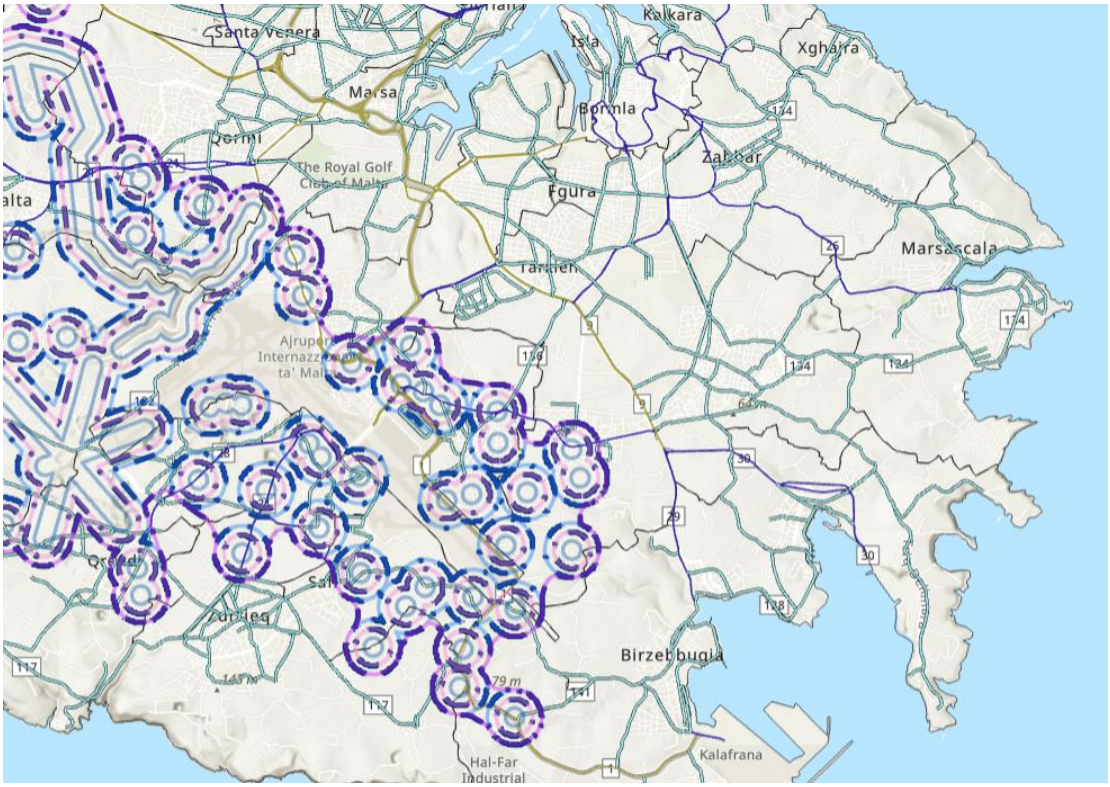


FIGURE 69: MAP OF SOUTH MALTA SHOWING THE GROUNDWATER SAFEGUARD ZONE (SOURCE ERA MAPSERVER)

Marine Environment

The proposed Scheme is located at the coastline. Development along the coastline will have a direct impact on the marine environment either by direct emissions into the sea or by emissions on the shore platform which is washed by wave breakers as well as by direct connection of the platform with the sea through fissures and bedding planes.

4.7 TERRESTRIAL ECOLOGY

4.7.1 Study Methodology

The Consultant carried out a thorough literature review of readily available data and previous studies in the AOI. This included a review of the following sources:

- South Malta Local Plan, 2006
- SPED (Strategic Plan for the Environment and Development)
- FLORA, FAUNA AND NATURAL HABITATS PROTECTION REGULATIONS S.L. 549.44
- Previous environmental studies carried out in the same area (if available)
- TREES AND WOODLANDS PROTECTION REGULATIONS, 2018 (L.N. 258/18)

Following on from the desktop study, the Consultant conducted a broad-brush terrestrial survey within the AOI in May 2026. The Consultant recorded the vegetation assemblages encountered during the surveys. The baseline survey also included a survey of all species present within the site and buffer zone, including their scientific and vernacular name to identify species protected in line with the TREES AND WOODLANDS PROTECTION REGULATIONS (S.L.549.123) and the FLORA, FAUNA, AND NATURAL

HABITATS PROTECTION REGULATIONS (S.L.549.44). Photographic evidence was collected during the field survey.

The report detailed the conservation status and ecological condition of the area and the state of health of its habitats, species and ecological features. All protected, endangered, rare, unique, endemic, high-quality, keystone, invasive/deleterious, or otherwise important species, habitats, ecological assemblages, and ecological conditions found in the area under study were also noted.

4.7.2 Baseline Conditions

A broad-brush terrestrial survey was conducted within the AOI in May 2026. Not all the scheme was able to be surveyed, the inner areas of the scheme were blocked by large blocks making the central and northern portion of the site inaccessible.

Flora

The main ecological components of the scheme site and surrounding AOI comprise of:

- Small patches of disturbed ground with alien/invasive tree species
- Cultivated plants and trees
- Coastal garigue surrounding the scheme dominated by *Limbarda crithmoides* in the supralittoral zone



FIGURE 70 : TERRESTRIAL HABITATS PRESENT WITHIN THE PRPOSED SITE AND AOI

Within the proposed scheme site and the AoI exists patches of disturbed ground dominated by invasive species such as Hottentot fig *Carpobrotus edulis,* Agave plant *Agave sp.* and the Great reed *Arundo donax.*



FIGURE 71: *ARUNDO DONAX* (MARKED AS "1", PRICKLY PEAR (MARKED AS "2") AND *AGAVE SP.* (MARKED AS "3").

Several cultivated plants were found within the Scheme site and AoI such as canary island spurge *Euphorbia canariensis* , and Hoary stock *Matthiola sp. S*everal planted trees were also found around the AoI as well as within the Scheme such species were mainly protected tamarisk trees (*Tamarix sp.*) and as well as non-indigenous species including Daniella wheeping fig tree *Ficus daniella.,* date palms *(Phoenix dactylifera),* the invasive white lead tree *Leucaena leucocephala* and the invasive *Acacia* sp.



FIGURE 72: TAMARISK SP. PLANTATIONS IN AOI

Patches of coastal garigue were present on either side of the site, dominated by *Limbarda crithmoides*, which is an ecological indicator for the supralittoral zone. Within this zone other species were observed including silver ragwort *Jacopea maritima subsp. sicula* which is sub-endemic to Malta and other neighbouring islands. Moreover, several protected species under S.L. 549.44 FLORA, FAUNA AND NATURAL HABITATS PROTECTION REGULATIONS were observed including: caper plants *Capparis orientalis* and the Maltese endemic Mediterranean sea chamomile *Anthemis urvilleana.* Other species observed in this area included the barbary nut iris *Moraea sisyrinchium* and the Maltese sand crochus *Romulea variicolor.*



FIGURE 73: *LIMBARDA CRITHMOIDES* FOUND WITHIN THE SCHEME SITE AND AOI

A list of floral species encountered during the broad-brush survey within the AoI is provided in Table 29. The protected tree species found directly within the site footprint are listed in Table 30.

TABLE 29: SPECIES LIST OF PLANTS OBSERVED DURING BROAD-BRUSH SURVEY

SPECIES NAME	ENGLISH NAME	PROTECTION	TYPICAL HABITAT IN AOI
Arundo donax	Greater reed	None	Disturbed areas

SPECIES NAME	ENGLISH NAME	PROTECTION	TYPICAL HABITAT IN AOI
Capparis orientalis	Caper bush	Schedule VIII of S.L. 549.44	Disturbed areas
Piptatherum miliaceum	Smilograss	None	Agricultural land, disturbed areas
Sonchus oleraceus	Sow thistle	None	Disturbed areas
Malva sylvestris	Common Mallow	None	Disturbed areas
Oxalis pes-caprae	Bermuda Buttercup	None	Disturbed areas
Carpobrotus edulis	Hottentot fig	None	Disturbed areas
Agave sp.	Agave plant	None	Disturbed areas
Acacia sp.	Acacia	None	Disturbed areas
Euphorbia canariensis	Canary Island spurge	None	Disturbed areas
Matthiola sp.	Hoary stock	None	Disturbed areas
Limbarda crithmoides	Coastal fleabane	None	Coastal garigue, disturbed areas
Mediterranean Sea chamomile	Silver ragwort	Endemic, protected under S.L. 549.44 Regulation 26	Coastal garigue
Mesembryanthemum crystallinum	Common ice plant / Crystalline ice plant	None	Coastal garigue
Moraea sisyrinchium	Barbary nut iris	None	Coastal garigue, disturbed areas
Romulea variicolor	Maltese sand crocus	Endemic, protected under S.L. 549.44 Regulation 26	Coastal garigue

SPECIES NAME	ENGLISH NAME	PROTECTION	TYPICAL HABITAT IN AOI
Tamarix sp.	Tamrisk sp.	Schedule II under S.L. 549.44	Disturbed areas

TABLE 30: QUANTITY OF TREE SPECIES AND/OR PROTECTED SPECIES WITHIN THE SITE FOOTPRINT

SPECIES NAME	ENGLISH NAME	PROTECTION	RECORDED AMOUNT
Capparis orientalis	Caper bush	Schedule VIII of S.L. 549.44	Scattered individuals
Tamarisk sp.	Tamarisk tree	Schedule II under S.L. 549.44 and Protected tree species under S.L 549.13	23
Nerium oleander	Oleander tree	None	28
Phoenix dactylifera	Date palm	None	14
Ficus daniella	Daniella wheeping fig	None	1
Total trees directly affected by the proposed development			**16**
Total protected trees directly affected by the proposed development			**10**

The trees and shrubs found within the AOI and site footprint have been mapped in Figure 74.



FIGURE 74: TREES AND SHRUBS IN AOI

Fauna

The only fauna species observed during the survey was the Filfla wall lizard *Podarcis filfolensis.* However, the habitat is likely to support several other species such as the Ocellated skink (*Chalcides ocellatus tiligugu)*, Mediterranean Chameleon (*Chamaeleo chamaeleon),* western whip snake (*Coluber viridflavus),* the Moorish wall gecko (*Tarentola mauritanica)*, Maltese pygmy shew (*Suncus etruscus*) the Algerian hedgehog (*Atlerichus algirus)* among others.[6,7] .Moreover, insects, molluscs, cats and rats are also likely to inhabit the area.



FIGURE 75: FILFA WALL LIZARD WITHIN AOI

No faunal species were observed in the salt pans as most were dried-out or damaged, however typical species to occur in salt pans include crustaceans such as the Maltese Rock crab *Pachygrapsus marmoratus,* several molluscs including limpets *Patella* spp. and the black periwinkle *Littorina neritoides* and the sea-slater *Ligia italica.*

The presence of bats cannot be excluded from this area, as old dilapidated buildings, including the Scheme itself, can provide attractive roosting sites, and the coastal

[6] SCIBERRAS A. SCIBERRAS J. 2013 Fauna at Pembroke Park-8-13. Malta Tourism Authority Nature Trust Malta publications.pdf

[7] https://birdlifemalta.org/wp-content/uploads/2021/10/WILDLIFE-FACTFILE.pdf

garigue may offer foraging opportunities. No roosts are documented publicly within the AOI at the time of writing.

4.8 AVIAN ECOLOGY

4.8.1 Study Area

The Area of Influence for the avifauna study consists of the actual footprint area of the proposed development and a 5.0 km buffer zone around this area (refer to Figure 76).

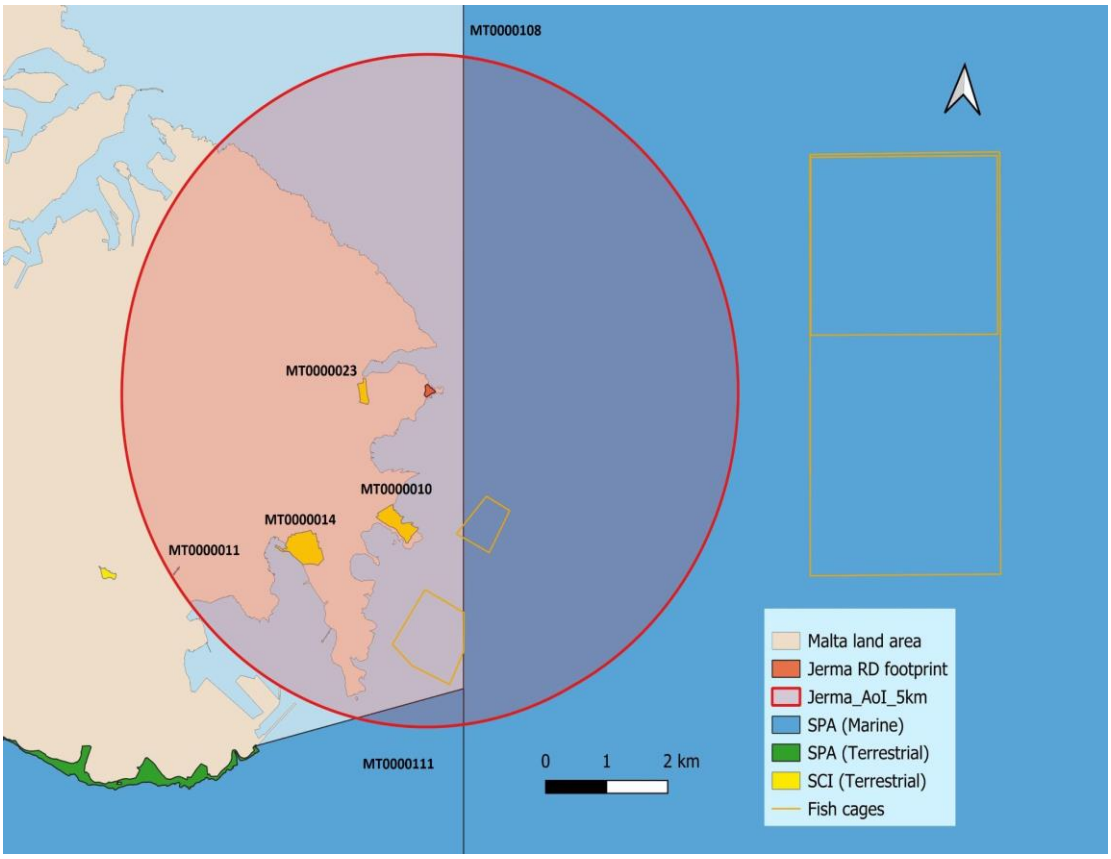


FIGURE 76: AREA OF INFLUENCE FOR AVIAN STUDY INDICATED WITHIN THE RED CIRCLE

4.8.2 Study Methodology

The consultants collated and assessed available data on the abundance and distribution of relevant avian receptors within the AoI. This data served as a baseline for the assessment. Apart from data on abundance and distribution, behavioural, ecological, and physiological data, alongside the receptors' conservation status was considered as required. Reports and literature from local and international studies were consulted as appropriate when carrying out the studies.

The section on avifauna describes the baseline of the relevant receptors in the AoIs, including an investigation of the ecology of the site and its surroundings regarding its avifauna, the respective conservation status of the receptor species and the ecological conditions.

It predicted the potential impacts of the proposed development on the ecology of the EIA with regards to the loss, damage or alteration of habitats and the populations of relevant bird species inhabiting them. It assessed the identified impacts at each phase of the planned development, including the construction, operational and decommissioning phase. Impacts of sources of noise, vibration and other types of physical energy (e.g. light) on sensitive receptors were included in the assessment.

4.8.3 Baseline Conditions

The proposed development itself is not situated inside a protected site, nor does the footprint of the proposed development border directly with any site protected as part of the Natura 2000 network. However, the AoI contains four terrestrial Natura 2000 sites (SCI, SAC), and partially overlaps with two marine Special Protected Areas under the Natura 2000 network within direct line of sight of the proposed development:

- SCI MT0000011 Għar Dalam
- SAC MT0000023 Il-Magħluq tal-Baħar ta' Marsascala
- SAC MT10000010 Xrobb l-Għaġin
- SAC MT0000014 Il-Ballut ta' Marsaxlokk
- SPA MT0000108 Il-Baħar tal-Lvant
- SPA MT0000111 Il-Baħar tal-Lbiċ

Breeding Species

According to the latest Maltese Breeding Bird Atlas (Ecoserv, in pressWBRU 2025), fourteen bird species have been reported breeding within the 1 km x 1 km squares which overlap with the AoI (refer to Table 31). Two of these species, *Anas platyrhynchos* and *Columba livia f. domestica*, are of feral origin and thus are not considered further in this study. Of the remaining twelve species, five have been recorded breeding in squares within 1 km of the footprint of the proposed development. All five are known to breed within urban environments and can be expected to associate strongly to also breed inside the development footprint.

All these breeding bird species are classified as Least Concern by the IUCN and none show decreasing population trends. None are known to have an unfavourable population trend in Malta and none are believed to reach threshold numbers of significance at the site as compared with the national breeding population numbers. One species - *Calandrella brachydactyla* - is listed in Annex I of the EU Birds Directive. However, this species is present in one square at the border of the AoI and has population strongholds in other areas of the Maltese islands.

TABLE 31: LIST OF BREEDING SPECIES IN THE AOI

SPECIES	BREEDING STATUS AT SCHEME SITE	ABUNDANCE IN MALTA	TREND IN MALTA	TREND IN EUROPE	ANNEX I (EU BIRDS DIRECTIVE)	WITHIN 1KM OF SCHEME FOOTPRINT
Feral Mallard *Anas platyrhynchos*	Confirmed	Scarce	Unknown	Increasing	No	Yes
Feral Pigeon *Columba livia* f. *domestica*	Probable	Frequent	Increasing	Decreasing	No	Yes
Eurasian Collared Dove *Streptopelia decaocto*	Probable	Common	Increasing	Increasing	No	No
Common Moorhen *Gallinula chloropus*	Confirmed	Scarce	Increasing	Stable	No	No
Greater Short-toed Lark *Calandrella brachydactyla*	Possible	Common	Increasing	Unknown	Yes	No
Zitting Cisticola *Cisticola juncidis*	Confirmed	Abundant	Increasing	Increasing	No	Yes
Barn Swallow *Hirundo rustica*	Confirmed	Scarce	Increasing	Decreasing	No	Yes
Cetti's Warbler *Cettia cetti*	Possible	Common	Stable	Stable	No	No

SPECIES	BREEDING STATUS AT SCHEME SITE	ABUNDANCE IN MALTA	TREND IN MALTA	TREND IN EUROPE	ANNEX I (EU BIRDS DIRECTIVE)	WITHIN 1KM OF SCHEME FOOTPRINT
Sardinian Warbler *Curruca melanocephala*	Possible	Abundant	Increasing	Increasing	No	YEs
Spectacled Warbler *Curruca conspicillata*	Probable	Common	Increasing	Stable	No	No
Spotted Flycatcher *Muscicapa striata*	Confirmed	Scarce	Increasing	Decreasing	No	No
Blue Rock-thrush *Monticola solitarius*	Probable	Common	Increasing	Unknown	No	Yes
Spanish Sparrow *Passer hispaniolensis*	Probable	Abundant	Uncertain	Decreasing	No	Yes
Eurasian Tree Sparrow *Passer montanus*	Confirmed	Common	Increasing	Decreasing	No	No

Non-Breeding Species

Annex A of the technical study provides a complete list of all non-breeding bird species that have been reported or can be expected to occur in the AoI, including their conservation status and details regarding their occurrence. The potential impacts are assessed considering the relevant sensitive avian receptors in this list.

The list comprises 30 non-breeding seabird species *sensu lato*, 81 non-passerine land- and shore-birds, and 80 passerine species. While overall it is unlikely that any of these species occur in the AoI in significant numbers relative to their global population, there are several seabird, wader, and waterbird species of conservation concern that are known to make regular use of the coast adjacent to the footprint of the proposed development and the wider AoI. Of note are:

- Audouin's Gulls *Larus audouinii* (BD Annex I, Vulnerable) on migration, stopover, and wintering in the adjacent and wider marine AoI
- Slender-billed Gull *Larus genei* (BD Annex I, Annex II Bern Convention) wintering and on passage in the adjacent and wider AoI
- Mediterranean Gull *Larus melanocephalus* (BD Annex I) wintering and on passage in the adjacent and wider AoI
- Black Terns *Chlidonias niger* (BD Annex I, Annex II Bern Convention) on migration and stopover in the wider marine AoI
- Dunlin *Calidris alpina* (Annex II Bern Convention, Near Threatened) on passage and stopover on the shore adjacent to the site footprint
- Kentish Plover *Charadrius alexandrinus* (BD Annex I, Annex II Bern Convention) on passage and stopover on the shore adjacent to the site footprint.

In the case of the Black Tern in particular, numbers passing through and stopping over in the AoI could potentially make up a significant proportion of the European breeding population[8]. For many of the other species, the AoI represents one of the most important areas of occurrence in the Maltese Islands during winter or in passage. In the case of wintering species, significant proportions of the local wintering population could be expected to make use of the AoI, while passage waterbirds and waders make regular use of the coastline on passage. Therefore, the below detailed impacts could be expected to affect these avian receptors.

[8] Gatt & Metzger (accepted paper) At-sea surveys expose pelagic migration of seabirds in the Central Mediterranean. Il-Merill.

4.9 ARCHITECTURAL, ARCHAEOLOGICAL, HISTORICAL & CULTURAL HERITAGE

4.9.1 Study Methodology

The cultural heritage assessment included a survey of the AoI, which consisted of a non-intrusive site inspection, and a desktop study of the tangible and intangible cultural heritage assets, including cultural landscapes, within the AoI.

Desktop Study

The methodology employed for the assessment of the cultural heritage in this area first involved a desktop study. This stage included:

- A thorough review of national, regional and local planning, and legislative framework governing the protection and treatment of cultural heritage within the planning process;
- A thorough literature review of published literature and previous reports carried out in the AoI and surroundings.

The literature review set the historical context of the area and delve into the cultural heritage considerations as defined by Article 2 of the CULTURAL HERITAGE ACT 2002 (Cap. 445).

Existing and available information was consulted, giving importance to cartographic material, archival documents, toponomy, photographic and any other graphic material (including relevant diagrams and sketches), and international and local statutory protection. This documentation aided in the compilation of information on any identified features which may include potential cultural heritage, military and civil architecture, underwater archaeological remains and coastal structures, and the definition of areas of high archaeological value and potential.

Research was conducted by taking into consideration historical events which occurred within the earmarked area including the archaeological, historical and cultural use of the area.

A number of publicly accessible sources of primary and synthesized information were consulted, including:

- National heritage datasets including the National Inventory for Malta and Scheduling (HS) constraints available on the Planning Authority (PA) Geoportal and on the Superintendence of Cultural Heritage (SCH) website and GIS interface;
- Relevant mapping including survey maps and Local Plans; and
- Relevant documentary sources, including Museum Annual Reports (MAR) and grey literature.

Site Inspection
In order to conclude the survey on the cultural heritage assets present within and in proximity of the AoI, the site was inspected on the 29/11/2024. The aim of the inspection was to systematically identify and record any cultural/historical features visible in the landscape and identify potential for unknown cultural heritage assets.

A photographic record using OM SYSTEM TG-7 camera with 4x wide optical 4.5-18mm zoom lens was made for each area visited and any identified cultural heritage assets.

Evaluation
Following the completion of both desktop study and survey, the Impact Assessment was carried out in order to determine any effects that the project may have on the identified cultural features and the surrounding landscape, and therefore the steps necessary to mitigate them. This evaluation took in consideration local and international legislations and other relevant documents related to the protection of cultural heritage.

The section addressing the cultural landscape should be read in conjunction with, and as a continuation of the Landscape and Visual Impact technical study.

4.9.2 Baseline Conditions

Cultural Heritage Assets
The locations of known cultural heritage features within and in proximity of the Area of Interest, are shown in Figure 77.

Table 32 shows known tangible cultural heritage assets still present within the AoI, while Table 33 shows previously recorded archaeological features mainly no longer present within and in proximity of the AoI.

With regard to the archaeological features, a proposed protection was assigned only to feature n. 3, which is related to water management of Grade 1 St. Thomas Tower. The remaining archaeological features, which are no longer present within the AoI or were located outside the AoI, were only included to highlight the archaeological importance of the area.

It is worth mentioning that any records held by the Superintendence of Cultural Heritage on the geoportal, used in this study, are not a record of all surviving heritage assets, but a record of the discovery of a wide range of archaeological and historical components of the historic environment. The information held within it is not complete and does not preclude the subsequent discovery of further elements of the historic environment that are, at present, unknown.

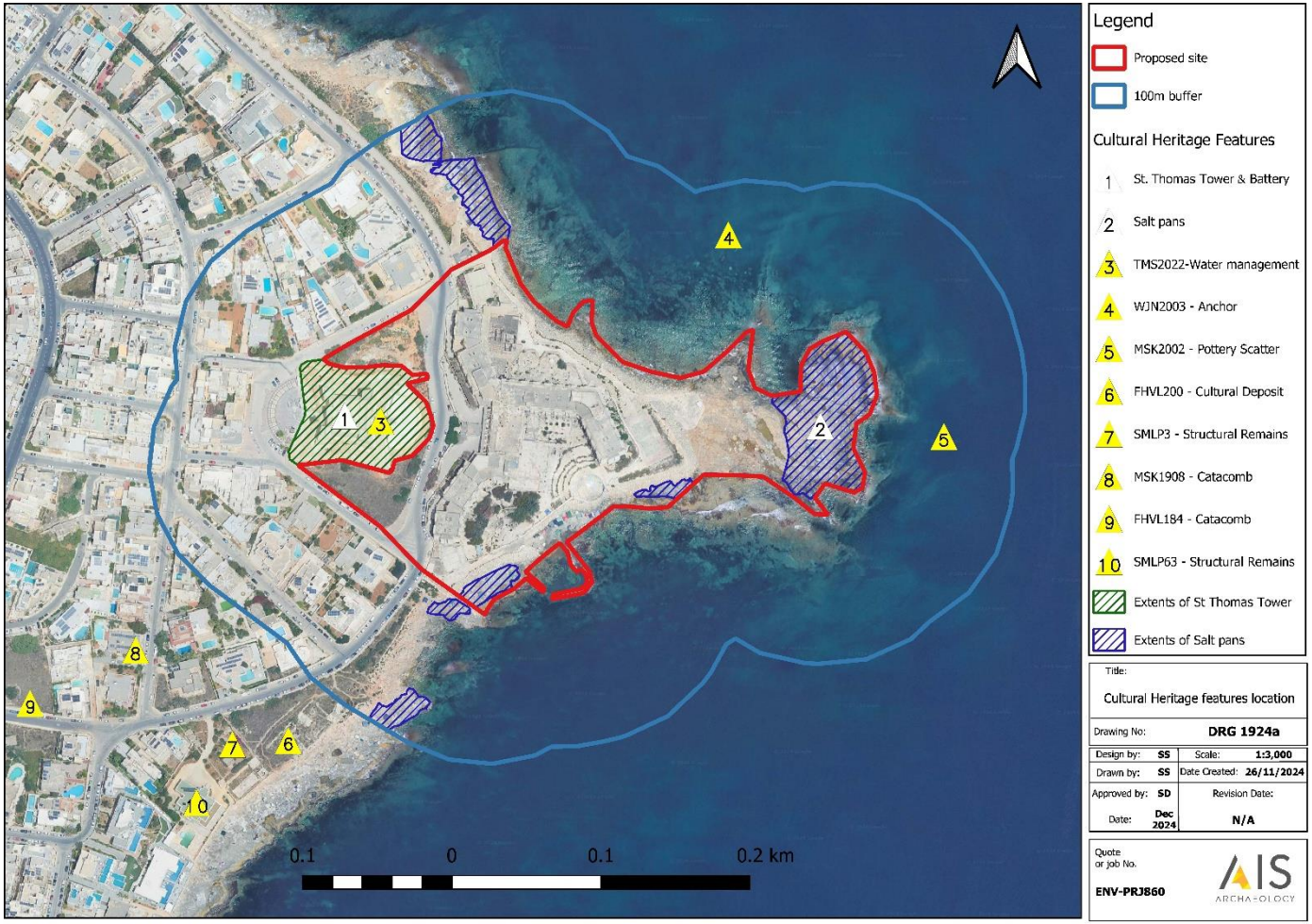


FIGURE 77: KNOWN CULTURAL HERITAGE FEATURES WITHIN AND IN PROXIMITY OF THE AOI

TABLE 32: KNOWN CULTURAL HERITAGE ASSETS

FEATURE NO.	LOCATION	CATEGORY	DESCRIPTION	ACTUAL PROTECTION
1	Dawret it-Torri, Marsascala	Architectural	St. Thomas Tower and Battery	Grade 1 – Gov. notice 729/95
2	Ras il-Gzira and surroundings, Marsascala	Archaeology	Salt Pans	Class B (Expired) – Gov. notice order 530/95 (End date 10/02/1999)

TABLE 33: KNOWN ARCHAEOLOGICAL FEATURES

FEATURE NO.	LOCATION	CATEGORY	DESCRIPTION	ACTUAL OR PROPOSED PROTECTION
3	Dawret it-Torri, Marsascala	Archaeology	Water management	Grade 1 (as part of St. Thomas Tower)
4	Underwater, Marsascala	Archaeology	Anchor	None
5	Underwater, Marsascala	Archaeology	Pottery scatter	None
6	Triq ir-Ridott, Marsascala	Archaeology	Cultural Deposit	None
7	Triq ir-Ridott, Marsascala	Archaeology	Structural remains	None
8	Triq il-Katacombi, Marsascala	Archaeology	Catacombs	None
9	Triq ir-Ridott, Marsascala	Archaeology	Catacombs	None
10	Triq ir-Ridott, Marsascala	Archaeology	Structural remains	None

Feature no.1: St Thomas Tower and Battery

The monument represents a very important cultural assets not only for the area of Marsascala but for the whole Maltese archipelago, as part of the early modern fortification system built by the Knights Hospitaller. The monument is scheduled as a

Grade 1 building (as per G.N 729 dating to 1995) and is noted to have a very high Cultural Heritage property value by the SCH in the National Inventory of the Cultural Property of the Maltese Island.

The tower and battery appear today in a good condition and the Grade 1 degree of protection assigned by relevant authorities should remain the same.

As a defensive coastal fortification, it was architecturally engineered to possess clear, unobstructed fields of fire and direct observation lines out to the open sea and adjacent coastal watchtowers to protect Marsascala and St. Thomas Bays from naval incursions. Therefore, its primary historical attributes are its clear, unobstructed lines of sight to the open sea and its visual inter-connectivity with other coastal towers.

Unfortunately, the modern urban sprawl of Marsascala have completely surrounded and engulfed the tower of St. Thomas, robbing this historical structure of its contextual legibility and important relationship with the coastline and the sea. In particular, the 25.5m high derelict former Jerma hotel blocks these views from the tower to the sea and vice versa.



FIGURE 78: SAN THOMAS TOWER AND BATTERY, LOOKING WEST

Feature no.2: Salt Pans

Salt Pans are located on the foreshore, mainly to the North and South of the AoI, while the ones within the proposed site have been mainly covered/destroyed or damaged during construction of the pre-existing buildings.

These are evidences of an industry that expanded during the early modern period under the Knights of St. John. The salt harvesting is a practice that has passed through generations and been preserved over several centuries and is still carried out, typically during the summer period, by Maltese families, making it both a local heritage and a tourist attraction in many parts of the Maltese archipelago.

The cultural significance of salt pans in Marsascala is attested by the Grade B protection originally given as per G.N 530 dating to 1995. However, the local plan report it as expired only three years later (1999). As a result, such salt pans within the proposed scheme appear abandoned and in poor state of conservation, mainly due to coastal erosion and construction activities.



FIGURE 79: SALT PANS IN THE NORTHERN PART OF AOI, LOOKING SOUTH



FIGURE 80: SALT PANS COVERED BY PREVIOUS DEVELOPMENT, LOOKING NORTH



FIGURE 81: SALT PANS IN THE SOUTHERN PART OF AOI, LOOKING NORTH

Cultural Landscape

The photomontages from Viewpoints 1, 4 and 7, are replicated below (Figure 82Figure 83Figure 84) and are discussed to assess the cumulative impacts of the proposed development on the cultural landscape.

As per the United Nations Educational, Scientific and Cultural Organization (UNESCO) definition, Cultural landscapes are those where human interaction with natural systems has, over a long period, formed a distinctive landscape. These interactions arise from, and cause, cultural values to develop. (Operational Guidelines 2008, Annex 3)

A cultural landscape may be designed at a specific time by a specific person or it may have evolved organically over a long period time (and may still be slowly evolving). It involves a grouping(s) of individual heritage features, such as structures, spaces, archaeological sites and natural elements that together form a significant type of heritage form, distinctive from that of its constituent elements or parts.

The main value of the cultural heritage in the area lies in the information it can yield regarding past settlement patterns, as well as the indications regarding land-use patterns. Crawford (1953: 51-52) explains, landscapes can be compared to a palimpsest, that is “a document which has been written on and erased over and over again”.

In accordance with the aforementioned definitions, every archaeological feature and known cultural heritage asset included in this study should not be isolated from the geographical features which surround them.

The present landscape appears highly impacted by the former Jerma Palace Hotel and the surrounding haphazard development. However, this land still holds evidences related to the development of the landscape of the southern part of Malta.

The area of Ras il-Gzira and St. Thomas Bay contains a number of recorded archaeological remains indicative of a continuous use of the land for industrial (salt pans), domestic (structural remains) and funerary purposes (Catacombs), at least since classical period. However, most of these remains had been buried under new constructions or disappeared without a trace due to past negligence and misconduct.

At present, the St Thomas Tower and battery represent the strategic importance that such area gained with the advent of the Order of St John. An importance that was retained, albeit with an obvious downsizing given to the disappearance of threats caused by corsair attacks, until the British period (as attested by minor structural modifications of the monument).

It is therefore still possible to identify the evolution of the landscape in this small stretch of land in the South of Malta, from a probable maritime economy closely linked with agricultural production during the roman period, to a fortress economy which lost its scope with British decolonization to the development of the tourism industry (Jerma Palace Hotel).



FIGURE 82: VIEWPOINT 01 - BASELINE AND PHOTOMONTAGE OF THE SCHEME FROM ST THOMAS TOWER AREA

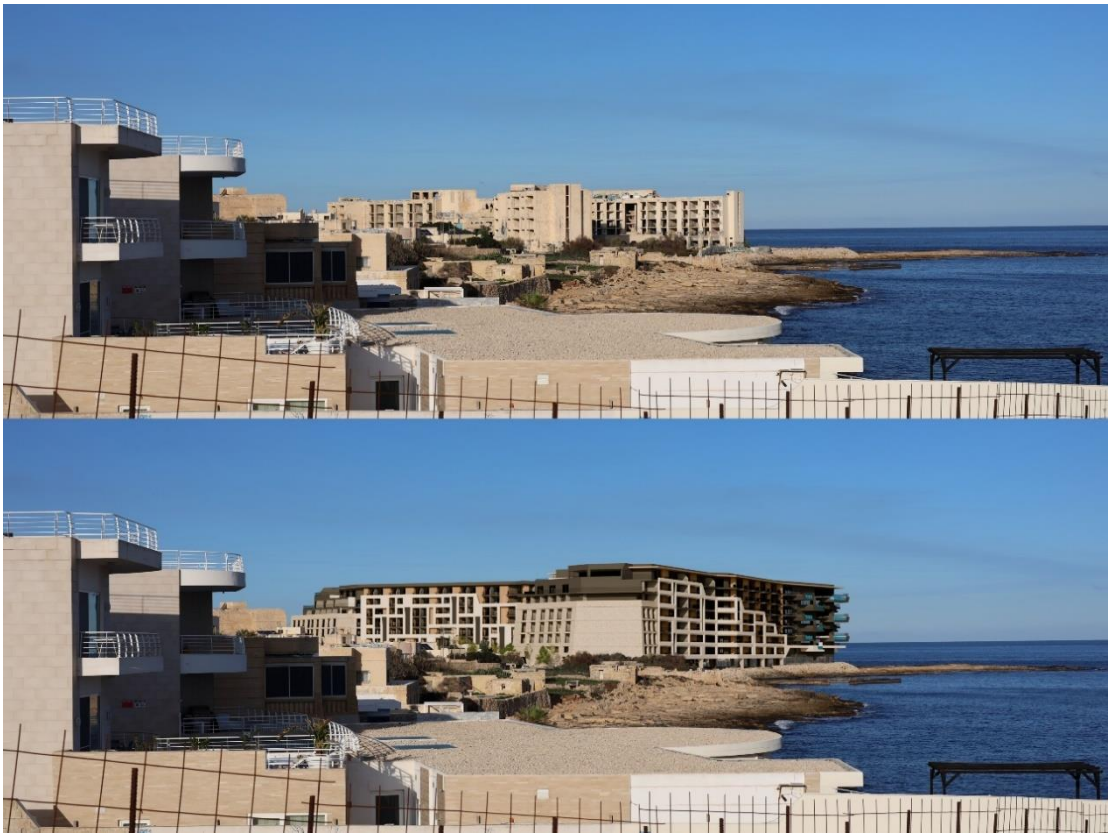


FIGURE 83: VIEWPOINT 04 - BASELINE AND PHOTOMONTAGE OF THE SCHEME FROM WWII PILLBOX



Figure 84: Viewpoint 07 - Baseline and photomontage of the Scheme from zonqor

4.10 Air Quality

4.10.1 Study Methodology (inc. Study Area)

The air quality study analysed the potential impacts from vehicular traffic arising from the Scheme's operational phase. The air quality study also incorporated the baseline monitoring readings of PM_{10} and NO_2, the results of which were then used to determine the impact of the Scheme on air quality in the surrounding area.

Baseline Sampling

Monitoring was conducted between January 23rd to 11th March 2019 for PM_{10} and until 7th March 2019 for NO_2. Concentrations of both PM_{10} and NO_2 were measured from the sampling station (see Figure 85).



FIGURE 85: LOCATION OF SAMPLING POINT AND THE SCHEME SITE (SOURCE: GOOGLE EARTH)

The instrument for PM_{10} was placed around 2 m above ground level, and more than 0.5 m away from the nearest wall. The sampling head was not shielded by trees or vegetation. The analysers were placed less than 10 m away from the kerbside.

The sampling and analytical methods for PM_{10} were carried out by Sunlab Group Ltd., which are an accredited and certified laboratory (ISO 17025:2015). The sampling for NO_2 was carried out by Passam ag, which are also an accredited and certified laboratory (ISO 17025:2015).

Particulate Matter (PM_{10})

Baseline levels of PM_{10} were determined using the reference method (MSA EN 12341:2014), which describes both sampling and measurement methods for PM_{10}. Other specific details regarding the measurement of PM_{10} can be found in the Terms of Reference provided by ERA.

The monitoring of PM_{10} was carried out using a Sequential Automatic Sampler (Skypost). Since this sampler has to work with a constant flow rate of 2.3 m^3/h ± 2% (EN 12341), the Skypost has a dry gas meter within 2% precision installed and it can electronically control the flow. Skypost is also equipped with a sensor to measure the atmospheric pressure and temperature and the pressure drop on filter. This sensor is installed on the suction tube and protected against adverse meteorological conditions.

The clean filter reservoir can contain up to 16 filter cassettes and this it can allow 16-days of monitoring without the need to go on the field and replace new filters. Unloaded filters were conditioned in the weighing room for a minimum of 48 h before weighing. Filters were weighed twice, with an interval of at least 12 hours, to confirm that the filter weight had stabilized. Loaded filters were placed in the weighing room

for a minimum of 48 hours before weighing, and then weighed again after a further 24 to 72 hours, whilst retained in the appropriate conditions.

The monitoring phase lasted a total of 6 weeks (additional monitoring days were carried out to account for Saharan dust events), but a scale up factor provided by ERA was used to scale the 6-week values of PM_{10} to yearly values.

Nitrogen Dioxide (NO_2)

Baseline levels of NO_2 were determined with a method which is shown to be equivalent to the reference method (EN 14211:2012). This standard describes both sampling and measurement methods for NO_2. Other specific details regarding the measurement of NO_2 can be found in the Terms of Reference provided by ERA.

The monitoring of NO_2 was carried out using a type of passive sampler known as Passam Tubes. The system of such diffusion samplers is based on that of Palmes. The devices are passive in that they do not require power for operation. NO_2 is collected by molecular diffusion along an inert tube to an absorbent, in this case triethanolamine. The tubes were replaced with fresh ones every four weeks. The monitoring phase lasted a total of six weeks, but a scale-up factor, provided by ERA, was used to scale the six-week values of NO_2 to yearly values.

The tubes used for the monitoring of NO_2 were then be sent to the laboratory, where they were treated to extract the pollutants and analysed. The analytical technique was divided into two distinct phases: sampling and analysis. The sampling was carried out by AIS. The analysis was be carried out by Passam ag, which is an ISO/IEC 17025:2015 accredited laboratory.

Additional Data

Annual weather data, recorded as hourly averages in 2018 from the Malta International Airport was used to create the model. The consultants also made use of annual concentrations of O_3, PM_{10}, NO and NO_2 in the form of hourly average 2017 data collected from the Zejtun air quality monitoring station operated by the ERA.

Traffic Studies

An separate Traffic Impact Assessment was conducted. In view of the magnitude of the number of vehicles that will be commuting to and from the proposed development, it is expected that the vehicular trips completion of the development will increase in the area. Thus, such an increase will also reflect on the existing network traffic.

A total of 5 modelling scenarios have been considered in the air quality study. The years considered in each scenario are indicated below:

- Scenario 1: Baseline year in 2018 (no development)
- Scenario 2: 1st year of Operation in 2030 (no development)
- Scenario 3: 1st year of Operation in 2030 (development fully operational)
- Scenario 4: 5th year of Operation in 2035 (no development)
- Scenario 5: 5th year of Operation in 2035 (development fully operational)

Modelling

Once the data was collected from the monitoring stations, the data was inputted into an air quality dispersion model using the software "Breeze Roads". The model is an air dispersion modelling suite that predicts air quality impacts of a number of pollutants including Carbon Monoxide (CO), Nitrogen Dioxide (NO_2) and Particular Matter (PM). It is specifically designed to model pollutant concentrations that are emitted from moving and idling motor vehicles at or alongside roadways and roadway intersections.

The diffusion of pollutants form linear sources (roads) is calculated using algorithms. The data inputted into the model was:

- Area of the Scheme (use of sensitive receptors);
- Geometry of the road segments (length, width etc.);
- Dislocation of the receptors;
- Weather conditions; and
- Vehicular emission factors.

Area of the Scheme

The model was created by using two types of planimetries. In line with the ToRs, numerous sensitive receptors were identified around the Scheme site. These sensitive receptors were plotted using Google Earth. Figure 86 maps the geographical location of the selected receptors, whilst Table 34 lists the coordinates of each receptor.

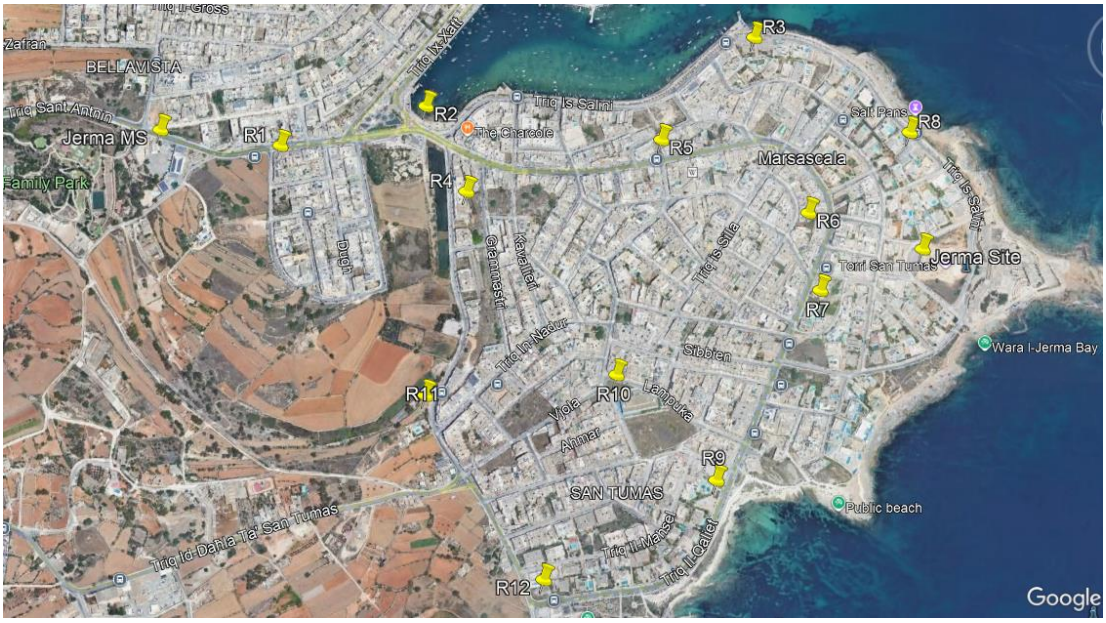


FIGURE 86: AREA OF STUDY MODELLED USING BREEZE ROADS WITH RECEPTORS

TABLE 34: SENSITIVE RECEPTOR COORDINATES

RECEPTOR	UTM COORDINATES	
	NORTH	EAST
R1	460213.6 N	3968784.7 E
R2	460494.1 N	3968845.5 E
R3	461031.9 N	3969011.8 E
R4	460538.3 N	3968674.5 E
R5	460887.4 N	3968818.4 E
R6	461155.3 N	3968704.9 E
R7	461183.7 N	3968568.3 E
R8	461326.9 N	3968855.4 E
R9	461014.7 N	3968219.2 E
R10	460824.7 N	3968399.3 E
R11	460481.5 N	3968345.2 E
R12	460709.2 N	3968019.2 E
JERMA MS	459980.0 N	3968789.9 E
JERMA SITE	461362.6 N	3968641.3 E

Selected Roads (Links)

The model identifies the road network as the source of pollution. The key input information regarding the road network in the model includes:

- Length of the road section;
- Width of the road section;
- Vehicular traffic (vehicles /hour);
- Emission Factor (g /vehicle x Km);
- Type of road (acts grade, depressed, fill, bridge);
- Type of links (free flow, queue).

The roads considered in the model are mapped in Figure 87.



FIGURE 87: ROADS INCLUDED IN THE MODELLING

The traffic data used for the model was provided by the traffic consultant. Traffic data is expressed as average annual daily traffic (AADT). Therefore, considering that the template allows the user to enter a single data traffic for each road, it was decided to use total traffic (vehicle entry and exit) for each road. The model allows the user to enter a value expressed in vehicles per hour. The roads which were considered in the model were:

- Triq Sant Antnin
- Triq il-Qaliet (upper part)
- Triq il-Qaliet (lower part)
- Triq tal-Gardiel
- Triq is-Salini

For the Breeze roads model, all roads were considered as roads without traffic lights, i.e. "free flow links".

Emission Factor

Emission factors (EF) for “Free Flow Links” were obtained from HBEFA (Handbook Emission Factors for Road Transport). The emission factors, expressed in g/veh*km, were derived from HBEFA 4.1 processing software.

Since the Maltese vehicular EF is not present in the HBEFA database, the vehicular composition in Germany is similar to that of Malta and considering that the average age of the German fleet is 5-6 years lower, then the emission coefficients were corrected by a multiplication factor [PM_{10} (x1.10) / PM_{10} non-exhaust (x1.10) / NO_2 (x1.3)].

The roads included in the study are classed as “Free Flow Links” which are characterised by straight sections, access and local roads with low-speed limits and roads within residential areas. The average EF used for each of the scenarios are listed in Table 35.

TABLE 35: EMISSION FACTORS FOR "FREE FLOW LINKS"

POLLUTANT	SCENARIO	BALANCE AVERAGE EMISSION FACTOR
PM_{10}	Scenario 1: 2018 Baseline (No development)	0.05175
	Scenario 2: 2030 (No development)	0.04439
	Scenario 3: 2030 (Development in full operation)	
	Scenario 4: 2035 (No development)	0.04380
	Scenario 5: 2035 (Development in full operation)	
Nitrogen Dioxide (NO_2)	Scenario 1: 2025 Baseline (No development)	0.18010
	Scenario 2: 2030 (No development)	0.10104
	Scenario 3: 2030 (Development in full operation)	
	Scenario 4: 2035 (No development)	0.09023
	Scenario 5: 2035 (Development in full operation)	

The PM_{10} emission coefficient includes PM (non-exhaust), i.e. emissions from the wear of motor vehicle brake pads, tires, and resuspension particles on the road.

A single weighted emission factor was included for each Scenario. This was obtained from the average emission factor of light vehicles (PC - Passenger Car), heavy vehicles (HGV), light commercial vehicles (LCV) and Bus considering that an average 15% of HGV- BUS, 10% LGV and 75% PC.

Meteorological Data

The weather data used for the transaction modelling were recorded by a weather sensor installed on an atmospheric monitoring station in Luqa, Malta. The weather data used in the model was compiled from this station in 2024:

- Wind direction (°N)
- Wind speed (m/s)
- Temperature (°K)

- Global Solar Radiation (W/m2)
- Precipitation (mm)

Urban Background

Emissions from an urban background site were required since Breeze Roads only estimates emissions attributed to traffic. The traffic emissions then need to be added to background air quality levels to predict the overall level of emissions (for example a construction site, domestic heating, industries etc.). The data used was taken from scientific studies or from atmospheric monitoring stations operated by the ERA.

The average background PM_{10} concentration at the Zejtun Station in the baseline year is 26.0 μg/m³. This value was validated with the average concentration detected at the 6-week monitoring point.

The average background of NO_2, was corrected with a multiplicative factor and validated so that the annual average NO_2 concentration in the baseline scenario is equal to the average concentration detected at the 6-week monitoring point. The average annual value of NO_2 is equal to 13.2 μg/m³.

4.10.2 Baseline Conditions

Particulate Matter (PM_{10})

The monitoring results for PM_{10} concentrations returned an average concentration in 42 days equal to 41.1 μg/m³ (discarding days from Sahara dust). This result was scaled up to one year through the use of a corresponding multiplicative coefficient of 0.82 provided by ERA (Environment & Resources Authority), and it is 33.7 μg/m³.

Nitrogen Dioxide (NO_2)

The monitoring results for NO_2 concentrations over the 42-day sampling period are summarized hereunder.

TABLE 36: SUMMARY OF NO2 RESULTS

SAMPLER	START	END	NO_2 (μG/M³)
3	24/01/2019 at 13:40	14/02/2019 at 14:00	18.5
5	24/01/2019 at 13:40	14/02/2019 at 14:00	19.4
10	24/01/2019 at 13:40	14/02/2019 at 14:00	18.0
4	14/02/2019 at 14:00	07/03/2019 at 14:30	24.3
6	14/02/2019 at 14:00	07/03/2019 at 14:30	22.5
8	14/02/2019 at 14:00	07/03/2019 at 14:30	23.4
		Average	21.0

The average result was scaled up to one year through the use of a corresponding multiplicative coefficient of 0.94+0.325 provided by ERA (Environment & Resources Authority), to obtain a figure of 20.1 μg/m³.

4.11 NOISE AND VIBRATIONS

4.11.1 Study Area

The noise assessment and analysis was carried out the nearest noise sensitive receptors (NSRs) to the Scheme which are:

- NSR01 – Residential properties located to the northwest of the Site along Triq is-Salini;
- NSR02 – Residential properties located to the southwest of the Site along Dawret it-Torri; and
- NSR03 – Residential properties located to the west of the Site along Triq il-Katakombi.



FIGURE 88: NSR LOCATIONS

4.11.2 Study Methodology

A summary assessment methodology is provided below.

- Baseline sound levels were measured at the NSRs. For the construction assessment, four x 15-minute non-consecutive measurements at each location during the daytime; and two x 15-minute non-consecutive measurements at each location during the night-time were measured.
- For the operational road traffic assessment, three 1-hour consecutive measurements at each location during the daytime between the hours of 10:00-17:00 were measured.

- A quantitative construction noise assessment was undertaken, with reference to BS 5228-1:2009+A1:2014 *Code of practice for noise and vibration control on construction and open sites – Part 1: Noise.*
- Noise levels from the construction of the Scheme were predicted at the nearest human receptors using the proprietary software-based noise model, CadnaA®, and the calculation algorithms contained in ISO9613-2 Acoustics – *Attenuation of sound during propagation outdoors – Part 2 General method of calculation.*
- Vibration levels from the construction of the Scheme was assessed in accordance with Table E.1 of BS5228-2:2009+A1:2014 Part 2 Vibration. The predicted vibration levels would be then assessed in accordance with the criteria contained within the guidance.
- Operational road traffic noise assessment utilised measured 3-hour L_{A10} noise levels which were converted to the 18-hour L_{A10} using the calculations in the Calculation of Road Traffic Noise 1988 (CRTN).

The results of the assessment indicate whether any noise mitigation measures would be required to reduce any identified impacts, which would be included as part of the assessment if deemed necessary.

British Standard 5228-1:2009 + A1:2014 (BS 5228)

Construction noise levels were calculated in accordance with BS 5228-1:2009+A1:2014 *Code of practice for noise and vibration control on construction and open sites – Part 1: Noise* (BS 5228-1). This standard sets out a methodology for predicting noise levels arising from a wide variety of open site activities and contains tables of sound power levels generated by a wide variety of mobile and fixed plant equipment.

Noise levels generated by open site construction operations and experienced at local receptors will depend upon a number of variables, the most significant of which are likely to be:

The amount of noise generated by plant and equipment being used during the construction phases, generally expressed as a sound power level:

- The periods of operation of the plant, known as the “on-time”;
- The distance between the noise source and the receptor, known as the “stand-off”;
- The attenuation due to ground absorption or barrier screening effects;
- Reflections of noise due to the presence of hard vertical faces such as walls.

BS 5228-1 gives several examples of acceptable noise limits for construction or demolition noise. For this assessment, as baseline noise data is available, it is proposed that the ABC method will be used to determine the threshold value at the NSR locations.

Under the ABC method, a threshold value noise level is determined by establishing the existing ambient noise level at each location. This measured ambient noise level is then rounded to the nearest whole 5dB(A), and the threshold noise value for each

receptor is then established from Table E.1 of BS 5228-1. This threshold value is the $L_{Aeq,T}$ noise level that should not be exceeded at the receptor location by operations at the site. Accordance with this method, the threshold noise levels for a potentially significant effect are as detailed in Table 37 below.

TABLE 37: CONSTRUCTION NOISE RESIDENTIAL RECEPTORS – EXAMPLE THRESHOLD VALUES

ASSESSMENT CATEGORY AND THRESHOLD VALUE PERIOD	THRESHOLD VALUE IN DECIBELS (DB)		
	CATEGORY A [A]	CATEGORY B [B]	CATEGORY C [C]
Night-time (23:00 – 07:00)	45	50	55
Evenings and weekends [D]	55	60	65
Daytime (07:00-19:00) and Saturdays (07:00-13:00)	65	70	75

[A] Category A: threshold values to use when ambient noise levels (when rounded to the nearest 5dB) are less than these values.

[B] Category B: threshold values to use when the ambient noise levels (when rounded to the nearest 5dB) are the same as category A values.

[C] Category C: threshold values to use when the ambient noise levels (when rounded to the nearest 5dB) are higher than category A values.

[D] 19:00-23:00 weekdays, 13:00-23:00 Saturdays and 07:00-23:00 Sundays.

Construction vibrations were assessed in accordance with BS5228-2:2009+A1:2014 *Code of practice for noise and vibration control on construction and open sites - Part 2: Vibration* (BS 5228-2). This standard gives recommendations for basic methods of vibration control relating to construction and open sites where work activities/operations generate significant vibration levels.

BS 5228-2 provides guidance on the effects of vibration as shown in Table 38.

TABLE 38: CONSTRUCTION VIBRATION RESIDENTIAL RECEPTORS – EXAMPLE THRESHOLD VALUES

VIBRATION LEVEL, MMS^{-1}	EFFECT
0.14	Vibration might be just perceptible in the most sensitive situations for most vibration frequencies associated with construction. At lower frequencies, people are less sensitive to vibration.
0.30	Vibration might be just perceptible in residential environments.

VIBRATION LEVEL, MMS^{-1}	EFFECT
1.00	It is likely that vibration of this level in residential environments will cause complaint but can be tolerated if prior warning and explanation has been given to residents.
10.00	Vibration is likely to be intolerable for any more than a very brief exposure to this level.

Road Traffic Noise Guidance

The CRTN 1988 is a technical memorandum that sets out standard methods and procedures to measure and predict road traffic noise. Road traffic noise is predicted and measured in terms of a statistical measure, equivalent to the 10th percentile. Termed the L_{10}, this measure of noise is equivalent to the sound level exceeded for 10% of the reference period.

Relevant to this assessment, CRTN contains a Shortened Measurement Procedure for determining the $L_{A10,18hr}$ sound level. To calculate the $L_{A10,18hr}$ sound level, road traffic noise levels are first measured over a three-hour continuous period between 10:00 and 17:00 to determine the $L_{A10,3hr}$. 1 dB is then subtracted from the measured $L_{A10,3hr}$ to give the $L_{A10,18hr}$ sound level.

Using the $L_{A10,18hr}$ sound level, daytime $L_{Aeq,16hr}$ and night-time $L_{Aeq,8hr}$ levels can then be calculated using formulae contained within the '*Method for Converting the UK Road Traffic Noise Index $L_{A10,18hr}$ to the EU Noise Indices for Road Noise Mapping'* (2006) and shown in Table 39

TABLE 39: $L_{A10,18HR}$ CONVERSION FORMULAE

TIME PERIOD	NON- MOTORWAY CONVERSION
07:00 – 21:00	$L_{day}= 0.95 \times L_{A10,18hr}) +1.44$
21:00 – 23:00	$_{Levening}= 0.97 \times L_{A10,18hr} - 2.87$
23:00 – 08:00	$L_{night}= 0.90 \times L_{A10,18hr}) - 3.77$
07:00 – 23:00	$L_{Aeq,16hr}= 10 \log10 ((12\times10(L_{day}/10)+4\times10(L_{evening}/10)))/16)$

To assess potential changes in road traffic noise arising from development-related traffic, the $L_{A10,18hr}$ noise level at 10m from the carriageway edge (referred to as the 'Basic Noise Level ('BNL)) has been calculated for each relevant road link identified by the Transport Consultant. The calculations have been undertaken in accordance with the principles set out in CRTN for the 2030 and 2035 'Do Nothing' and 'Do Something' scenarios. The assessment includes base and committed development traffic flows in the Do Nothing scenarios and also incorporates proposed Scheme flows in the Do Something scenarios.

These predictions consider the relative change in noise level that is likely to result from the Scheme at a notional roadside receptor for each assessed road link. Representative traffic speeds and a constant HGV proportion of 0% have been assumed consistently across all scenarios. As the assessment is based on the change between scenarios, rather than the prediction of absolute noise levels, these assumptions do not materially influence the predicted noise changes. It is noted that, the assumption of 0% HGV is considered conservative, as existing HGV traffic is likely to reduce the relative influence of development-generated light vehicle traffic on overall road traffic noise levels

The likely changes in road traffic noise levels attributable to the Scheme has been determined for each road link by comparing the predicted BNLs for the Do Nothing and Do Something scenarios.

The noise impact upon existing NSRs of Scheme-related road traffic, reference has been made to guidance contained within The Design Manual for Roads and Bridges (DMRB) LA 111 Noise and Vibration. DMRB LA111 sets out the requirements for assessing and reporting the effects of highways noise and vibration from construction, operation and maintenance projects.

DMRB LA 111 presents a significance matrix for assessing the magnitude of changes in BNLs in the short-term. Within the DMRB LA111 significance framework, noise changes below 3 dB are typically considered not perceptible, whereas changes at or above 3 dB may contribute to a perceptible effect and therefore may influence the assessment of significance depending on context, receptor sensitivity, and baseline sound levels.

ISO 9613-2: 2024

The levels of sound generated by the operation of the Scheme has been predicted in accordance with the prediction framework within ISO 9613-2:2024 *Acoustics – Attenuation of Sound during Propagation Outdoors– Part 2: General Method of Calculation.* This method of calculation takes into account the distance between the sound sources and the closest receptors, and the amount of attenuation due to atmospheric absorption. The methodology also assumes downwind propagation, i.e. a wind direction that assists the propagation of sound from the source to the receiver.

Baseline Data Collection

Baseline sound measurements were undertaken during both daytime and night-time periods at each of the three monitoring locations. For the construction assessment, four x 15-minute non-consecutive measurements at each location during the daytime; and two x 15-minute non-consecutive measurements at each location during the night-time were measured. For the operational road traffic assessment, three 1-hour consecutive measurements at each location during the daytime between the hours of 10:00-17:00 were measured.

The following monitoring protocol is proposed for each receptor:

- NSR01 – Residential: A fully attended 3-hour consecutive measurement, with noise levels being logged every 15-minute during the daytime, four 15-minute non-consecutive readings during daytime and two 15-minute non-consecutive readings during the night-time;
- NSR02 – Residential: A fully attended 3-hour consecutive measurement, with noise levels being logged every 15-minute during the daytime, four 15-minute non-consecutive readings during daytime and two 15-minute non-consecutive readings during the night-time; and
- NSR03 – Residential: A fully attended 3-hour consecutive measurement, with noise levels being logged every 15-minute during the daytime, four 15-minute non-consecutive readings during daytime and two 15-minute non-consecutive readings during the night-time.

Measurements at the survey locations were made at 1.5m above the ground in free-field conditions, i.e. at least 3.5m from the closest vertical reflecting surface.

The measurements were attended at all times with a record of all noise observations made. The following noise indices were recorded:

- $L_{Aeq,T}$: The A-weighted equivalent continuous noise level over the measurement period T;
- L_{A90}: the A-weighted noise level exceeded for 90% of the measurement period. This parameter is often used to describe background noise;
- L_{A10} : The A-weighted noise level exceeded for 10% of the measurement period. This parameter is often used to describe road traffic noise; and
- L_{Amax}: the maximum A-weighted noise level during the measurement period.

4.11.3 Baseline Conditions

The results of the sound survey are summarised in Table 40 including the background sound level (L_{A90}), L_{A10}, ambient noise level (L_{Aeq}) and the highest L_{AFmax} values. The daytime period is taken between 07:00 and 23:00 hours and the night-time between 23:00 and 07:00 hours.

TABLE 40: SOUND SURVEY SUMMARY

LOCATION	DATE/ TIME PERIOD	TIME	$L_{AEQ,T}$	L_{A90}	L_{A10}	L_{AFMAX}
NSR01	29/09/2025	07:37-07:54	52.7	44.0	55.4	70.1
		08:40-08:58	53.3	43.0	55.3	75.3
		09:38-09:55	49.8	40.7	52.8	65.3

LOCATION	DATE/ TIME PERIOD	TIME	$L_{AEQ,T}$	L_{A90}	L_{A10}	L_{AFMAX}
		10:17-10:33	54.3	41.9	57.6	75.4
	30/09/2025	05:50-06:10	50.1	45.3	49.4	71.2
		06:39-06:55	52.2	42.7	55.8	70.2
	30/09/2025	10:02-13:38	56.7	37.3	60.0	87.2
NSR02	29/09/2025	07:00-07:15	49.6	41.5	52.9	63.0
		07:59-08:16	52.4	42.7	56.0	69.7
		09:01-09:17	52.0	39.9	56.8	65.9
		09:57-10:14	55.0	41.2	58.7	74.4
	30/09/2025	05:31-05:50	44.7	41.3	44.9	62.5
		03:48-04:03	38.8	35.8	41.2	52.6
	30/09/2025	13:50-16:50	52.4	36.7	55.0	77.4
NSR03	29/09/2025	07:18-07:33	50.1	40.6	48.7	72.9
		08:20-08:37	51.0	41.4	52.3	69.7
		09:20-09:37	47.7	39.1	50.5	64.6
		10:35-10:52	50.7	46.7	51.0	69.9
	30/09/2025	06:19-06:35	48.4	39.9	50.1	66.8
		04:38-04:53	52.4	36.0	56.6	58.0
	14/10/2025	13:22-16:22	51.3	38.4	48.6	79.1

For assessment purposes, the daytime $L_{A10,T}$ sound levels measured on the 30th September 2025 (NSR01 and NSR02) and the 14th October 2025 (NSR03) have been converted to daytime $L_{Aeq,16hr}$ and night-time $L_{Aeq,8hr}$ equivalent continuous sound levels using the formulae presented in Table 39. The results are shown in Table 41.

It is acknowledged that this method assumes all sound was from road traffic on the adjacent road links and it is considered that, based on the critical listening observations, in all likelihood this presents an overestimation of road traffic noise.

TABLE 41: 2025 BASE $L_{A10,18HR}$ CONVERSION TO $L_{AEQ,T}$ SOUND LEVELS

LOCATION	PARAMETER/PERIOD	$L_{A10,3HR}$	$L_{A10,18HR}$	*CALCULATED* $L_{AEQ,T}$, DB
NSR01	$L_{Aeq,16hr}$ (daytime)	60	59	57
	$L_{Aeq,8hr}$ (night-time			49
NSR02	$L_{Aeq,16hr}$ (daytime)	55	54	52
	$L_{Aeq,8hr}$ (night-time			45
NSR03	$L_{Aeq,16hr}$ (daytime)	49	48	46
	$L_{Aeq,8hr}$ (night-time			39

4.12 INFRASTRUCTURE AND UTILITIES

4.12.1 Study Methodology

The baseline research for the Infrastructure and Utilities Study was divided into two main components. The first part of the study consisted of a thorough literature review to identify the existing infrastructure and utilities within the Scheme site and surrounding area. The information was gathered from third-party utility providers and review of satellite images from sources such as Landsat/Copernicus (Google Earth). The findings from the desktop study will then be verified through a field survey (the second component), which will also include the gathering of photographic evidence.

After completion of the aforementioned components, the existing infrastructure and utilities as well as any proposed changes (if applicable) were mapped using Geographic Information Systems Software (GIS).

4.12.2 Baseline Conditions

Table 2 provides an outline of the existing and/or planned infrastructure and utilities present with the AoI. Photographic evidence of examples of infrastructures encountered during the site visit is provided in Figure 89 and Figure 90.

TABLE 42: EXISTING INFRASTRUCTURE AND UTILITIES

FEATURE NAME	FEATURE TYPE	OWNER
Aerial Power cables	Aerial power cables	Enemalta
Underground Power cables	Underground power cables	Enemalta
Telecommunication cables	Underground and aerial cables	GO Mobile, Melita
Potable water	Underground potable water pipes	Water Services Corporation
Waste water	Underground wastewater pipes	Water Services Corporation
Water gutter	Water gutter	Water Services Corporation



FIGURE 89: WATER GUTTER WITHIN THE PROPOSED SITE BOUNDARY



FIGURE 90: AERIAL CABLES IN AOI

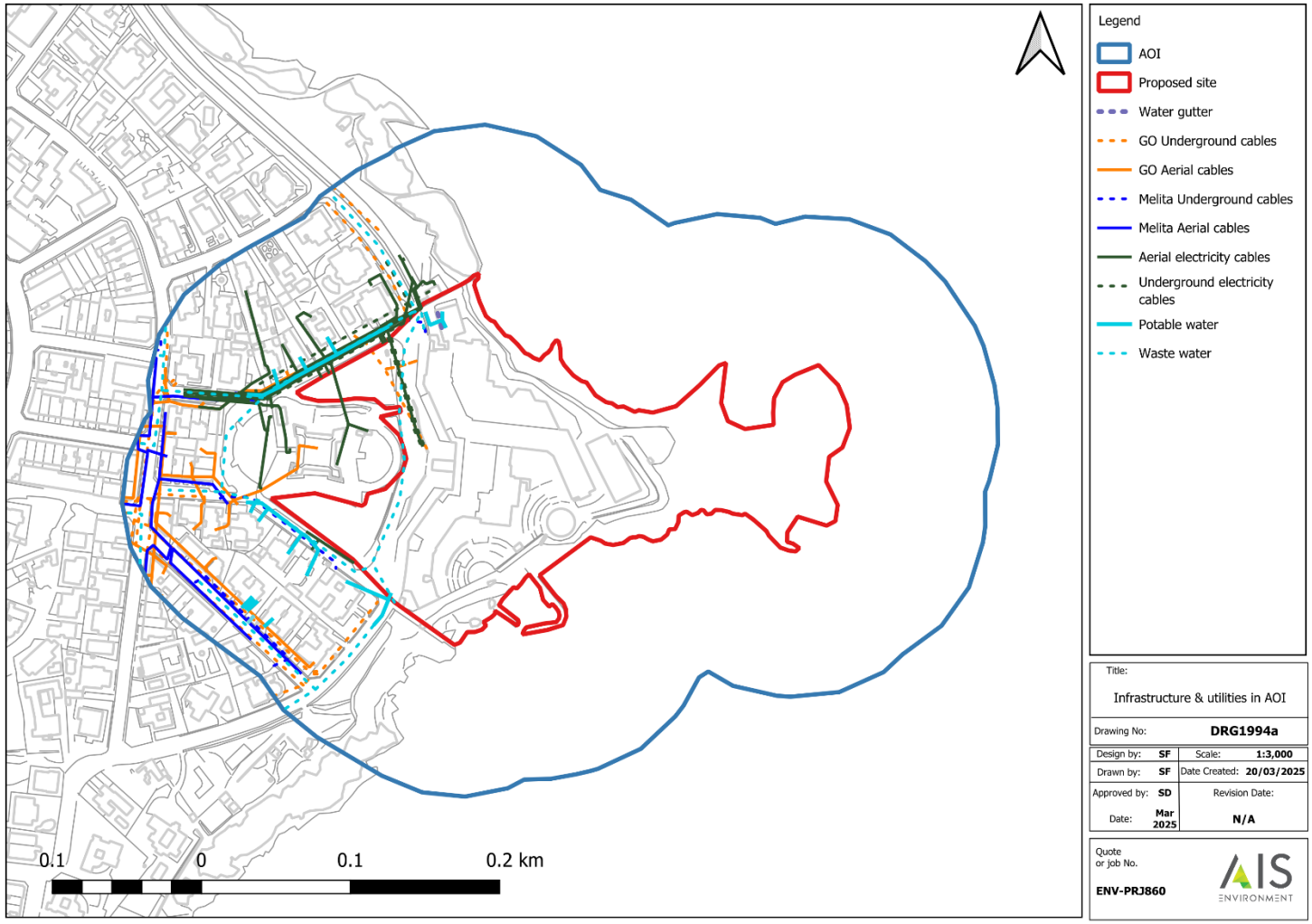


FIGURE 91: OVERVIEW OF THE EXISTING INFRASTRUCTURE AND UTILITIES WITHIN THE AOI

4.13 Public Access

4.13.1 Study Methodology

The public access study was composed of two main elements: a desktop study followed by a site survey. The aim was to provide a description of the current public access arrangements in the study area and to analyse how the proposed Scheme will affect them.

The literature review included the analysis of satellite images from sources such as Landsat/Copernicus (Google Earth). The subsequent site survey was used to confirm the reliability of the data collected from the desktop research, since it is not always representative of real-time arrangements. Photographs of the current situation were taken as evidence. Mapping of the existing routes was performed using Geographic Information Systems (GIS) software.

4.13.2 Baseline Conditions

The site is situated on a mostly undeveloped peninsula and therefore, vehicle access is limited. Triq is-Salini dissects through the Scheme site, in between the historic St Thomas Tower and the main entrance to the old hotel. It is a single lane, one-directional road with traffic flowing in a North to South orientation. Although the road is tarmacked, it is showing signs of deterioration with several cracks clearly visible on the surface. The road markings are very limited. The other roads in the surrounding area comprise of small surfaced roads; some are one-way, whilst others are two-way. The majority of the roads have demarcated parallel parking spaces on both sides.

Since the area is predominately residential, most roads have pavements on both sides. The exception, is a small stretch on Triq is-Salini which does not have pavements on both sides of the road. Due to the limited space, some of the pavements are very narrow, making them difficult to use with a pram or wheel chair. However, the concrete or block paving pavements in the area are generally in good condition.

One bus stop is located within the study area along Triq is-Salini, close to the main entrance of the abandoned hotel. It is only serviced by one bus, Route 93, which is a predominately linear route connecting Marsascala to the capital city of Valletta. It passes by the ex-Jerma Palace site on an hourly basis. The bus shelter is in very poor condition, with the glass side panels missing. Despite the good provision of pavements and a bus stop, there are no pedestrian crossings within the study area.

During the operation of the Jerma Hotel, the foreshore was inaccessible to the general public as it was considered as part of the hotel's private grounds. Two large walls were constructed along the southern and northern sides of the site to prevent public access. Once the hotel closed, access to the foreshore was left open for a number of years through the hotel grounds. However, overtime as the abandoned buildings deteriorated and became a safety risk, the access routes were blocked off

using large precast blocks as a safety precaution. Some of these blocks have been removed from the southern boundary to provide an access point to the Scheme site and consequently the natural foreshore around the hotel facilities. The foreshore is mainly undeveloped, but there are a couple of small concrete paths around the perimeter of the hotel structures/facilities. Small staircases link the paths to the low-lying foreshore area; however, these are currently all blocked off by precast blocks.

The rock revetements which were constructed to protect the Jerma Palace from adverse sea conditions have deteriorated over the years. Several boulders have been relocated during storm events. The large rocks are now scattered around the foreshore area acting as obstacles to those wishing to walk around the area.

Within the Scheme site itself there is also a small concrete road, which used to act as an internal service road during the operation of the Jerma Palace. This is currently blocked by some of the dislodged rock revetment boulders.

Just beyond the site boundary to the north and south, are two small concrete ramps which link the pavements to the foreshore. However, both ramps are in a state of disrepair. A small informal dirt footpath connects to the southern ramp, running parallel to the coastline.

Access to the marine environment in the study area is extremely limited. A single small set of steps on the seawall leads from the wall to the sea. The rest of the coast is low-lying exposed weather rock, making access to the sea cumbersome and risky.



FIGURE 92: TRIQ IS-SALINI OUTSIDE OF THE EX-JERMA PALACE HOTEL (JUNE 2026)



FIGURE 93: PAVED PAVEMENT IN GOOD CONDITIONS WITHIN THE STUDY AREA (JUNE 2026)



FIGURE 94: BUS STOP, TIRQ IS-SALINI (JUNE 2026)



FIGURE 95: FOREGROUND - POOR STATE ROCK REVETMENT; BACKGROUND - LARGE BOUNDARY WALL OF THE EX-JERMAN PALACE COMPLEX (MAY 2026)



FIGURE 96: CREATION OF ILLEGAL ACCESS POINT TO THE SITE (MAY 2026)



FIGURE 97: ACCESS FROM THE HOTEL GROUNDS TO THE FORESHORE BLOCKED BY PRECAST BLOCKS (MAY 2026)



FIGURE 98: SMALL CONCRETE PATH RUNNING ALONG THE OLD HOTEL TENNIS COURT (MAY 2026)



FIGURE 99: ROCK REVETMENT BOULDERS SCATTERED ON THE FORESHORE (MAY 2026)



FIGURE 100: ACCESS RAMP PROVIDING PARTIAL ACCESS TO THE FORESHORE (MAY 2026)



FIGURE 101: INFORMAL DIRT PATH IN THE SOUTHERN PART OF THE AOI (MAY 2026)



FIGURE 102: SMALL STAIRCASE LEADING DOWN THE SEA (MAY 2026)

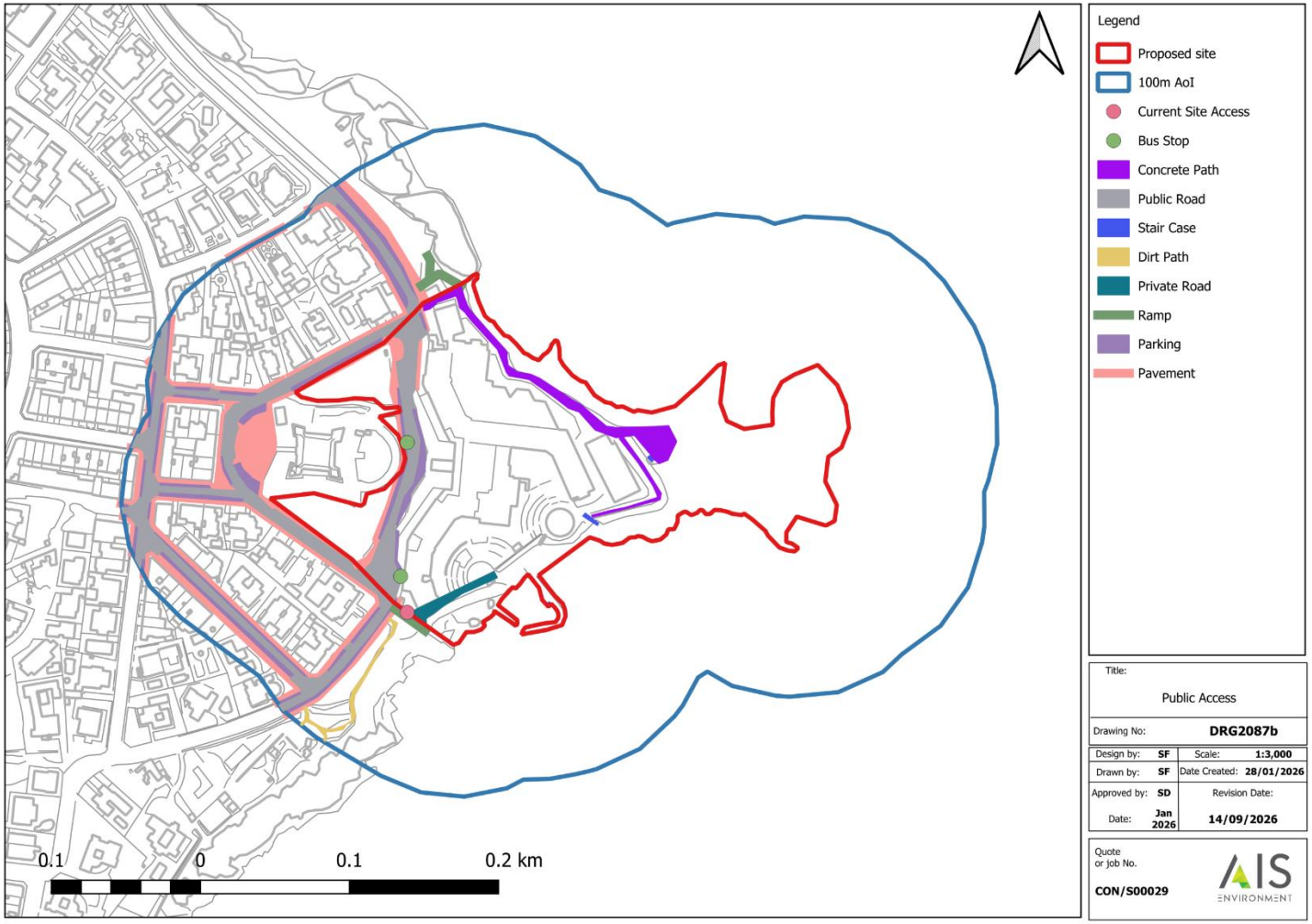


FIGURE 103: PUBLIC ACCESS FEATURES IN THE STUDY AREA

5 Assessment of Environmental Impacts and Risks

5.1 Land Cover and Land/Sea Uses

5.1.1 Construction Phase

Impacts on Land Use

Restrictions to Foreshore

The construction phase will be confined entirely within the designated development footprint, with all construction activities, machinery, vehicles, material storage areas, and waste management facilities contained within the site boundary. As the site and foreshore is currently only accessible via trespassing through the ex-Jerma Palace site, no additional permanent loss of publicly accessible land or marine areas is anticipated during the construction phase.

Nevertheless, the installation of temporary site hoarding and construction security measures will formalise the exclusion of public access and may restrict existing informal recreational activities that currently take place within the peninsula, particularly along the coastal edge. The temporary loss of access is likely to be more noticeable during the summer months, when visitor numbers and recreational use of the surrounding coastline are generally higher.

Given that public access to the site is already discouraged and restricted on health and safety grounds, and that any additional access limitations will be temporary and limited to the duration of the construction works, the resulting impact on land use and sea use is considered to be temporary, localised, and of minor adverse significance.

Pedestrian and Vehicle Circulation Restrictions

Large construction vehicles will require access to the site on a regular basis throughout the construction phase. The frequency will vary depending on the activities taking place. For example, vehicle activity will be particularly intensive during the removal of excavation waste from site and during on site casting of large structures/areas. This may result in congestion on the local road network, affecting the ability of other road users to freely navigate around the small neighbourhood roads.

The increased numbers of construction vehicles, especially if they are queuing on the roads, may also alter the pedestrian routes around the immediate vicinity of the Scheme site.

Alterations to both pedestrian and vehicle circulation routes, coupled with the associated inconveniences may occasionally deter people from visiting the area for recreational purposes. This is considered to be an adverse impact of minor significance.

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Dust and Noise Generation

Increased levels of dust and noise generation are inevitable during the construction works on the Scheme. Such atmospheric emissions are expected to be the highest during the demolition and excavation activities. The generation of excess dust could result in the temporary deterioration of air quality in the nearby areas which may become a considerable nuisance to the people visiting the area and the nearby residents. Similarly, the generation of excess noise could also the nearby residential uses in the area. These adverse impacts are classified as minor significance due to their intermittent nature.

Impacts on Sea Uses

Marine Pollution

The presence of a construction site in a coastal area inherently poses a risk to the integrity of the marine environment due to the potential for contamination from various sources of pollution. The most likely, and potentially must serious pollution factor, relates to the presence of oils, fuels, chemicals and other harmful substances in the coastal zone. Accidental spills or leaks of any of these substances can result in the pollutant either flowing directly into the sea, or being washed into the marine area by surface run-off or other water sources.

Similarly, if the ground conditions within the site are not managed correctly, there is the potential for fine dust to be blown or washed into the sea. Dust may be transported into the sea through natural surface runoff during rainfall events, as well as through washing activities, excessive watering of exposed ground surfaces and rough sea conditions. These water-related pathways of pollutant transfer are also applicable to concrete washing residue generated from the onsite washing of concrete vehicles, machinery and equipment if no containment measures or practices are implemented.

Lightweight litter, waste materials and other loose construction materials are particularly susceptible to wind dispersal and may be blown directly into the marine environment during periods of strong winds. Once deposited in the sea, such materials can contribute to marine pollution, adversely affect water quality and pose risks to marine organisms through ingestion, entanglement or habitat degradation.

Overall, if any of these pollutants from the Scheme site were to enter the marine environment, it would diminish the quality of the sea in the nearby vicinity, and hence forth reduce the appeal of the area for swimming and other water related activities. Due to the nearby designated swimming zone and general popularity of the area for swimming, the adverse impact is classified as being of moderate significance.

5.1.2 Operational Phase

Impacts on Land Uses

Redevelopment of Abandoned Site

The proposed Scheme involves the comprehensive regeneration of the long-abandoned ex-Jerma Palace site, transforming it from a derelict and inaccessible property into a mixed-use development. This change in land use represents the reuse of a previously developed neglected site, thereby avoiding the need to accommodate a similar development on undeveloped land elsewhere.

The redevelopment is expected to revitalise a neglected section of the Marsascala coastline, enhancing the overall quality and functionality of the area while generating new economic activity, employment opportunities and recreational facilities for both residents and visitors. The introduction of a diverse mix of complementary land uses will promote year-round activity, improve the attractiveness of the locality and contribute towards the wider regeneration objectives established for the site.

Furthermore, the proposed land uses are consistent with the planning vision and strategic objectives set out in both the South Malta Local Plan and the site-specific Development Brief. Accordingly, the proposed redevelopment is considered to give rise to a major beneficial impact on land use within the AoI, representing a significant enhancement over the existing baseline conditions.

Intensification of Activity

The operation of the proposed Scheme will result in a substantial intensification of land use compared to the existing baseline. Consequently, the number of residents, visitors, employees and associated vehicular movements within the area will increase significantly.

This increase in activity is expected to alter the character of the locality, which is predominantly residential and relatively tranquil, through higher levels of traffic, noise, human activity and general urbanisation. While such changes may be perceived as incompatible with the surrounding residential context, the proposed

mixed-use redevelopment is consistent with the vision and objectives established in both the South Malta Local Plan and the site-specific Development Brief.

Although the Scheme delivers significant regeneration benefits, the operational intensification of land use is considered to give rise to a moderate adverse impact on the surrounding locality.

Restored Access to Foreshore

In accordance with the objectives of the Development Brief, the Scheme includes the restoration of free unrestricted public access to the natural foreshore. The proposed works comprise the clearance and reorganisation of existing boulders that currently impede access, together with the construction of dedicated pedestrian pathways to improve accessibility and safety.

As public access to this section of the coastline has been effectively restricted for several years, these interventions will reinstate opportunities for informal recreation and enhance the public enjoyment of the coastal environment. Consequently, the restoration of foreshore access is considered to constitute a major beneficial impact on land and coastal use within the AoI.

Impacts on Sea Uses

Marine Pollution

In comparison to the derelict site, the operation of a large multi-use complex poses risks of localised marine pollution. Surface run off, from natural rainfall events and site cleaning activities, can wash residues from the ground into the sea.

Light-weight items of litter will also be at risk of being blown into the sea with strong gusts of wind. During intense storm events, any unsecured equipment and furniture such as chairs may also be washed into the marine environment.

Any pollution to the marine environment will potentially result in a deterioration of the water quality and aesthetics of the overall area. This will deter people from coming to the foreshore to enjoy the sea for a variety of recreational purposes. The likelihood of the pollution occurring is low and the nature of the pollutants are unlikely to be particularly harmful. Therefore, the severity of the impact is considered to be minor adverse.

Restoration of the Foreshore

The proposed restoration of the public access to the foreshore, along with its general rehabilitation and redevelopment of the abandoned hotel site will drastically increase the appeal of the area. It is reasonable to expect that this will result in larger numbers of people, both locals and visitors, frequenting the foreshore to access the sea for informal recreational past-times. This is considered to be a moderate beneficial impact of the proposed Scheme.

On the other hand, this increase in people and associated noise will reduce the tranquillity of the area for sea users. This adverse impact is considered to be of minor significance.

5.2 Landscape Character and Visual Amenity

5.2.1 Baseline Photographs and Photomontages

Figure 104 to Figure 123 present the current baseline conditions and photomontages of the Scheme for each of the 10 viewpoints.



FIGURE 104: VP1 – TRIQ DAWRET IT-TORRI, M'SCALA (BASELINE)



FIGURE 105: VP1 – TRIQ DAWRET IT-TORRI, M'SCALA (WITH PROPOSED DEVELOPMENT)



Figure 106: VP2 – Triq is-Salini, M'Scala (baseline)



FIGURE 107: VP2 – TRIQ IS-SALINI, M'SCALA (WITH PROPOSED DEVELOPMENT)



FIGURE 108: VP3 – TRIQ IR-RIDOTT, M'SCALA (BASELINE)



Figure 109: VP3 - Triq ir-Ridott, M'Scala (with proposed development)



FIGURE 110: VP4 – COAST OFF TRIQ IS-SIKKA, M'SCALA (BASELINE)



FIGURE 111: VP4 – COAST OFF TRIQ IS-SIKKA, M'SCALA (WITH PROPOSED DEVELOPMENT)



FIGURE 112: VP5 – MUNXAR HILL, M'SCALA (BASELINE)



FIGURE 113: VP5 – MUNXAR HILL, M'SCALA (WITH PROPOSED DEVELOPMENT)



FIGURE 114: VP6 – TRIQ XROBB L-GHAGIN, DELIMARA (BASELINE)



FIGURE 115: VP6 – TRIQ XROBB L-GHAGIN, DELIMARA (WITH PROPOSED DEVELOPMENT)



FIGURE 116: VP7 – TRIQ IZ-ZONQOR, M'SCALA (BASELINE)



FIGURE 117: VP7 – TRIQ IZ-ZONQOR, M'SCALA (WITH PROPOSED DEVELOPMENT)



FIGURE 118: VP8 – TRIQ HURDS BANK, M'SCALA (BASELINE)



FIGURE 119: VP8 – TRIQ HURDS BANK, M'SCALA (WITH PROPOSED DEVELOPMENT)



FIGURE 120: VP 09 – TRIQ SANT'ANNA, M'SCALA (BASELINE)



FIGURE 121: VP9 – TRIQ SANT'ANNA, M'SCALA (WITH PROPOSED DEVELOPMENT – NOT VISIBLE)



FIGURE 122: VP10 – TRIQ IZ-ZONQOR, M'SCALA (BASELINE)



FIGURE 123: VP 10 – TRIQ IZ-ZONQOR, M'SCALA (WITH PROPOSED DEVELOPMENT)

5.2.2 Construction Phase

During the construction phase, the proposed Scheme is anticipated to generate discernible visual effects across short-, medium-, and long-distance viewpoints. Early-stage activities, including site clearance, demolition and excavation, will introduce temporary disruption to the existing visual environment. These works are likely to reduce visual amenity and will be accompanied by associated effects such as noise, vibration and dust generation. During drier periods, particularly in summer, dust deposition on adjacent surfaces, vegetation and residential properties may further influence the appearance of the surrounding environment, thereby intensifying perceived visual impacts.

Given the scale and complexity of the development, the use of multiple tower cranes will be required. These cranes will introduce prominent vertical elements into the skyline, forming visually dominant features during the construction period. Within the open coastal context of Marsascala Bay, such elements are likely to be widely visible and may be particularly noticeable to sensitive receptors, including residents and pedestrians moving along the coastal frontage.

Across the majority of assessed viewpoints, excluding VP6, VP8, and VP9, construction-related components such as site hoarding, scaffolding, construction vehicles, material storage areas, and active machinery are expected to be clearly visible. Collectively, these elements will result in a temporary but marked deterioration in visual quality and amenity, and are therefore assessed as giving rise to major adverse effects. The magnitude of these effects will vary depending on receptor exposure and the influence of secondary factors, including dust levels, noise, vibration and any temporary traffic management arrangements.

At viewpoints VP6 and VP8, the greater distance from the site, together with partial screening from intervening landform and built features, will reduce the prominence of construction activity. As a result, visual effects at these locations are assessed as moderate adverse. However, upper-level construction works and crane operations are still likely to remain visible.

At VP9, construction activities at ground level are expected to be fully screened from view. Only the upper sections of tower cranes may be intermittently visible, and in the context of existing urban and infrastructural elements within the landscape, the resulting visual effect is considered negligible.

Overall, while construction-phase impacts are temporary and their duration which is anticipated to extend over approximately four years, means that they will be experienced over the medium term. The application of standard environmental management and mitigation measures, including the use of screened hoarding, effective dust suppression techniques, the timely removal of redundant cranes, and wheel-washing facilities, will assist in reducing the extent and intensity of visual and environmental effects on surrounding receptors.

5.2.3 Operational Phase

The proposed development introduces an increase in overall massing and a more pronounced vertical expression, which in isolation would represent a degree of visual intensification. However, this change must be considered within the context of replacing the existing derelict and visually intrusive ex-Jerma structure. In this regard, the resulting visual outcome reflects a balance between a more prominent built form and a significant enhancement in visual quality and townscape coherence. The Scheme effectively substitutes a degraded and discordant element with a well-designed structure of higher architectural quality, leading to an overall improvement in appearance, albeit with increased scale and presence.

The development will be visible from a range of viewpoints, with the extent of visibility influenced by factors such as distance, orientation, and the presence of intervening features. Owing to its height exceeding that of the immediate surrounding context, the upper levels of the building will remain a consistent feature within the skyline. Nevertheless, the proposed design has been carefully configured to maintain appropriate height-to-width (H:W) relationships within the area. This is achieved through the retention of visual corridors, the introduction of setbacks and open spaces, and measures aimed at reducing enclosure and limiting overshadowing, particularly in close-range views.

Architecturally, the Scheme adopts a modern yet contextually responsive approach, characterised by the use of neutral tones and modern cladding materials. These have been selected to complement the textures and tonal qualities of the surrounding environment, promoting visual integration within the semi-urban coastal setting. Elements of the façade draw inspiration from the adjacent St Thomas Tower, incorporating sloped limestone features that reinterpret the language of the historic bastion walls. These features, which are particularly evident in Viewpoint 3, contribute to an improved visual composition when compared to the existing condition.

At Viewpoint 1, the impact is assessed as minor beneficial relative to the baseline scenario. The introduction of a central public plaza between the two building blocks, along with the creation of new visual connections towards the sea, enhances the spatial quality and openness of the area at close range. While there is a modest increase in height and massing, the removal of the dilapidated structure and its associated negative features results in a clear and positive transformation, yielding a development that is more coherent with its surroundings.

At VP3 and VP7, the proposed development occupies a greater horizontal and vertical extent than the existing structure, leading to an increased visual presence within these views. However, this is partially offset by the clear qualitative improvements associated with the removal of the derelict ex-Jerma building. The elimination of visually intrusive elements, such as structural decay, graffiti, and unfinished surfaces results in a more coherent and aesthetically refined townscape. As such, while the development introduces additional massing, it simultaneously

enhances the visual condition of the site, resulting in an overall minor adverse effect rather than a more significant level of impact.

At VP6, the minor adverse classification is mainly influenced by the considerable viewing distance and elevated vantage point. From this location, the increase in height and massing is less pronounced within the overall composition, and the proposed development appears as a relatively small component within a broader landscape. Furthermore, at this range, the degraded condition of the existing building is not readily perceptible, meaning that the visual benefits associated with its removal are less evident. Consequently, the assessment reflects a subtle increase in built form without a corresponding strong perceptual gain, resulting in a minor adverse effect.

At Viewpoints 2, 4, 5, 8 and 10, the impact is assessed as moderate adverse. From these locations, the increase in overall massing and the stronger vertical emphasis of the proposed development are more readily perceived, resulting in a more pronounced alteration to the existing visual baseline. In many of these views, the combination of viewing distance and partial screening reduces the legibility of the current building's deteriorated condition. As a result, the existing structure does not appear as degraded, and the visual benefits associated with its removal are less apparent. Consequently, the perceived change is driven less by improvements in architectural quality and more by the introduction of a larger and more visually assertive built form.

Key design features intended to mitigate visual impact, such as the central plaza and the spatial separation between building blocks, are not clearly discernible from these viewpoints. This limits the effectiveness of the proposed articulation in breaking down the perceived mass. As a result, the development is more likely to be read as a consolidated volume, reinforcing the perception of increased height and width within the landscape and leading to a moderate adverse level of impact.

At VP9, the proposed Scheme is fully screened from view by the intervening built form along the coastal frontage, in combination with a cluster of large vessels situated within a boatyard adjacent to the shoreline. These mid-ground elements collectively obstruct any direct line of sight towards the proposed building. As a result, the development is not perceptible from this location, and the residual visual impact is therefore assessed as negligible.

While the architectural approach of the Scheme demonstrates a clear intent to respond to the materials, textures, and formal language of the surrounding context, its overall scale and siting inevitably result in an increased level of visual exposure within the coastal landscape. As such, the extent to which the development integrates successfully will depend not only on design intent but also on the quality of execution, particularly in relation to façade articulation, the use of appropriate and durable materials, and the effective implementation and long-term maintenance of a robust landscaping strategy. Soft landscaping will be especially important in moderating the

perceived mass of the building and reinforcing its relationship with the surrounding environment at close distance views.

In addition, the increased height and massing of the proposed development will give rise to changes in shadow patterns and increased exterior lighting, particularly within adjacent public spaces and nearby residential areas. Shadowing effects are expected to be most noticeable during certain times of the day and year, when shadow casting may extend further than under existing conditions. However, given the orientation of the site, the surrounding open coastal context, and the incorporation of setbacks and open spaces within the design, such impacts are anticipated to be limited in extent.

The external lighting strategy is expected to adopt a restrained and integrated approach, with low-intensity fittings and directional luminaires used to limit light spill and avoid unnecessary illumination of the surrounding environment. Particular attention should be given to the coastal context and nearby residents, ensuring that lighting enhances safety and legibility without resulting in visual intrusion or adverse impacts on the night-time character of the area.

Overall, light and shadowing effects are assessed as minor adverse, representing a modest but manageable change to existing conditions.

5.3 Geology, Geomorphology, Hydrogeology and Soils

5.3.1 Construction Phase

The proposed excavation works will generate ca. 25,557m^3 of bulk material (based on a bulking factor of 1.3). Once rock strata are extracted, they can never be replaced and take millions of years to be regenerated. Considering that the stone material to be extracted is of a considerable volume, the impact is considered to be of major severity.

The construction works shall also destroy / degrade any soil present on the shore platform. Since the site is already developed, the quantities of affected soil are expected to be relatively small. In light of this, the adverse impact is negligible.

During the excavation activities, the stability of the exposed walls could be compromised. Daylighting of natural joints can result in rock wedge failure. This constitutes a moderate adverse impact.

Since the Scheme is a redevelopment project, the geomorphology of the site has already been significantly altered in the past. However, the proposed additional excavation will further alter the sites geomorphology disrupting the once continuous shoreline feature. This further alteration constitutes a minor adverse impact.

In addition, the coastal salt pans could also be damaged by the movement of large machinery and inappropriate storage of materials or waste. However, since the salt pans are located outside of the building area, the likelihood of such damage occurring is low. Consequently, the adverse impact is considered to be minor.

As with all construction sites, there is a risk of spillage of fuel, lubricants, oils and other chemicals. These harmful liquids can easily penetrate into rock strata via open fissures., especially during excavation activities when the rock surface is exposed. This constitutes a moderate negative impact on the hydrogeology of the immediate and surrounding area.

There shall be no impact on palaeontology since the excavation material is Lower Globigerina Limestone, which is not renown for particular fossil beds.

5.3.2 Operational Phase

During operation there could be accidental leakage of sewer or other discharges; as well as spills of edible oils. Such effluents may percolate into the subsurface contaminating the geology and hydrogeology. Decontamination of rocks from oils and fats is difficult and costly. In light of this, the adverse impact is classified as moderate.

The shoreline salt pans will be easily accessible to members of the general public and those people visiting the Scheme facilities. This will put the structures at increased risk of potential damage, leading to alterations in the geomorphology. They will also be subject to potential littering. This constitutes a minor adverse impact.

The site is located on low ground, close to the shoreline meaning that it is vulnerable to sea level rise and exception storm waves. Current trends indicate a 1 cm per year local sea level rise. A sea level rise of 50 cm by 2050 and 100 cm by 2100 was assumed for the assessments and adaptation measures in the Maltese islands.

5.4 WATER BODIES

5.4.1 Construction Phase

During construction, potential impacts on water bodies are principally associated with the mobilisation of dust and fine excavated material, contaminated surface runoff, accidental spillages of fuels, lubricants and other construction chemicals, and the uncontrolled discharge of concrete or cement wash water. Owing to the coastal location of the Scheme and the fractured nature of the underlying limestone, contaminants released at ground level may migrate through fissures and bedding discontinuities towards saline groundwater and the adjoining marine environment. Surface runoff may also transport suspended material directly across the shore platform into coastal waters.

TABLE 43: OUTLINE OF WATERBODY CONSTRUCTION IMPACTS

POTENTIAL IMPACT	MAIN RECEPTOR	TYPICAL CHARACTER
Dust and fine limestone entering runoff or the sea	Coastal water	Temporary adverse; increased turbidity/suspended solids

POTENTIAL IMPACT	MAIN RECEPTOR	TYPICAL CHARACTER
Concrete/cement wash water	Coastal water / saline groundwater	Potentially important because of very high pH
Accidental fuel, hydraulic oil or lubricant spills	Fractured rock, saline groundwater, sea	Localised but potentially significant
Excavation exposing fissures and bedding planes	Groundwater–sea pathway	Can provide rapid migration routes for contaminants
Stockpiling excavated material near shore	Coastal water	Sediment/dust mobilisation during wind or rainfall
Dewatering, if required	Saline groundwater / sea	May alter local groundwater flow and requires appropriate disposal
Works on coastal defences/platform	Hydromorphology	Possible alteration of wave reflection, erosion and sediment movement

5.4.2 Operational Phase

During operation, potential impacts are mainly associated with accidental leakage from foul-water systems, contaminated stormwater runoff from trafficked and parking areas, oils and fats from catering facilities, detergents and cleaning chemicals, swimming-pool water and inappropriate disposal of solid waste. Increased impermeable surfaces may also modify the existing runoff regime. Because the Scheme is located immediately adjacent to the coastline, exceptional storm-wave and storm-surge events should also be considered, particularly in relation to the integrity of drainage, wastewater and below-ground infrastructure.

Where coastal defence works or other interventions are proposed along the foreshore, their potential effects on local hydromorphology, including wave reflection, erosion, scour and sediment transport, should also be assessed. Subject to appropriate design, containment, drainage and pollution-prevention measures, most water-quality impacts during construction and normal operation should be capable of substantial mitigation; accidental pollution events remain the principal residual risk.

Loss of groundwater recharge is of lesser importance immediately beneath the coastal site as the freshwater lens has effectively tapered out there. Marine-water contamination and saline-groundwater pathways are much more relevant.

TABLE 44: OUTLINE OF WATERBODY OPERATIONAL IMPACTS

POTENTIAL IMPACT	MAIN RECEPTOR	TYPICAL CHARACTER
Leakage from foul sewers or pumping systems	Groundwater and coastal water	Potential microbiological and nutrient contamination
Kitchen oils, grease and detergents	Sewer/drainage system and ultimately coastal waters	Chronic pollution risk if poorly managed
Stormwater from roads, garages and parking areas	Coastal waters	Hydrocarbons, tyre/brake residues, suspended solids
Swimming-pool backwash or chlorinated water	Coastal waters	Chemical/water-quality impact if discharged improperly
Increased impermeable surfaces	Hydrological regime	Greater runoff and reduced infiltration
Litter and plastics	Shore platform and marine environment	Persistent marine pollution risk
Exceptional storm waves/storm surge	Hotel drainage and wastewater systems	Flooding may mobilise pollutants back into the sea
Coastal structures or altered defences	Hydromorphology	Possible changes to wave action, local scour and shoreline processes

5.5 TERRESTRIAL ECOLOGY

5.5.1 Construction Phase

Uprooting of Trees

The project will involve the uprooting of approximately 16 individual trees, 10 of which are Tamarisk trees which are protected in accordance to Schedule II of S.L. 549.44 and S.L. 549.123. It is recommended that the 10 Tamarisks to be uprooted are to be transplanted on the sea-facing side of the scheme.

Notwithstanding the relatively low conservation value of the majority of the trees affected, the removal of approximately 16 individuals represents a substantial loss of established vegetation and associated habitat. Mature trees provide important

ecological functions irrespective of their protection status, offering feeding, nesting, roosting and shelter opportunities for a range of fauna. Their removal will therefore reduce the availability of suitable habitat for birds, bats, hedgehogs, reptiles, invertebrates and other species currently utilising the site. The extensive clearance of vegetation may also further increase habitat fragmentation for the currently dilapidated site, reducing ecological connectivity between the site and surrounding vegetated areas.

Tree removal will additionally result in the loss of ecological functions associated with established vegetation, including the contribution of leaf litter and decomposing organic matter to soil structure, nutrient cycling and soil-dwelling organisms. These functions cannot be immediately replicated through replacement planting, particularly where mature specimens are removed, as newly planted trees require considerable time to establish and develop comparable ecological value.

Given that an extensive soft landscaping plan is to be incorporated in the proposed scheme which includes the planting of several indigenous trees and vegetation, any habitat lost will be replaced. Therefore, such impacts are expected to be of moderate adverse impact, especially since indigenous halophytic flora capable of withstanding coastal erosion and hypersaline environments are to be planted.



FIGURE 124: PROTECTION STATUS OF TREES PRESENT, THEY SHOULD EITHER BE RETAINED, TRANSPLANTED OR REPLACED BY ERA APPROVED COMPENSATORY PLANTING RATIO STANDARDS

Demolition of Dilapidated Building: Habitat Loss for Bats

The existing dilapidated ex-Jerma building serves as an important habitat and refuge site for bat species. The demolition of this structure could result in the loss of

valuable and attractive roosting sites[9] and could significantly disrupt the ecological functionality of the area for bats. Consequently, the proposed demolition has the potential to result in a major adverse impact on the local bat population, particularly if suitable alternative roosting habitats are not available.

Removal of Soil

The removal of soil associated with the proposed works is expected to result in the loss of the ecological community of ruderal vegetation that has developed over time as a consequence for the site's neglected and dilapidated condition. Such disturbed habitats can provide important refuge and foraging opportunities for wildlife. The proposed removal of soil would lead to the direct loss of these established biological communities of soil-dwelling organisms, including invertebrates, microorganisms and other infauna. These communities contribute to essential ecological processes such as decomposition, nutrient cycling, soil aeration and the maintenance of soil structure and fertility. The soil layer may also contain seeds, bulbs, rhizomes and other propagules that facilitate the natural regeneration of vegetation on site. Its removal will therefore result in the direct disturbance or loss of these communities and temporarily interrupt the ecological functions associated with the existing soil environment and dilapidated building. However, given that most of the site is already mostly built-up, an insignificant amount of soil is anticipated to be removed from the dilapidated landscaped areas. Moreover, all soil excavated for the construction of the scheme is to not be discarded and is instead to be used for soft-landscaping. Therefore, the overall impact of the removal of soil is anticipated to have a negligible to minor adverse impact on terrestrial flora and fauna.

Spillover Effects

Excavation and construction activities may result in additional indirect impacts, particularly through the generation of fine particulate matter. This particulate matter can disperse beyond the boundaries of the development site due to wind and stormwater runoff. The dust carried by wind has the potential to adversely affect nearby trees and vegetation by obstructing and damaging their respiratory and photosynthetic surfaces. Such interference can lead to compromised physiological processes, which may result in decreased plant health and alterations in community structure, contingent upon the varying susceptibility of different species. Consequently, the dispersal of wind-borne particulates is expected to have a temporary yet significant negative impact on the vegetation within the study area. Such impacts are further magnified for coastal vegetation as they are already exposed to harsh xeric and saline environments. Therefore, significant quantities of dust may influence the overall functioning of coastal vegetations such as their photosynthetic ability and seed propagation.

[9] Voigt, C. C., Phelps, K. L., Aguirre, L. F., Corrie Schoeman, M., Vanitharani, J., & Zubaid, A. (2015). Bats and buildings: the conservation of synanthropic bats. In *Bats in the Anthropocene: Conservation of bats in a changing world* (pp. 427-462). Cham: Springer International Publishing.

The nearest terrestrial Natura 2000 site, MT000023 - *Il-Maghluq tal-Baħar ta' Marsaskala* designated, is located at a considerable distance from the scheme therefore significant impacts from wind-borne dust dispersal on these protected areas are not anticipitated.

Moreover, particulate matter may also contaminate surface runoff which would end up in the surrounding salt pans, soil areas and the sea. This may adversely affect species inhabiting the nearby salt pans, ecosystems that are already characterised by extreme and fluctuating conditions of drought and salinity. As these shallow basins tend to retain and concentrate pollutants rather than effectively flush them away, contaminated runoff could place additional stress on resident species and potentially disrupt ecological functions. Moreover, contaminated surface run off is likely to impact marine fauna such as photosynthetic organisms like *Posidonia oceanica* which is a highly important species and habitat playing a vital role in the marine ecoystem.

Therefore the suspesion of dust in the air and as run off is expected to have a moderate adverse impact on the surrounding vegetation and marine environment.

Additional anticipated spillover affects include the trampling of vegetation outside the scheme boundary by staff and construction vehicles resulting in the physical crushing, bruising and destruction of plants. If trampling activities are repetitive this can result in a decrease of plant cover and impaction of soil over time reducing the overall biodiversity of the area. The impact of trampling by staff and construction vehicles is expected to have a minor adverse impact on the surrounding vegetation.

Artificial Lighting

Activities related to the construction phase will be strictly confined to daylight hours. Any emergency/safety-related night-time activities will be conducted with the minimum required lighting and implement appropriate mitigation measures such as the use of down-turned luminaries. Therefore, impacts to be inflicted on terrestrial ecological receptors are expected to be negligible as night-time lighting will not be implemented during the construction phase.

Noise and Vibration

According to the Noise and Vibration study conducted alongside this assessment, significant increases in noise and vibration levels are predicted during the construction phase. Such levels will likely be highest during the demolition and excavation phases. Excessive noise generation can be a deterrent for faunal species, particularly if carried out during periods which are generally quiet (ex. during the night). Long-term increased noise and vibration generation may cause certain species to leave the site's surrounding area temporarily or even permanently. Therefore, the overall impact of noise and vibration on faunal species is expected to be moderate to major adverse.

5.5.2 Operational Phase

Lighting

The proposed development will introduce exterior lighting in an area that is currently relatively dark and likely frequented by nocturnal species, which may be deterred following the proposed development such as bats and hedgehogs. Light pollution is known to alter behaviour in bats such as in their natural foraging, navigation and roosting and have been found to avoid lit areas[10]. Similar displacement behaviour is observed with the European hedgehog which have been found to favour lower lit areas[11]. Such impacts are therefore expected to be minor to moderate adverse.

Increased Vehicular Traffic

The Scheme will bring about a significant increase in vehicular trips in nearby and connecting roads, Triq is-Salini is predicted to face an increase of 1136 average annual daily trips by 2035 and therefore adding a significant increase of vehicles on the road. This will inevitably increase the deposition of particulate matter and gases related to the combustion onto the surrounding land such as of heavy metals which are known to alter soil microbial activity[12] and therefore affecting plant growth. However, given the surrounding vegetated areas are generally disturbed and rich in non-indigenous species, the impact on surrounding flora is expected to be minor adverse.

In the case of fauna, the increase in vehicular traffic associated with the proposed development could result in a higher likelihood of road mortality through vehicle collisions. This risk would be greatest during periods of low light, particularly at dusk and during nighttime hours, when nocturnal species such as hedgehogs are most active. Increased traffic volumes may therefore result in occasional direct impacts on individuals attempting to cross access roads and nearby transport routes. However, given that the road between St. Thomas Tower and the proposed development is to be pedestrianised, this would decrease the likelihood of vehicle collisions with fauna in this area. Therefore, the overall impact of traffic collisions on fauna is expected to be minor adverse.

Shading Effects

The increase from four to seven storeys results in only a limited incremental change in the spatial extent and/or duration of shadowing. This additional shadowing predominantly affects disturbed, developed or sparsely vegetated areas. Where

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[10] Christian C Voigt, Jasja Dekker, Marcus Fritze, Suren Gazaryan, Franz Hölker, Gareth Jones, Daniel Lewanzik, Herman J G A Limpens, Fiona Mathews, Jens Rydell, Kamiel Spoelstra, Maja Zagmajster, The Impact Of Light Pollution On Bats Varies According To Foraging Guild And Habitat Context, *BioScience*, Volume 71, Issue 10, October 2021, Pages 1103–1109

[11] Berger, A., Lozano, B., Barthel, L. M., & Schubert, N. (2020). Moving in the dark—evidence for an influence of artificial light at night on the movement behaviour of European hedgehogs (Erinaceus europaeus). *Animals*, *10*(8), 1306.

[12] Kuklová, M., Kukla, J., Hniličková, H., Hnilička, F., & Pivková, I. (2022). Impact of car traffic on metal accumulation in soils and plants growing close to a motorway (Eastern Slovakia). *Toxics*, *10*(4), 183.

vegetation is affected, the duration is limited principally to periods shortly after sunrise or before sunset; and no appreciable additional shadowing of sensitive garigue habitat is anticipated[13]. Any incremental shadowing effect is likely to be confined largely to already developed surfaces and unvegetated coastal areas, the impact caused by shading is therefore expected to be of negligible adverse impact.

Noise and Vibration
According to the noise and vibration technical study, operational road traffic noise is expected to significantly alter the noise climate of the relatively quiet residential area. Excessive noise generation can be a deterrent for faunal species, particularly if carried out during periods which are generally quiet (ex. during the night). Long-term increased noise and vibration generation may cause certain species to leave the site's surrounding area temporarily or even permanently. The increased commotion brought about by the Scheme such as an increase in tourism, traffic and social events is expected to cause a moderate adverse impact on ecosystems during the operation phase.

5.6 AVIAN ECOLOGY

5.6.1 Construction Phase

Temporary Disturbance and Reduction of Habitat
The site of the Jerma Hotel Redevelopment will be a source of noise, vibration, dust and direct disturbance during the construction phase. Additionally, the construction site will create light pollution during night-time activities and from security lighting. These factors are expected to negatively affect the avian assemblages in the AoI. Overall, the proposed development will result in the loss of potential breeding habitat for up to five native terrestrial bird species within the footprint of the proposed development.

While the proposed development is not situated inside Natura 2000 sites, the habitats disturbed during the construction phase in the wider area provide nesting territories for additional land birds within the AoI. The roads leading to the construction site will experience higher traffic volume of heavy machinery, creating additional disturbance, light and noise pollution, dust, vibration and direct disturbance. Material from demolition, excavation and construction will need to be stored at least temporarily on site, increasing the area of disturbance. Material from demolition of the derelict hotel and from excavation will have to be transported and stored elsewhere, potentially creating additional disturbance and habitat destruction elsewhere, possibly even outside the AoI.

[13] According to Shading calculating software (https://www.suncalc.org/#/35.8611,14.5737,18/2026.07.08/19:05/30/3) when comparing a building of a height of 7 storeys (proposed) and 4 storeys (current development) the shading effects are casted on developed areas/disturbed ground throughout the year.

Breeding territories and nest sites of the Sardinian Warbler, Spanish Sparrow, Blue Rock-thrush, Zitting Cisticola and Barn Swallow will be disturbed or lost during the construction phase as it is inevitable that works are carried out during their breeding seasons (February – August). The disturbance can potentially lead to the complete temporary displacement, and consecutive reduction in breeding success up to loss of nest sites leading to reproductive failure of the breeding pairs of all species in the footprint of the proposed development and its direct vicinity.

Additionally, foraging areas of the above listed breeding species are expected to be reduced temporarily during the construction phase and additional broods in the surroundings of the proposed development may fail if works are carried out during the breeding season (February – August).

Temporary habitat loss and disturbance is expected to result in the reduction and disturbance of foraging, resting and roosting areas for many other bird species that are breeding, wintering, or stopping over in the AoI. As the construction phase is expected to span more than one year, works will impact various shore-, water- and seabird species which currently make use of the rocky promontory and the shallow waters above the reef in the vicinity of the proposed development to rest and forage during migration stopover in both spring and autumn and while wintering in the Maltese Islands.

Overall, the direct impacts during the construction phase of the Jerma redevelopment will act temporarily and mainly on a localised scale in the AoI and, but also along the access roads. The works are therefore expected to be of a moderate adverse impact on local breeders of common species, as well as individuals of non-breeding species stopping over in the AoI, some of which are of conservation concern, at least short-term.

Light Pollution During Night-Time Works

Artificial light at night (ALAN) is well documented to negatively affect birds, including seabirds. Adults from all three procellariiform species nesting on the Maltese Islands actively avoid approaching breeding areas under high levels of illumination and may desert colonies as a result of exposure to ALAN. Furthermore, ALAN causes the stranding and grounding of seabird fledglings on their first flight out of the colony. In general, light pollution from ALAN is additive and light trespass that creates skyglow adds to light pollution in areas in the AoI (and potentially even beyond) that are otherwise dark. Furthermore, birds attracted to ALAN may be injured or killed by collisions with manmade structures.

While the site of the proposed development is not situated within the immediate line of sight of any seabird nest sites, seabird fledglings are known to strand at light polluted sites across the Maltese Islands[14]. This is relevant if night-time construction activities are carried out during the fledging seasons of the sensitive avian receptors.

[14] *Crymble et al. (2020): Identifying light-induced grounding hotspots for Maltese seabirds. Il-Merill 34, 23-43.*

The most sensitive periods for fledging seabirds are during their respective fledging periods: June/July for Yelkouan Shearwaters and September/October for Scopoli's Shearwaters. Mediterranean Storm-petrels have an asynchronous breeding season, with fledglings expected between June and October.

Due to the exposed location of the proposed development at the easternmost promontory of the Maltese Islands and its direct line of sight with marine SPAs of importance to procellariform seabirds, the temporary negative impact of ALAN during construction, if not mitigated, will potentially act on significant numbers of all breeding seabird species (Scopoli's Shearwater, Yelkouan Shearwater and European Storm-petrel). Such impacts are expected to be of major adverse impact.

Additionally, ALAN is known to have negative consequences on nocturnally migrating birds. Bright lights are known to attract, disorient, trap and ground birds in active migration during the night[15]. The lit-up construction site during night-time operation is highly likely to have the above-mentioned impacts on nocturnally migrating birds passing within the AoI. This is especially problematic for shore- and waterbirds using the coastline along the promontory as a guidance line, and species which may be making use of protected sites and rare habitats within the AoI and within direct line of sight (e.g. wetlands and other terrestrial SPAs listed above). Moreover, due to the varied phenology of the species involved, sensitive periods to migrating land-, shore- and waterbirds are spread across the year. Therefore, ALAN is expected to have an overall moderate impact on nocturnally migrating birds.

NB: No night time construction works are foreseen at this stage.

Dust and Waste Pollution

The demolition of the derelict Jerma hotel is expected to create substantial amounts of dust and waste. Likewise, the construction of the proposed development will produce large amounts of waste material from the excavation, packaging material (plastic sheets, Styrofoam, etc.), the netting of the scaffolding etc. If this waste is not contained appropriately and spills into the environment it can be expected to have a negative impact on sensitive receptors, including birds.

Situated on a headland, the area of the proposed development is very exposed and can experience strong winds and high waves under certain meteorological conditions. This is expected to elevate the risk that waste material, such as harmful dust, micro- and macroplastics, will end up in the marine environment, including protected Natura 2000 sites in the AoI and potentially beyond. Such unintended spills can have significant detrimental effects on sensitive receptors including marine and coastal avifauna, if left unmitigated. Once released into the environment, plastic fragments persist, with their physical breakdown into smaller fragments actually facilitating their take-up by living creatures. They are also known to absorb toxins and harmful

[15] *Evans Ogden, L. J. (2002). Summary report on the bird friendly building program: Effect of light reduction on collision of migratory birds. In Fatal Light Awareness Program (Vol. 1).*

chemicals such as persistent organic pollutants (POPs), increasing further their potential negative impact on sensitive receptors when ingested and when accumulating along the food chain. Bioaccumulation and biomagnification are particularly problematic phenomena for seabirds which are long-lived organisms on top of marine food webs. The increased contamination of the marine SPAs within the AoI is of concern due to their importance for foraging seabirds, including SPA trigger species and species of conservation concern.

5.6.2 Operational Phase

Permanent Loss of Habitat

Overall, the proposed development will potentially result in the permanent loss of habitat for up to five terrestrial breeding bird species within the footprint of the proposed development. Once the Jerma Hotel redevelopment is finalized, the area will experience much higher vehicular traffic and more people frequenting the site. The site is expected to have permanent high elevated levels of disturbance and noise pollution during standard operations as compared to the site's state today. Events such as private and commercial functions will create additional peaks in traffic, disturbance and noise pollution.

Of the five potential terrestrial breeding bird species in the development footprint, the Spanish Sparrow, Sardinian Warbler, Blue Rock-thrush, and Barn Swallow are not particularly sensitive to human disturbance and three of them make use of human-made structures as nest sites. The Sardinian Warbler readily nests in shrubs and trees in gardens, parks and alike. Therefore, the extent of permanent habitat loss will depend on the provision of undisturbed nest sites within the operational development and landscaping of the unbuilt areas, roofs, etc. for the nesting and foraging opportunities. The Zitting Cisticola, which nests in grasses, is expected to experience a permanent loss of habitat as a result of the proposed project, such habitat loss impact is expected to be of moderate adversity.

Bird species which are stopping over during migration or wintering in the area will also be impacted by direct habitat loss within the footprint of the proposed development and its close vicinity in the AoI. While a large proportion of the proposed footprint is currently built up, the low level of human disturbance due to the site's current derelict status means that both artificial land cover and the adjacent natural coastline and marine areas are hospitable for passage or wintering species, some of which are sensitive receptors of conservation concern. As a result, the redevelopment of the site and the level of activity associated with the proposed mixed-use commercial development will result in the degradation and/or loss of habitat to a large number of species, and in particular the six non-breeding shore- and seabird species listed above. Therefore, the expected loss of nesting and foraging habitat is expected to be of moderate to major adverse impact on terrestrial avifauna.

Pollution and Disturbance

The operation of the proposed Jerma development is expected to increase vehicular traffic and human pressure at site and in the wider area drastically. This is expected

to permanently and significantly increase the noise pollution but also the air pollution from vehicular combustion engines and tyre abrasion in the area, both with negative impact on avifauna. Direct disturbance from increased human activities in the AoI, including the introduction of domestic animals such as cats and dogs, is expected to have a significant negative impact on sensitive receptors feeding and resting in the area during stopover on migration and when wintering, including the rocky shores. It is also expected to increase the pressure on sensitive receptors in the wider AoI including the relevant terrestrial protected areas due to increased activity originating from this site (e.g. excursions, quad bike and other vehicular tours), as well as in the wider marine environment, including inside the relevant marine SPAs due to the expected increase in maritime activities (e.g. leisure crafts, dive boats, boat parties, jet skis etc.). Therefore, such aforementioned human disturbances are expected to have a moderate to major adverse impact on avian assemblages.

Situated on a headland, the area of the proposed development is very exposed and can experience strong winds and high waves under certain meteorological conditions. This is expected to elevate the risk that waste material resulting from increased human activities will end up in the marine environment, including protected Natura 2000 sites in the AoI (and potentially beyond). Such unintended spills can have significant detrimental effects on sensitive receptors including marine and coastal avifauna, if left unmitigated. Once released into the environment, plastic fragments persist, with their physical breakdown into smaller fragments actually facilitating their take-up by living organisms. They are also known to absorb toxins and harmful chemicals such as persistent organic pollutants (POPs), increasing further their potential negative impact on sensitive receptors when ingested and when accumulating along the food chain. Bioaccumulation and biomagnification are particularly problematic phenomena for seabirds which are mostly long-lived organisms on top of marine food webs. The increased contamination of the marine SPAs within the AoI is of concern due to their importance for foraging seabirds, including SPA trigger species and species of conservation concern. Overall, the impacts of the exposure of harmful pollutants on avifauna is expected to be moderate adverse.

Permanent Light Pollution

Artificial light at night (ALAN) is well documented to negatively affect birds, including seabirds. Adults from all three procellariiform species nesting on the Maltese Islands actively avoid approaching breeding areas under high levels of illumination and may desert colonies as a result of exposure to ALAN. Furthermore, ALAN causes the stranding and grounding of seabird fledglings on their first flight out of the colony. In general, light pollution from ALAN is additive and light trespass that creates skyglow adds to light pollution in areas in the AoI (and potentially even beyond) that are otherwise dark. Furthermore, birds attracted to ALAN may be injured or killed by collisions with manmade structures.

While the site of the proposed development is not situated within the immediate line of sight of any seabird nest sites, seabird fledglings are known to strand at light

polluted sites across the Maltese Islands[16]. The derelict hotel at the site of the proposed development is currently dark and is shielding light from the built-up and urbanized area of Marsascala from spilling out to the shoreline of the promontory and the surrounding sea, keeping the area relatively darker at night. Therefore, so far no seabird fledglings have been reported being grounded due to ALAN in this area.

The proposed development is situated at an exposed location, the easternmost promontory of the Maltese Islands. The two main blocks of the developments tower to a significant height of eight stories and are characterized by wide fronts each facing one of the sea fronts of the promontory. This is expected to lead to a significant light spill far out into the marine environment, including relevant marine SPAs, which are in its direct line of sight. This can be expected to lead to a significant number of seabird groundings in the area. Thus, the expected major adverse impact of ALAN during operation is expected to act permanently on a significant number of all breeding seabird species (Scopoli's Shearwater, Yelkouan Shearwater and European Storm-petrel), if not adequately mitigated.

Additionally, ALAN is known to have negative consequences on nocturnally migrating birds in general. Bright lights are known to attract, disorient, trap and ground birds in active migration during the night[17]. ALAN from light spill during operation will act permanently and significantly on sensitive receptors passing through the AoI at night during their annual migration periods if no adequate mitigation measures are in place. This is especially problematic for waders and waterbirds using the coastline along the promontory as a guidance line, and species which may be making use of protected sites and rare habitats within the AoI and within direct line of sight. Due to the varied phenology of the species involved, sensitive periods to migrating land-, shore- and waterbirds are spread year-round. Therefore, the overall impact of ALAN on nocturnally migrating birds is expected to be moderate adverse during the operational phase.

Urban Heat Island Effect

The increase in concreted and asphalted areas is expected to raise the ambient temperature in and around the footprint of the proposed development significantly. This increase in ambient air temperature, known as the urban heat island effect, will be additive to the temperature rise in the area caused by the large number of air conditioning systems of all the hotel rooms, serviced apartment and residential units, etc. If not mitigated, the rise in ambient air temperature is expected to have a moderate to major adverse impact on the local microclimate, detrimental to the avifauna community in the AoI.

[16] *Crymble et al. (2020): Identifying light-induced grounding hotspots for Maltese seabirds. Il-Merill 34, 23-43.*

[17] *Evans Ogden, L. J. (2002). Summary report on the bird friendly building program: Effect of light reduction on collision of migratory birds. In Fatal Light Awareness Program (Vol. 1).*

5.7 Architectural, Archaeological, Historical & Cultural Heritage

5.7.1 Construction Phase

The proposed development has the potential to give rise to direct impacts during the construction phase, particularly as a result of soil and material excavation works, as well as rock-cutting activities required for the construction of the proposed basement levels, underground garages, and landscaping interventions. Such works may result in mechanical damage to St Thomas Tower and battery and its immediate setting.

The overall significance of the impact arising from the superficial demolition of the pre-existing structures is considered to range from moderate to minor adverse, provided that the existing 50m buffer zone established for the protection of the cultural heritage assets is fully respected and that sensitive construction methodologies are adopted throughout the implementation phase.

With regard to the subsequent excavation works below the current ground surface, which is presently covered by cement and asphalt layers, it is important to acknowledge that archaeology, by its very nature, constitutes an uncertain and potentially undiscovered resource. Any archaeological remains, if present, would only become evident during the course of excavation works, at which stage appropriate preservation and/or mitigation measures could be implemented as necessary.

This assessment has identified a number of known archaeological features that were exposed during previous construction activities. Given both the quantity and significance of these archaeological remains, the potential impact associated with excavation works within the proposed scheme is considered to be moderate to major adverse.

Indirect impacts may also arise as a consequence of construction-related vibrations. In this regard, the western portion of the proposed development falls within the existing 50m buffer zone established to safeguard the scheduled building. Consequently, vibrations generated by the proposed rock-trimming works associated with the construction of the underground parking levels may pose a risk of structural damage to the heritage asset. The significance of this impact is considered to range from moderate to minor adverse, depending on the final construction methodology and the effectiveness of the proposed mitigation measures.

With regard to the historic salt pans located within the wider study area, the proposed development will not encroach onto the foreshore. Furthermore, the proposal includes the provision of public pathways, which are currently absent, thereby ensuring public accessibility to the salt pans located along the Ras il-Gżira headland.

Accordingly, no direct impacts on the salt pans are anticipated, with the exception of those features that have already been partially covered and/or destroyed by the pre-existing structures. Nevertheless, the proposed rock-cutting works may still result

in localized minor direct impacts on those salt pans situated in close proximity to the development footprint.

5.7.2 Operational Phase

With regard to the cultural landscape surrounding the Area of Influence (AoI), it is acknowledged that the setting has already undergone substantial and largely irreversible alteration as a consequence of the construction of the former Jerma Palace Hotel together with the surrounding residential development.

Given that the existing derelict Jerma Hotel presently obstructs views between St Thomas Tower and the sea, the present assessment has considered whether the proposed scheme would exacerbate, perpetuate, or partially mitigate this existing visual impact through its proposed massing, scale, and building heights.

In view of the location and scale of the proposed development, the Scheme would continue to obstruct views between the tower and the sea towards the north-west and south-west. This impact is primarily attributable to the proposed height of the development, with the North and South Blocks reaching an approximate roof level of +32m above mean sea level (AMSL). This exceeds both the height of the pre-existing hotel structure (approximately +25.5m AMSL) and that of St Thomas Tower itself (approximately +23m AMSL). The increased height and overall massing of the proposed development are therefore likely to generate a degree of overshadowing of the tower, potentially reinforcing the visual dominance of the new built form over the historic landmark when viewed from the shoreline.

The overshadowing effect experienced from the shoreline would furthermore be accentuated by the proposed façade, its texture and color.

Notwithstanding these impacts, the Scheme incorporates a number of mitigation measures intended to partially address the identified visual obstruction. These include the introduction of a central view corridor extending from the glacis of St Thomas Tower towards the foreshore, together with the creation of approximately 13,600 sqm of publicly accessible open space designed to facilitate the visual and spatial reconnection of the identified cultural heritage assets with the surrounding urban fabric.

Such interventions are consistent with the objectives of the Development Brief for the former Jerma Palace Hotel site and its surroundings, particularly Objective (f), which seeks to “introduce all the necessary mitigation measures aimed at reducing any potential adverse impact from the development, particularly on scheduled buildings and the natural coast.”

Furthermore, the importance of contextual setting in the perception and appreciation of scheduled buildings and monuments, as outlined in PA Circular 3/20, appears to have been taken into consideration within the proposed design approach.

However, the proposed re-established visual relationship between the historic tower and the sea appears to remain confined primarily to the central visual axis. Consequently, notwithstanding that the proposed building footprints and heights are in accordance with the approved Development Brief, the magnitude of impact associated with the proposed massing and vertical scale is assessed as moderate in relation to the existing site conditions. Accordingly, the proposed development is considered to result in a moderate adverse effect on the setting of St Thomas Tower and its associated seascape context.

5.8 AIR QUALITY

5.8.1 Construction Phase

During the construction phase, site preparation and construction works will involve activities such as excavation and backfilling, the storage and handling of inert materials, the operation of construction machinery, and the movement of heavy vehicles transporting materials to and from the site.

These activities may affect local air quality through emissions generated by construction machinery and vehicles. The excavation, movement, handling and storage of inert materials may also generate dust and particulate matter, particularly during dry and windy conditions.

5.8.2 Operational Phase

Scenario Modelling

The prediction from the model exercise was compared and validated with the data from the 6-week monitoring. To verify calibration of the model, were used. Since the monitoring period covered 42 days, the multiplicative coefficients below were used for scaling up to one year provided by the Environment & Resources Authority (ERA):

- PM_{10}: 0.82
- NO_2: 0.94 + 0.325

TABLE 45: PREDICTION EVALUATION

PARAMETER	RESULT OF THE MONITORING	ANNUALISATION/ SCALE FACTORS	RESULT OF THE MONITORING CORRECT TO FACTOR ERA	MODEL RESULTS AT THE SAME POINT	RESULTS
PM_{10}	41.1	0.82	33.7	33.7	**Positive**
NO_2	21	0.94 + 0.325	20.1	20.1	**Positive**

The values obtained at each sensitive receptor location are expressed in annual averages in the emission contour maps.



FIGURE 125: SCENARIO 1 (2018, NO DEVELOPMENT): BASELINE CONTOUR MAP FOR PM_{10}



FIGURE 126: SCENARIO 1 (2018, NO DEVELOPMENT): BASELINE CONTOUR MAP FOR DAILY PM_{10} PCT 90.4TH

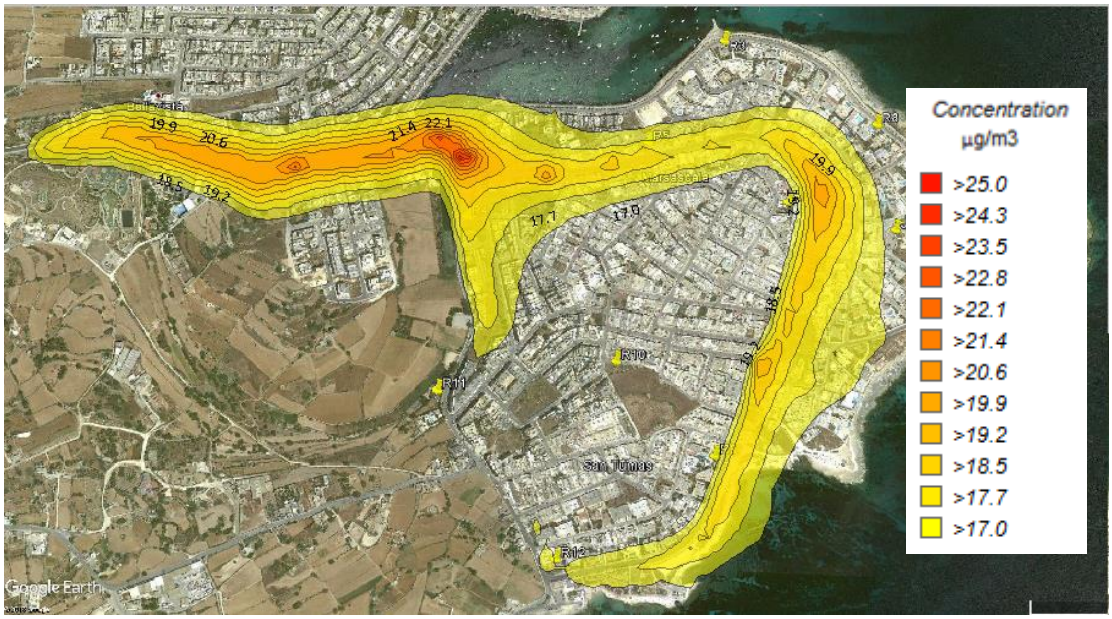


FIGURE 127: SCENARIO 1 (2018, NO DEVELOPMENT): BASELINE CONTOUR MAP FOR NO_2



FIGURE 128: SCENARIO 2 (2030, NO DEVELOPMENT): CONTOUR MAP FOR PM_{10}

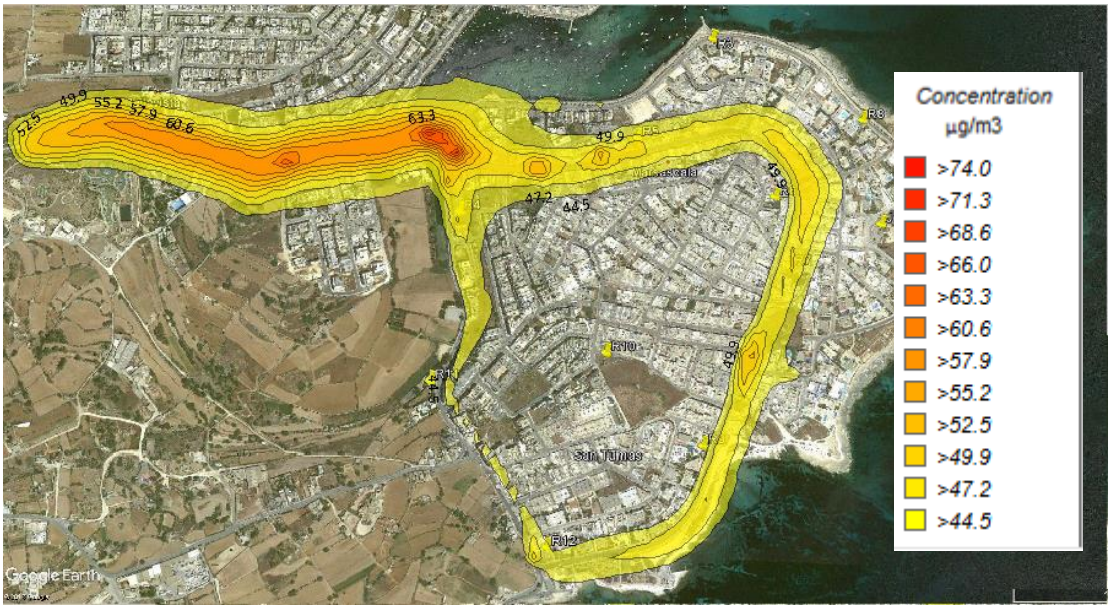


FIGURE 129: SCENARIO 2 (2030, NO DEVELOPMENT): CONTOUR MAP FOR DAILY PM_{10} PCT 90.4TH



FIGURE 130: SCENARIO 2 (2030, NO DEVELOPMENT): CONTOUR MAP FOR NO_2



FIGURE 131: SCENARIO 3 (2030, WITH DEVELOPMENT): CONTOUR MAP FOR PM_{10}



FIGURE 132: SCENARIO 3 (2030, WITH DEVELOPMENT): CONTOUR MAP FOR DAILY PM_{10} PCT 90.4TH



FIGURE 133: SCENARIO 3 (2030, WITH DEVELOPMENT): CONTOUR MAP FOR NO_2



FIGURE 134: SCENARIO 4 (2035, NO DEVELOPMENT): CONTOUR MAP FOR PM_{10}



FIGURE 135: SCENARIO 4 (2035, NO DEVELOPMENT): CONTOUR MAP FOR DAILY PM_{10} PCT 90.4TH



FIGURE 136: SCENARIO 4 (2035, NO DEVELOPMENT): CONTOUR MAP FOR NO_2

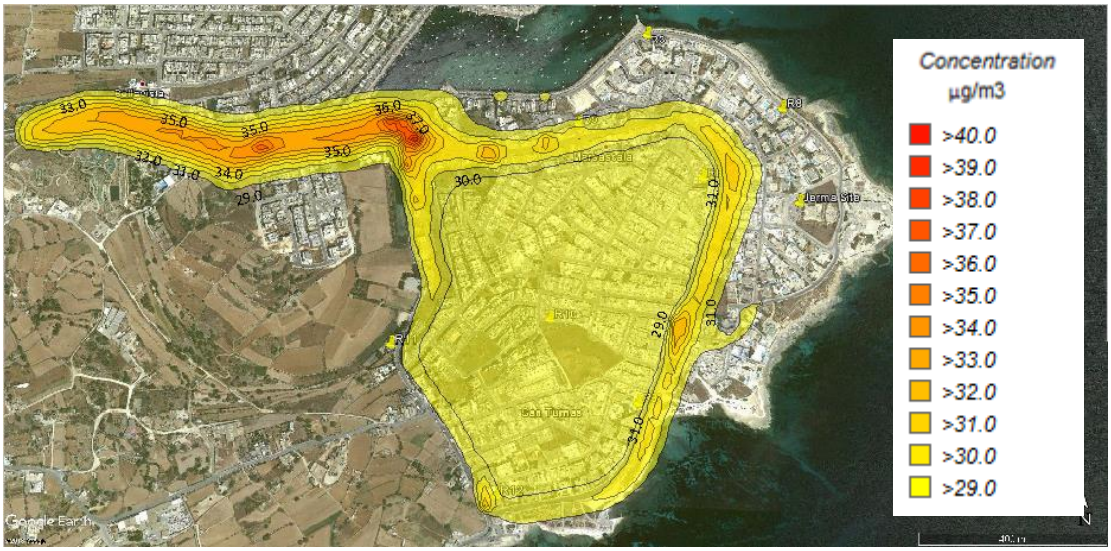


FIGURE 137: SCENARIO 5 (2035, WITH DEVELOPMENT): CONTOUR MAP FOR PM_{10}

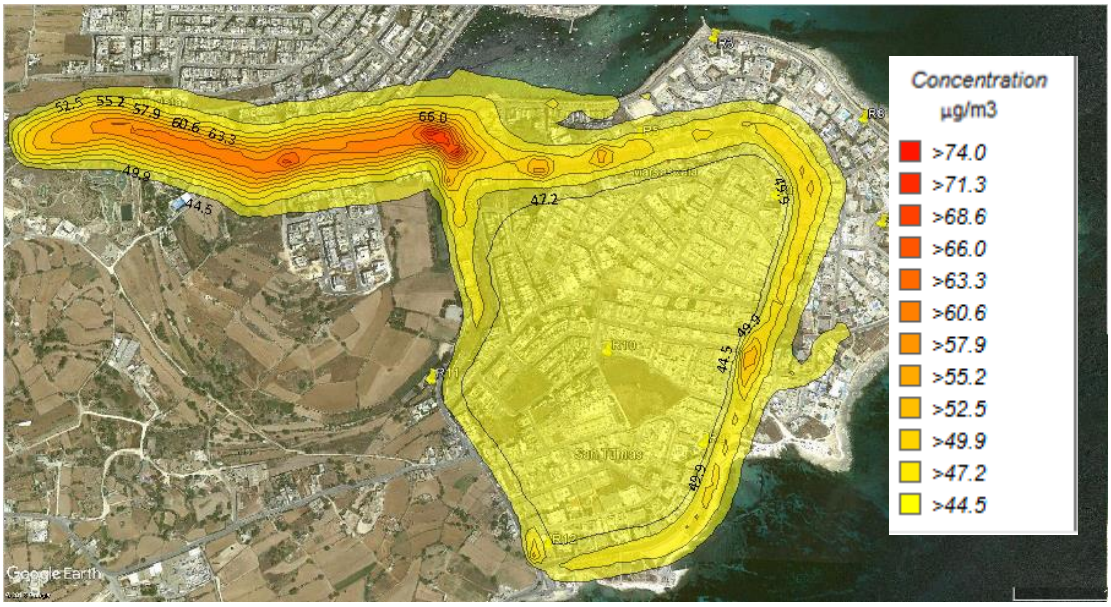


FIGURE 138: SCENARIO 5 (2035, WITH DEVELOPMENT): CONTOUR MAP FOR DAILY PM_{10} PCT 90.4TH

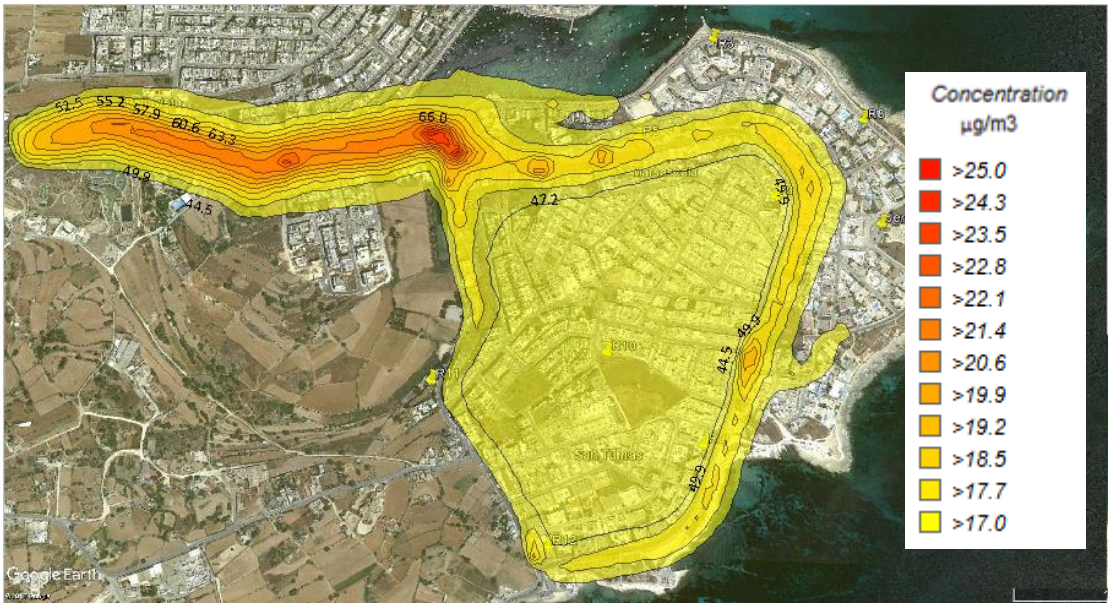


FIGURE 139: SCENARIO 5 (2035, WITH DEVELOPMENT): CONTOUR MAP FOR NO_2

Scenario Comparison

At R11 the model predicts no increase in PM_{10} values across all scenarios considered. At R9 no change is predicted in 2030. Increases in PM_{10} values above the No Development Scenarios, ranging between 0.1 to 0.6µg/m³ are predicted at the other receptors in 2030 and 2035.

At R9 and R11, the model predicts no increase in PM_{10} PCT values across the 2030 and 2035 scenarios respectively. Increases in PM_{10} PCT values above the No Development Scenarios, ranging between 0.1 to 1.4µg/m³ are predicted at the other receptors in 2030 and 2035.

At R9 and R11, the model predicts no increase in NO_2 values across the 2030 and 2035 scenarios, respectively. Increases in NO_2 values above the No Development Scenarios, ranging between 0.1 to 0.5µg/m³ are predicted at the other receptors in 2030 and 2035.

Impact Assessment

The results of the monitoring of NO_2, PM_{10} and traffic counts, together with the use of data from other baseline surveys, were integrated to enable prediction of potential impacts on the concentrations of these airborne pollutants. The dispersion model software Breeze Roads was used to determine the impact of the Scheme on the air quality of the area.

Table 46 and Table 47 show the computation of the impact assessment on each of the sensitive receptors for both pollutants. The concentration of the baseline level was compared with the results obtained from the model for the two future scenarios. This comparison enabled the calculation of the difference in the concentration of the pollutant and the annual exceedances, which in turn led to the identification of the significance of the impact. As can be seen from the impact assessment tables, the increase in traffic created by the proposed Scheme will lead to a mixture of adverse

impacts ranging from negligible to substantial impacts. For NO_2, the impacts across all scenarios are expected to be negligible adverse. For PM_{10}, the impact is also expected to be negligible across all scenarios, except at R4 in 2030, where a slight adverse impact is predicted. The impacts predicted for PCT PM_{10} are more significant, with a variety of negligible, slight, moderate and substantial impacts predicted at different locations and in different scenarios.

The values calculated in the model have also been compared to the thresholds stipulated in the AMBIENT AIR QUALITY REGULATIONS (S.L.549.59). In terms of PM10, the aforementioned regulations set the annual threshold at 40 $\mu g/m^3$. In all scenarios considered, this threshold is not surpassed at any of the receptors considered.

The AMBIENT AIR QUALITY REGULATIONS (S.L.549.59) threshold for PCT PM_{10} is established at 50 $\mu g/m^3$. This value is exceeded at some of the receptors and across all the Scenarios considered.

The annual threshold for NO2 in accordance with the AMBIENT AIR QUALITY REGULATIONS (S.L.549.59) is 40 $\mu g/m^3$. The baseline readings and predicted concentrations at all sensitive receptors fall below the threshold limit.

Overall, emissions into the atmosphere are expected, deriving from the variation in traffic induced by the new road system. The impact is classified as negligible.

Table 46: Impact assessment for Scenarios 2 & 3 in 2030

Receptor	Scenario 1 2018 Baseline ($\mu g/m^3$)	Predicted CAA PM_{10} ($\mu g/m^3$)				Predicted PCT PM_{10} ($\mu g/m^3$)				
		Scenario 2 2030 No Development ($\mu g/m^3$)	Scenario 3 2030 with development ($\mu g/m^3$)	Difference (dCAA) ($\mu g/m^3$)	Impact	Scenario 1 2018 Baseline ($\mu g/m^3$)	Scenario2 2030 No Development ($\mu g/m^3$)	Scenario 3 2030 with development ($\mu g/m^3$)	Difference (dPCT) ($\mu g/m^3$)	Impact
R1	32.5	32.3	32.6	0.3	Negligible	55.8	55.1	55.9	0.8	Substantial
R2	33.0	32.8	33.1	0.3	Negligible	60.4	59.6	60.6	1.0	Substantial
R3	27.5	27.4	27.8	0.4	Negligible	41.8	41.7	42.5	0.8	Slight
R4	30.8	30.6	31.2	0.6	Slight	48.6	48.2	49.6	1.4	Moderate
R5	31.4	31.2	31.4	0.2	Negligible	54.4	53.8	54.3	0.5	Moderate
R6	27.5	27.4	27.5	0.1	Negligible	41.5	41.4	41.6	0.2	Negligible
R7	31.7	31.5	31.7	0.2	Negligible	51.1	50.6	50.9	0.3	Slight
R8	27.6	27.5	27.7	0.2	Negligible	42.1	41.9	42.2	0.3	Negligible
R9	27.5	27.5	27.5	0	Negligible	42.2	42.1	42.1	0	Negligible
R10	27.0	27.0	27.1	0.1	Negligible	40.5	40.4	40.6	0.2	Negligible
R11	26.5	26.5	26.5	0	Negligible	39.5	39.4	39.5	0.1	Negligible
R12	29.7	29.6	30	0.4	Negligible	46.1	45.9	46.6	0.7	Negligible
Jerma MS	33.7	33.4	33.7	0.3	Negligible	54.6	54.0	54.7	0.7	Moderate
Jerma site	27.6	27.5	27.6	0.1	Negligible	42.0	41.9	42.1	0.2	Negligible

Receptor	Scenario 1 2018 Baseline ($\mu g/m^3$)	Predicted CAA NO_2 ($\mu g/m^3$)			
		Scenario 2 2030 No Development ($\mu g/m^3$)	Scenario 3 2030 with development ($\mu g/m^3$)	Difference (dCAA) ($\mu g/m^3$)	Impact
R1	19.9	18.0	18.2	0.2	Negligible
R2	20.3	18.0	18.5	0.5	Negligible
R3	15.8	15.3	15.4	0.1	Negligible
R4	18.7	17.0	17.4	0.4	Negligible
R5	19.0	17.2	17.4	0.2	Negligible
R6	16.4	15.5	15.6	0.1	Negligible

Receptor	Scenario 1 2018 Baseline ($\mu g/m^3$)	Predicted CAA NO_2 ($\mu g/m^3$)			
		Scenario 2 2030 No Development ($\mu g/m^3$)	Scenario 3 2030 with development ($\mu g/m^3$)	Difference (dCAA) ($\mu g/m^3$)	Impact
R7	19.4	17.6	17.8	0.2	Negligible
R8	16.5	15.6	15.8	0.2	Negligible
R9	16.1	15.3	15.4	0.1	Negligible
R10	15.6	15.0	15.1	0.1	Negligible
R11	14.3	14.1	14.1	0	Negligible
R12	17.1	15.8	16.1	0.3	Negligible
Jerma MS	20.1	18.0	18.2	0.2	Negligible
Jerma site	16.8	15.7	15.9	0.2	Negligible

Table 47: Impact assessment for 2035

Receptor	Scenario 1 2018 Baseline ($\mu g/m^3$)	Predicted CAA PM_{10} ($\mu g/m^3$)				Predicted PCT PM_{10} ($\mu g/m^3$)				
		Scenario 4 2035 No Development ($\mu g/m^3$)	Scenario 5 2035 with development ($\mu g/m^3$)	Difference (dCAA) ($\mu g/m^3$)	Impact	Scenario 1 2018 Baseline ($\mu g/m^3$)	Scenario 4 2035 No Development ($\mu g/m^3$)	Scenario 5 2035 with development ($\mu g/m^3$)	Difference (dPCT) ($\mu g/m^3$)	Impact
R1	32.5	32.5	32.8	0.3	Negligible	22.8	55.8	56.5	0.7	Moderate
R2	33.0	33.0	33.3	0.3	Negligible	22.8	60.4	61.4	1.0	Substantial
R3	27.5	27.5	27.8	0.3	Negligible	23.7	41.8	42.6	0.8	Slight
R4	30.8	30.8	31.3	0.5	Negligible	33.5	48.6	49.9	1.3	Moderate
R5	31.4	31.4	31.6	0.2	Negligible	25.3	54.4	54.8	0.4	Moderate
R6	27.5	27.5	27.6	0.1	Negligible	22.8	41.5	41.7	0.2	Negligible
R7	31.7	31.7	31.9	0.2	Negligible	23.0	51.0	51.4	0.4	Slight
R8	27.6	27.6	27.8	0.2	Negligible	23.7	42.1	42.4	0.3	Negligible
R9	27.5	27.5	27.6	0.1	Negligible	28.2	42.2	42.3	0.1	Negligible
R10	27.0	27.0	27.1	0.1	Negligible	29.4	40.5	40.7	0.2	Negligible
R11	26.5	26.5	26.5	0	Negligible	35.3	39.5	39.5	0	Negligible
R12	29.7	29.7	30.1	0.4	Negligible	29.4	46.1	46.9	0.8	Slight
Jerma MS	33.7	33.7	34.0	0.3	Negligible	30.1	54.6	55.3	0.7	Moderate
Jerma site	27.6	27.6	27.7	0.3	Negligible	31.0	42.0	42.2	0.2	Negligible

Receptor	Scenario 1 2018 Baseline ($\mu g/m^3$)	Predicted CAA NO_2 ($\mu g/m^3$)			
		Scenario 4 2035 No Development ($\mu g/m^3$)	Scenario 5 2035 with development ($\mu g/m^3$)	Difference (dCAA) ($\mu g/m^3$)	Impact
R1	13.2	17.8	18.0	0.2	Negligible
R2	13.2	18.1	18.3	0.2	Negligible
R3	13.4	15.0	15.3	0.3	Negligible
R4	15.5	16.6	17.1	0.5	Negligible
R5	13.8	17.0	17.2	0.2	Negligible
R6	13.2	15.4	15.5	0.1	Negligible

Receptor	Scenario 1 2018 Baseline ($\mu g/m^3$)	Predicted CAA NO_2 ($\mu g/m^3$)			
		Scenario 4 2035 No Development ($\mu g/m^3$)	Scenario 5 2035 with development ($\mu g/m^3$)	Difference (dCAA) ($\mu g/m^3$)	Impact
R7	13.2	17.4	17.5	0.1	Negligible
R8	13.5	15.4	15.6	0.2	Negligible
R9	14.7	15.2	15.2	0	Negligible
R10	15.1	14.9	15.0	0.1	Negligible
R11	15.9	14.0	14.1	0.1	Negligible
R12	15.5	15.7	15.9	0.2	Negligible
Jerma MS	14.8	17.8	18.0	0.2	Negligible
Jerma site	15.0	15.6	15.8	0.2	Negligible

5.9 NOISE AND VIBRATIONS

5.9.1 Construction Phase

Noise

High level noise predictions for worst-case construction works were undertaken within the CadnaA® modelling software, based on the following.

- Predictions were based on the calculation algorithms contained in BS 5228:2014.
- The combined sound power level from all construction plant (120dB(A)) was modelled as an area source covering the entire area within the red line boundary at a height of 2m above ground level.
- A ground absorption factor of 0.5 (mixed ground).
- Downwind propagation between the source and receptors.
- A daytime receiver height of 1.5m above ground level.
- The predictions took into account the local topography and any intervening structures.

Based on the above, the predicted noise levels at each of the NSRs are shown in Table 48 (rounded to the nearest decibel).

TABLE 48: PREDICTED CONSTRUCTION NOISE LEVELS, DB

NOISE SENSITIVE RECEPTOR	PREDICTED NOISE LEVEL, DB $L_{AEQ, 1\text{-HOUR}}$
NSR01 - Residential Property to the west of the Site	69.2
NSR02 - Residential Property to the west of the Site	70.2
NSR03 - Residential Property to the west of the Site	56.2

The construction noise assessment is shown in Table 49.

TABLE 49: PREDICTED CONSTRUCTION NOISE LEVELS AND ASSESSMENT

LOCATION	CONSTRUCTION PHASE	PREDICTED NOISE LEVEL, DB $L_{AEQ,T}$	DAYTIME CATEGORY A THRESHOLD LIMIT, DB $L_{AEQ,T}$	DIFFERENCE, DB	IMPACT MAGNITUDE
NSR01	Site Preparation	69	65	4	Medium
NSR02		70		5	High
NSR03		56		-9	Negligible

The initial assessment of impacts and effects is as follows:

- At NSR01 the impact magnitude is predicted to be Medium adverse, with Moderate adverse effects.
- At NSR02 the impact magnitude is predicted to be High adverse, with Major adverse effects.
- At NSR03 the impact magnitude is predicted to be Negligible, with Minor adverse effects.

While predicted construction noise levels may give rise to effects assessed as moderate or major adverse, these do not necessarily equate to significant effects. Significance is determined not solely by the magnitude of impact, but by a holistic consideration of context, duration, frequency, and the effectiveness of mitigation.

Construction activities will be temporary and phased, with noisy operations confined to defined daytime periods, thereby limiting prolonged exposure and avoiding the most sensitive periods.

Appropriate mitigation will be implemented during the construction phases to minimise noise impacts on existing and future NSRs. As construction will be temporary, effects would not be permanent in nature.

It is therefore considered that effects will not be significant.

Vibrations

Desktop predictions of vibratory compaction (steady state), vibratory compaction (start up and run-down) and vibratory piling, have been completed in accordance with Table E.1 of BS25228-2. The predicted vibration levels at the identified NSRs are shown in Table 50.

For the purpose of the calculation the following parameter values have been assumed:

- Maximum amplitude of drum vibration = 2.38mm (the middle value of the accepted range).
- Vibrating roller drum width = 1.48m (the middle value of the accepted range).
- Number of vibrating drums = 1 (the lowest value of the accepted range).

TABLE 50: PREDICTED CONSTRUCTION VIBRATION LEVELS, DB

NSR DISTANCE FROM SITE	OPERATION	PREDICTED* VIBRATION LEVEL, MMS^{-1}	IMPACT MAGNITUDE	EFFECT
NSR01 (30m)	Vibratory compaction (startup/ rundown)	4.39	Medium	Moderate
	Vibratory compaction (steady state)	2.97	Medium	Moderate
	Vibratory piling	1.51	Medium	Moderate
NSR02 (30m)	Vibratory compaction (startup/ rundown)	4.39	Medium	Moderate
	Vibratory compaction (steady state)	2.97	Medium	Moderate
	Vibratory piling	1.51	Medium	Moderate
NSR03 (140m)	Vibratory compaction (startup/ rundown)	0.62	Low	Minor
	Vibratory compaction (steady state)	0.31	Low	Minor

NSR DISTANCE FROM SITE	OPERATION	PREDICTED* VIBRATION LEVEL, MMS^{-1}	IMPACT MAGNITUDE	EFFECT
	Vibratory piling	0.20	Negligible	Minor

* Probability of predicted value being exceeded 33%

The initial assessment of impacts and effects is as follows:

- At NSR01 and NSR02 the impact magnitude is predicted to be medium adverse, with moderate adverse effects.
- At NSR03 the impact magnitude for vibratory piling is predicted to be negligible with minor adverse effects. The impact magnitude for vibratory compaction is predicted to be low with minor adverse effects.

It is therefore considered that effects from construction vibration at NSR01 and NSR02 have the potential to be significant.

5.9.2 Operational Phase

Noise: Road Traffic Noise

Road traffic arising from operation of the Scheme may alter noise levels at receptors near to the road network. Assessment has been undertaken to include the following road links for which traffic flow data has been provided:

- Triq Sant Antnin
- Triq is-Salini
- Triq il-Qaliet (upper)
- Triq il-Qaliet (lower)
- Triq tal-Gardiel

For each road link the BNL has been established for the 'Do Nothing' and 'Do Something' scenarios for the future years of 2030 and 2035. The BNL is the $L_{A10,18hr}$ dB noise level at 10m from the kerb of the road assessed. The results of the assessment are provided in Table 51 and

Table 52 below.

TABLE 51: 2030 OPERATIONAL ROAD TRAFFIC ASSESSMENT

	2030 DO NOTHING			2030 DO SOMETHING			CHANGE IN BNL	IMPACT	EFFECT
	AAWT	ASSUMED SPEED KM/HR	BNL	AAWT	ASSUMED SPEED KM/HR	BNL			
Triq Sant Antnin	23730	48	70.0	25829	48	70.2	0.2	Negligible	Minor
Triq is-Salini	1534	32	54.4	2563	32	58.0	3.6	Medium	Moderate/ Major
Triq il-Qaliet (Upper)	9074	48	65.8	9613	48	65.9	0.1	Negligible	Minor
Triq il-Qaliet (Lower)	9074	48	65.8	10394	48	66.2	0.4	Negligible	Minor
Triq Sant Antnin	23730	32	62.3	7090	32	62.9	0.6	Negligible	Minor

TABLE 52:2035 OPERATIONAL TRAFFIC ASSESSMENT

	2035 DO NOTHING			2035 DO SOMETHING			CHANGE IN BNL	IMPACT	EFFECT
	AAWT	ASSUMED SPEED KM/HR	BNL	AAWT	ASSUMED SPEED KM/HR	BNL			
Triq Sant Antnin	25953	48	70.2	27089	48	70.4	0.2	Negligible	Minor
Triq is-Salini	1678	32	54.8	2644	32	58.2	3.4	Medium	Moderate (daytime)/ Major (night-time)
Triq il-Qaliet (Upper)	9924	48	66.0	10094	48	66.1	0.1	Negligible	Minor
Triq il-Qaliet (Lower)	9924	48	66.0	10875	48	66.4	0.4	Negligible	Minor
Triq Sant Antnin	6452	32	62.5	7403	32	63.1	0.6	Negligible	Minor

The initial assessment indicates that increases in operational road traffic would result in a negligible impact with minor adverse effects at NSRs adjacent all assessed road links, except Triq is-Salini.

At Triq is-Salini, increases in operational road traffic are shown to result in a medium adverse impact with moderate/ major adverse effects, which could be significant. It is noted that moderate adverse effects are predicted in the daytime period as receptor sensitivity is 'medium' and major adverse effects are predicted in the night-time period as receptor sensitivity is 'high'.

Whilst the assessment identifies a moderate/major adverse effect at receptors adjacent to Triq is-Salini, this outcome has been considered in the context of the existing acoustic environment and the nature of the affected road link. Triq is-Salini is currently a lightly trafficked road, such that relatively small increases in traffic flow can result in a proportionally larger increase in the calculated BNLs for the 'Do Something' scenarios. With reference to DMRB LA111 guidance, the maximum predicted increase is only marginally above the level generally regarded as just perceptible to residents.

Notwithstanding the calculated changes, the calculated 2025 Base $L_{Aeq,16hr}$ and night-time $L_{Aeq,8hr}$ sound levels at NSR01 and NSR02 indicate that existing ambient levels are relatively moderate, with daytime $L_{Aeq,16hr}$ levels between 52 and 57 dB and night-time $L_{Aeq,T}$ levels between 45 and 49 dB. It is considered that the resulting increases in operational sound levels would remain within a range that is typical of residential environments influenced by local road traffic.

Furthermore, the predicted increase is primarily associated with traffic using the site access road and would be localised to receptors immediately adjoining Triq is-Salini. The effect would diminish rapidly with increasing distance from the road and is not representative of the wider study area, where increases in road traffic noise are predicted to result in only negligible impacts and minor adverse effects.

Within the context of the significance matrix, moderate/major adverse effects may be significant or not depending on the specific circumstances with professional judgement applied. The assessment methodology is intentionally precautionary, being based on changes in traffic noise indices rather than direct assessment of resulting absolute noise levels at façade locations. Consequently, whilst a moderate/major adverse effect has been identified in accordance with the adopted significance criteria, the increase represents a localised change on a lightly trafficked access road and is not considered likely to result in a substantial deterioration in overall residential amenity. Taking into account the above and the modest scale of the increase, the impact is considered to be low with low adverse effects and is judged to be not significant.

Vibrations
No vibration-related operational impacts are anticipated.

5.10 Infrastructure and Utilities

Some of the infrastructure and utilities present in the area exists directly within the development's footprint. Consequently, there are potential risks during the construction phase, whereby accidental damages may occur to the pre-existing infrastructure and utilities present within close proximity especially to those surrounding the perimeter and/or overlapping the scheme site.

5.10.1 Construction Phase

Electricity
Within the site boundary, underground cables may be affected by accidental damage during excavation, trenching, or piling works. They may also be damaged indirectly as a result of heavy construction plant and materials stored above; as well as from vibrations generated from heavy machinery due to gradual displacement and/or added stress on the joints. Aerial cables are also vulnerable to accidental damage during construction activities especially during the manoeuvring/ operational of tall machinery and lifting operations. Ground work may also jeopardise the stability of the supporting poles. Dust from construction could also settle on power lines, potentially causing corrosion, overheating, and short circuits. Damage to any of the electrical infrastructure may result in temporary power outages, safety risks for workers and disruptions to surrounding properties. Overall, construction-phase impacts are assessed as minor adverse within/along the site boundary and negligible to minor adverse within the surrounding AOI.

Telecommunications
Underground fibre -optic and communication cables present within the site boundary may be impacted by excavation activities where cable protection is absent or poorly recorded; it a worse -case scenario it may result in accidental severance. Micro - vibrations may also affect sensitive fibre connections, potentially causing latent faults that manifest after construction. No aerial cables are present within the site boundary itself, however, those outside but in close proximity of the boundary will also be vulnerable to damage from lifting equipment and tall structures; as well as increased tension and misalignment due to temporary repositioning. Dust may also settle on the aerial cables. All of these occurrences may result in signal interference and loss of service affecting residents, commercial enterprises and emergency communications. Overall, construction-phase impacts are assessed as moderate adverse along the site boundary and minor to moderate adverse within the surrounding AOI.

Potable Water
Potable water infrastructure within the Scheme footprint is at risk of impact during construction leading to accidental damage of mains and breakages of pipes which

may pose future constraints on the existing network. The infrastructure within the AoI maybe affected indirectly as a result of vibrations and ground movements originating from the activities on site potentially leading to significant interaction pathways. Overall, construction-phase impacts are assessed as minor adverse within the Scheme footprint and minor to moderate adverse in the wider study area.

Waste Water

Waste water infrastructure is present extensively within the AOI including a single pipeline along Triq is-Salini within the west side of the site. Therefore, a risk of impact during construction is possible especially towards the north, west and southern boundaries of the site. Accidental damage of sewage pipes which may cause damage and disruption to the waste water pipeline may occur during excavation works and mobilisation of heavy machinery. Overall, within the site boundary construction-phase effects are assessed as minor to moderate adverse. In the case of those present within the AOI and their proximity to the site boundary, the associated construction-phase impacts are considered minor adverse.

5.10.2 Operational Phase

Electricity

Electricity infrastructure is expected to increase significantly due to the construction of accommodation units including hotel rooms, apartments, spas, restaurants and retail outlets. These additional loads are expected to be accommodated within the network capacity following the necessary upgrades subject to continued coordination with utility providers and implementation of appropriate demand and operational management measures to ensure reliable service provision. These impacts are expected to be minor adverse.

Telecommunications

Mixed-use developments such as the current proposed Scheme bring about an increase in telecommunication demand due to multiple land-use types, high guest density and continuous operations. Such operations require a fast, reliable and secure connectivity. These additional loads are expected to be accommodated within the network capacity following the necessary upgrades subject to continued coordination with utility providers and implementation of appropriate demand and operational management measures to ensure reliable service provision These impacts are expected to be minor adverse.

Water

Water use and wastewater generation is expected to increase especially due to the construction of spa facilities, several accommodation outlets and catering establishments. These additional loads are not expected to be accommodated within the capacity present around the site. Major upgrades are required to be carried out subject to continued coordination with utility providers and implementation of appropriate demand and operational management measures to ensure reliable service provision. These impacts are expected to be moderate adverse.

5.11 Public Access

5.11.1 Proposed Public Access

Private vehicle access to the Scheme's underground parking shall be possible from Triq is-Salini through a two-laned access ramp proposed in the north-west corner of the development (Figure 142). This two-lane access ramp provides segregated entry routes to the residential garages and the open visitor car parking spaces within the complex. Vehicles leaving the complex would exit back onto Triq is-Salini from a dedicated exit ramp located in the southwest corner of the Scheme. Similar to the entrance, the exit ramp is divided into two lanes, each providing an exit route from the residential garages and the visitor parking spaces.

Private coaches are to stop at the north west point of the development on Triq it-Torri and on the south west side of the development on Triq Dawret it-Torri.

The onsite parking provisions shall consist of a combination of public open spaces and private garages which are to be used exclusively for residents. Level -2 will contain 165 open spaces and 98 garages while Level -1 shall contain 165 open spaces and 93 garages. The provision of on-site parking will prevent vehicles associated with the development from parking on the surrounding narrow roads.

The central stretch of Triq is-Salini between the Scheme site and St Thomas tower is proposed as a pedestrian zone. The planned pedestrianization shall extend into the plaza between the two tower blocks and out to a viewing platform overlooking the foreshore.

Moreover, changes are to be made in current existing public transport bus-stops within the area. The current bus stop located in between St. Thomas Tower and the Scheme cannot be retained in its present location and is proposed for further North along Triq is-Salini. The proposed location would maintain convenient public transport access to the development while providing a safer and more appropriate interface between bus operations, pedestrians and other road users. The second existing bus stop located on the south-side of the site is proposed to be relocated further South along Triq is-Salini. This adjustment is intended to integrate the bus stop more effectively with the revised road layout and traffic circulation arrangements resulting from the proposed development and associated pedestrianization, as detailed in the Traffic Impact Assessment.



FIGURE 140: PROPOSED VEHICULAR TRAFFIC ROUTING AS DUE TO THE PROPOSED PEDESTRIANISATION

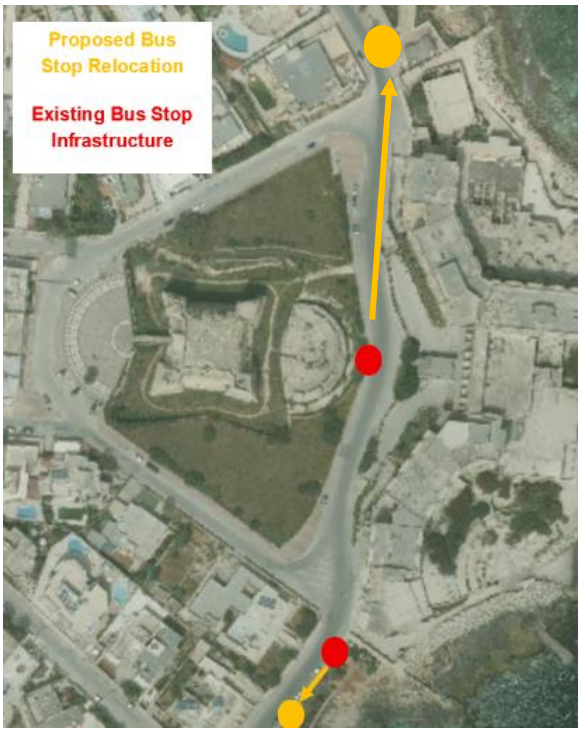


FIGURE 141: PROPOSED SHIFT IN PUBLIC TRANSPORT BUS-STOP LOCATIONS (OBTAINED FROM TRAFFIC IMPACT ASSESSMENT STUDY)

In line with the Development Brief and Local Plan guidelines, public access to the foreshore will be improved. The project involves the construction of formal footpaths to provide access to the natural foreshore area. These paths shall not extend onto the foreshore per se, leaving it in its natural state. The Contractor shall also remove/relocate all of the boulders which have been dislodged from the old revetments, clearing up the foreshore. Public access to the entire of the natural foreshore area shall be unrestricted.

The project does not involve the modifications of the existing sea wall and small quay staircase or new marine access features.

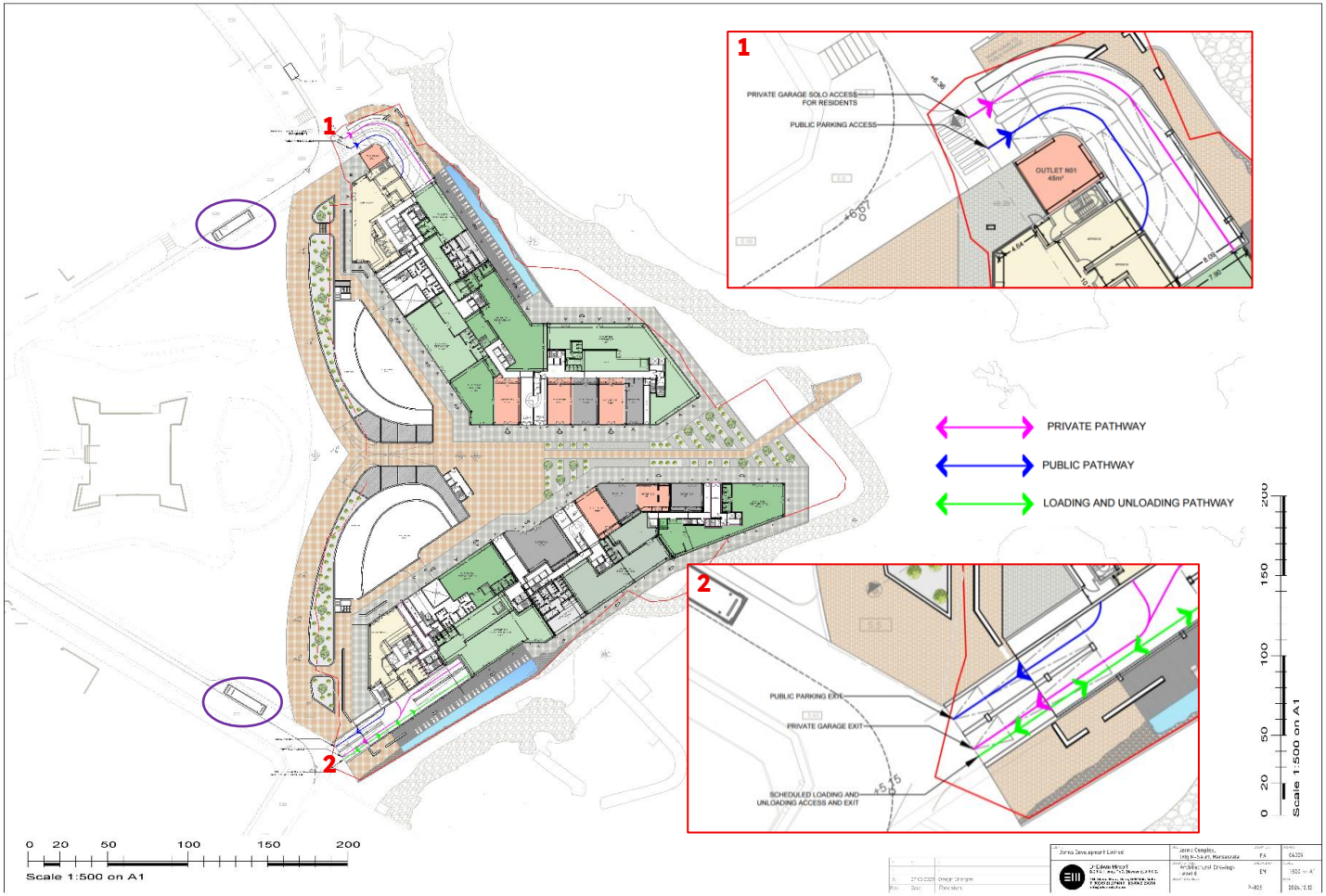


FIGURE 142: PROPOSED PROJECT LAYOUT, WITH PURPLE CIRCLES REPRESENTING ALIGHTING AREAS FOR PRIVATE COACHES, PINK ARROWS REPRESENTING PRIVATE PATHWAYS. BLUE ARROWS REPRESENTING PUBLIC PATHWAYS AND GREEN ARROWS REPRESENTING LOADING AND UNLOADING PATHWAYS. INSET IMAGES SHOWING ZOOMED IN ACCESS POINTS OF THE SITE.

5.11.2 Construction Phase

Foreshore Access

Throughout the construction phase, public access to the foreshore area may be prohibited for safety reasons. Currently, the foreshore is accessible by trespassing through the ex-hotel grounds. In light of this, the potential temporary controlled access restriction during the construction phase is viewed as a negative impact of moderate significance.

Road Network and Pedestrian Access

Given the extensive footprint of the Scheme, all construction machinery, vehicles, equipment, material storage areas and ancillary facilities will be accommodated within the site boundary throughout the construction phase. However, as the site boundary encompasses a substantial section of Triq is-Salini, it is anticipated that public access along this coastal road will be restricted for the duration of the works.

The closure will affect both vehicular and pedestrian movements, requiring road users to divert via alternative routes, including Triq it-Torri, Triq il-Melh, Triq il-Katacombi, and Triq Likama. These roads are generally narrower in width and primarily serve the surrounding residential areas, and are therefore likely to experience increased traffic volumes and associated disturbances. Given the complete temporary closure of a key coastal route and the resulting disruption to local accessibility and circulation patterns, this impact is considered to be of moderate adverse significance.

The transportation of machinery, materials and waste to and from the site will add to the strain on the local road network. The small roads are not designed to cope with high loads of traffic or with large construction vehicles. As a result, access on the surrounding roads may be temporarily blocked due to queuing construction vehicles, or temporary bottle necks may form. The manoeuvring of vehicles into and out of the Scheme site may also cause traffic bottlenecks on the nearby junctions and public roads. The excess pressure on the local road work and associated disruptions are classified as a minor adverse due to the intermittent and temporary nature of the impact.

Furthermore, the closure of Triq is-Salini would also necessitate the relocation of the bus stop situated next to the Scheme site as well as the diversion of the bus route. The locality is serviced by another two bus stops which form part of Route 93: Olivana and Xehda (ca. 290m and 400m walk away from the Jerma bus stop respectively). Due to the presence of these two buses stops within around a 5-minute walking distance from the ex-Jerma Palace stop, the adverse impact is classified as minor.

5.11.3 Operational Phase

Foreshore Access

The provision of new footpaths, together with the relocation/removal of dislodged rock revetment boulders, will restore easy and safe access to the natural foreshore

area. This is compliant with the requirements of the Development Brief document and Local Plan. This constitutes a major beneficial impact due to the improved access to the natural coastline.

Pedestrianisation of Triq is-Salini

The pedestrianisation of Triq is-Salini between St Thomas Tower and the Scheme site forms a key component of the proposed development. The pedestrian route will seamlessly connect with the proposed public plaza located between the two principal buildings, creating a continuous and accessible public space. Moreover, the pedestrianised paths will directly lead to coaching layby areas towards the north-west and south-west of the proposed scheme and to the proposed public transport bus stop located further down Triq is-Salini.

The plaza will also provide direct access to a walkway leading to a viewing platform overlooking the natural foreshore. Together, these interventions will significantly enhance pedestrian connectivity, improve public accessibility and create a high-quality public realm that strengthens the visual and physical relationship between the historic tower and the surrounding marine environment.

The creation of this extensive open space is expected to enhance the recreational and cultural value of the area and is therefore considered to constitute a major beneficial impact on public access.

Alteration to Bus Routes

The proposed pedestrianisation of this section of Triq is-Salini will necessitate the relocation of the existing bus stops further along the road and corresponding modifications to the current bus route. While these changes may result in minor alterations to public transport accessibility and passenger movement patterns, the surrounding area is already well served by a network of nearby bus stops. Consequently, the operational impact on public transport users is expected to be limited and is considered to be of minor adverse significance.

Vehicle Access and Numbers

The operation of such a large development is predicted to attract significant numbers of vehicles to the area, which are currently not present within the locality. The full development is expected to generate an increase of 149 trips during the weekday AM, 263 during the weekday PM peak and 347 trips during weekend peak. This will lead to pressure and overloading of the current road junctions, as highlighted in the Development Brief document. The Brief emphasises that the increase vehicle volumes will not only affect Triq is-Salini, but also Triq il-Migbha and Triq il-Maqsab; and states that drastic action must be taken ensure that the road network can cope with the increased vehicle volumes which would be produced by the redevelopment of the ex-Jerma Palace site.

The Development Brief recommends the diversion of vehicles away from Triq is-Salini to the neighbouring roads to protect the public space around the tower. This

component has been incorporated into the project proposal and Traffic Impact Assessment study which was carried out in conjunction with his report. Given the pedestrianisation of the area in Triq is-Salini, traffic in this road will need to be diverted around the tower through the surrounding local road network, resulting in a redistribution of existing traffic flows, particularly along Triq Dawret it-Torri.

Moreover, the proposed redevelopment of the ex-Jerma Palace can be accommodated within the surrounding transport network apart the junction of Triq Sant Antnin / Triq ix-Xatt / Triq il-Qaliet junction. Moreover, the study identified that the junction between Triq tal-Gardiel and Triq id-Daħla ta' San Tumas currently requires improvement in terms of road-safety and operation with the already-existing traffic scenario, especially if the proposed scheme is to be approved. Consequently, the operational impact on vehicle access and numbers is expected to be of moderate adverse significance.

5.12 Climate change and Climate Change Adaptation

5.12.1 Impacts on Climate Change

The redevelopment of the ex-Jerma Palace complex can have climate change impacts. The impacts from the construction of such a project are temporary in nature but involve energy-intensive interventions that inevitably lead to the release of greenhouse gas (GHG) emissions. These interventions include the extraction and production of construction materials, the manufacture of raw materials and machinery, the transportation of these materials, and the operation of machinery during construction. This impact is classified as minor adverse on climate change.

An increase in GHG emissions contributes to accelerating cumulative global Climate Change effects, including sea ice decline, sea level rise, extreme weather conditions, ecosystem changes, and reduced crop production:

- **Sea ice decline, sea level rise and retreat of glaciers** – global warming causes the shrinking and thinning of ice which melt and cause the sea level to rise.
- **Extreme weather conditions** – heat waves, droughts and monsoons.
- **Ecosystem changes** – earlier timing of spring events, poleward migration of arctic species, expansion of deserts, and a reduction in ocean oxygen levels and an increase in acidity affecting coral reefs, fisheries and protected species.
- **Crop production** – carrying capacity of the biosphere to produce.

The consumption of energy from the proposed Scheme will also lead to an increase in GHG emissions during its operational phase when compared to the current derelict hotel. This also includes the impact from increased trip generation towards the site. To minimise these operational climate impacts, the project has been designed with environmental compatibility as a key consideration. The development will incorporate

a range of energy- and water-efficiency measures, including VRF air-conditioning systems, LED lighting, heat-pump water heating systems, and on-site rainwater harvesting and reuse systems.

5.12.2 Adaptability to Climate Change

The Scheme's coastal location renders it potentially vulnerable to the effects of climate change, particularly sea level rise, coastal storm surges, wave overtopping, and increasingly intense storm events. Nevertheless, the proposed built structures are set back a substantial distance from the shoreline and are positioned at levels considered unlikely to be directly affected by foreseeable coastal inundation scenarios. In view of this setback and site configuration, no additional hard coastal defence structures are currently proposed as part of the Scheme. The risk of significant structural damage arising from projected sea level rise or storm-related coastal processes is therefore considered to be relatively low.

The project has also been designed with consideration for Malta's increasingly xeric climatic conditions, characterised by prolonged dry periods, rising temperatures, and more frequent heatwaves. To improve climate resilience and reduce resource demand, the development will incorporate a range of water- and energy-efficiency measures, including rainwater harvesting and reuse systems, water-efficient fittings, drought-tolerant landscaping, and advanced building management systems. Landscaping proposals prioritise native and climate-adapted species with lower irrigation requirements, thereby reducing long-term water demand under increasingly arid conditions.

Rising ambient temperatures may influence cooling demand and overall building performance. However, all buildings will be equipped with advanced smart climate-control systems and energy-efficient infrastructure designed to maintain acceptable internal comfort conditions under elevated temperature scenarios. Consequently, the Scheme is considered capable of adapting to the projected climatic conditions expected over its operational lifespan, and no significant operational constraints associated with future climate change are anticipated.

5.13 Environmental Risk

Any relevant risks, including major accident scenarios like contamination, emissions and major spillages, which could originate during the demolition, excavation, construction, operational and decommissioning phases of the proposed Scheme are assessed in this chapter. The assessment includes a quantification of the risk magnitude and probability, and the relevant risk analysis vis-à-vis the aforementioned scenarios.

Potential risk scenarios can be classified as:

- One-time risks
- Recurrent risks during operational phase of the project; and

- Risks associated with extreme or exceptional events (ex: effect of earthquakes or other natural disasters on the project).

The preliminary environmental risk assessment identifies eighteen potential environmental threats or sources of contamination identified throughout the duration of this EIA, as listed in Table 53.

TABLE 53: IDENTIFIED ENVIRONMENTAL RISKS

ENVIRONMENTAL RISK		PROJECT PHASE		
TYPE	RISK	CONSTRUCTION (INC. DEMOLITION & EXCAVATION)	OPERATIONAL	DECOMMISSIONING
Construction related one-time risks	Contamination of geological layers through spillage of oils, chemicals or fuels	✓	✓	✓
	Contamination of the Malta Mean Sea Level Aquifer through spillage of oils, chemicals or fuels	✓	✓	✓
	Contamination of the marine environment through spillage of oils, chemicals or fuels	✓	✓	✓
	Generation of dust from works which may affect surrounding sensitive receptors	✓		✓
	Rock/soil instability which could impact nearby cultural heritage features	✓		✓

ENVIRONMENTAL RISK		PROJECT PHASE		
	Spillage of demolition and/or excavation material as well as dust emissions during transportation	✓		✓
	Excessive noise and vibration impacts during the demolition and excavation phases	✓		✓
	Increased movement of heavy vehicles and construction traffic may cause congestion and noise	✓		✓
	Construction infrastructure, particularly the presence of multiple tower cranes	✓		✓
Operational recurring risks	Increased GHG emissions due to high energy consumption		✓	
	Elevated water and resource demands required to operate a large multi-use development		✓	
	Waste and wastewater generation in a currently abandoned area		✓	

ENVIRONMENTAL RISK		PROJECT PHASE		
	Traffic generation and the associated air quality and noise emissions		✓	
	External lighting in a currently unlit area of the coastline		✓	
	Change in urban form and massing of the building will modify the character of the area		✓	
Exceptional risks	Instability of the built structures due to earthquakes	✓	✓	✓
	Flooding of the built structures and outdoor facilities due to extreme sea conditions or tsunami event	✓	✓	✓
	Damage to built structures and surrounding environment as a result of a large-scale fire	✓	✓	✓

5.13.1 Criteria Used to Assess Environmental Risks

The impacts on environmental receptors were assessed independently to determine the Potential Source of Contamination (PSC), keeping in mind the pathway status. The effects of the various impacts identified were evaluated against the criteria listed in Table 54.

TABLE 54: CRITERIA USED TO ASSESS ENVIRONMENTAL RISKS

CRITERION	DESCRIPTION	
Impact	Adverse	Overall negative impact
	Neutral	Neither positive nor negative impact
	Beneficial	Overall positive impact
Geographical extent of impact	Local	Within the confines of the peninsula
	National	Offshore within Maltese territorial waters
	Transboundary	Offshore outside Maltese territorial waters
Duration of impact	Short-term	Impact extends over a brief period
	Medium-term	Impact extends over one phase
	Long-term	Impact extends indefinitely
Type of effect	Temporary	Impact effects cease after activities are halted
	Permanent	Impact effects are felt after activities are halted

5.13.2 Environmental Risk Evaluation

The environmental risk was determined in a qualitative manner, which involved the computation of the impact magnitude (Table 55) on the environment and the corresponding probability of occurrence (Table 56). The risk matrix is shown in Table 57 and the final risk assessment shown in Table 58.

TABLE 55: PARAMETERS USED TO ASSESS THE RISK MAGNITUDE

MAGNITUDE	EFFECT ON THE ENVIRONMENT
Insignificant	No discernible impact or measurable impairment, for example, not exceeding published guideline values for "normal" or "background" levels.

MAGNITUDE	EFFECT ON THE ENVIRONMENT
Minor	Minor effects on biological or physical environment. Minor short-, medium-term damage to a localised area or that ceases once the event is over.
Moderate	Measurable impairment on biological or physical environment but not affecting ecosystem function. Short-, medium-term impacts, where the ecosystem will recover quickly and without intervention.
Major	Serious environmental effects with some impairment of ecosystem function. Relatively widespread medium-, long-term impacts, requiring remediation, where ecosystem will recover over time once clean-up has been completed.
Severe	Very serious environmental effects with significant impairment of ecosystem function. Long term, widespread effects. Remediation required.

TABLE 56: PARAMETERS USED TO ASSESS THE RISK PROBABILITY

PROBABILITY	DESCRIPTION
Almost certain	The event is expected to occur in most circumstances /commonly repeating / occurs weekly
Likely	The event will probably occur in most circumstances / known to occur / occurs monthly
Possible	The event might occur, say yearly / has a 1 in 20 chance of occurring
Unlikely	The event could occur at some time, say once in every 10 years / say 1 in 100 chance of occurring
Rare	Event may only occur in only exceptional circumstances / less than a 1% chance of occurring

TABLE 57: RISK ASSESSMENT MATRIX

		MAGNITUDE				
		Insignificant	**Minor**	**Moderate**	**Major**	**Severe**
Probability	Almost certain	Med	Med	High	High	High
	Likely	Med	Med	Med	High	High
	Possible	Low	Med	Med	High	High
	Unlikely	Low	Low	Med	Med	High
	Rare	Low	Low	Med	Med	High

Table 58: Environmental risk assessment

PSC/Environmental Threat	Risk description	Pathway status	Receptor	PSC Evaluation											Evaluation of Risk													
				Impact			Extent			Term			Effect		Magnitude					Probability					Risk		
				Adverse	Neutral	Beneficial	Local	National	Transboundary	Short	Medium	Long	Temporary	Permanent	Severe	Major	Moderate	Minor	Insignificant	Almost certain	Likely	Possible	Unlikely	Rare	Low	Moderate	High
One-Time Construction Environmental Risks																												
Oils/chemicals/fuels used on site during demolition, excavation, construction and/or potentially maintenance works during operations	Contamination of geological layers through spillage of oils, chemicals or fuels	Horizontal/vertical percolation into geological layers	Aquifer system	✓			✓				✓			✓				✓					✓		✓		
	Contamination of the Malta Mean Sea Level Aquifer through spillage of oils, chemicals or fuels	Horizontal/vertical percolation through geological layers and into the groundwater body	Groundwater body	✓			✓				✓			✓				✓						✓	✓		
	Contamination of the marine environment through spillage of oils, chemicals or fuels	Horizontal/vertical movement to the sea	Marine environment	✓			✓	✓			✓			✓				✓					✓		✓		
Demolition, excavation and construction activities	Generation of dust from works which may affect surrounding sensitive receptors	Rock/soil excavation	Surrounding areas and uses	✓			✓			✓			✓					✓			✓					✓	
	Rock/soil instability which could impact nearby cultural features	Excavation works potentially causing structural damage to St Thomas Tower	Surrounding areas and uses	✓			✓				✓			✓			✓							✓		✓	
	Excessive noise and vibrations which could have consequential impacts	Demolition of old structures and rock excavation	Surrounding areas and uses	✓			✓			✓			✓				✓				✓					✓	

PSC/Environmental Threat	Risk description	Pathway status	Receptor	PSC Evaluation											Evaluation of Risk													
				Impact			Extent			Term			Effect		Magnitude					Probability					Risk		
				Adverse	Neutral	Beneficial	Local	National	Transboundary	Short	Medium	Long	Temporary	Permanent	Severe	Major	Moderate	Minor	Insignificant	Almost certain	Likely	Possible	Unlikely	Rare	Low	Moderate	High
Vehicular movements to and from the site	Spillage of demolition and excavated material during transportation	Material dropping off the truck	Surrounding land uses	✓			✓	✓		✓			✓					✓				✓				✓		
	Dust emissions from transportation of waste rock material	Fine particles disperse in the air from the moving truck if not appropriately covered	Surrounding areas and uses	✓			✓			✓			✓					✓			✓					✓		
	Increased heavy vehicle movement in the area leading to increased congestion, noise and air emissions	Increased numbers of vehicles leading to congestion and idling engines	Surrounding areas and uses	✓			✓			✓			✓					✓				✓				✓		
Presence of construction machinery	Prescence of a construction site, particularly tower cranes	Dangers posed by tower cranes in adverse weather conditions	Surrounding areas and uses	✓			✓			✓			✓					✓					✓		✓			
Recurring Operational Risks																												
Increase in resource consumption and waste generation	Increased GHG emissions due to high energy consumption of the Scheme	Release of emissions associated with electricity generation	Areas surrounding electricity generation facilities and potentially further afield based on wind	✓				✓			✓		✓					✓			✓					✓		
	Increased water and resource demand to operate large complex	Direct increase pressure on natural resources, most notedly water	Water processing facilities	✓				✓			✓		✓					✓			✓							✓

PSC/Environmental Threat	Risk description	Pathway status	Receptor	PSC Evaluation											Evaluation of Risk												
				Impact			Extent			Term			Effect		Magnitude					Probability					Risk		
				Adverse	Neutral	Beneficial	Local	National	Transboundary	Short	Medium	Long	Temporary	Permanent	Severe	Major	Moderate	Minor	Insignificant	Almost certain	Likely	Possible	Unlikely	Rare	Low	Moderate	High
	Increased generation of waste, including waste water	Larger quantities of waste to recycle, treat or dispose of	Waste processing and disposal facilities	✓				✓			✓		✓					✓		✓						✓	
Presence of a large development	Generation of traffic and associated air quality and noise emissions	Increased people visiting the site leading to an increase in vehicle emissions	Surrounding areas and uses	✓			✓			✓			✓				✓			✓							✓
	Introduction of external lighting	Light pollution from exterior lights	Surrounding areas and uses	✓			✓			✓			✓				✓			✓							✓
	Built structures in a rural area	Visual intrusion and deterioration of the natural environment	Surrounding areas and uses	✓			✓			✓			✓				✓			✓							✓
Exceptional Environmental Risks																											
Natural earthquake	Instability of the structures due to earthquakes	Direct physical damage to building structures	Surrounding areas and uses	✓			✓				✓		✓				✓							✓		✓	
Flooding due to extreme weather conditions and events	Physical damage to the built structures and outdoor facilities	Anthropogenic third-party interventions	Building structure and operation	✓			✓				✓		✓				✓							✓		✓	
Accidental or arsenal fires	Damage built structures and surrounding environment from fires	Direct physical damage to building structures and surrounding natural area	Surrounding areas and uses	✓			✓				✓		✓				✓							✓		✓	

5.14 EFFECTS OF HUMAN POPULATIONS

As outlined in the previous chapters, the proposed redevelopment of the ex-Jerma Palace Hotel site may lead to various environmental impacts which in turn could affect human populations in several ways. The below table summarises these potential effects:

TABLE 59: SUMMARY OF THE EFFECTS ON HUMAN POPULATIONS

CAUSE	EFFECT	IMPACT
Effects of construction activities	Generation of dust	**Minor adverse** Reduced air quality for workers and nearby residents, most notably individuals who suffer from respiratory conditions.
	Noise and vibration	**Minor to major adverse** Temporary increases in noise and vibration levels which may affect workers and surrounding residential properties.
	Traffic congestion	**Minor adverse** Substantial number of large, heavy-duty construction vehicles visiting the site leading to congestion in the surrounding area posing a nuisance to locals.
	Visual intrusion	**Moderate to major adverse** The presence of a construction site and related machinery, especially tower cranes, will detract from the visual appeal of the area for those residing and visiting in the vicinity.
Effects during the operation of the proposed development	Air quality	**Minor to moderate adverse** The increased number of vehicles frequenting the area will result in increased levels of vehicle emissions, and consequently a deterioration in local air quality for the local residents and other people visiting the area. The increased electrical supply which will be required to power the Scheme will require an increase in energy production. This inevitably release emissions into the area around the power production facilities.
	Waste generation	**Minor adverse** The complex will generate significant quantities of waste, most of which will be collected by private waste carriers. This will result in an increase of large waste vehicles on the roads, which may lead to road congestion and unpleasant odours in the neighbourhood.

CAUSE	EFFECT	IMPACT
	Traffic congestion	**Minor to moderate adverse** The Scheme will attract large numbers of people to the site, most of whom are expected to use their private cars. It will also require multiple van/lorry deliveries per day to bring the necessary supplies; as well as waste collection vehicles to remove the waste. Overall, this will undoubtedly lead to increased congestion in the area for local residents, which will be a nuisance.
	Noise	**Moderate to major adverse** The operation of the proposed complex will inevitably increase the ambient noise levels in the area, which may affect the local residents.
	Light	**Moderate adverse** Both the decorative and functional lighting after daylight hours will increase the ambient light levels which may disturb adjacent local residents
	Visual intrusion	**Moderate adverse** The presence of a large built complex will detract from the visual appeal of the area for those residing and visiting in the vicinity. However, it is considered to be an improvement to the currently dilapidated ex-Jerma Palace hotel structures.

6 Summary of Impacts

6.1 Land Cover and Land/Sea Uses

Table 60: Summary of Expected Impacts on land covert and land/sea uses as a result of the proposed Scheme

Impact Type and Source			Impact Receptor		Effect and Scale							Probability of Impact Occurring	Overall Impact Significance	Proposed Mitigation Measures	Residual Impact Significance
Impact Type	Specific Intervention Leading to Impact	Project Phase	Receptor Type	Sensitivity	Direct/ Indirect/ Cumulative	Effect of Impact Beneficial/ Adverse	Severity	Physical/ Geographic Extent of Impact	Short/ Medium/ Long Term	Duration of Impact Temporary/	Reversible/ Irreversible				
Foreshore restrictions	Construction of the site	Construction	Foreshore	Moderate	Direct	Adverse	High	Site	Short term	Temporary	Reversible	Possible	Minor	Position hoarding to allow public access to foreshore (safety concerns permitting)	Negligible
Circulation restrictions	Construction of the site	Construction	Foreshore	Moderate	Direct	Adverse	Low	Surrounding area	Short term	Temporary	Reversible	Possible	Minor	Implementation of traffic management plan	Negligible
Dust and noise generation	Construction of the site	Construction	Surrounding land uses	Moderate	Direct	Adverse	Medium	Surrounding area	Short term	Temporary	Reversible	Inevitable	Minor	Follow L.N. 340 of 2022, Construction monitoring	Negligible
Marine pollution	Construction of the site	Construction	Marine area	High	Direct	Adverse	High	Nearby vicinity	Short term	Temporary	Irreversible	Possible	Moderate	Follow L.N. 340 of 2022, Construction monitoring	Minor
Redevelopment of abandoned site	Operation of the complex	Operation	Site	High	Direct	Beneficial	Medium	Site	Long term	Permanent	Irreversible	Inevitable	Major	N/A	Major
Intensification of land use activity	Operation of the complex	Operation	Site and surrounding land uses	High	Direct	Adverse	Medium	Site and local surrounding area	Long term	Permanent	Irreversible	Inevitable	Moderate	Appropriate operational management of the various facilities	Minor

Impact Type and Source			Impact Receptor		Effect and Scale										
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity	Direct/ indirect/ cumulative	Effect of Impact Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Duration of Impact Temporary/	Reversible/ irreversible	Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance
Restored foreshore	Unrestricted foreshore access	Operation	Foreshore	High	Direct	Beneficial	Moderate	Site	Long term	Permanent	Irreversible	Inevitable	Major	N/A	Major
	Increased appeal of the open foreshore	Operation	Marine area	High	Indirect	Beneficial	Moderate	Nearby vicinity	Long term	Permanent	Irreversible	Likely	Moderate	N/A	Moderate
	Increased numbers of people using the foreshore	Operation	Marine area	High	Indirect	Adverse	Moderate	Nearby vicinity	Long term	Permanent	Irreversible	Likely	Minor	Informational signs to remind people of appropriate behaviour	Negligible
Marine pollution	Operation of the large complex	Operation	Marine area	High	Direct	Adverse	High	Nearby vicinity	Short term	Temporary	Irreversible	Possible	Minor	Appropriate operational management of the various facilities	Negligible

6.2 Landscape Character and Visual Amenity

Table 61: Summary of Expected Impacts on landscape character and visual amenity as a result of the proposed Scheme

Impact Type and Source			Impact Receptor		Effect and Scale										
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity & resilience towards impact	Direct/indirect/ cumulative	Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Temporary/ permanent	Reversible/ irreversible	Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Reduced landscape & visual amenity at VP01, VP02, VP03, VP04, VP05, VP07, VP10	Presence of construction machinery, tower cranes; hoarding and associated works	Construction	Pedestrians, Residents, Visitors, Workers, Drivers & Passengers etc.	High	Direct	Adverse	Medium	Site and immediate surroundings	Medium	Temporary	Reversible	Certain	Major	Adhere to S.L.623.08 to minimise impacts during construction works.	Moderate	N/A
Reduced landscape & visual amenity at VPV06, VP08				High	Direct	Adverse	Medium	Site and immediate surroundings	Medium	Temporary	Reversible	Certain	Moderate		Minor	N/A
Reduced visual amenity at VP09				High	Direct	Adverse	Medium	Site and immediate surroundings	Medium	Temporary	Reversible	Certain	Negligible		Negligible	N/A
Landscape & visual amenity at VP01	New proposed building	Operation		High	Direct	Beneficial	Medium	Site and immediate surroundings	Long	Permanent	Irreversible	Certain	Minor	N/A	Minor	N/A
Landscape & visual amenity at VP03, VP06, VP07				High	Direct	Adverse	Medium	Site and immediate surroundings	Long	Permanent	Irreversible	Certain	Minor	Visual mitigation measures (soft landscaping at ground level, receded walls, green walls and roof gardens) Use of mature trees and vegetation Regular maintenance of landscaping	Minor (slight reduction)	N/A
Landscape & visual amenity at VP02, VP04, VP05, VP08, VP10				Moderate	Direct	Adverse	Medium	Site and immediate surroundings	Long	Permanent	Irreversible	Certain	Moderate		Moderate (slight reduction)	N/A

Impact Type and Source			Impact Receptor		Effect and Scale							Probability of Impact Occurring	Overall Impact Significance	Proposed Mitigation Measures	Residual Impact Significance	Other Requirements
Impact Type	Specific Intervention Leading to Impact	Project Phase	Receptor Type	Sensitivity & Resilience Towards Impact	Direct/Indirect/ Cumulative	Beneficial/ Adverse	Severity	Physical/ Geographic Extent of Impact	Short/ Medium/ Long Term	Temporary/ Permanent	Reversible/ Irreversible					
Landscape & visual amenity at VP09				Moderate	Direct	Adverse	Medium	Site and immediate surroundings	Long	Permanent	Irreversible	Certain	Negligible	N/A	Negligible	N/A
Increased shadowing effects and light pollution	Resident rooms, exterior lighting and height of proposed building	Operation	Residents & Pedestrians	Moderate	Direct	Adverse	Medium	Site and immediate surroundings	Long	Temporary	Irreversible	Likely	Minor	Strategic placement of exterior lighting to minimise glare and disturbance of sleep patterns.	Minor (slight reduction)	N/A

6.3 Geology, Geomorphology, Hydrogeology and Soils

Table 62: Summary of Expected Impacts on geology, geomorphology, hydrology and soils as a result of the proposed Scheme

Impact Type and Source			Impact Receptor		Effect and Scale							Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity & resilience t	Direct/indirect/ cumulative	Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Temporary/ permanent	Reversible/ irreversible					
Geology: loss of rock strata & mineral resources	Excavation	Construction	Rock strata	Low	Direct	Adverse	Medium	Site	Long	Permanent	Irreversible	Certain	Major	None. Marine Sedimentary rocks require millions of years to form	Major	Recycling and reuse of excavated material
Geomorphology: change in shore platform	Excavation	Construction	Shore platform	Low	Direct	Adverse	Medium	Site	Long	Permanent	Irreversible	Certain	Minor	N/A	Minor	/
Geomorphology: degradation / destruction of surface features	Various construction activities	Construction	Salt pans	High	Indirect	Adverse	High	Surrounding foreshore area	Long	Permanent	Irreversible	Unlikely	Minor	Isolate the site from the foreshore with appropriate hoarding	Negligible	/
Geomorphology: soils	Excavation	Construction	Soil	Medium	Direct	Adverse	High	Site	Long	Permanent	Irreversible	Remote	Negligible	Reuse soil on site	Negligible	/
Palaeontology	Excavation	Construction	Fossils	Medium	Direct	Adverse	Medium	Site	Long	Permanent	Irreversible	Remote	Negligible	/	N/A No known fossil beds of scientific importance	/
Hydrogeology: Pollution of water bodies	Spillage of oils & fuels	Construction	Rock strata and water bodies	Medium	Indirect	Adverse	High	Site and immediate surroundings	Medium	Temporary	Reversible	Possible	Moderate	Appropriate liquid storage and handling protocols on site	Minor	/

Impact Type and Source			Impact Receptor		Effect and Scale							Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity & resilience t	Direct/indirect/ cumulative	Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Temporary/ permanent	Reversible/ irreversible					
Stability of exposed walls	Excavation	Construction	Exposed rock faces	Medium	Indirect	Adverse	Medium	Site and immediate surroundings	Short	Temporary	Reversible	Remote	Moderate	Monitoring during excavation	Minor	Rock wedge stabilisation may not be permanent
Hydrogeology: Pollution of water bodies	Sewer/ effluent leaks & oils/fats spills	Operational	Rock strata and water bodies	Medium	Indirect	Adverse	High	Site and immediate surroundings	Medium	Temporary	Reversible	Unlikely	Moderate	Appropriate liquid and effluent storage and handling protocols on site	Minor	Monitoring & maintenance of effluent infrastructures
Geomorphology: damage to salt pans	People walking in the salt pans	Operational	Salt pans	Medium	Direct	Adverse	High	Site and surrounding area	Long	Permanent	Irreversible	Possible	Minor	Installation of information boards	Minor (reduced)	/

6.4 Water Bodies

Table 63: Summary of Expected Impacts on water bodies as a result of the proposed Scheme

Impact type and source			Impact receptor		Effect & Scale										
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity & resilience toward	Direct/ Indirect/ Cumulative	Beneficial/ Adverse	Severity	Physical/ geographic extent of impact	Short-/ Medium-/ Long-term	Temporary / Permanent	Reversible / irreversible	Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Dust emissions	Excavation	Construction	Runoff and seawater	Low	Direct	Adverse	Moderate	Coastal marine water	Short term	Temporary	Reversible	Unlikely	Moderate	Cart Excavation material away as soon as it is generated for reuse or disposal depending on outcome of contamination study	Negligible	/
Uncontrolled runoff from the works	Excavation	Construction	Runoff and seawater	Low	Direct	Adverse	Moderate	Catchment	Short term	Temporary	Reversible	Unlikely as excavations are usually isolated from the surroundings	Moderate	Excavation walls isolate the site from the surrounding environment	Negligible	/
Fuel and lubricant spills	Excavation and construction machinery	Construction	Seawater	Low	Direct	Adverse	High	Coastal marine water	Short term	Temporary	Reversible	Unlikely as excavations are usually isolated from the surroundings	Moderate	Such substances should be stored in designated impermeable and bunded areas,	Minor	/
Alkaline concrete wash	Laying of fresh concrete	Construction	Seawater	Low	Direct	Adverse	High	Coastal marine water	Short term	Temporary	Reversible	Unlikely as excavations are usually isolated from the surroundings	Moderate	Inject concrete wash in the rock. prevent from reaching the sea	Minor	/
Contamination from washings from trafficked and parking areas	Washing	Operation	Coastal waters	Low	Direct	Adverse	Moderate	Coastal waters	Short term	Temporary	Reversible	Unlikely	Moderate	Care during operation appropriate filters and sediment collectors	Minor	/

Impact type and source			Impact receptor		Effect & Scale							Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity & resilience toward	Direct/ Indirect/ Cumulative	Beneficial/ Adverse	Severity	Physical/ geographic extent of impact	Short-/ Medium-/ Long-term	Temporary / Permanent	Reversible / Irreversible					
Storm surge	Stormy seas	Operation	Wastewater and drainage infrastructure	Low	Direct	Adverse	Moderate	Wastewater and drainage infrastructure	Short term	Temporary	Reversible	Unlikely	Moderate	Care during operation appropriate filters oil separators and sediment collectors	Minor	/
Spillage of sewer and other fluids	Facility operations and surface run-off	Operation	Coastal waters	Low	Direct	Adverse	Moderate	Coastal waters	Short term	Temporary	Reversible	Unlikely	Minor	Care during operation of the plant- employ experienced operatives	Minor (reduced)	/
Disposal of oil and chlorinated water	Inappropriate Disposal	Operation	Coastal waters	High	Direct	Adverse	Moderate	Coastal waters	Short term	Temporary	Reversible	Unlikely	Moderate	discharged only through an approved system	Minor	/
Littering	Careless disposal of waste	Operation	Shore platform and coastal waters	Low	Direct	Adverse	Moderate	Hydromorphology of the shore platform and marine environment	Short term	Temporary	Reversible	Likely	Minor	Provision of appropriate waste disposal bins and appropriate signage	Negligible	/

6.5 Terrestrial Ecology

Table 64: Summary of Expected Impacts on terrestrial ecology as a result of the proposed Scheme

Impact type and source			Impact receptor		Effect & Scale							Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity & resilience toward impact	Direct/ Indirect/ Cumulative	Beneficial/ Adverse	Severity	Physical/ geographic extent of impact	Short-/ Medium-/ Long-term	Temporary/ Permanent	Reversible/ Irreversible					
Loss of terrestrial species – Circa 10 protected tree individuals	Uprooting	Construction	Vegetation	High	Direct	Adverse	High	Localised	Long-term	Permanent	Irreversible	High	Moderate	Relocation of species, compensatory planting in landscaped areas	Minor	N/A
Removal of potential roosting sites for bat species	Demolition of the existing Ex-Jerma hotel	Construction	Fauna (Bat species)	High	Direct	Adverse	High	Localised	Long-term	Permanent	Irreversible	High	Major	Installation of bat boxes or dedicated bat roosting areas	Moderate	N/A
Removal of soil	Removal of soil during excavation of natural land	Construction	Vegetation	Moderate	Direct	Adverse	Low	Localised	Short	Temporary	Reversible	High	Negligible to Minor	Re-use of soil for landscaping	Negligible	N/A
Air emissions from dust generating activities	Demolition, excavation and other dust generating activities	Construction	Flora and surrounding marine environment	High	Direct	Adverse	High	Localised	Short-term	Temporary	Reversible	Likely	Moderate	Dust suppression techniques, regular clearing of affected areas, construction monitoring	Minor	N/A

Impact type and source			Impact receptor		Effect & Scale							Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity & resilience toward impact	Direct/ Indirect/ Cumulative	Beneficial/ Adverse	Severity	Physical/ geographic extent of impact	Short-/ Medium-/ Long-term	Temporary/ Permanent	Reversible/ Irreversible					
Trampling of vegetation by humans and vehicles	Construction staff and vehicles trampling over vegetation outside scheme boundary	Construction, decommissioning	Vegetation	Moderate	Cumulative	Adverse	Low	Localised	Short-term	Temporary	Irreversible	Likely	Minor	Vehicles to be parked in designated areas onsite, construction staff are to walk on paths and non-vegetated areas as much as possible	Negligible	N/A
ALAN on nocturnal species	Exterior lighting remaining switched at nighttime.	Construction	Nocturnal fauna	Moderate	Direct	Adverse	Moderate	Localised and near vicinity	Medium	Permanent	Reversible	Likely	Negligible	Night time works are not permitted unless deemed absolutely necessary	Negligible	N/A
Noise & Vibration	Excavation, building construction	Construction	Fauna	High	Direct	Adverse	Moderate	Localised and near vicinity	Short-term	Temporary	Reversible	Likely	Moderate to Major	Equipment to be well maintained to avoid excessive noise.	Negligible	N/A
Air pollution by vehicular emissions	Increase in vehicle trips and air pollution including deposition of toxins into the soil	Operation	Vegetation	Moderate	Cumulative	Adverse	Moderate	Localised	Medium	Temporary	Reversible	Likely	Minor	Promotion of bus shuttle services for tourists, construction of electric vehicle charging bays	Negligible	N/A

Impact type and source			Impact receptor		Effect & Scale							Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity & resilience toward impact	Direct/ Indirect/ Cumulative	Beneficial/ Adverse	Severity	Physical/ geographic extent of impact	Short-/ Medium-/ Long-term	Temporary/ Permanent	Reversible/ Irreversible					
ALAN on nocturnal species	Exterior lighting remaining switched at nighttime.	Operation	Nocturnal fauna	Moderate	Direct	Adverse	Moderate	Localised and near vicinity	Medium	Permanent	Reversible	Likely	Minor to moderate	Limit night-time lighting to the bare minimum, light fixtures to be installed downward facing emitting warm coloured light waves.	Negligible	N/A
Shading effects	Increase of building height compared to the current ex-Jerma site	Construction and Operation	Vegetation	Moderate	Direct	Adverse	Low	Localised	Long-term	Permanent	Reversible	Unlikely	Negligible	N/A	Negligible	N/A
Noise and vibration	Activities including social events, parties, increased traffic and general human activity	Operation	Fauna	Moderate	Direct	Adverse	Low	Localised	Long-term	Temporary	Reversible	Likely	Moderate	Installation of acoustic barriers, pre-set sound system levels, implement quiet hours	Negligible	N/A

6.6 Avian Ecology

Table 65: Summary of Expected Impacts on avian ecology as a result of the proposed Scheme

Impact Type and Source			Impact Receptor		Effect and Scale										
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity	Direct/ indirect/ cumulative	Effect of Impact Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Duration of Impact Temporary/ permanent	Reversible/ irreversible	Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Disturbance to terrestrial avian breeding species, including loss of nesting/ foraging habitat	Demolition, construction, and transportation of materials in a wider area	Construction, Decommissioning	Terrestrial avian species	High & Low	Direct	Adverse	Low	Local in footprint and AoI	Short -term	Temporary	Reversible	Inevitable	Moderate	Keep time short, retain all works, machinery, materials and waste within the site footprint, avoid reproductive season for demolition, habitat restoration	Minor	N/A
Loss of nesting/foraging habitat to terrestrial avian species	Operation of proposed development	Operation	Terrestrial avian species	High & Low	Direct	Adverse	Low	Local in footprint and AoI	Long -term	Permanent	Reversible	Inevitable	Moderate	Landscaping measures and architectural features that provide nesting/ foraging/roosting habitat	Minor	N/A

Impact Type and Source			Impact Receptor		Effect and Scale											
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity	Direct/ indirect/ cumulative	Effect of Impact Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Duration of Impact Temporary/ permanent	Reversible/ irreversible	Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Loss of roosting and foraging habitat for avian assemblages	Direct human disturbance, noise and light pollution	Operation, decommissioning	All avian species making use of the AoI, including wintering and passage populations of conservation concern	High & Moderate	Direct	Adverse	Moderate to High	Local in footprint and AoI	Long -term	Permanent	Reversible	Inevitable	Moderate to Major	Install containment barriers during construction/ decommission, reduce nighttime activities, create buffer zones along the shore, avoid activities that produce excessive noise and light pollution, follow guidelines on avoidance of light pollution	Moderate	N/A
Grounding of seabird fledglings, associated induced mortality caused by ALAN	ALAN	Construction, operation, decommissioning	Breeding procellariiform seabirds	High & Low	Direct	Adverse	High	Broad	Long -term	Permanent	Reversible	High	Major	Limit night-time activities, reduce light pollution in accordance with published guidelines, avoid sensitive period	Minor to Moderate	Funding the monitoring and rescue of seabird grounding in the AoI.

Impact Type and Source			Impact Receptor		Effect and Scale											
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity	Direct/ indirect/ cumulative	Effect of Impact Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Duration of Impact Temporary/ permanent	Reversible/ irreversible	Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
ALAN negatively impacting nocturnally migrating birds	ALAN	Construciton, operation, decommissioning	Nocturnally migrating birds	Moderate & Moderate	Direct	Adverse	Low	Broad	Long -term	Permanent	Reversible	High	Moderate	Limit night-time activities, reduce light pollution in accordance with published guidelines, avoid sensitive periods	Minor	N/A
Exposure of avifauna to harmful substances, reducing life expectancy, physiological health state, reproductive success	Pollution and spillage of material during construction, operation, decommissioning	Construction, operation, decommissioning	Avian species	Moderate & Low	Direct	Adverse	High	Broad (AoI and beyond)	Long -term	Permanent	Irreversible	High	Moderate	Infrastructure and procedures to minimise and address pollution events	Minor	N/A
Cumulative effects impacting biodiversity, including overall habitat destruction and climate change	Cumulative habitat degradation and loss along eastern shore, urban heat-island effect	Operation	Biotic and abiotic environment	Moderate & Low	Indirect/ Cumulative	Adverse	Moderate	Very broad	Long -term	Permanent	Reversible with difficulty	Inevitable	Moderate to Major	Take holistic approach to planning, reduce footprint, floor area and parking, shift to climate neutral or positive design, construction and operation, implement adequate landscaping	Minor to moderate	Consider alternative solutions for area

6.7 Architectural, Archaeological, Historical & Cultural Heritage

Table 66: Summary of Expected Impacts on architecture, archaeological, historical and cultural heritage as a result of the proposed Scheme

Impact type and source			Impact receptor		Effect & Scale							Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity & resilience	Direct/ Indirect/ Cumulative	Beneficial/ Adverse	Severity	Physical/ geographic extent of impact	Short-/ Medium-/ Long-term	Temporary / Permanent	Reversible / Irreversible				
Potential damage of known cultural assets	Superficial demolition of pre-existing structures	Construction	Identified cultural features (St Thomas Tower and battery & Salt pans)	Sensitive	Direct	Adverse	High	Limited	Long term	Permanent	Irreversible	Likely	Moderate	Respect of Grade 1 scheduled monument buffer zone using sensitive construction methods to reduce vibration and to avoid spread of demolition material	Moderate to Minor (depending on the outcome of the proposed interventions)
Potential damage of archaeological features below the ground	Excavation works up to rock surface	Construction	Unknown potential archaeological features	Sensitive	Direct	Adverse	High	Limited	Long term	Permanent	Irreversible	Likely	Moderate to Major	Constant monitoring and use of sensitive construction methods	Moderate to Minor (depending on the outcome of the proposed interventions)
Potential structural damage of known cultural assets	Rock-cutting works	Construction	St Thomas Tower and battery	Sensitive	Indirect	Adverse	High	Limited	Long-term	Temporary	Reversible	Likely	Minor to Moderate	Use of sensitive construction methods to reduce vibration; vibration monitoring; pre and post building survey.	Minor (depending on the outcome of proposed interventions)
Potential damage of known cultural assets	Rock-cutting works	Construction	Salt Pans located in proximity of the scheme	Sensitive	Direct	Adverse	High	Limited	Long-term	Permanent	Irreversible	Likely	Minor	Use of sensitive construction methods to avoid unnecessary damage of exposed features and use of protective polythene	Minor

Impact type and source			Impact receptor		Effect & Scale										
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity & resilience	Direct/ Indirect/ Cumulative	Beneficial/ Adverse	Severity	Physical/ geographic extent of impact	Short-/ Medium-/ Long-term	Temporary / Permanent	Reversible / Irreversible	Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance
														sheeting if practicable.	
Change in the context and cultural landscape	Construction of new buildings	Construction /Operation	St Thomas tower and battery and surroundings	Sensitive	Cumulative	Adverse	High	Site and immediate surrounding	Long term	Permanent	Irreversible	Inevitable	Moderate	Use of earth-toned, globigerina limestone texture panelling for the external facade and introduction of a more articulated and stepped building profile towards the coastline.	Moderate

6.8 Air Quality

Table 67: Summary of Expected Impacts on air quality as a result of the proposed Scheme

Impact Type and Source			Impact Receptor		Effect and Scale							Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity & resilience towards impact	Direct/indirect/ cumulative	Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Temporary/ permanent	Reversible/ irreversible					
Increased NO_2 levels from trips generated by the Scheme	Traffic caused by operations	Operations in 2030	R1 to R12, Jerma MS and Jerma site	Medium	Direct	Adverse	Minor	Localised	Long term	Permanent	Irreversible	Likely	Negligible	None	Negligible	N/A
		Operations in 2035		Medium	Direct	Adverse	Minor	Localised	Long term	Permanent	Irreversible	Likely	Negligible	None	Negligible	N/A
Increased PM_{10} levels from trips generated by the Scheme	Traffic caused by operations	Operations in 2030	R4	Medium	Direct	Adverse	Minor	Localised	Long term	Permanent	Irreversible	Likely	Minor	Green travel plan	Negligible	N/A
		Operations in 2030	R1 to R3, R5 to R12, Jerma MS and Jerma site	Medium	Direct	Adverse	Minor	Localised	Long term	Permanent	Irreversible	Likely	Negligible	None	Negligible	N/A
		Operations in 2035	R1 to R12, Jerma MS and Jerma site	Medium	Direct	Adverse	Minor	Localised	Long term	Permanent	Irreversible	Likely	Negligible	None	Negligible	N/A
Increased PCT level form trips generated by the Scheme	Traffic caused by operations	Operations in 2030	R6, R8 to R12, Jerma site	Medium	Direct	Adverse	Minor	Localised	Long term	Permanent	Irreversible	Likely	Negligible	None	Negligible	N/A
			R3 and R7	Medium	Direct	Adverse	Minor	Localised	Long term	Permanent	Irreversible	Likely	Minor	Green travel plan	Negligible	N/A
			R4, R5 and Jerma MS	Medium	Direct	Adverse	Minor	Localised	Long term	Permanent	Irreversible	Likely	Moderate	Green travel plan	Minor	N/A
			R1 and R2	Medium	Direct	Adverse	Minor	Localised	Long term	Permanent	Irreversible	Likely	Major	Green travel plan	Moderate	N/A
Increased PCT level form trips generated by the Scheme	Traffic caused by operations	Operations in 2035	R6, R8 to R11, Jerma site	Medium	Direct	Adverse	Minor	Localised	Long term	Permanent	Irreversible	Likely	Negligible	None	Negligible	N/A
			R3, R7, R12	Medium	Direct	Adverse	Minor	Localised	Long term	Permanent	Irreversible	Likely	Minor	Green travel plan	Negligible	N/A
			R1, R4, R5, Jerma MS	Medium	Direct	Adverse	Minor	Localised	Long term	Permanent	Irreversible	Likely	Moderate	Green travel plan	Minor	N/A

Impact Type and Source			Impact Receptor		Effect and Scale							Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity & resilience towards impact	Direct/indirect/ cumulative	Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Temporary/ permanent	Reversible/ irreversible					
			R2	Medium	Direct	Adverse	Minor	Localised	Long term	Permanent	Irreversible	Likely	Major	Green travel plan	Moderate	N/A

6.9 Noise and Vibrations

Table 68: Summary of Expected Impacts on noise and vibrations as a result of the proposed Scheme

Impact type and source			Impact receptor		EFFECT & SCALE							Impact occurring (Inevitable, Likely, Unlikely, Remote,	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Impact Type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity towards impact	Direct/Indirect/ Cumulative	Beneficial/ Adverse	Severity	Physical / geographic extent of impact	Short-/medium-/ long-term	Temporary / Permanent	Reversible / Irreversible					
Noise	Site preparation	Construction	Residential (day)	Medium	Direct	Adverse	High	Local	Short-term	Temporary (for duration of construction)	Reversible with suitable mitigation	Likely	Major Adverse	Best practicable means in line with standard best practice	Minor Adverse	None
Vibration	Vibratory compaction and piling	Construction	Residential (day)	Medium	Direct	Adverse	Moderate	Local	Short - term	Temporary (for duration of vibratory activities)	Reversible with suitable mitigation	Unlikely (dependent on required construction methods)	Moderate Adverse	Alternative equipment/ methods of working, notify residents.	Negligible	None
Noise	Operational Road Traffic Noise	Operation	Residential (day and night)	Medium / High	Direct	Adverse	Medium	Local	Long-term	Permanent	No	Remote	Moderate / Major Adverse	None identified	Low adverse	None

6.10 Infrastructure and Utilities

Table 69: Summary of Expected Impacts on infrastructure and utilities as a result of the proposed Scheme

Impact Type and Source			Impact Receptor		Effect and Scale											
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity towards impact	Direct/indirect/ cumulative	Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Temporary/ permanent	Reversible/ irreversible	Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Damage to existing electrical infrastructure	Mechanical damage	Construction	Electrical infrastructure within access route and site boundary	Medium	Direct	Adverse	Medium	Local	Short	Permanent	Reversible	Unlikely	Minor	Liaison between service providers/ operators and contractor, Precautions taken	Negligible	N/A
Corrosion, overheating, and short circuits of existing electrical infrastructure	Dust-generating activities	Construction	Electrical infrastructure along site boundary	Medium	Indirect	Adverse	Medium	Local	Short	Temporary	Reversible	Unlikely	Minor	Liaison between service providers/ operators and contractor, Dust-mitigation measures	Negligible	N/A
Damage to existing electrical infrastructure	Vibration	Construction	Electrical infrastructure along site boundary	Medium	Indirect	Adverse	Medium	Local	Short	Temporary	Reversible	Unlikely	Minor	Liaison between service providers/ operators and contractor, Dust-mitigation measures	Negligible	N/A

Impact Type and Source			Impact Receptor		Effect and Scale										
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity towards impact	Direct/indirect/ cumulative	Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Temporary/ permanent	Reversible/ irreversible	Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Corrosion, overheating, and short circuits of existing electrical infrastructure	Dust-generating activities	Construction	Electrical infrastructure within buffer zone	Low	Indirect	Adverse	Medium	Local	Short	Temporary	Reversible	Unlikely	Minor	Liaison between service providers/ operators and contractor, Dust-mitigation measures	Negligible	N/A
Damage to existing electrical infrastructure	Vibration	Construction	Electrical infrastructure within buffer zone	Low	Indirect	Adverse	Medium	Local	Short	Temporary	Reversible	Unlikely	Minor	Liaison between service providers/ operators and contractor, Dust-mitigation measures	Negligible	N/A
Damage to existing telecommunications infrastructure	Mechanical damage	Construction	Telecommunications infrastructure within access route and site boundary	Medium	Direct	Adverse	Medium	Local	Short	Permanent	Reversible	Unlikely	Moderate	Liaison between service providers/ operators and contractor, Precautions taken	Minor	N/A
Signal interference of existing telecommunications infrastructure	Dust-generating activities	Construction	Telecommunications infrastructure along site boundary	Medium	Indirect	Adverse	Medium	Local	Short	Temporary	Reversible	Unlikely	Moderate	Liaison between service providers/ operators and contractor, Dust-mitigation measures	Minor	N/A

Impact Type and Source			Impact Receptor		Effect and Scale											
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity towards impact	Direct/indirect/ cumulative	Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Temporary/ permanent	Reversible/ irreversible	Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Damage to existing telecommunications infrastructure	Micro vibrations	Construction	Telecommunications infrastructure along site boundary	Medium	Indirect	Adverse	Medium	Local	Short	Temporary	Reversible	Unlikely	Moderate	Liaison between service providers/ operators and contractor, Dust-mitigation measures	Minor	N/A
Signal interference of existing telecommunications infrastructure	Dust-generating activities	Construction	Telecommunications infrastructure within buffer zone	Low	Indirect	Adverse	Medium	Local	Short	Temporary	Reversible	Unlikely	Minor Moderate	Liaison between service providers/ operators and contractor, Dust-mitigation measures	Moderate	N/A
Damage to existing telecommunications infrastructure	Micro vibrations	Construction	Telecommunications infrastructure within buffer zone	Low	Indirect	Adverse	Medium	Local	Short	Temporary	Reversible	Unlikely	Minor Moderate	Liaison between service providers/ operators and contractor, Dust-mitigation measures	Moderate	N/A
Damage to existing potable water infrastructure	Mechanical damage	Construction	Existing potable water infrastructure within site and along site boundary	Low	Direct	Adverse	Low	Local	Short	Permanent	Reversible	Unlikely	Minor	Liaison between service providers/ operators and contractor, Precautions taken	Negligible	N/A

Impact Type and Source			Impact Receptor		Effect and Scale											
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity towards impact	Direct/indirect/ cumulative	Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Temporary/ permanent	Reversible/ irreversible	Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Damage to existing potable water infrastructure	Vibration	Construction	Existing potable water infrastructure within buffer zone	Low	Indirect	Adverse	Low	Local	Short	Temporary	Reversible	Unlikely	Minor Moderate	Liaison between service providers/ operators and contractor	Minor	N/A
Damage to existing wastewater infrastructure	Accidental impact during excavation/ piling works	Construction	Existing wastewater infrastructure within site	Medium	Direct	Adverse	Low	Local	Short	Temporary	Reversible	Unlikely	Minor Moderate	Liaison between service providers/ operators and contractor	Minor	N/A
Damage to existing wastewater infrastructure	Vibration	Construction	Existing wastewater infrastructure within buffer zone and on site	Low	Direct	Adverse	Low	Local	Short	Temporary	Reversible	Unlikely	Minor	Liaison between service providers/ operators and contractor	Negligible	N/A
Interruptions to water, telecommunications and electricity supply	Connection of services to electricity grid, telecommunications services & water network	Construction	Existing facilities in on site	Low	Direct	Adverse	Medium	Local	Short	Temporary	Reversible	Likely	Minor	Liaison between service providers/ operators and contractor	Negligible	N/A
Interruptions to water, telecommunications and electricity supply	Connection of services to electricity grid, telecommunications services & water network	Construction	Existing facilities in immediate vicinity of Scheme	Medium	Direct	Adverse	Medium	Local	Short	Temporary	Reversible	Likely	Moderate	Liaison between service providers/ operators and contractor	Minor	N/A

Impact Type and Source			Impact Receptor		Effect and Scale											
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity towards impact	Direct/indirect/ cumulative	Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Temporary/ permanent	Reversible/ irreversible	Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance	Other requirements
Overloading of infrastructure and utility services	Increased demand due to new development	Operational	Existing infrastructure and utilities within site and surroundings	Medium	Direct	Adverse	Medium	Local	Long -term	Permanent	Reversible	Likely	Minor	Appropriate traffic management measures, ongoing coordination with utility providers, renewable energy, phased connection to utility networks.	Minor	Coastal erosion endurance
Cumulative demand on infrastructure and utility loads	Cumulative impact of multiple developments in the same area	Operational	Existing infrastructure and utilities within area	Medium	Direct	Adverse	Medium	Local	Long -term	Permanent	Reversible	Likely	Moderate	Appropriate traffic management measures, ongoing coordination with utility providers, phased connection to utility networks.	Minor	Coastal erosion endurance measures

6.11 Public Access

Table 70: Summary of Expected Impacts on public access as a result of the proposed Scheme

Impact Type and Source			Impact Receptor		Effect and Scale										
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity	Direct/indirect/ cumulative	Effect of Impact Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Temporary/ Permanent	Reversible/ irreversible	Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance
Restricted access to the foreshore	Obstruction along foreshore due to site hoarding	Construction	Local residents, and tourists	Medium	Direct	Adverse	Medium	Site and immediate surroundings	Short	Temporary	Reversible	Possible	Moderate	Creation of safe passageway along foreshore, close to sea (subject to health & safety risk assessment)	Minor
Restricted road and pedestrian access	Closure of Triq is-Salini	Construction	Road users and pedestrians	Low	Direct	Adverse	High	Site and surrounding locality	Short	Permanent	Irreversible	Inevitable	Moderate	N/A	Moderate
Pressure on local road network	Increase in large vehicles on small residential roads	Construction	Road users	Low	Direct	Adverse	Medium	Surrounding locality	Short	Temporary	Reversible	Possible	Minor	Implementation of a Construction Traffic Management Plan	Negligible
Change in public bus service	Relocation of bus stop	Construction	Bus users	Low	Direct	Adverse	Low	Site and surrounding locality	Short	Permanent	Irreversible	Inevitable	Minor	Coordination with Tal-Linja for alternative arrangements	Negligible
Improved access to foreshore	Restoration of foreshore and construction of access paths	Operation	Local residents, and tourists	Medium	Direct	Beneficial	High	Site and immediate surroundings	Long	Permanent	Reversible	Inevitable	Major	N/A	Major
Pedestrianised area	Pedestrianisation Triq il-Salini, plaza and viewing platform	Operation	Local residents, and tourists	Medium	Direct	Beneficial	Medium	Site and immediate surroundings	Long	Permanent	Reversible	Inevitable	Major	N/A	Major

Impact Type and Source			Impact Receptor		Effect and Scale										
Impact type	Specific intervention leading to impact	Project phase	Receptor type	Sensitivity	Direct/indirect/ cumulative	Effect of Impact Beneficial/ adverse	Severity	Physical/ geographic extent of impact	Short/ medium/ long term	Temporary/ Permanent	Reversible/ irreversible	Probability of impact occurring	Overall impact significance	Proposed mitigation measures	Residual impact significance
Alterations to public bus service	Relocation of bus stops and route modification	Operational	Bus users	Medium	Direct	Adverse	Low	Site and surrounding locality	Long	Permanent	Irreversible	Inevitable	Minor	Coordination with Tal-Linja for alternative arrangements	Negligible
Increase in traffic in surrounding roads	Junction capacity exceedances	Operation	Road users	Medium	Direct	Adverse	Moderate	Site and surrounding locality	Medium	Temporary	Reversible	Inevitable	Moderate	Modifications to nearby road junctions	Negligible

7 Mitigation Measures, Residual Impacts and Monitoring Programme

7.1 Mitigation Measures and Residual Impacts

7.1.1 Land Cover and Land/Sea Uses

Construction Phase

Restrictions to Foreshore

If feasible, the site hoarding should be positioned to allow public access to the foreshore. This will enable the natural area to still be utilised by the general public for informal recreational purposes. If such access can be retained, the impact on recreational land use may be partially mitigated leading to a slight reduction on the significance of the minor impact.

Pedestrian and Vehicle Circulation Restrictions

A traffic management plan should be drawn up for the project. The plan should include a wide range of measures to keep the disruptions on the local road network to a minimum such as scheduling the arrival of large vehicles to avoid queuing and avoidance of peak traffic hours. If a traffic management plan is followed throughout the construction phase, the severity of the adverse impact can be downgraded to negligible as the vast majority of the inconveniences should be eliminated.

Dust and Noise Generation

It is important that the Contractor follows the guidelines set out in the Construction Management Site Regulations of 2022 (and all subsequent amendments) and overall good working practices throughout the construction phase. These shall include but not be limited to:

- Covering and/or wetting of all stockpiles and loose material when not in use
- Control of ground conditions to minimise dust dispersal
- Use of sprinkler systems if deemed necessary
- Use of dust suppression equipment for dust generating activities
- Covering of trucks carrying loose material before transportation off site
- Installation and use of wheel wash stations
- Regular maintenance of machinery, equipment and vehicles to minimise noise emissions
- Carrying out noise generating activities within the daylight hours

If the Contractor does adhere to the above, and other relevant practices, the severity of the adverse impact can be reduced to negligible.

Marine Pollution

The Contractor is required to follow good working practices, most notedly those outlined in the Environmental Construction Site Regulations of 2007 (S.L.552.09), to keep the marine pollution risks to a minimum. Such measures include:

- Onsite storage of liquids in spill trays or bunds at all times
- Onsite storage of liquids as far away from the sea as possible
- Provisions of easily accessible emergency spill kits
- Use of drip trays in the instance of leaking machinery and equipment
- Prompt repair of broken machinery and equipment
- Regular servicing and maintenance of machinery and equipment
- Designated hard standing maintenance and washing areas, located as far away from the sea as possible
- Maintenance of ground conditions to prevent thick accumulations of fine dust
- Containment of concrete washing residue
- Correct onsite storage of all waste and light-weight materials in designated areas away from the sea and in suitable receptacles that can be closed or covered

If the Contractor follows good working practices throughout the entire of the construction phase, the impact on the marine sea uses will reduce to be of minor significance.

Operational Phase

Intensification of Activity

During the operational phase, the following mitigation measures are recommended to reduce the impact of the presence of such a large development in a residential area:

- Proper site management and restriction of activities to the approved footprint
- Ongoing maintenance of landscaping and open spaces vegetation
- Traffic and access management
- Visual and noise mitigation to maintain land-use compatibility

If such measures are implemented and maintained throughout the operation of all components of the proposed development, the severity of the adverse impact can be reduced to minor.

Marine Pollution

The operators of the proposed complex shall adopt environmentally responsible management practices to minimise the risk of marine pollution, with particular emphasis on the outdoor facilities located in close proximity to the coastline. Thorough housekeeping and maintenance procedures should be implemented to ensure that waste, chemicals, and other potential contaminants are appropriately managed and prevented from entering the marine environment.

In advance of forecast storm events, all loose furniture, equipment, and other movable items should be relocated away from the shoreline and securely anchored or stored to prevent their displacement by strong winds or wave action. The timely

implementation of these preventative measures will significantly reduce the potential for accidental marine pollution, resulting in a negligible residual impact.

Restoration of the Foreshore

The potential disturbance is expected to originate primarily from members of the public using the areas surrounding the complex, rather than from activities taking place within the development itself. To minimise this risk, informational signage can be installed at appropriate locations around the perimeter of the site, particularly along the foreshore, to promote responsible behaviour and raise awareness of the sensitivity of the surrounding environment.

Provided these measures are effectively implemented and respected by visitors, the residual impact is expected to be reduced to negligible significance.

7.1.2 Landscape Character and Visual Amenity

Construction Phase

During the construction phase, appropriate environmental monitoring and site management measures should be implemented to ensure that works are undertaken in accordance with the CONSTRUCTION MANAGEMENT SITE REGULATIONS (L.N. 340 of 2022). Particular attention should be given to the installation and maintenance of appropriate site boundary screening, suppression of dust dispersion beyond the site boundary, and orderly containment of stockpiles, construction materials and machinery within designated areas. Good housekeeping practices should be maintained throughout the construction period to minimise visual clutter and reduce the temporary visual effects associated with the works.

During the construction phase, residual impacts are anticipated to range from minor to moderate adverse, primarily due to the temporary presence of prominent construction elements, particularly tower cranes and other large-scale machinery and structures that cannot be fully screened from surrounding viewpoints.

Operational Phase

The proposed development has been designed with a series of measures intended to limit its visual dominance and ensure a more sensitive integration within the surrounding townscape. Key strategies include setting portions of the building below street level, subdividing the overall volume into two distinct blocks separated by a generous pedestrian space, and maintaining an appropriate setback from St Thomas Tower to preserve its visual setting. Additional design interventions, such as the incorporation of bastion-inspired elements and the use of recessed upper floors, draw from the architectural style of the nearby tower while helping to reduce the perceived scale of the structure. Together, these approaches break down the overall massing, resulting in a more proportionate and visually coherent composition. Variations in form introduce a degree of articulation and rhythm, which further moderates the building's apparent height when viewed from street level. The use of restrained, light-absorbing materials and neutral colour tones, combined with high-quality finishes, enhances compatibility with the existing built environment.

Soft landscaping and greening form a central component of the Scheme's visual mitigation strategy. Planting at ground level, as well as across terraces, setback areas, and roof surfaces, contributes to softening the building's presence, reducing the perception of bulk, and reinforcing the semi-urban character of the locality. Green roofs and vertical planting systems not only improve visual integration but also support ecological value and microclimatic benefits, aligning with broader sustainability principles. The selection of plant species should prioritise indigenous and mature specimens, ideally sourced locally, to ensure immediate visual impact and avoid delays in achieving effective screening. It is important that the landscaping proposals illustrated in the relevant plans, reports and visualisations are fully implemented and maintained over time, both in terms of quality and extent, to safeguard their role as a key mitigation measure.

The appearance of the development during night-time conditions should also be carefully addressed. External lighting must be designed to limit unnecessary light spill, using low-intensity, well-integrated fixtures that subtly accentuate architectural features without resulting in excessive illumination. This approach will allow the building to contribute positively to the night-time townscape, maintaining visual coherence and safety while avoiding undue visual intrusion.

Implementing such mitigation measures can lead to a partial reduction in impact significance. During the operational phase, the most significant residual impact is associated with the building's increased height, which will remain above that of the surrounding context and introduce a noticeable, though relatively subtle, alteration to the existing skyline.

Although design measures such as setbacks, façade articulation, and the use of contextually appropriate materials will help to moderate its visual presence, the development will nonetheless introduce a more pronounced vertical element within an otherwise predominantly low-rise setting. This change will be perceptible but limited in scope, with effects that are expected to be localised and of moderate magnitude, gradually diminishing with distance from the site.

7.1.3 Geology, Geomorphology, Hydrogeology and Soils

Construction Phase

Loss of Geological Strata

If the excavation waste is recycled, rather than disposed of, this will partially offset the adverse impact. Lower Globigerina Limestone can be recycled and used in the following ways:

- As an aggregate used in mass concrete;
- As a sub-base in road construction;
- Sizeable clasts can be used for the construction of rubble walls.

Loss of Soil

This may be mitigated by preserving it for later reuse during operation.

Protection of Salt Pans

Containing the machinery movements and activities (including material and waste storage) within the site boundary, away from the salt pans will reduce the severity if this adverse impact.

Protection of Hydrogeology

By implementing environmentally good working practices on site, the risk of oil lubricant and chemical spillages and leaks are reduced. If such incidents were to occur, the provision of spill kits on site and prompt action will further mitigate the potential adverse impacts on the site and surrounding areas hydrogeology.

Operational Phase

Liquid Storage

All potentially harmful liquids, most notedly oils and fats, stored on site need to be stored and handled appropriately to minimise the likelihood of accidental spills occurring.

Protection of Salt Pans

Information boards should be installed in the salt pan areas advising people not to enter the salt pans.

7.1.4 Water Bodies

Construction Phase

During construction, potential impacts on water bodies shall be mitigated primarily through prevention and containment. Uncontrolled runoff from the works shall not be permitted to discharge directly onto the shore platform or into coastal waters. Fuels, lubricants and other potentially contaminating substances shall be stored within appropriately bunded and impermeable areas, and routine servicing and refuelling of plant shall be undertaken away from the foreshore wherever practicable. Concrete and cement wash water shall be collected and contained, and no such alkaline effluent shall be discharged to the ground, fractured limestone, surface drainage system or marine environment. Dust and fine excavation material shall be controlled by appropriate damping, covering, barriers and timely removal from site.

Operational Phase

During operation, foul-water, stormwater and drainage systems shall be maintained so as to minimise the possibility of leakage to the subsurface or coastal waters. Runoff from trafficked and parking areas shall be appropriately managed, with interception of sediment and hydrocarbons where necessary. Oils and fats from catering facilities shall be separately controlled, while swimming-pool backwash and other chemically treated waters shall be discharged only through an approved system. Particular consideration shall be given to the coastal location of the Scheme and to the protection of wastewater and drainage infrastructure from exceptional storm-wave and coastal-flooding events.

Subject to the full implementation and maintenance of these measures, the likelihood and magnitude of adverse impacts on saline groundwater and coastal water quality should be substantially reduced.

7.1.5 Terrestrial Ecology

Construction Phase

The LEGAL NOTICE 340 OF 2022 - CONSTRUCTION MANAGEMENT SITE REGULATIONS, 2022 should be enforced to avoid the impacts from being generated in the first place and to ensure that environmental degradation is kept as low as possible. Some of the proposed mitigation measures related to construction best practices are highlighted below:

- Chemical spillages from machinery should be avoided by storing wastes and chemicals in bunded areas within the construction site
- Negligence during construction activities can be mitigated through regular and effective environmental monitoring to ensure that the construction impacts are not spilling over into the adjacent habitats.
- Hoarding should be set up (in line with the L.N.340 OF 2022 - CONSTRUCTION MANAGEMENT SITE REGULATIONS, 2022) along the construction site to minimise dispersion of particulates. This should be covered with suitable mesh or material that precludes dispersion of particulate matter.
- Pre-soaking, dust suppressors and covered stockpiles are considered good practices to minimise dust emissions.
- The use of wheel-washing facilities, installation of silt curtains at nearby coastlines and wetting down any exposed stockpiles should be adopted to minimise dispersion of dust into the air and surrounding sea.
- No additional land take-up should be used for the storage of materials and equipment or manoeuvring of construction vehicles.
- Construction vehicles and machinery should be well-maintained and serviced such that they can be operated at the best of their environmental performance.

The following measures are related to the minimising of impacts on protected flora and fauna directly within the proposed scheme site and AOI:

- Heavy machinery should not trample on natural areas located outside of the scheme site boundary
- All construction debris and soil should not be stockpiled near the base of trees and/or natural areas, but should be hauled away for proper recovery or disposal in designated waste management areas
- Any compensatory planting should not be carried out during the summer period
- The necessary environmental permits to carry out interventions on protected species are obtained from the ERA
- Uprooting of invasive alien species should follow the recommendations in the ERA Guidelines on Works Involving Trees (2019) on managing non-native

plant invaders and restoring native plant communities in terrestrial settings in the Maltese islands

- Species to be used for landscaped areas are recommended to be native species from local stocks able to tolerate coastal environments
- Any activities creating excessive noise levels in the area, such as boat parties, speed boat, jet ski and quad bike rentals, loud music from bars or lido clubs, festivals, fireworks etc. would need to be avoided to mitigate the expected permanent and significant impact of noise disturbance on sensitive receptors in the AoI.
- Demotion of single-use car use within the area such as by offering airport shuttle bus services for tourists and use of public transport and the construction of electric vehicle charging bays for hotel guests/residents.
- To mitigate the impact of the proposed development on the ambient temperature and to reduce the urban heat island effect, it is highly recommended to reduce the overall volume of the project, the number of air-conditioning units, reduce sealed surface areas exposed to the sun, and seek alternative building materials that have a lower climate impact. Effective landscaping with green open areas, green roofs and green walls as well as large evergreen trees are proposed as potentially suitable measures.
- Works should not be carried out during the night time due to the recorded presence of nocturnal species in the area
- Although rodent control is encouraged when setting up a construction site, care must be taken not to negatively influence any resident fauna in the immediate surroundings
- If lighting is required, downward facing luminaires should be installed within the facility to reduce light pollution and spilling during the operational phase
- Activities making use of bright lights are to be avoided
- Alternative sustainable building material to reduce impact of climate change: Effective landscaping with green open areas, green roofs and green walls as well as large evergreen trees are proposed as potentially suitable measures, reduce sealed surface areas exposed to the sun and utilising renewable energy sources such as PV panels.
- Excessive noise levels are to be avoided with pre-set sound system levels not exceeding the recommended noise dB levels according to the ASSESSMENT AND MANAGEMENT OF ENVIRONMENTAL NOISE REGULATIONS (S.L. 549.37).

Tamarisk sp. is recommended to be considered for transplanting, replacement and/or compensatory planting. If such interventions are to be carried out the following mitigation measures are to be applied:

- Should transplanting of trees be necessary, they should be pruned (not more than 25% of overall crown) to stimulate growth and reduce water loss. The trees should be watered for two consecutive days before removal, and the branches should be tied together during the transplantation phase.
- Before transplanting mature trees, the soil depth needs to be determined. For trees which are within soil less than 75cm deep, transplanting is not recommended as the majority of the root ball will be within the bedrock

- Root pruning is recommended to ensure the root ball is of equal size to the tree canopy
- For trees found within soil of adequate depth, an excavator or hand-held tools are necessary to dig a trench around the tree which is of equal depth to the tree height. Should the root ball be confirmed by the ecological monitor to be of smaller size, a shallower excavation would be acceptable as long as the root ball is not damaged. The excavator/manual tools should also dig a new pit which is around twice the original size of the root ball
- Transplanting should ideally be carried during the wet season and when soil depth is determined and trees earmarked for transplanting are subjected to root pruning. In the second year, the same trees are relocated to the transplanting area

Operational Phase

During operations, certain measure can be implemented to reduce the adverse impacts of the artificial lighting. Such measures include sensor-operated lights, down-turned light fixtures and other measures as indicated in the GUIDELINES FOR ECOLOGICALLY RESPONSIBLE LIGHTING[18]. This will minimise the potential light spillover into the adjacent patches of natural land.

Despite the comprehensive adoption of the recommended mitigation measures, a number of unavoidable residual impacts are still expected to arise. These are expected to vary between negligible to moderate adverse. These include:

- Permanent loss of terrestrial ecosystems and assemblages falling directly within the footprint of the site including uprooting of Tamarisk trees and protected caper plants.
- The removal of a potential roosting sites for bat species through the demolition of the abandoned ex-Jerma building.
- Temporary accumulation of dust, vibration and noise impacts within the immediate terrestrial and marine ecosystems abutting the construction site boundary
- Trampling of vegetation and soil outside the scheme boundary during the construction phase by staff and vehicles.
- Increase in pollutant deposition on the surrounding vegetation through vehicular emissions.
- Increase of noise levels during both the construction and operation phase.

7.1.6 Avian Ecology

Construction Phase

To mitigate the impact of the proposed development during the construction phase, on bird populations, a wide range of mitigation measures can be implemented. Recommended measures include:

[18] Source: https://birdlifemalta.org/wp-content/uploads/2020/07/Guidelines-for-Ecologically-Responsible-Lighting.pdf

- Restriction of demolition activities to only take place outside of the breeding season (February to August)
- Installation of physical barriers around the site footprint
- Appropriate handling and storage of waste on site
- Efficient project management to keep overall duration of project as short as possible
- Avoidance of night-time construction activities
- Any temporary lighting needs to follow the Guidelines for the Reduction of Light Pollution in the Maltese Islands (2020) published by ERA/PA
- Implementation of good house-keeping on site
- Implementation of general good working practices on site

Minor adverse and/or negligible residual impacts are expected with respect to the local terrestrial breeding bird population in the AoI during the construction phase. While these widely temporary impacts are expected to be significant within the footprint of the proposed development and its direct vicinity, it will likely not have significant residual impacts on the overall breeding populations of avian receptors in the AoI, as long as the relevant mitigation measures as outlined above are carefully implemented.

Operational Phase

A range of mitigation measures can also be implemented during the operational phase to limit the potential adverse impacts on bird populations. Such measures include:

- Creation of nesting sites through sensitive landscaping and architectural features
- Promotion of alternative modes of transport to and from the Scheme site
- Creation of buffer zones around the development and along the shoreline
- Avoidance of excessive noise generation
- Avoidance of use of bright lights; all lighting should follow the GUIDELINES FOR THE REDUCTION OF LIGHT POLLUTION IN THE MALTESE ISLANDS (2020) published by ERA/PA
- Reduction of the overall built volume of the project, number of AC units and sealed areas
- Inclusion of large landscaped areas

The scale and significance of the residual impacts will depend on how strictly the relevant mitigation measures will be implemented. The adverse impacts are expected to remain between minor to moderate significance.

Residual cumulative impacts from non-sustainable development in the Maltese islands and specifically along the eastern shoreline, of which the proposed development forms part, will potentially remain significant on avian receptors in the long-term. Such impacts also include those caused by climate change and the urban heat island effect. As long as developments are not climate neutral and do not make use of truly sustainable designs and materials and procedures and as long as the

population numbers and tourist arrivals grow further alongside non-sustainably, residual cumulative impacts on avian receptors are expected to be of minor to moderate impact.

7.1.7 Architectural, Archaeological, Historical & Cultural Heritage

Construction Phase

Given the proximity of the proposed construction works, substantial ground vibrations may have an adverse effect on the scheduled buildings. Measures must be taken to address and minimize possible long-term impact to avoid structural damage and ensure building safety by preventing any possible minor cracks. Therefore, the proposed development should respect the relevant policies protecting scheduled properties to ensure that the scheduled buffer zone around San Thomas Tower and battery is subjected to the least intervention possible.

Additionally, further precautionary measures to safeguard the integrity of the existing cultural heritage assets should be taken into consideration. This study suggests proactive measures to act promptly in case of possible damage, such as daily vibration monitoring during rock-cutting works and pre and post structure survey to evaluate any possible damage.

With specific regard to the historic salt pans located within and adjacent to the proposed scheme, it is further recommended that these features be protected, insofar as practicable, through the installation of protective polythene sheeting and other appropriate safeguarding measures during rock-cutting activities.

Operational Phase

No specific mitigation measures have been identified that would entirely offset the potential impact of the proposed development on the existing cultural landscape, which, notwithstanding the degree of anthropogenic alteration already present within the area, remains of moderate sensitivity.

Consideration should therefore be given to further design refinements aimed at reducing the magnitude of the identified visual impacts. In particular, revisions to the proposed architectural treatment, including the adoption of earth-toned globigerina limestone-textured panelling across the entirety of the external façades, would assist in reducing the visual prominence of the development within the wider coastal and heritage setting.

Furthermore, in order to reduce visual intrusion and enhance visual permeability between the sea and St Thomas Tower, consideration should be given to the introduction of a more articulated and stepped building profile towards the coastline. Such an approach would contribute to reducing the perceived bulk and vertical dominance of the proposed development, while simultaneously reinforcing the effectiveness of the proposed visual corridor between the tower and the foreshore.

The implementation of these measures would contribute towards preserving the legibility and visual appreciation of the monument within its historic setting, whilst

improving the compatibility of the proposed development within the broader townscape and seascape context. This approach would also be consistent with the objectives of Policy SMMS 13 – St. Thomas Tower of the 2006 SOUTH MALTA LOCAL PLAN, which emphasises the cultural and recreational valorisation of the site and its surrounding environment.

7.1.8 Air Quality

Construction Phase

In order to reduce impacts brought about by the demolition and construction activities, which generate airborne particulate matter, mitigation measures need to be implemented to minimise dispersion of dust. Possible mitigation systems in the construction phase include:

- Any heaps of inert material present will be protected from the wind with sheets
- Fixed and movable water nebulizers - The nebulizer should be installed during major activities such as demolition and construction.
- Dust barriers - Such barriers decrease the wind dispersion of dust beyond the perimeter of the construction site. These barriers must be at least 3 meters.
- Wetting of the internal roads of construction sites with trucks containing water. This activity is very important because it reduces the lifting of dust deposited on the ground.
- Wheel-washing facility - Wheel-washing facilities are placed at the entrance and exit of the construction site. These systems reduce the dispersion of particulates beyond the perimeter of construction sites.
- The transport of inert materials along the ordinary roads pertaining to the site will be carried out using closed or sheeted vehicles.

Operational Phase

Sustainable Transport

Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

a) the potential impacts of development on transport networks can be addressed;
b) opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;
c) opportunities to promote walking, cycling and public transport use are identified and pursued

At the end of the works, with regard to emissions induced by vehicular traffic, the project may consider:

- Creation of a cycle-pedestrian path within the area connected to the urban network, in order to limit travel by car, at least for short distances

- Avoid the formation of vehicle traffic queues for access into the complex
- Improvement of nearby junctions, to increase the vehicular flow of transit and avoid congestion of vehicular traffic as recommended in the TIA report.

Green Travel Plan

A Green Travel Plan is a strategic framework designed to encourage a shift away from single-occupancy private vehicle use towards more sustainable modes of transport, including public transport, walking, cycling, shared mobility solutions, and carpooling. Such plans aim to influence travel behaviour by promoting environmentally responsible transport choices for journeys to and from work, business-related travel, and personal trips undertaken outside working hours.

Green Travel Plans provide an effective mechanism for reducing traffic congestion, particularly during peak travel periods, while simultaneously contributing to improved air quality, reduced greenhouse gas emissions, and enhanced accessibility. By encouraging sustainable travel patterns, these plans support broader environmental objectives and help create healthier and more liveable communities.

The primary objective of adopting a Green Travel Plan for the proposed development is to minimise the environmental impacts associated with vehicular traffic. This can be achieved through a combination of behavioural measures, awareness initiatives, and physical infrastructure improvements aimed at reducing dependency on private car use and increasing the attractiveness of sustainable transport alternatives.

7.1.9 Noise and Vibrations

Construction Phase

Noise

To reduce the potential for adverse noise impacts, the following construction mitigation measures are provided as recommended good practice, to be incorporated within the Works Method Statement (WMS) and implemented where appropriate. The adoption of Best Practicable Means is usually the most effective means of controlling noise from construction sites and a number of generic measures are available. Examples are below:

- Consideration will be given to noise emissions when selecting plant and equipment to be used on site;
- All equipment should be maintained in good working order and fitted with the appropriate silencers, mufflers or acoustic covers where applicable;
- Stationary noise sources will be sited as far away as reasonably possible from noise-sensitive receptors and where necessary and appropriate, acoustic barriers will be used to screen them;
- The movement of vehicles to and from the site will be controlled and employees will be instructed to ensure compliance with any noise control measures adopted;

- The contractor's site induction programme and site rules must include good working practice instructions for site staff/managers and contractors to help minimise noise and vibration whilst working on the site.
- Good public relations, including good lines of communication, giving advance notice of noisy activities and the implementation of a complaints action plan, enabling complaints to be reported, recorded, investigated and actioned where necessary.

There are many strategies to reduce construction noise by the limitation of activities that would result in predicted noise levels being reduced. Any such measures should be considered adequate, and the mitigation adopted should not be limited to the measures above.

Experience has shown that by implementing these measures, typical noise levels from construction activities could be reduced by 5dB or more.

Regarding vibration during construction, effects without mitigation have been judged to be potentially significant. Where vibration levels are between 1 and 10mms^{-1} it is likely that vibration of this level will cause complaint but can tolerated if prior warning and explanation has been given to residents.

It is therefore recommended that residents are notified before any vibratory compaction of piling is carried out. Furthermore, where reasonably practicable, plant or work that may lead to significant levels of vibration at sensitive premises should be replaced by other less intrusive plant and/or methods of working. Alternatively, equipment should be relocated or isolated using resilient mounting.

Taking into account the temporary and intermittent nature of the construction works, together with the likely reduction in sound levels and improved management of noise-generating activities resulting from the implementation of mitigation measures, the residual impact significance is considered to reduce from Moderate to Low, corresponding to a minor adverse effect. The residual effect is therefore considered to be not significant.

Vibrations

With the adoption of appropriate mitigation measures such as suitable plant selection and methods to control vibration, vibration levels can typically be substantially reduced, and it is considered reasonable that levels associated with activities such as vibratory compaction could be reduced from around 4 mm/s PPV to below 1 mm/s PPV at NSRs.

This reduction in vibration levels is expected to reduce the impact of construction vibration to Negligible with Negligible effects. The residual effect is therefore considered to be not significant.

Operational Phase

Noise

It has not been considered necessary to apply specific mitigation measures to reduce operational road traffic noise.

Vibrations

N/A

7.1.10 Infrastructure and Utilities

Construction Phase

During the construction phase, a range of mitigation measures should be implemented to reduce the likelihood of adverse impacts upon the existing local infrastructures and utilities. Recommended mitigation measures include:

- Prior to commencement of works, the contractor will be required to undertake a detailed utilities survey and liaise with all relevant service providers to confirm the location, status, and retention requirements of existing infrastructure. This process will inform the preparation of method statements that ensure safe working practices and prevent accidental damage.
- Throughout construction, close coordination will be maintained with utility owners to safeguard assets and agree on any temporary protection measures. In the event of accidental damage, the contractor will be obliged to notify the relevant operator immediately and facilitate prompt repair at their own expense.
- Liaising with the operators of the existing infrastructure and utilities of the proposed work to open up communication channels.
- Taking extra precautions when working in close proximity to existing infrastructures and utilities to avoid accidental damage.
- Informing service providers/operators of any accidental damage to existing infrastructure and utilities so that damages can be repaired at the expense of the Contractor.
- Site hoarding and other dust mitigation measures should be implemented as necessary to avoid indirect impacts from dust accumulation on existing infrastructure

If the Contractor works with care, adopts extra precautions around the existing infrastructure and utilities and carries out any accidental repair work correctly (should the need arise) there should be no significant residual impacts arising from the Scheme on the existing utilities and infrastructure.

Operational Phase

The proposed scheme requires robust and resilient infrastructure systems to ensure reliable operations across all components of the site. Given the coastal environment, all infrastructure should be protected against corrosion and flooding, and monitored through a centralised management system that enables early detection of issues and proactive maintenance. Telecommunications should incorporate redundant high-capacity connections, secure network segmentation, and corrosion-resistant

equipment, with careful coordination to avoid overloading local ISP routes or diminishing service quality for neighbouring communities. Moreover, water infrastructure must include adequate storage, reliable supply arrangements, and effective leak-detection measures, while wastewater systems should be designed to manage restaurant effluent, prevent flooding, and maintain hygienic conditions. Electrical systems should incorporate backup and renewable energy resources, protective equipment, and load-management strategies to ensure continuity during disruptions.

7.1.11 Public Access

Construction Phase

Foreshore Access

If possible, site hoarding on the coastal side of the site should be positioned to allow some public access to the foreshore, even if limited to a walkway. Such arrangements would need to be assessed by a health and safety professional. If feasible, this would reduce the adverse impact from moderate to minor significance.

Road Network and Pedestrian Access

The closure of Triq is-Salini is an inevitable part of the project. Therefore, the related impacts cannot be mitigated.

In contrast, the disruptions on the local roadwork in the areas surrounding the Scheme site can be mitigated by the drafting and implementation of a Construction Management Plan. The Plan should include measures such as avoidance of construction vehicles travelling during peak traffic hours, scheduling of deliveries to avoid queuing and supervised access gates to enable prompt vehicle access to and from the site. If such measures are followed, the significance of the impact can be downgraded to negligible as the queuing and disruptions on the small roads can be eliminated.

The Contractor will need to correspond with Malta Public Transport to make the necessary arrangements for the relocation of the bus stop and consequential bus route diversions. Based on the fact there are two other bus stops serving the same route close by and the assumption that appropriate arrangements can be made, the severity of the impact can be reduced to negligible.

Operational Phase

Green Travel Plan

The implementation of a Green Travel Plan is strongly recommended to provide an effective mechanism for reducing traffic congestion, particularly during peak travel periods, while simultaneously contributing to improved air quality, reduced greenhouse gas emissions, and enhanced accessibility. Particular emphasis should be placed on organised staff transport, public transport use, car sharing, secure cycle parking, walking and other forms of sustainable mobility as detailed in The Traffic

Impact Assessment report. Monitoring of employee and visitor travel patterns following occupation of the development would also enable the effectiveness of the Green Travel Plan to be reviewed and, where necessary, strengthened.

Alteration of Bus Routes

The Developer will need to correspond with Malta Public Transport to make the necessary arrangements for the relocation of the bus stop and consequential bus route diversion. Similar to the disruptions during the construction phase, based on the fact there are two other bus stops serving the same route close by and the assumption that appropriate arrangements can be made, the severity of the impact can be reduced to negligible.

Vehicle Access and Numbers

Modifications to the surrounding road junctions are required to reduce the load/pressure on the public road network:

- Triq Sant Antnin / Triq ix-Xatt / Triq il-Qaliet junction

  According to the Traffic Impact Assessment it is recommended that appropriate capacity-enhancement measures are to be investigated. With particular focus on signal optimisation, revised signal staging, geometric improvements, turning-lane provision or other junction modifications, subject to detailed design and further operational assessment.

- Triq tal-Gardiel and Tiq id-Daħla ta' San Tumas junction

  According to the Traffic Impact Assessment improvements to the operation and road-safety is required to be modified. The existing geometry, visibility conditions, proximity of on-street parking and pedestrian infrastructure warrant attention irrespective of whether the Jerma redevelopment proceeds. Accordingly, redesign of the junction should be pursued to improve maneuverability, visibility, pedestrian safety and the overall organisation of traffic movements.

Such modifications will reduce the impact intensity from moderate to negligible throughout the operational phase.

7.2 MONITORING PROGRAMME

7.2.1 Land Cover and Land/Sea Uses

Construction Phase

It is recommended that general construction site monitoring is carried out during the construction phase. Such monitoring will ensure that the Contractor is abiding by the ENVIRONMENTAL CONSTRUCTION SITE REGULATIONS OF 2007 (S.L.552.09) to help keep the adverse land use impacts to a minimum.

Operational Phase
Monitoring during the operational phase is not deemed necessary.

7.2.2 Landscape Character and Visual Amenity

Monitoring is not deemed necessary in relation to landscape character and visual amenity.

7.2.3 Geology, Geomorphology, Hydrogeology and Soils

Construction Phase
The walls of the excavation should be monitored to assess the rock stability by a competent geologist for timely intervention if and when necessary.

Operational Phase
Periodic checks of effluents and second-class water effluent systems would ensure that no harmful substances are leaked to the ground. Groundwater analysis as part of the baseline study would produce a baseline water quality which would serve as a base for future monitoring of the water quality.

7.2.4 Water Bodies

Construction Phase
No monitoring is proposed.

Operational Phase
Periodic checks of effluents and second-class water effluents and other waste disposal systems would ensure that no harmful substances are leaked to the ground. Seawater analysis as part of the baseline study would produce a baseline water quality which would serve as a base for future monitoring of the water quality.

7.2.5 Terrestrial Ecology

Construction Phase
During the construction phase, periodic monitoring is being recommended to ensure that mitigation measures are in place and working as they should. Constant/longer monitoring is also recommended during dust generating activities. This would ensure that no unwarranted impacts arise due to deviations from proposed working practices. Such deviations could have additional impacts over and above those originally predicted. All monitoring data should be presented to the relevant authorities at pre-agreed frequencies.

A tree specialist is recommended to oversee/enact interventions directly related to the pruning or relocation of the native tree species. All interventions related to native trees are subject to permits provided by the Environment and Resources Authority.

A bat specialist is recommended to carry out a pre-construction survey to determine the presence of any bat species within the dilapidated building in order to safely remove individuals from the site if such species are observed.

Operational Phase
No further monitoring is deemed necessary during the operational phase.

7.2.6 Avian Ecology

It is recommended that monitoring and rescuing of seabird grounding takes place throughout both the construction and operational phases.

7.2.7 Architectural, Archaeological, Historical & Cultural Heritage

Construction Phase
In view of the proposed excavation and rock-cutting works associated with the construction phase of the development, it is recommended that all such interventions be carried out under continuous archaeological monitoring, in accordance with conditions to be imposed and supervised by the competent Cultural Heritage regulator, namely the Superintendence of Cultural Heritage.

Operational Phase
No further monitoring is recommended during the operational phase.

7.2.8 Air Quality

Construction Phase
The phase which contributes most significantly to the impact on air quality is the construction phase. Therefore, it is recommended that an expert monitors the construction phase (including the demolition and excavation activities) to identify the concentrations of pollutants generated by the works. It is important that the concentrations of pollutants do not exceed the limits stipulated in the local and EU Ambient Air Quality regulations.

The parameters to monitor include:

- Concentration of Nitrogen Dioxide on the main transit route;
- Particulate matter PM_{10} (test method EN 12341: 2014);
- Analysis on particulate matter PM_{10} filters for metals (Lead, Cadmium, Arsenic and Nickel - test method EN 14902: 2005) and Benzo[a]pyrene (test method EN 15549: 2008).

7.2.9 Noise and Vibrations

No noise and vibration monitoring are proposed.

7.2.10 Infrastructure and Utilities

Construction Phase

If the Contractor accidently damage the infrastructure and utilities during the construction phase, a technically competent person should oversee the repair work. This will ensure that the repair work is up to standard and restores the damaged items to their original state with the least possible inconvenience.

Operational Phase

Monitoring of infrastructure and utilities is not required during the operational phase.

7.2.11 Public Access

No monitoring of public access is proposed in either the construction or operational phases.

8 CONCLUSION

The redevelopment of the ex-Jerma Palace Hotel involves the demolition of the existing derelict building, excavation works and the construction of two seven-storey blocks separated by an outdoor piazza. The proposed mixed-use development will include a hotel, spa, outdoor swimming pools, residential units, restaurants and retail outlets, together with private and public underground parking. The Scheme also provides for the regeneration of the foreshore and the pedestrianisation of the area extending towards St Thomas Tower.

The layout and design of the Scheme have been developed in accordance with the site-specific DEVELOPMENT BRIEF and the relevant provisions of the SOUTH MALTA LOCAL PLAN. Particular consideration has been given to the site's coastal setting and its relationship with the surrounding residential areas, natural features and cultural heritage assets, including St Thomas Tower and the nearby saltpans. The proposed development will nevertheless represent a substantial change from the existing site, with the massing and height of the proposed blocks exceeding those of the existing building. The inclusion of soft landscaping using indigenous vegetation, together with hard landscaping and pedestrian routes, will help integrate the development into its surroundings and reduce its visual impact from certain viewpoints.

The technical studies have identified a range of environmental effects associated with both the construction and operation of the Scheme. During construction, the main impacts will arise from demolition, excavation, construction traffic and the operation of machinery. These activities are expected to result in temporary increases in noise, vibration, dust, emissions and traffic, together with potential disturbance to nearby residents and other sensitive receptors. Construction activities may also pose risks to existing infrastructure, cultural heritage features and the surrounding coastal environment. While these effects will generally be temporary, appropriate construction and environmental management measures will be required throughout the works to minimise disturbance and avoid accidental damage.

During operation, the most notable impacts are associated with the intensification of residential, tourism and commercial activity within an area that has experienced limited activity since the closure of the former hotel. The Scheme will introduce a considerable increase in the number of residents, visitors, employees and vehicles using the area, resulting in increased traffic, noise, artificial lighting and demand on existing infrastructure. The surrounding road network, junctions and utility infrastructure will therefore require appropriate interventions to accommodate the additional demand generated by the development.

The increase in traffic generated by the Scheme is also expected to affect local air quality. Additional vehicle movements, particularly during peak periods, will result in increased emissions along the surrounding road network and at nearby junctions. Changes in traffic distribution associated with the pedestrianisation of Triq is-Salini may also shift these effects onto surrounding streets. The promotion of alternative

modes of transport, including the proposed private coach service, will help reduce reliance on private vehicles and limit the resulting emissions.

Some permanent environmental effects will remain despite the implementation of mitigation measures. These include the loss of approximately 16 protected trees, the alteration of the existing landscape and visual setting, and the potential for physical impacts on nearby cultural heritage assets during the construction phase. The scale and massing of the development will also result in a lasting change to the character of the site and its relationship with the surrounding coastal landscape. Such effects cannot be fully avoided through mitigation and therefore need to be considered alongside the wider benefits associated with the redevelopment.

The Scheme will also result in a number of important beneficial effects. The removal of the existing derelict hotel will eliminate a prominent deteriorated structure that currently represents both a visual intrusion and a safety concern. The regeneration of the foreshore will provide safer and improved public access to the coastline, while the proposed revetment will provide a degree of additional protection to the coastline and nearby areas from severe wave and storm conditions. The pedestrianisation of Triq is-Salini and the creation of landscaped public spaces and pedestrian connections around St Thomas Tower will further improve accessibility and the quality of the public realm.

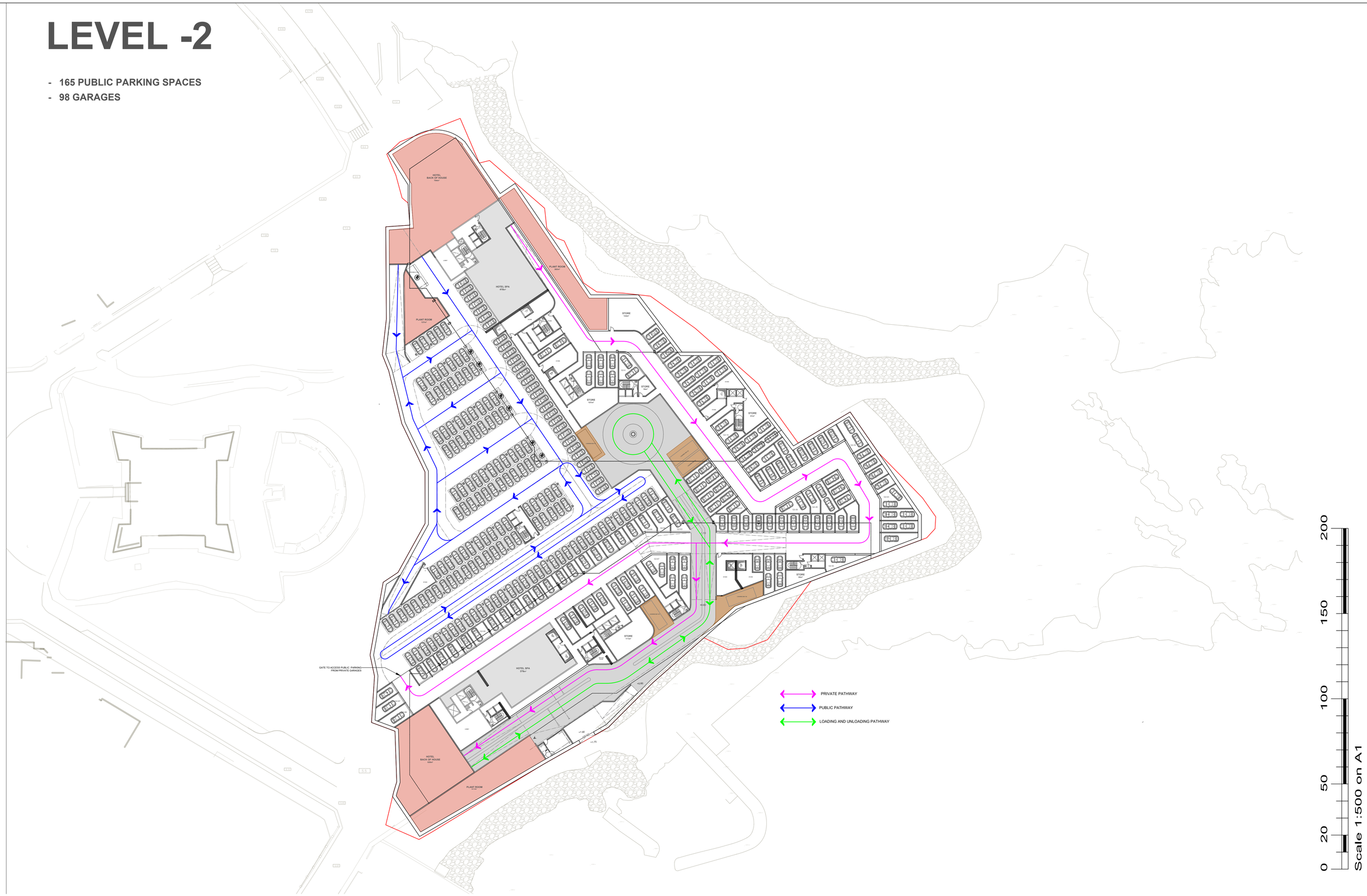
The implementation of the mitigation, monitoring and environmental management measures identified throughout the EIA will therefore be important in reducing adverse effects as far as practicable and ensuring that the environmental considerations identified through the assessment are appropriately addressed throughout the construction and operational phases.

Appendix 1

Large Scale Plans

LEVEL -2

- 165 PUBLIC PARKING SPACES
- 98 GARAGES



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Scale 1:500 on A1

0 20 50 100 150 200

Scale 1:500 on A1

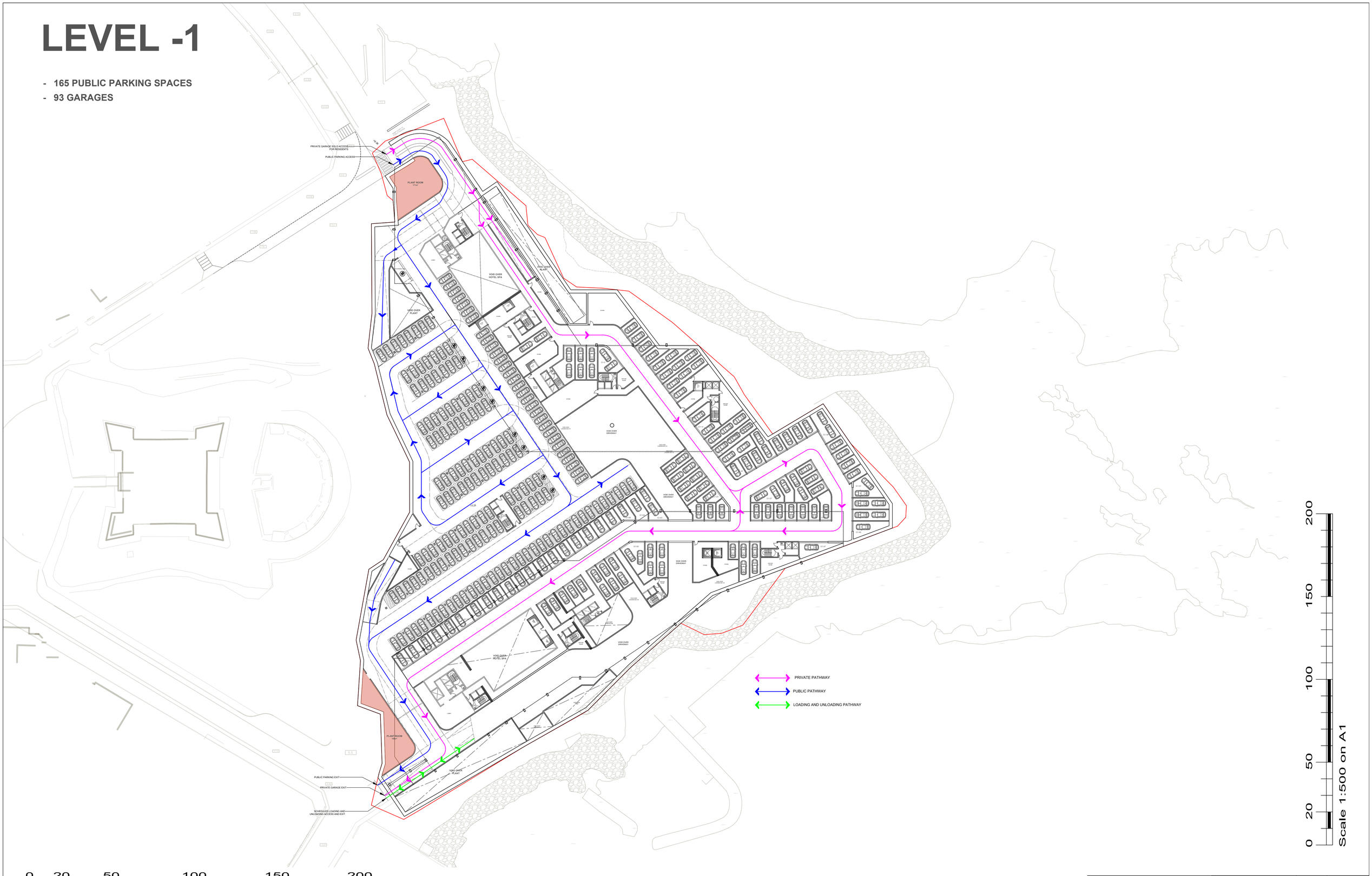
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A	27.05.2025	Design Changes
Rev :	Date	Revision:

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CLIENT: Jerma Development Limited	SITE: Jerma Complex, Triq is-Salini, Marsascala	DRAWN BY: PA	JOB NO: 04309
	DRAWING TITLE: Architectural Drawings Level -02	CHECKED BY: EM	SCALE: 1:500 on A1
	DRAWING NUMBER: P-001		DATE: 2024.12.04

LEVEL -1

- 165 PUBLIC PARKING SPACES
- 93 GARAGES



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Scale 1:500 on A1

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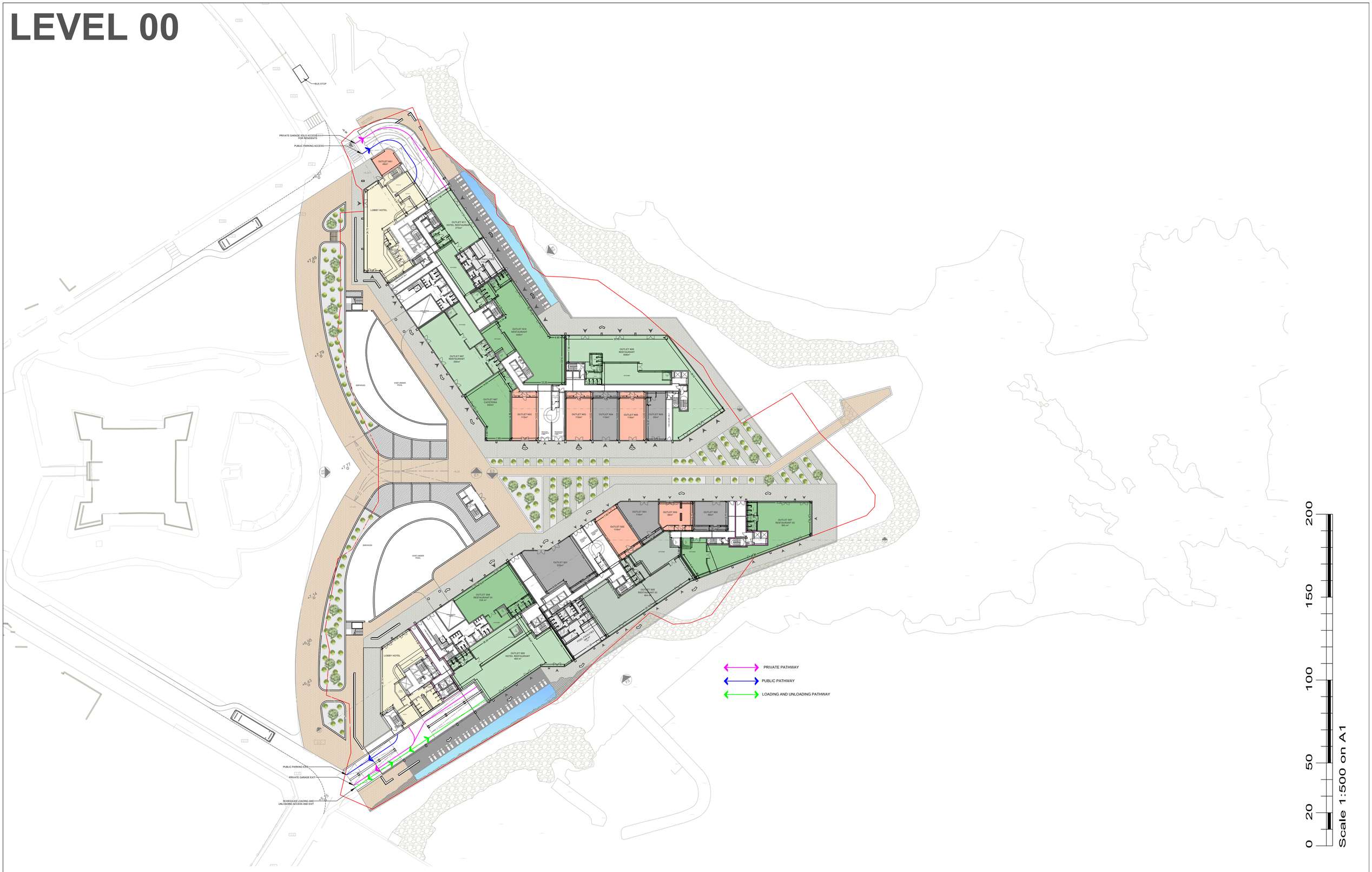
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Rev :	Date	Revision:
-	-	-
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A	27.05.2025	Design Changes

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DRAWING TITLE:	Architectural Drawings Level -01
DRAWN BY:	PA
CHECKED BY:	EM
JOB NO:	04309
SCALE:	1:500 on A1
DRAWING NUMBER:	P-002
DATE:	2022.12.04

LEVEL 00



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Rev :	Date	Revision:	

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SITE: Jerma Complex, Triq is-Salini, Marsascala		DRAWN BY: PA	JOB NO: 04309
DRAWING TITLE: Architectural Drawings Level 0		CHECKED BY: EM	SCALE: 1:500 on A1
DRAWING NUMBER: P-003			DATE: 2024.12.10

LEVEL 01

NORTH WING

- 5 HOTEL ROOMS
- 21 SERVICED APARTMENTS
- 8 RESIDENTIAL APARTMENTS

SOUTH WING

- 5 HOTEL ROOMS
- 21 SERVICED APARTMENTS
- 8 RESIDENTIAL APARTMENTS



NORTH

UNIT TYPE	UNIT No.	SQM INT	SQM EXT	TOTAL
HOTEL ROOM	NH1001	44	11	**55**
HOTEL ROOM	NH1002	46	23	**69**
HOTEL ROOM	NH1003	46	12	**58**
HOTEL ROOM	NH1004	47	12	**59**
HOTEL ROOM	NH1005	45	12	**57**
RESIDENTIAL APT	N1001	117	29	**146**
RESIDENTIAL APT	N1002	153	28	**181**
RESIDENTIAL APT	N1003	154	28	**182**
RESIDENTIAL APT	N1004	117	29	**146**
RESIDENTIAL APT	N1005	153	28	**181**
RESIDENTIAL APT	N1006	155	14	**169**
RESIDENTIAL APT	N1007	113	26	**139**
RESIDENTIAL APT	N1008	142	25	**167**
SERVICED APT.	N1013	58	10	**68**
SERVICED APT.	N1014	57	9	**66**
SERVICED APT.	N1015	57	9	**66**
SERVICED APT.	N1016	57	9	**66**
SERVICED APT.	N1017	57	9	**66**
SERVICED APT.	N1018	57	9	**66**
SERVICED APT.	N1019	57	9	**66**
SERVICED APT.	N1020	57	9	**66**
SERVICED APT.	N1021	80	25	**105**
SERVICED APT.	N1022	67	22	**89**
SERVICED APT.	N1023	57	9	**66**
SERVICED APT.	N1024	57	9	**66**
SERVICED APT.	N1025	58	10	**68**
SERVICED APT.	N1026	58	10	**68**
SERVICED APT.	N1027	57	9	**66**
SERVICED APT.	N1028	57	9	**66**
SERVICED APT.	N1029	57	9	**66**
SERVICED APT.	N1030	57	9	**66**
SERVICED APT.	N1031	57	9	**66**
SERVICED APT.	N1032	57	9	**66**
SERVICED APT.	N1033	57	9	**66**

SOUTH

UNIT TYPE	UNIT No.	SQM INT	SQM EXT	TOTAL
HOTEL ROOM	SH1001	39	10	**49**
HOTEL ROOM	SH1002	39	10	**49**
HOTEL ROOM	SH1003	45	58	**103**
HOTEL ROOM	SH1004	51	26	**77**
HOTEL ROOM	SH1005	47	11	**58**
RESIDENTIAL APT	S1001	136	28	**164**
RESIDENTIAL APT	S1002	116	29	**145**
RESIDENTIAL APT	S1003	150	27	**177**
RESIDENTIAL APT	S1004	164	30	**194**
RESIDENTIAL APT	S1005	143	32	**175**
RESIDENTIAL APT	S1006	154	26	**180**
RESIDENTIAL APT	S1007	152	25	**177**
RESIDENTIAL APT	S1008	118	26	**144**
SERVICED APT.	S1013	57	9	**66**
SERVICED APT.	S1014	57	9	**66**
SERVICED APT.	S1015	57	9	**66**
SERVICED APT.	S1016	57	9	**66**
SERVICED APT.	S1017	58	10	**68**
SERVICED APT.	S1018	58	10	**68**
SERVICED APT.	S1019	55	12	**67**
SERVICED APT.	S1020	54	10	**64**
SERVICED APT.	S1021	57	9	**66**
SERVICED APT.	S1022	57	9	**66**
SERVICED APT.	S1023	57	9	**66**
SERVICED APT.	S1024	57	9	**66**
SERVICED APT.	S1025	57	9	**66**
SERVICED APT.	S1026	57	9	**66**
SERVICED APT.	S1027	55	13	**68**
SERVICED APT.	S1028	54	20	**74**
SERVICED APT.	S1029	57	14	**71**
SERVICED APT.	S1030	57	14	**71**
SERVICED APT.	S1031	56	14	**70**
SERVICED APT.	S1032	56	14	**70**
SERVICED APT.	S1033	56	14	**70**

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B	01.12.2025	Design Changes
A	27.05.2025	Design Changes
Rev :	Date	Revision:

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CLIENT: Jerma Development Limited	
SITE: Jerma Complex, Triq is-Salini, Marsascala	DRAWN BY: PA
DRAWING TITLE: Architectural Drawings Level 1	CHECKED BY: EM
DRAWING NUMBER: P-004	SCALE: 1:500 on A1
	JOB NO: 04309
	DATE: 2024.12.10

LEVEL 04

NORTH WING

- 9 HOTEL ROOMS
- 25 SERVICED APARTMENTS
- 11 RESIDENTIAL APARTMENTS

SOUTH WING

- 9 HOTEL ROOMS
- 25 SERVICED APARTMENTS
- 11 RESIDENTIAL APARTMENTS





NORTH

UNIT TYPE	UNIT No.	SQM INT	SQM EXT	TOTAL
HOTEL ROOM	NH4001	44	12	**56**
HOTEL ROOM	NH4002	46	23	**69**
HOTEL ROOM	NH4003	46	12	**58**
HOTEL ROOM	NH4004	47	12	**59**
HOTEL ROOM	NH4005	45	12	**57**
HOTEL ROOM	NH4006	42	18	**60**
HOTEL ROOM	NH4007	66	47	**113**
HOTEL ROOM	NH4008	51	52	**103**
HOTEL ROOM	NH4009	43	11	**54**
RESIDENTIAL APT	N4001	136	28	**164**
RESIDENTIAL APT	N4002	115	29	**144**
RESIDENTIAL APT	N4003	135	28	**163**
RESIDENTIAL APT	N4004	154	28	**182**
RESIDENTIAL APT	N4005	117	29	**146**
RESIDENTIAL APT	N4006	153	28	**181**
RESIDENTIAL APT	N4007	155	14	**169**
RESIDENTIAL APT	N4008	113	26	**139**
RESIDENTIAL APT	N4009	142	25	**167**
RESIDENTIAL APT	N4010	156	38	**194**
RESIDENTIAL APT	N4011	188	58	**246**
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SERVICED APT.	N4013	57	9	**66**
SERVICED APT.	N4014	57	9	**66**
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SERVICED APT.	N4019	57	9	**66**
SERVICED APT.	N4020	57	9	**66**
SERVICED APT.	N4021	57	9	**66**
SERVICED APT.	N4022	57	9	**66**
SERVICED APT.	N4023	57	9	**66**
SERVICED APT.	N4024	80	25	**105**
SERVICED APT.	N4025	67	22	**89**
SERVICED APT.	N4026	57	9	**66**
SERVICED APT.	N4027	57	9	**66**
SERVICED APT.	N4028	58	10	**68**
SERVICED APT.	N4029	58	10	**68**
SERVICED APT.	N4030	57	9	**66**
SERVICED APT.	N4031	57	9	**66**
SERVICED APT.	N4032	57	9	**66**
SERVICED APT.	N4033	57	9	**66**
SERVICED APT.	N4034	57	9	**66**
SERVICED APT.	N4035	57	9	**66**
SERVICED APT.	N4036	57	9	**66**

SOUTH

UNIT TYPE	UNIT No.	SQM INT	SQM EXT	TOTAL
HOTEL ROOM	SH4001	39	10	**49**
HOTEL ROOM	SH4002	39	10	**49**
HOTEL ROOM	SH4003	46	58	**104**
HOTEL ROOM	SH4004	51	26	**77**
HOTEL ROOM	SH4005	46	11	**57**
HOTEL ROOM	SH4006	51	11	**62**
HOTEL ROOM	SH4007	43	12	**55**
HOTEL ROOM	SH4008	43	42	**85**
HOTEL ROOM	SH4009	45	11	**56**
RESIDENTIAL APT	S4001	136	28	**164**
RESIDENTIAL APT	S4002	116	29	**145**
RESIDENTIAL APT	S4003	150	27	**177**
RESIDENTIAL APT	S4004	164	30	**194**
RESIDENTIAL APT	S4005	143	32	**175**
RESIDENTIAL APT	S4006	154	26	**180**
RESIDENTIAL APT	S4007	152	25	**177**
RESIDENTIAL APT	S4008	118	26	**144**
RESIDENTIAL APT	S4009	155	23	**178**
RESIDENTIAL APT	S4010	181	48	**229**
RESIDENTIAL APT	S4011	173	94	**267**
SERVICED APT.	S4012	58	10	**68**
SERVICED APT.	S4013	61	11	**72**
SERVICED APT.	S4014	59	11	**70**
SERVICED APT.	S4015	57	9	**66**
SERVICED APT.	S4016	57	9	**66**
SERVICED APT.	S4017	57	9	**66**
SERVICED APT.	S4018	57	9	**66**
SERVICED APT.	S4019	57	9	**66**
SERVICED APT.	S4020	58	10	**68**
SERVICED APT.	S4021	58	10	**68**
SERVICED APT.	S4022	55	12	**67**
SERVICED APT.	S4023	54	10	**64**
SERVICED APT.	S4024	57	9	**66**
SERVICED APT.	S4025	57	9	**66**
SERVICED APT.	S4026	57	9	**66**
SERVICED APT.	S4027	57	9	**66**
SERVICED APT.	S4028	57	9	**66**
SERVICED APT.	S4029	57	9	**66**
SERVICED APT.	S4030	55	13	**68**
SERVICED APT.	S4031	54	20	**74**
SERVICED APT.	S4032	57	14	**71**
SERVICED APT.	S4033	57	14	**71**
SERVICED APT.	S4034	56	14	**70**
SERVICED APT.	S4035	56	14	**70**
SERVICED APT.	S4036	56	14	**70**

0 20 50 100 150 200

Scale 1:500 on A1

0 20 50 100 150 200

Scale 1:500 on A1

Rev :	Date	Revision:
-	-	-
B	01.12.2025	Design Changes
A	27.05.2025	Design Changes

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CLIENT: Jerma Development Limited

SITE: Jerma Complex, Triq is-Salini, Marsascala

DRAWN BY: PA

JOB NO: 04309

DRAWING TITLE: Architectural Drawings Level 4

CHECKED BY: EM

SCALE: 1:500 on A1

DRAWING NUMBER: P-007

DATE: 2024.12.04

LEVEL 04

NORTH WING

- 9 HOTEL ROOMS
- 25 SERVICED APARTMENTS
- 11 RESIDENTIAL APARTMENTS

SOUTH WING

- 9 HOTEL ROOMS
- 25 SERVICED APARTMENTS
- 11 RESIDENTIAL APARTMENTS





NORTH

UNIT TYPE	UNIT No.	SQM INT	SQM EXT	TOTAL
HOTEL ROOM	NH4001	44	12	**56**
HOTEL ROOM	NH4002	46	23	**69**
HOTEL ROOM	NH4003	46	12	**58**
HOTEL ROOM	NH4004	47	12	**59**
HOTEL ROOM	NH4005	45	12	**57**
HOTEL ROOM	NH4006	42	18	**60**
HOTEL ROOM	NH4007	66	47	**113**
HOTEL ROOM	NH4008	51	52	**103**
HOTEL ROOM	NH4009	43	11	**54**
RESIDENTIAL APT	N4001	136	28	**164**
RESIDENTIAL APT	N4002	115	29	**144**
RESIDENTIAL APT	N4003	135	28	**163**
RESIDENTIAL APT	N4004	154	28	**182**
RESIDENTIAL APT	N4005	117	29	**146**
RESIDENTIAL APT	N4006	153	28	**181**
RESIDENTIAL APT	N4007	155	14	**169**
RESIDENTIAL APT	N4008	113	26	**139**
RESIDENTIAL APT	N4009	142	25	**167**
RESIDENTIAL APT	N4010	156	38	**194**
RESIDENTIAL APT	N4011	188	58	**246**
SERVICED APT.	N4012	57	9	**66**
SERVICED APT.	N4013	57	9	**66**
SERVICED APT.	N4014	57	9	**66**
SERVICED APT.	N4015	58	10	**68**
SERVICED APT.	N4016	58	10	**68**
SERVICED APT.	N4017	57	9	**66**
SERVICED APT.	N4018	57	9	**66**
SERVICED APT.	N4019	57	9	**66**
SERVICED APT.	N4020	57	9	**66**
SERVICED APT.	N4021	57	9	**66**
SERVICED APT.	N4022	57	9	**66**
SERVICED APT.	N4023	57	9	**66**
SERVICED APT.	N4024	80	25	**105**
SERVICED APT.	N4025	67	22	**89**
SERVICED APT.	N4026	57	9	**66**
SERVICED APT.	N4027	57	9	**66**
SERVICED APT.	N4028	58	10	**68**
SERVICED APT.	N4029	58	10	**68**
SERVICED APT.	N4030	57	9	**66**
SERVICED APT.	N4031	57	9	**66**
SERVICED APT.	N4032	57	9	**66**
SERVICED APT.	N4033	57	9	**66**
SERVICED APT.	N4034	57	9	**66**
SERVICED APT.	N4035	57	9	**66**
SERVICED APT.	N4036	57	9	**66**

SOUTH

UNIT TYPE	UNIT No.	SQM INT	SQM EXT	TOTAL
HOTEL ROOM	SH4001	39	10	**49**
HOTEL ROOM	SH4002	39	10	**49**
HOTEL ROOM	SH4003	46	58	**104**
HOTEL ROOM	SH4004	51	26	**77**
HOTEL ROOM	SH4005	46	11	**57**
HOTEL ROOM	SH4006	51	11	**62**
HOTEL ROOM	SH4007	43	12	**55**
HOTEL ROOM	SH4008	43	42	**85**
HOTEL ROOM	SH4009	45	11	**56**
RESIDENTIAL APT	S4001	136	28	**164**
RESIDENTIAL APT	S4002	116	29	**145**
RESIDENTIAL APT	S4003	150	27	**177**
RESIDENTIAL APT	S4004	164	30	**194**
RESIDENTIAL APT	S4005	143	32	**175**
RESIDENTIAL APT	S4006	154	26	**180**
RESIDENTIAL APT	S4007	152	25	**177**
RESIDENTIAL APT	S4008	118	26	**144**
RESIDENTIAL APT	S4009	155	23	**178**
RESIDENTIAL APT	S4010	181	48	**229**
RESIDENTIAL APT	S4011	173	94	**267**
SERVICED APT.	S4012	58	10	**68**
SERVICED APT.	S4013	61	11	**72**
SERVICED APT.	S4014	59	11	**70**
SERVICED APT.	S4015	57	9	**66**
SERVICED APT.	S4016	57	9	**66**
SERVICED APT.	S4017	57	9	**66**
SERVICED APT.	S4018	57	9	**66**
SERVICED APT.	S4019	57	9	**66**
SERVICED APT.	S4020	58	10	**68**
SERVICED APT.	S4021	58	10	**68**
SERVICED APT.	S4022	55	12	**67**
SERVICED APT.	S4023	54	10	**64**
SERVICED APT.	S4024	57	9	**66**
SERVICED APT.	S4025	57	9	**66**
SERVICED APT.	S4026	57	9	**66**
SERVICED APT.	S4027	57	9	**66**
SERVICED APT.	S4028	57	9	**66**
SERVICED APT.	S4029	57	9	**66**
SERVICED APT.	S4030	55	13	**68**
SERVICED APT.	S4031	54	20	**74**
SERVICED APT.	S4032	57	14	**71**
SERVICED APT.	S4033	57	14	**71**
SERVICED APT.	S4034	56	14	**70**
SERVICED APT.	S4035	56	14	**70**
SERVICED APT.	S4036	56	14	**70**

0 20 50 100 150 200

Scale 1:500 on A1

0 20 50 100 150 200

Scale 1:500 on A1

Rev :	Date	Revision:
-	-	-
B	01.12.2025	Design Changes
A	27.05.2025	Design Changes

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CLIENT: Jerma Development Limited

SITE: Jerma Complex, Triq is-Salini, Marsascala

DRAWN BY: PA

JOB NO: 04309

DRAWING TITLE: Architectural Drawings Level 4

CHECKED BY: EM

SCALE: 1:500 on A1

DRAWING NUMBER: P-007

DATE: 2024.12.04

LEVEL 04

NORTH WING

- 9 HOTEL ROOMS
- 25 SERVICED APARTMENTS
- 11 RESIDENTIAL APARTMENTS

SOUTH WING

- 9 HOTEL ROOMS
- 25 SERVICED APARTMENTS
- 11 RESIDENTIAL APARTMENTS





NORTH

UNIT TYPE	UNIT No.	SQM INT	SQM EXT	TOTAL
HOTEL ROOM	NH4001	44	12	**56**
HOTEL ROOM	NH4002	46	23	**69**
HOTEL ROOM	NH4003	46	12	**58**
HOTEL ROOM	NH4004	47	12	**59**
HOTEL ROOM	NH4005	45	12	**57**
HOTEL ROOM	NH4006	42	18	**60**
HOTEL ROOM	NH4007	66	47	**113**
HOTEL ROOM	NH4008	51	52	**103**
HOTEL ROOM	NH4009	43	11	**54**
RESIDENTIAL APT	N4001	136	28	**164**
RESIDENTIAL APT	N4002	115	29	**144**
RESIDENTIAL APT	N4003	135	28	**163**
RESIDENTIAL APT	N4004	154	28	**182**
RESIDENTIAL APT	N4005	117	29	**146**
RESIDENTIAL APT	N4006	153	28	**181**
RESIDENTIAL APT	N4007	155	14	**169**
RESIDENTIAL APT	N4008	113	26	**139**
RESIDENTIAL APT	N4009	142	25	**167**
RESIDENTIAL APT	N4010	156	38	**194**
RESIDENTIAL APT	N4011	188	58	**246**
SERVICED APT.	N4012	57	9	**66**
SERVICED APT.	N4013	57	9	**66**
SERVICED APT.	N4014	57	9	**66**
SERVICED APT.	N4015	58	10	**68**
SERVICED APT.	N4016	58	10	**68**
SERVICED APT.	N4017	57	9	**66**
SERVICED APT.	N4018	57	9	**66**
SERVICED APT.	N4019	57	9	**66**
SERVICED APT.	N4020	57	9	**66**
SERVICED APT.	N4021	57	9	**66**
SERVICED APT.	N4022	57	9	**66**
SERVICED APT.	N4023	57	9	**66**
SERVICED APT.	N4024	80	25	**105**
SERVICED APT.	N4025	67	22	**89**
SERVICED APT.	N4026	57	9	**66**
SERVICED APT.	N4027	57	9	**66**
SERVICED APT.	N4028	58	10	**68**
SERVICED APT.	N4029	58	10	**68**
SERVICED APT.	N4030	57	9	**66**
SERVICED APT.	N4031	57	9	**66**
SERVICED APT.	N4032	57	9	**66**
SERVICED APT.	N4033	57	9	**66**
SERVICED APT.	N4034	57	9	**66**
SERVICED APT.	N4035	57	9	**66**
SERVICED APT.	N4036	57	9	**66**

SOUTH

UNIT TYPE	UNIT No.	SQM INT	SQM EXT	TOTAL
HOTEL ROOM	SH4001	39	10	**49**
HOTEL ROOM	SH4002	39	10	**49**
HOTEL ROOM	SH4003	46	58	**104**
HOTEL ROOM	SH4004	51	26	**77**
HOTEL ROOM	SH4005	46	11	**57**
HOTEL ROOM	SH4006	51	11	**62**
HOTEL ROOM	SH4007	43	12	**55**
HOTEL ROOM	SH4008	43	42	**85**
HOTEL ROOM	SH4009	45	11	**56**
RESIDENTIAL APT	S4001	136	28	**164**
RESIDENTIAL APT	S4002	116	29	**145**
RESIDENTIAL APT	S4003	150	27	**177**
RESIDENTIAL APT	S4004	164	30	**194**
RESIDENTIAL APT	S4005	143	32	**175**
RESIDENTIAL APT	S4006	154	26	**180**
RESIDENTIAL APT	S4007	152	25	**177**
RESIDENTIAL APT	S4008	118	26	**144**
RESIDENTIAL APT	S4009	155	23	**178**
RESIDENTIAL APT	S4010	181	48	**229**
RESIDENTIAL APT	S4011	173	94	**267**
SERVICED APT.	S4012	58	10	**68**
SERVICED APT.	S4013	61	11	**72**
SERVICED APT.	S4014	59	11	**70**
SERVICED APT.	S4015	57	9	**66**
SERVICED APT.	S4016	57	9	**66**
SERVICED APT.	S4017	57	9	**66**
SERVICED APT.	S4018	57	9	**66**
SERVICED APT.	S4019	57	9	**66**
SERVICED APT.	S4020	58	10	**68**
SERVICED APT.	S4021	58	10	**68**
SERVICED APT.	S4022	55	12	**67**
SERVICED APT.	S4023	54	10	**64**
SERVICED APT.	S4024	57	9	**66**
SERVICED APT.	S4025	57	9	**66**
SERVICED APT.	S4026	57	9	**66**
SERVICED APT.	S4027	57	9	**66**
SERVICED APT.	S4028	57	9	**66**
SERVICED APT.	S4029	57	9	**66**
SERVICED APT.	S4030	55	13	**68**
SERVICED APT.	S4031	54	20	**74**
SERVICED APT.	S4032	57	14	**71**
SERVICED APT.	S4033	57	14	**71**
SERVICED APT.	S4034	56	14	**70**
SERVICED APT.	S4035	56	14	**70**
SERVICED APT.	S4036	56	14	**70**

0 20 50 100 150 200

Scale 1:500 on A1

0 20 50 100 150 200

Scale 1:500 on A1

Rev :	Date	Revision:
-	-	-
B	01.12.2025	Design Changes
A	27.05.2025	Design Changes

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CLIENT: Jerma Development Limited

SITE: Jerma Complex, Triq is-Salini, Marsascala

DRAWN BY: PA

JOB NO: 04309

DRAWING TITLE: Architectural Drawings Level 4

CHECKED BY: EM

SCALE: 1:500 on A1

DRAWING NUMBER: P-007

DATE: 2024.12.04

LEVEL 05

NORTH WING

- 8 HOTEL ROOMS
- 25 SERVICED APARTMENTS
- 11 RESIDENTIAL APARTMENTS

SOUTH WING

- 8 HOTEL ROOMS
- 25 SERVICED APARTMENTS
- 11 RESIDENTIAL APARTMENTS



NORTH

UNIT TYPE	UNIT No.	SQM INT	SQM EXT	TOTAL
HOTEL ROOM	NH5001	44	12	**56**
HOTEL ROOM	NH5002	46	22	**68**
HOTEL ROOM	NH5003	46	12	**58**
HOTEL ROOM	NH5004	47	12	**59**
HOTEL ROOM	NH5005	44	12	**56**
HOTEL ROOM	NH5006	42	18	**60**
HOTEL ROOM	NH5007	45	55	**100**
HOTEL ROOM	NH5008	52	70	**122**
RESIDENTIAL APT	N5001	136	28	**164**
RESIDENTIAL APT	N5002	115	29	**144**
RESIDENTIAL APT	N5003	135	28	**163**
RESIDENTIAL APT	N5004	154	28	**182**
RESIDENTIAL APT	N5005	117	29	**146**
RESIDENTIAL APT	N5006	153	28	**181**
RESIDENTIAL APT	N5007	155	14	**169**
RESIDENTIAL APT	N5008	113	26	**139**
RESIDENTIAL APT	N5009	142	25	**167**
RESIDENTIAL APT	N5010	156	27	**183**
RESIDENTIAL APT	N5011	188	105	**293**
SERVICED APT.	N5012	57	9	**66**
SERVICED APT.	N5013	57	9	**66**
SERVICED APT.	N5014	57	9	**66**
SERVICED APT.	N5015	58	10	**68**
SERVICED APT.	N5016	58	10	**68**
SERVICED APT.	N5017	57	9	**66**
SERVICED APT.	N5018	57	9	**66**
SERVICED APT.	N5019	57	9	**66**
SERVICED APT.	N5020	57	9	**66**
SERVICED APT.	N5021	57	9	**66**
SERVICED APT.	N5022	57	9	**66**
SERVICED APT.	N5023	57	9	**66**
SERVICED APT.	N5024	80	25	**105**
SERVICED APT.	N5025	67	22	**89**
SERVICED APT.	N5026	57	9	**66**
SERVICED APT.	N5027	57	9	**66**
SERVICED APT.	N5028	58	10	**68**
SERVICED APT.	N5029	58	10	**68**
SERVICED APT.	N5030	57	9	**66**
SERVICED APT.	N5031	57	9	**66**
SERVICED APT.	N5032	57	9	**66**
SERVICED APT.	N5033	57	9	**66**
SERVICED APT.	N5034	57	9	**66**
SERVICED APT.	N5035	57	9	**66**
SERVICED APT.	N5036	57	9	**66**

SOUTH

UNIT TYPE	UNIT No.	SQM INT	SQM EXT	TOTAL
HOTEL ROOM	SH5001	39	10	**49**
HOTEL ROOM	SH5002	48	56	**104**
HOTEL ROOM	SH5003	46	58	**104**
HOTEL ROOM	SH5004	51	26	**77**
HOTEL ROOM	SH5005	46	11	**57**
HOTEL ROOM	SH5006	51	11	**62**
HOTEL ROOM	SH5007	43	12	**55**
HOTEL ROOM	SH5008	43	42	**85**
HOTEL ROOM	SH5009	45	11	**56**
RESIDENTIAL APT	S5001	136	28	**164**
RESIDENTIAL APT	S5002	116	29	**145**
RESIDENTIAL APT	S5003	150	27	**177**
RESIDENTIAL APT	S5004	164	30	**194**
RESIDENTIAL APT	S5005	143	32	**175**
RESIDENTIAL APT	S5006	154	26	**180**
RESIDENTIAL APT	S5007	152	25	**177**
RESIDENTIAL APT	S5008	118	26	**144**
RESIDENTIAL APT	S5009	155	23	**178**
RESIDENTIAL APT	S5010	181	48	**229**
RESIDENTIAL APT	S5011	173	94	**267**
SERVICED APT.	S5012	58	10	**68**
SERVICED APT.	S5013	61	11	**72**
SERVICED APT.	S5014	59	11	**70**
SERVICED APT.	S5015	57	9	**66**
SERVICED APT.	S5016	57	9	**66**
SERVICED APT.	S5017	57	9	**66**
SERVICED APT.	S5018	57	9	**66**
SERVICED APT.	S5019	57	9	**66**
SERVICED APT.	S5020	58	10	**68**
SERVICED APT.	S5021	58	10	**68**
SERVICED APT.	S5022	55	12	**67**
SERVICED APT.	S5023	54	10	**64**
SERVICED APT.	S5024	57	9	**66**
SERVICED APT.	S5025	57	9	**66**
SERVICED APT.	S5026	57	9	**66**
SERVICED APT.	S5027	57	9	**66**
SERVICED APT.	S5028	57	9	**66**
SERVICED APT.	S5029	57	9	**66**
SERVICED APT.	S5030	55	13	**68**
SERVICED APT.	S5031	54	20	**74**
SERVICED APT.	S5032	57	14	**71**
SERVICED APT.	S5033	57	14	**71**
SERVICED APT.	S5034	56	14	**70**
SERVICED APT.	S5035	56	14	**70**
SERVICED APT.	S5036	56	14	**70**

0 20 50 100 150 200

Scale 1:500 on A1

0 20 50 100 150 200

Scale 1:500 on A1

-	-	-
B	01.12.2025	Design Changes
A	27.05.2025	Design Changes
Rev :	Date	Revision:

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CLIENT: Jerma Development Limited			
SITE: Jerma Complex, Triq is-Salini, Marsascala		DRAWN BY: PA	JOB NO: 04309
DRAWING TITLE: Architectural Drawings Level 5		CHECKED BY: EM	SCALE: 1:500 on A1
DRAWING NUMBER: P-008			DATE: 2024.12.04

LEVEL 06

NORTH WING

- 5 HOTEL ROOMS
- 25 SERVICED APARTMENTS
- 11 RESIDENTIAL APARTMENTS

SOUTH WING

- 5 HOTEL ROOMS
- 25 SERVICED APARTMENTS
- 11 RESIDENTIAL APARTMENTS



NORTH

UNIT TYPE	UNIT No.	SQM INT	SQM EXT	TOTAL	
HOTEL ROOM	NH6001	44	21	**65**	
HOTEL ROOM	NH6002	47	13	**60**	
HOTEL ROOM	NH6003	42	19	**61**	
HOTEL ROOM	NH6004	56	22	**78**	
HOTEL ROOM	NH6005	60	65	**125**	
RESIDENTIAL APT	N6001	237	158	**395**	DUPLEX
RESIDENTIAL APT	N6002	115	29	**144**	
RESIDENTIAL APT	N6003	153	28	**181**	
RESIDENTIAL APT	N6004	154	28	**182**	
RESIDENTIAL APT	N6005	117	29	**146**	
RESIDENTIAL APT	N6006	153	28	**181**	
RESIDENTIAL APT	N6007	155	14	**169**	
RESIDENTIAL APT	N6008	113	26	**139**	
RESIDENTIAL APT	N6009	142	25	**167**	
RESIDENTIAL APT	N6010	156	38	**194**	
RESIDENTIAL APT	N6011	188	58	**246**	
SERVICED APT.	N6012	57	9	**66**	
SERVICED APT.	N6013	57	9	**66**	
SERVICED APT.	N6014	57	9	**66**	
SERVICED APT.	N6015	58	10	**68**	
SERVICED APT.	N6016	58	10	**68**	
SERVICED APT.	N6017	57	9	**66**	
SERVICED APT.	N6018	57	9	**66**	
SERVICED APT.	N6019	57	9	**66**	
SERVICED APT.	N6020	57	9	**66**	
SERVICED APT.	N6021	57	9	**66**	
SERVICED APT.	N6022	57	9	**66**	
SERVICED APT.	N6023	57	9	**66**	
SERVICED APT.	N6024	80	25	**105**	
SERVICED APT.	N6025	67	22	**89**	
SERVICED APT.	N6026	57	9	**66**	
SERVICED APT.	N6027	57	9	**66**	
SERVICED APT.	N6028	58	10	**68**	
SERVICED APT.	N6029	58	10	**68**	
SERVICED APT.	N6030	57	9	**66**	
SERVICED APT.	N6031	57	9	**66**	
SERVICED APT.	N6032	57	9	**66**	
SERVICED APT.	N6033	57	9	**66**	
SERVICED APT.	N6034	57	9	**66**	
SERVICED APT.	N6035	57	9	**66**	
SERVICED APT.	N6036	57	9	**66**	

SOUTH

UNIT TYPE	UNIT No.	SQM INT	SQM EXT	TOTAL	
HOTEL ROOM	SH6001	83	82	**165**	
HOTEL ROOM	SH6002	52	19	**71**	
HOTEL ROOM	SH6003	47	14	**61**	
HOTEL ROOM	SH6004	52	38	**90**	
HOTEL ROOM	SH6005	42	11	**53**	
RESIDENTIAL APT	S6001	248	104	**352**	DUPLEX
RESIDENTIAL APT	S6002	116	29	**145**	
RESIDENTIAL APT	S6003	150	27	**177**	
RESIDENTIAL APT	S6004	164	30	**194**	
RESIDENTIAL APT	S6005	143	32	**175**	
RESIDENTIAL APT	S6006	154	26	**180**	
RESIDENTIAL APT	S6007	152	25	**177**	
RESIDENTIAL APT	S6008	118	26	**144**	
RESIDENTIAL APT	S6009	155	23	**178**	
RESIDENTIAL APT	S6010	181	48	**229**	
RESIDENTIAL APT	S6011	173	94	**267**	
SERVICED APT.	S6012	58	10	**68**	
SERVICED APT.	S6013	61	11	**72**	
SERVICED APT.	S6014	59	11	**70**	
SERVICED APT.	S6015	57	9	**66**	
SERVICED APT.	S6016	57	9	**66**	
SERVICED APT.	S6017	57	9	**66**	
SERVICED APT.	S6018	57	9	**66**	
SERVICED APT.	S6019	57	9	**66**	
SERVICED APT.	S6020	58	10	**68**	
SERVICED APT.	S6021	58	10	**68**	
SERVICED APT.	S6022	55	12	**67**	
SERVICED APT.	S6023	54	10	**64**	
SERVICED APT.	S6024	57	9	**66**	
SERVICED APT.	S6025	57	9	**66**	
SERVICED APT.	S6026	57	9	**66**	
SERVICED APT.	S6027	57	9	**66**	
SERVICED APT.	S6028	57	9	**66**	
SERVICED APT.	S6029	57	9	**66**	
SERVICED APT.	S6030	55	13	**68**	
SERVICED APT.	S6031	54	20	**74**	
SERVICED APT.	S6032	57	14	**71**	
SERVICED APT.	S6033	57	14	**71**	
SERVICED APT.	S6034	56	14	**70**	
SERVICED APT.	S6035	56	14	**70**	
SERVICED APT.	S6036	56	14	**70**	

0 20 50 100 150 200

Scale 1:500 on A1

TO CONSTRUCT

Rev :	Date	Revision:
-	-	-
B	01.12.2025	Design Changes
A	27.05.2025	Design Changes

CLIENT: Jerma Development Limited

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SITE: Jerma Complex, Triq is-Salini, Marsascala

DRAWN BY: PA

JOB NO: 04309

DRAWING TITLE: Architectural Drawings Level 6

CHECKED BY: EM

SCALE: 1:500 on A1

DRAWING NUMBER: P-009

DATE: 2024.12.04

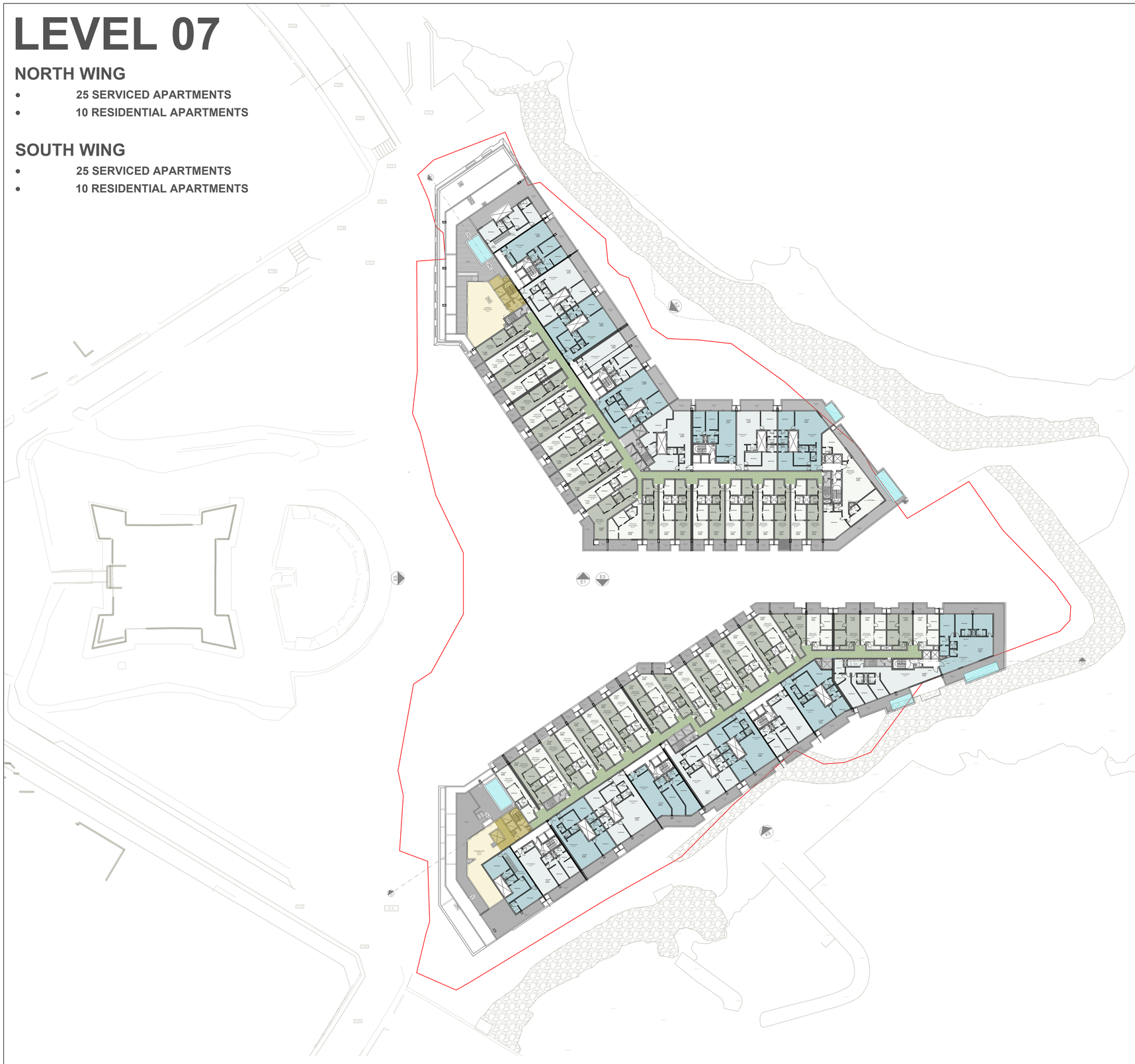
LEVEL 07

NORTH WING

- 25 SERVICED APARTMENTS
- 10 RESIDENTIAL APARTMENTS

SOUTH WING

- 25 SERVICED APARTMENTS
- 10 RESIDENTIAL APARTMENTS



NORTH

UNIT TYPE	UNIT No.	SQM INT	SQM EXT	TOTAL
HOTEL	-	124	172	**296**
RESIDENTIAL APT	N7001	115	29	**144**
RESIDENTIAL APT	N7002	153	28	**181**
RESIDENTIAL APT	N7003	154	28	**182**
RESIDENTIAL APT	N7004	117	29	**146**
RESIDENTIAL APT	N7005	153	28	**181**
RESIDENTIAL APT	N7006	155	14	**169**
RESIDENTIAL APT	N7007	113	26	**139**
RESIDENTIAL APT	N7008	142	25	**167**
RESIDENTIAL APT	N7009	156	38	**194**
RESIDENTIAL APT	N7010	188	58	**246**
SERVICED APT.	N7011	57	9	**66**
SERVICED APT.	N7012	57	9	**66**
SERVICED APT.	N7013	57	9	**66**
SERVICED APT.	N7014	58	10	**68**
SERVICED APT.	N7015	58	10	**68**
SERVICED APT.	N7016	57	9	**66**
SERVICED APT.	N7017	57	9	**66**
SERVICED APT.	N7018	57	9	**66**
SERVICED APT.	N7019	57	9	**66**
SERVICED APT.	N7020	57	9	**66**
SERVICED APT.	N7021	57	9	**66**
SERVICED APT.	N7022	57	9	**66**
SERVICED APT.	N7023	80	25	**105**
SERVICED APT.	N7024	67	22	**89**
SERVICED APT.	N7025	57	9	**66**
SERVICED APT.	N7026	57	9	**66**
SERVICED APT.	N7027	58	10	**68**
SERVICED APT.	N7028	58	10	**68**
SERVICED APT.	N7029	57	9	**66**
SERVICED APT.	N7030	57	9	**66**
SERVICED APT.	N7031	57	9	**66**
SERVICED APT.	N7032	57	9	**66**
SERVICED APT.	N7033	57	9	**66**
SERVICED APT.	N7034	57	9	**66**
SERVICED APT.	N7035	57	9	**66**

SOUTH

UNIT TYPE	UNIT No.	SQM INT	SQM EXT	TOTAL
HOTEL	-	108	195	**303**
RESIDENTIAL APT	S7001	116	29	**145**
RESIDENTAIL APT	S7002	150	27	**177**
RESIDENTAIL APT	S7003	164	30	**194**
RESIDENTAIL APT	S7004	143	32	**175**
RESIDENTAIL APT	S7005	154	26	**180**
RESIDENTAIL APT	S7006	152	25	**177**
RESIDENTAIL APT	S7007	118	26	**144**
RESIDENTAIL APT	S7008	155	23	**178**
RESIDENTAIL APT	S7009	181	48	**229**
RESIDENTAIL APT	S7010	173	94	**267**
SERVICED APT.	S7011	58	10	**68**
SERVICED APT.	S7012	61	11	**72**
SERVICED APT.	S7013	59	11	**70**
SERVICED APT.	S7014	57	9	**66**
SERVICED APT.	S7015	57	9	**66**
SERVICED APT.	S7016	57	9	**66**
SERVICED APT.	S7017	57	9	**66**
SERVICED APT.	S7018	57	9	**66**
SERVICED APT.	S7019	58	10	**68**
SERVICED APT.	S7020	58	10	**68**
SERVICED APT.	S7021	55	12	**67**
SERVICED APT.	S7022	54	10	**64**
SERVICED APT.	S7023	57	9	**66**
SERVICED APT.	S7024	57	9	**66**
SERVICED APT.	S7025	57	9	**66**
SERVICED APT.	S7026	57	9	**66**
SERVICED APT.	S7027	57	9	**66**
SERVICED APT.	S7028	57	9	**66**
SERVICED APT.	S7029	55	13	**68**
SERVICED APT.	S7030	54	20	**74**
SERVICED APT.	S7031	57	14	**71**
SERVICED APT.	S7032	57	14	**71**
SERVICED APT.	S7033	56	14	**70**
SERVICED APT.	S7034	56	14	**70**
SERVICED APT.	S7035	56	14	**70**

0 20 50 100 150 200

Scale 1:500 on A1

Rev :	Date	Revision:
-	-	-
B	01.12.2025	Design Changes
A	27.05.2025	Design Changes

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SITE: Jerma Complex, Triq is-Salini, Marsascala

DRAWING TITLE: Architectural Drawings Level 7

DRAWN BY: PA

CHECKED BY: EM

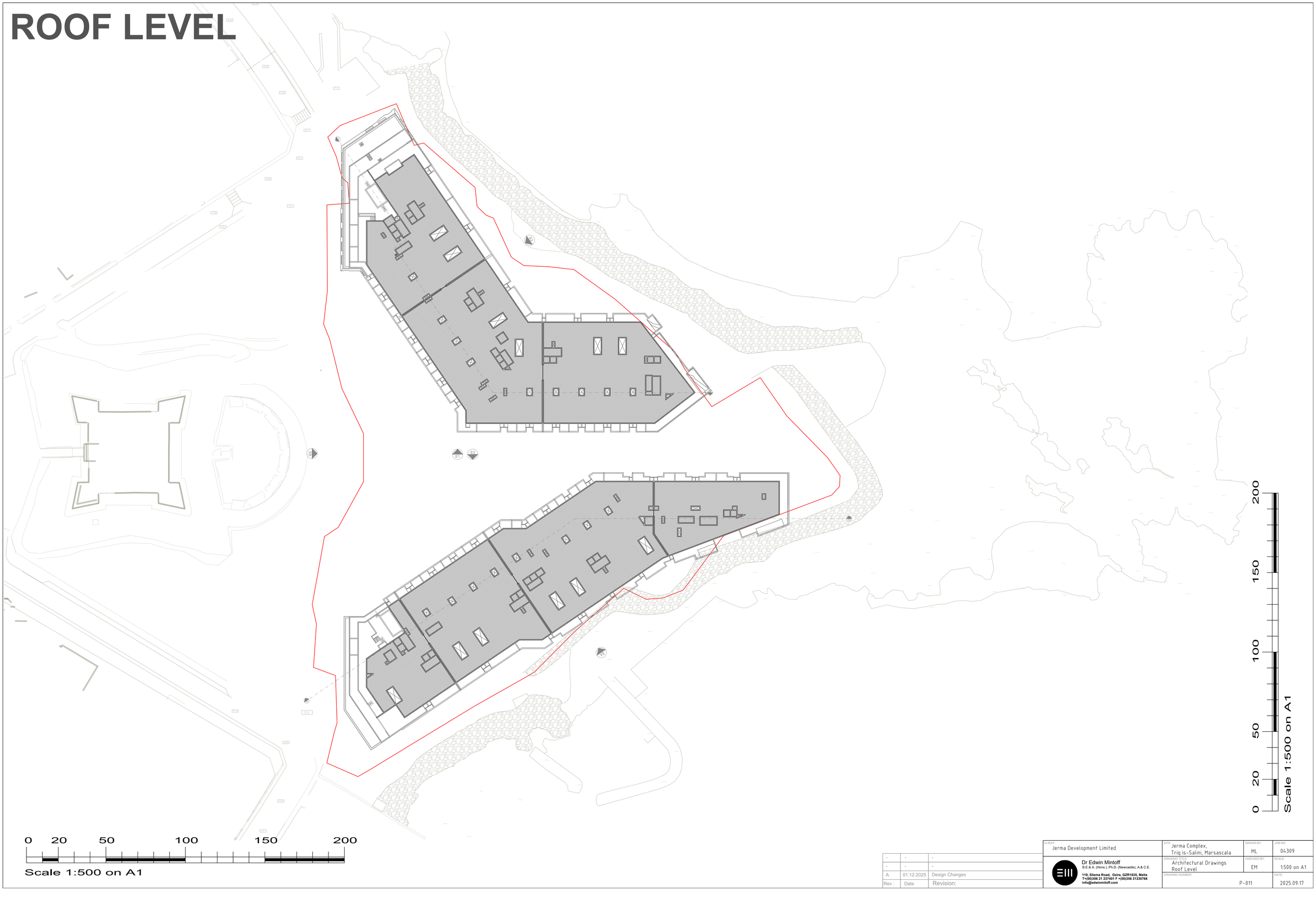
JOB NO: 04309

SCALE: 1:500 on A1

DRAWING NUMBER: P-010

DATE: 2024.12.04

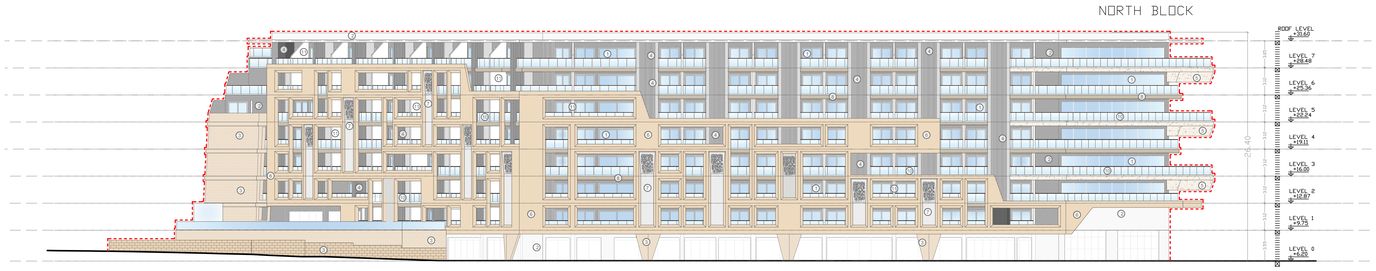
ROOF LEVEL



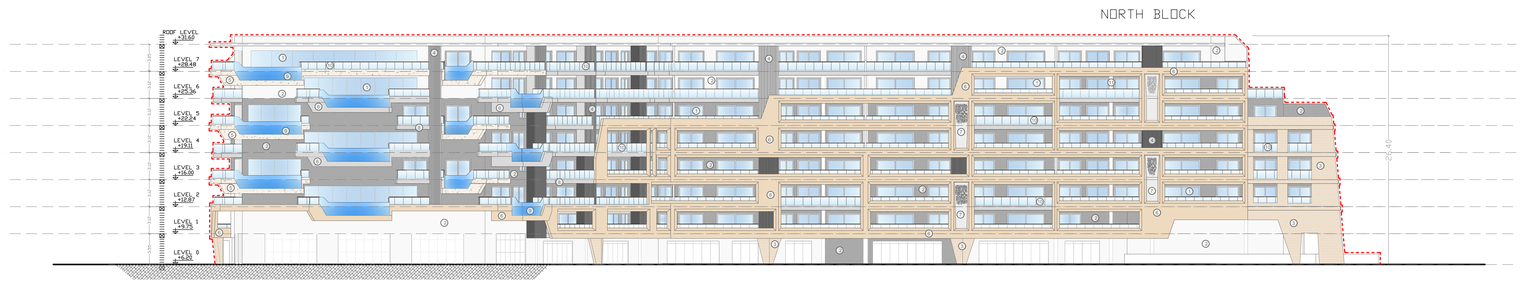
Rev :	Date	Revision:
-	-	-
-	-	-
A	01.12.2025	Design Changes

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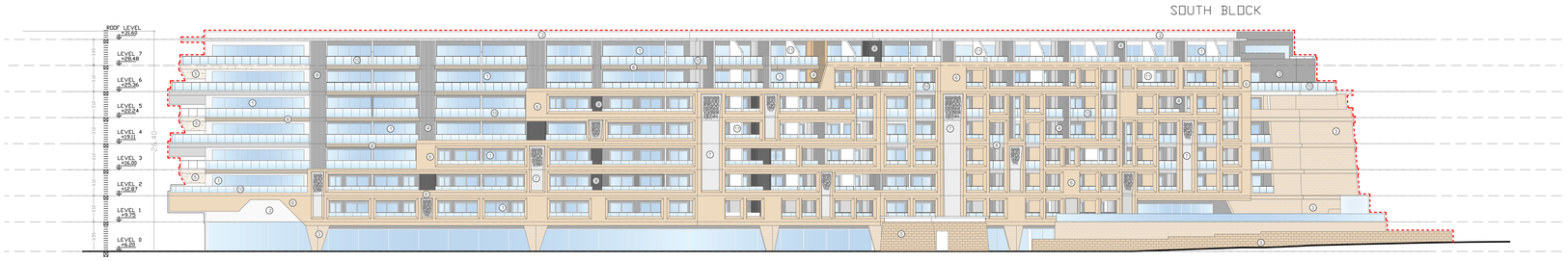
CLIENT: Jerma Development Limited			DRAWN BY: ML	JOB NO: 04309
SITE: Jerma Complex, Triq is-Salini, Marsascala			CHECKED BY: EM	SCALE: 1:500 on A1
DRAWING TITLE: Architectural Drawings Roof Level			DRAWING NUMBER: P-011	DATE: 2025.09.17



ELEVATION 1



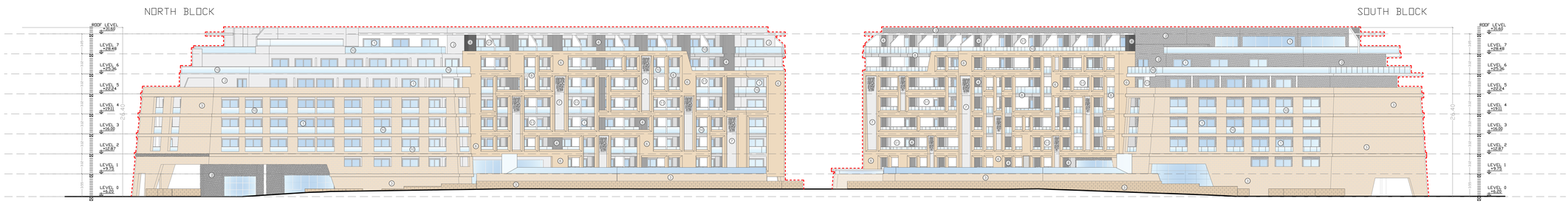
ELEVATION 2



ELEVATION 3



ELEVATION 4



ELEVATION 5

LEGEND MATERIAL

1. GLAZING WITH WHITE ALUMINIUM FRAME
2. LIGHT BROWN RENDER
3. LIMESTONE
4. WOOD PANELS
5. LIGHT BROWN RENDER
6. WHITE MARBLE
7. METAL MESH
8. CREMA TRAVERTINE
9. GLAZING
10. GLAZING RAILING
11. WHITE RENDER

0 5 10 20 50m

Scale 1:250 on A1

0 5 10 20 50m

Scale 1:250 on A1

TO CONSTRUCT

Rev	Date	Revision:
-	-	-
-	-	-
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TITLE:	Jerma Complex, Triq is-Salini, Marsascala
DRAWING:	Architectural Drawings DEVELOPED ELEVATIONS
DRAWN BY:	PA
CHECKED BY:	EM
JOB NO:	04309
SCALE:	1:250 on A1
DRAWING NUMBER:	E-001
DATE:	2024.12.18