

Project Description Statement for the Proposed Redevelopment of the San Ġiljan Waterpolo Club

as per ERA requirements for a Planning Permit (TRK 221696)

Technical Report

AIS REF. NO: PRJ-ENV452
CLIENT REF. NO: TRK 221696
FIRST VERSION

Publication Date

24 January 2020



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DOCUMENT REVISION HISTORY

Date	Revision	Comments	Authors/Contributors
24/01/2020	1.0	First Version	AIS Environment Siân Pledger

AMENDMENT RECORD

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1 Introduction

Carlo Mifsud, on behalf of San Ġiljan Aquatic Sports Club, is in the process of filing a full development application for the redevelopment of the San Ġiljan Aquatic Sports Club facilities, San Ġiljan (TRK 221696). AIS Environment Ltd (AIS) has been commissioned by San Ġiljan Aquatic Sports Club (henceforth referred to as the 'Applicant') to prepare a Project Description Statement (PDS) to pre-validate the impacts expected from this proposed development (henceforth referred to as the 'scheme').

The PDS is a detailed report requested by ERA to provide the necessary information for screening in the Environmental Impact Assessment (EIA) process and is aimed to describe the scheme, the site of the development and its surroundings, and planned activities during the construction and operational phases of the development with an indication of the main environmental impacts expected. Through the PDS, ERA will be able to establish whether the planning application requires an EIA or not.

This PDS has been prepared and structured in accordance with S.L. 549.46 (Environmental Impact Assessment Regulations, 2017).

2 Details of Person/s Wishing to Carry out Development

The Scheme has been submitted by Carlo Mifsud (ID card: 292272M) on behalf of San Ġiljan Aquatic Sports Club. Mr Mifsud is the current secretary of the aforementioned water polo club.

3 Description of the Project and its General Objectives

3.1 San Ġiljan

San Ġiljan, also known as Saint Julians, is a coastal town located on the eastern shores of Malta. The town was named after the patron saint, Saint Julian, who was also known as Julian the Hospitaller and Julian the Poor.

The area is highly commercialised and economic activities are focused around the tourist industry. There are a large number of hotels, bars and restaurants which cater for both tourists and locals alike. The bars and nightclubs are particularly densely packed within the Paceville area. San Ġiljan is also home to the Portomaso Business Tower, which is the tallest building in the Maltese Islands, standing at a height of 97.54m.

A long promenade, extending the entire length of the San Ġiljan coastline, also attracts large numbers of people who enjoy walking, cycling and running. The promenade is especially busy during the summer months when people enjoy leisurely evening walks once the temperatures have fallen.

San Ġiljan attracts a large number of foreign short-let and long-let residential occupants, due to its wide range of traditional town houses and modern apartment blocks, interspersed with the occasional traditional villa. The town had a resident population of 10,232 as of 2014¹.

Two prominent historical buildings are found within the San Ġiljan area. The first is the Old Parish Church which is believed to have been built in 1580 and is dedicated to Saint Julian. The second is the Spinola Palace, which was built in 1688. The Palace was built by Fra Paola Raffaele Spinola for the public with idyllic surrounding gardens. The Palace was later extended by Fra Giovanni Battista Spinola in 1733.

3.2 Scheme Site and Immediate Surroundings

The Scheme site is located on the coast between Balluta and Spinola Bays. The site is currently occupied by the existing San Ġiljan Aquatic Sports Club, bar and restaurant. The sports club facilities are currently composed of two shower rooms, small storage rooms and an additional room which is being used by a dive centre operator. The sports club facilities, bar and restaurant are only operational during the summer months; during which a temporary waterpolo pitch is installed in the sea.

A small kiosk with surrounding outdoor terrace is located above the sports club at the promenade level. The site is surrounded by a mixture of commercial and residential property.

¹ Government of Malta, 2014. Estimated Population by Locality 31st March, 2014. (<https://goo.gl/BHPFGL>)



Figure 1: The San Ġiljan Aquatic Sports Club existing facilities (7th January 2020)

3.2.1 Proposed Development

The Scheme incorporates the refurbishment and extension of the San Ġiljan Aquatic Sports Club. The project also involves the construction of two saltwater swimming pools with ancillary facilities including a gym/weights room, changing rooms and toilets. In order to accommodate the two pools, an area of ca. 3,388 sqm will need to be reclaimed. A specifically designed seawall has been included in the Scheme to protect the development from waves.

A large deck that will serve as a lido for the general public will be constructed next to the pools. The development also includes a restaurant and a sufficient footprint to accommodate the diving school operator. The promenade will also be upgraded into a public plaza, whilst the existing kiosk will not be modified. Access to the shoreline will remain unobstructed along the entire length of the site boundary.

Refer to Section 7.1 for further details.

3.3 Project Justification

The Scheme primarily aims to improve the existing sports club facilities by building a permanent pool structure, which will enable waterpolo games to take place during adverse weather conditions, particularly when the sea is rough. The current facilities are not sufficiently equipped to cater for such scenarios.

The project is seeking to invest in the development of its athletes and members by providing an onsite gym and other ancillary facilities. The proposed Scheme will also provide improved safety and accessibility, thus catering for a wider spectrum of people that are interested in the sport. Furthermore, the project also aims to embellish and enlarge the promenade providing a more enjoyable space for people strolling along the coastline.

3.3.1 Relevant Policy

San Ġiljan falls under the provisions of the North Harbour Local Plan (NHLP). The NHLP outlines a number of objectives for the North Harbour area (refer to Figure 2). The proposed Scheme will help work towards one of overall area aims to “*continue to promote compatible leisure and tourism activity*”. The Scheme will also help achieve the recreational aims set out for the North Harbour area:

- » *Protect existing facilities*
- » *Promote access to new facilities*
- » *Improve access to waterfront and informal open spaces*

The Scheme site is located within a “*coastal area with leisure uses*” as defined in Policy NHRL03 of the NHLP (Figure 3). Therefore, the development must conform with the restrictions outlined in the aforementioned policy. Policy NHRL03 states that the following land-uses are acceptable within these zones:

- » *Class 9 (use class order, 1994): Leisure and assembly including visitor attractions, provided they enhance the tourist product through their uniqueness and innovation*
- » *Class 6 (d) (use class order, 1994): Restaurants only*
- » *Class 6 (c) (use class order, 1994): Bars only provided they are part of a mixed-use scheme.*

Since the facilities included in the proposed Scheme fall within the accepted uses, the project conforms with Policy NHRL03 of the NHLP. The Scheme must comply with the other conditions of Policy NHRL03, which state that the uses outlined above will only be permitted if:

- » *They are located within buildings/structures which are covered by development permission;*
- » *They will involve only very minor extensions and consolidation of existing buildings/structures covered by development permission;*
- » *The finished level of any new minor structure serving as an extension to an existing structure covered by development permission will not exceed the height of any existing legal structure within the site, and is not to increase the solid structures on the street frontage to ensure that views onto the sea across the site are not obstructed;*
- » *Public access to the coast is not compromised;*
- » *Any detrimental impacts to adjoining urban areas likely to result from the operation of the proposed development are appropriately resolved; and,*
- » *MEPA will seek planning gain from the developer, and particularly to secure public access to the coast.*

The design of the Scheme has taken all of the above into consideration and ensured that all of these conditions are met.

The Scheme site lies between two protected valleys, Wied ta'Kalci/Wied Ghomor/Wied il-Kbir and Wied il-Ballutta, as stipulated in NHCV 01 (vide Figure 4). No development should be allowed to take place in these areas to ensure that they are preserved. Nevertheless, the

scheme site is not located within the confinements of these two protected valleys. The site is also not covered by any of the building height restrictions stipulated in the NHLP (Figure 5).

Looking at the Scheme in a broader context, it must also complement the goals and objectives set out in the STRATEGIC PLAN FOR ENVIRONMENT AND DEVELOPMENT (SPED, 2015). SPED (2015) aims to direct development to ensure that the land and sea resources of the Maltese Islands are utilised effectively, whilst ensuring that the environment is protected and enhanced. The Scheme will specifically help achieve a number of the SPED objectives, most notably,

» **Social Economic Development: Thematic Objective 5**

To ensure that existing recreational resources are protected, enhanced and accessible, and to facilitate the provision of new recreational facilities to improve social cohesion, human health, air quality and biodiversity by....directing the bulk of new formal recreation facilities to the Urban Area and the Urban Coast....ensuring that proposed recreational facilities respect the water scarce characteristics of the islands.

» **Environment: Thematic Objective 7**

To promote the efficient use of resources including local stone, water and soil, and manage waste in a manner that safeguards natural processes, and minimises impacts on cultural heritage, landscape and human health by....promoting rain water harvesting provided that there is no unacceptable adverse impact on protected areas and species.

» **Urban Area: Urban Objective 3**

To identify, protect and enhance the character and amenity of distinct urban areas by....retaining and seeking to upgrade existing sports facilities, public gardens, playgrounds, promenades and other public open spaces in urban areas.

» **Urban Area: Urban Objective 4**

To ensure that all new developments are energy and water efficient and provide a sense of place, respond to the local character, improve amenity and the pleasantness of place and ensure safety by....ensuring that the design of buildings and infrastructure makes efficient use of energy and resources and reduces waste....seeking to integrate the requirements of people with special needs in the design of buildings and facilities

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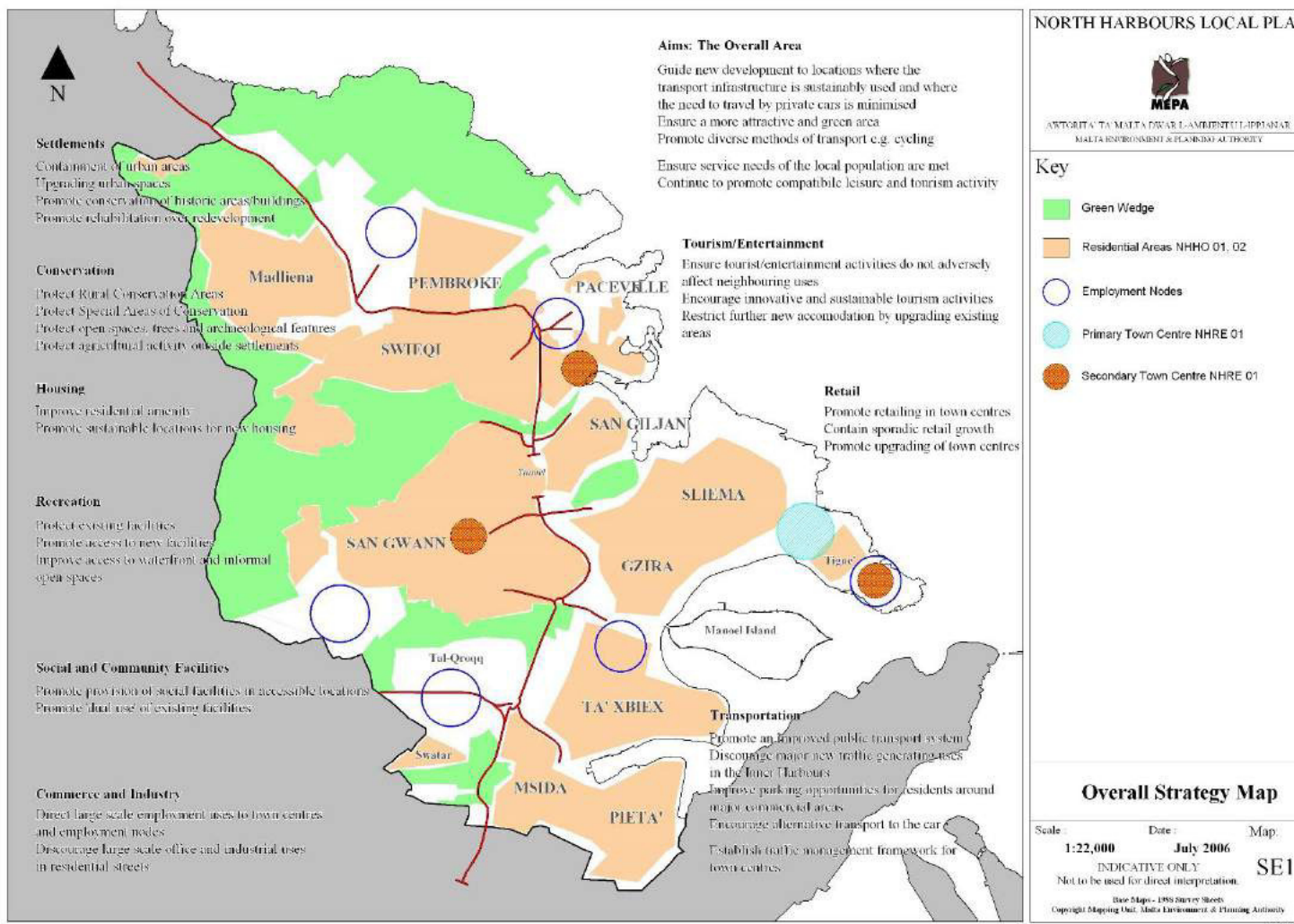


Figure 2: Strategic policy map for the North Harbour region (Source: NHLP)

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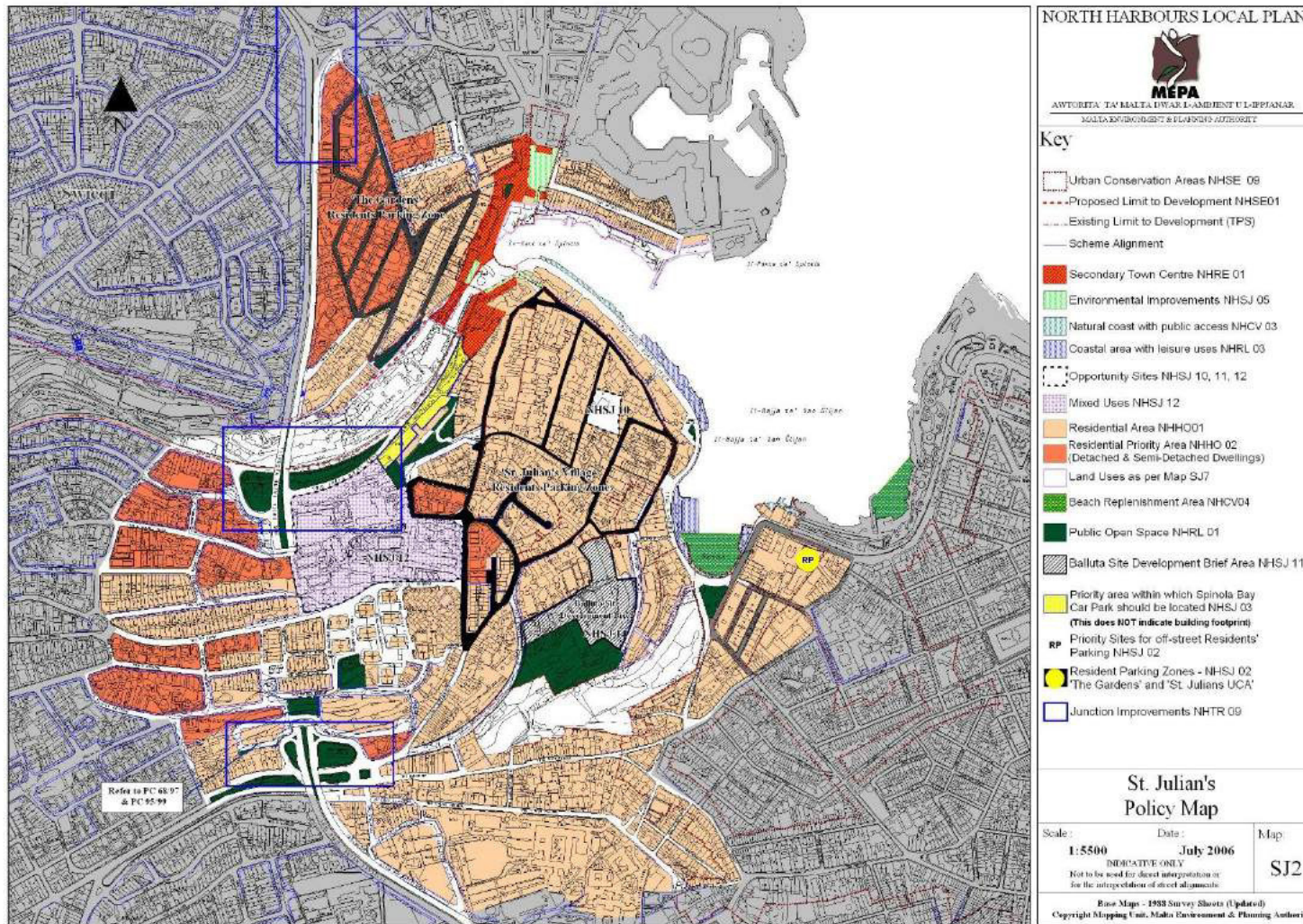


Figure 3: St Julian's policy map (Source: NHELP)

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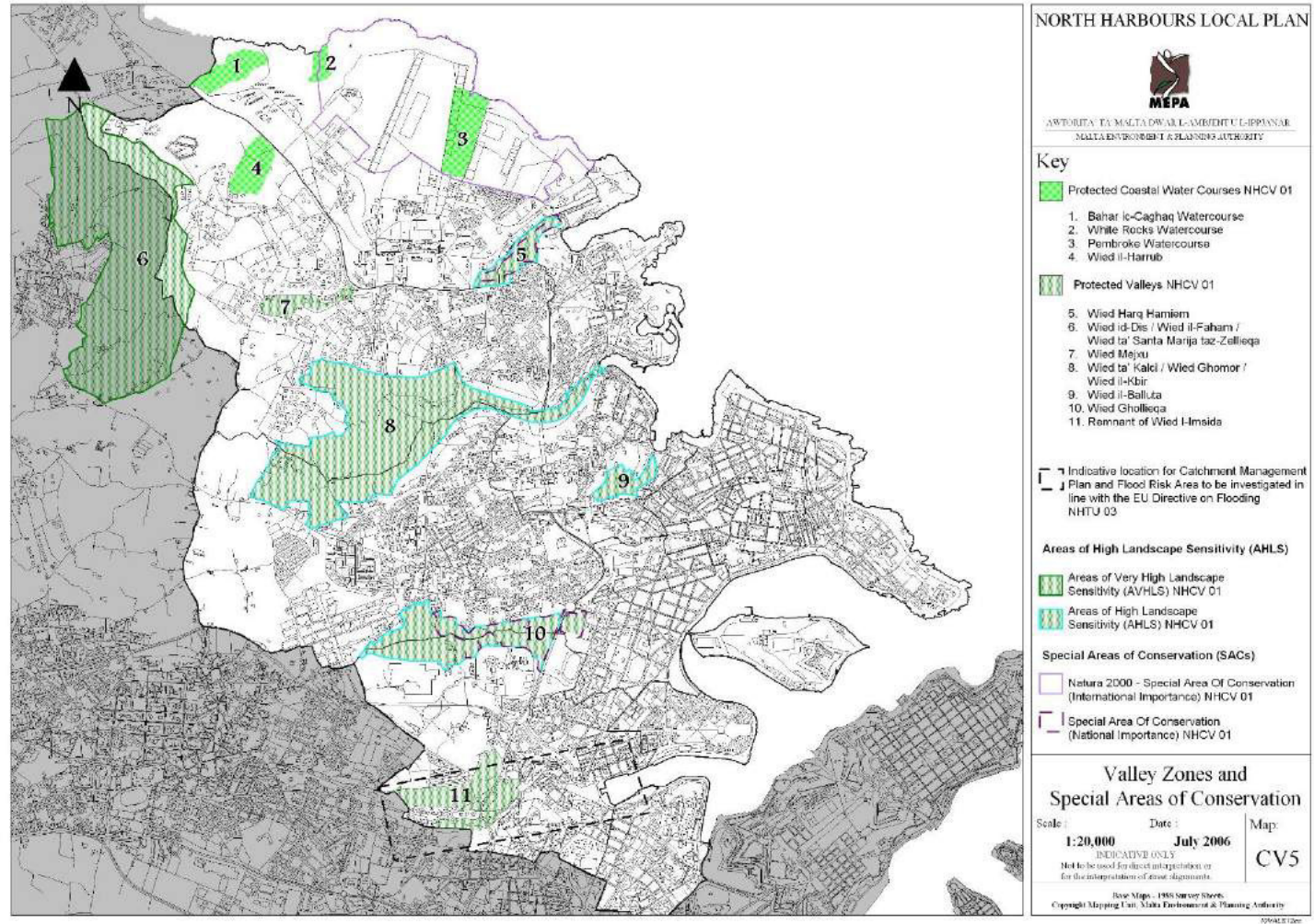


Figure 4: Valley zone and special areas of conservation (Source: NHTU)

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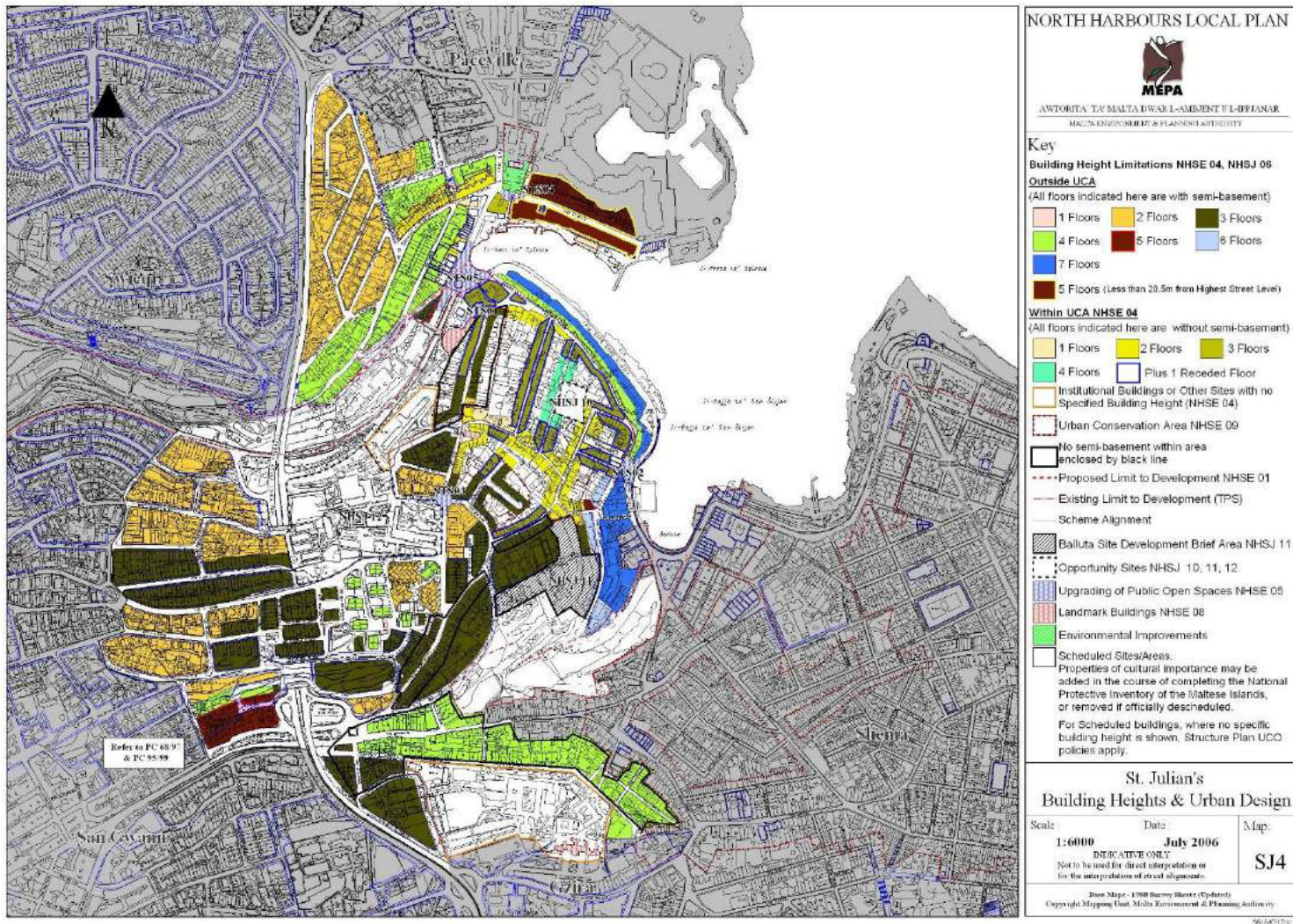


Figure 5: Building height restrictions for the St Julian's area (Source: NHLP)

4 Indication of the Proposed Timing of the Project and Why its Timing is Preferred

It is envisaged that the Scheme will take approximately 52 weeks to complete.

The timing of the commencement of the Scheme depends on the duration of the regulatory planning process, the approval of the application and any additional studies that maybe requested by the various competent authorities. If this process goes smoothly, it is planned that the construction work will begin in September 2020 once the main summer tourist and waterpolo seasons are over.

5 The Location of the Scheme with Site Boundaries Shown

The Scheme is located on the eastern coast of Malta, as shown in Figure 6, Figure 7 and in greater detail in Figure 8. The GPS coordinates for the proposed development are 35°55'0.71"N, 14°29'39.42"E.



Figure 6: Location of the Scheme site within the Maltese Islands (Source: Google Earth)



Figure 7: Location of the proposed Scheme within San Ġiljan (Source: Google Earth)

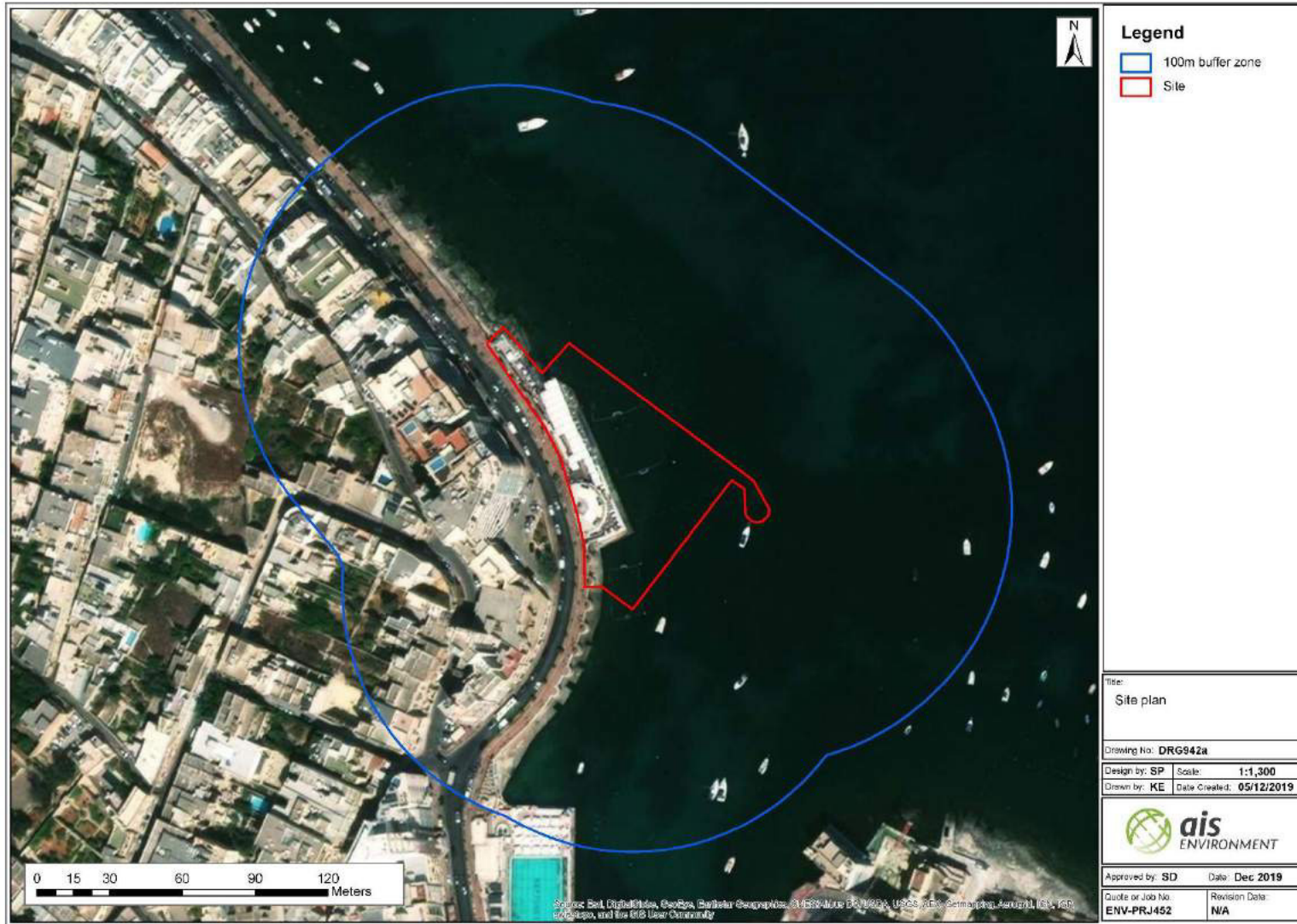


Figure 8: Location of the Scheme site and 100m buffer zone

6 Alternative Uses, Technologies and Locations for the Scheme

6.1 Location

Since the Scheme involves the redevelopment of the existing San Ġiljan Aquatic Sports Club and the club does not wish to relocate, no other locations were considered during the design stage.

6.2 Construction Methodology

One alternative construction method was considered during the design of the Scheme. The alternative proposal involved backfilling the entire area under the platform and building a solid seawall defence around the perimeter of the site. This method is currently not the preferred option as it is thought to be structurally deficient and will not be effective at wave dissipation.

However, this alternative option has not been fully discarded. Once the contractor has been chosen, the construction methodologies will be discussed in more detail and the most suitable method for the project will be determined.

6.3 Alternative Technology

The Scheme will utilise the latest technology where possible to ensure the facilities area as energy efficient as possible. The air conditioning systems will be based on Variable Refrigerant Flow (VRF) systems with coefficient performances (COP) of higher than 3. All the lighting will be energy efficient LEDs.

The installation of photovoltaic cells may also be included in the Scheme. The feasibility of such installations will be determined at a later stage.

7 Physical Characteristics

Site plans for the proposed development are presented in Figure 9 to Figure 12.

7.1 Size, scale and design

7.1.1 Deck Level

The Scheme involves the land reclamation of ca. 3,388 sqm to expand the San Ġiljan Aquatic Sports Club facilities. The increased area will allow the construction of two swimming pools. The larger of the two pools will be 33m long and 20m wide, this is large enough to accommodate a senior men's water polo game. The second pool, which will only be 14.4m long and 10.6m wide, will be used for teaching purposes. Both of the pools will be equipped with pool hoists to enable persons with physical disabilities or movement problems to access the pools. It is the intention of the applicant to construct both pools with heating facilities, thus permitting active use throughout the year, irrespective of weather conditions.

A large deck area located to the north of the pool will provide a spacious area for sunbeds and sun umbrellas. A lounge and restaurant will be positioned in the centre of the deck area to allow the lido customers to buy food and refreshments. Approximately 250 sqm of the deck area will be used to accommodate the restaurant's seating area that will be equipped with tables and chairs.

The Scheme also includes a gym/weights room to enable athletes to carry out their strength work and training sessions whilst at the pool. The gym will occupy a footprint of 65m² which is adequate to house all the main pieces of equipment. The gym will also be open for the general public.

A series of rooms, located directly underneath the promenade, will house a wide variety of ancillary facilities. These include shower/changing rooms, two sets of toilets, two kitchens, two store rooms, a pump room and the dive centre.

The lower level of the development includes the construction of a seawall to protect the lido from waves during the winter months.

7.1.2 Promenade Level

The promenade will be turned into a public plaza with planters to add to the visual appeal of the area. Indigenous species of plants, such as Sandac Gum Trees (*Tetraclinis articulata*), will be planted within the planters. A bicycle parking rack has also been included within the plaza to encourage people to cycle to the sports complex. The existing kiosk will not be altered.

7.1.3 Access

Three staircases and two ramps will provide access between the promenade and deck level. A lift will also provide access between the two levels. The coastline around the site will remain accessible to the general public via a series of small staircases located around the edge of the deck.



Figure 9: Site plan of the deck level



Figure 10: Site plan of the promenade level

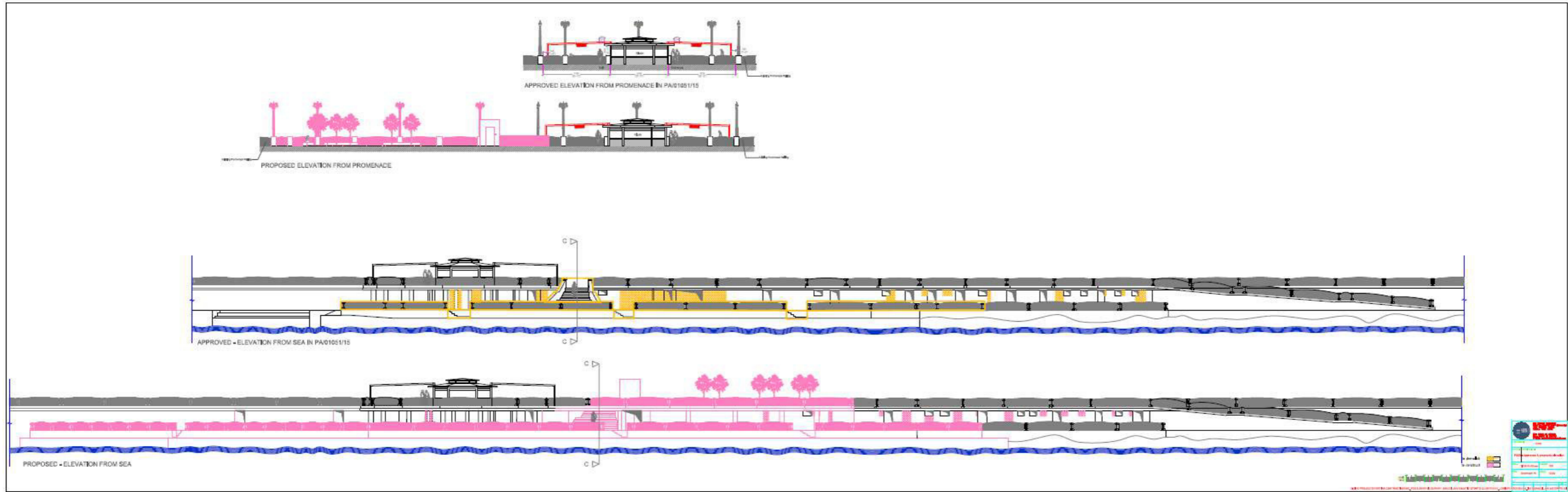


Figure 11: Proposed elevations

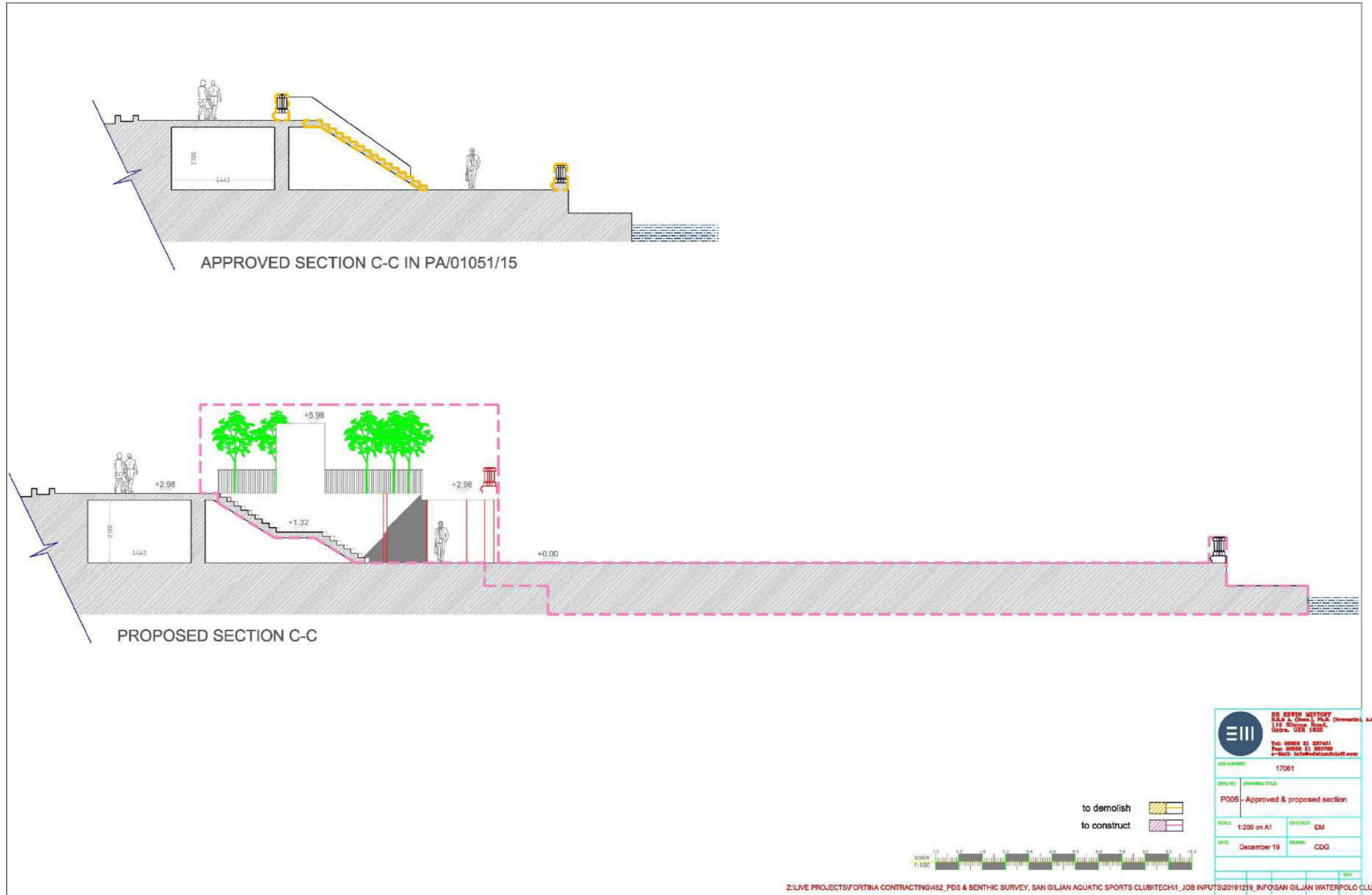


Figure 12: Proposed sections

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7.2 Phasing

The development of the Scheme will be divided into nine phases, the duration of which are summarised in Table 1.

Table 1: Phasing of the construction of the Scheme

Phase	Description of Works	Estimated Duration
1	Mobilisation and hoarding	2 weeks
2	Demolition and removal of material	4 weeks
3	Shoring: Sea defence	6 weeks
4	Foundation piling	9 weeks
5	Platform slab	9 weeks
6	Construction: HCB walls	2 weeks
7	Construction: Roof slabs	2 weeks
8	Electrical and mechanical works	10 weeks
9	Finishes	8 weeks

7.2.1 Number of Employees

The approximate number of personnel to be employed during the different phases is as follows:

- » Construction phase: 5 to 10 persons at any one time
- » Operational phase: up to 10 persons at any one time

8 Land Uses & Environmental Characteristics

8.1 Land Uses

Land uses within a 100m buffer zone surrounding the Scheme site have been mapped in Figure 23.

The AoI to the east of the Scheme site is composed of a mixture of residential and commercial land uses. The residential property varies in age and style. The accommodation along the front is mainly characterized by apartment blocks which range in style from older buildings to modern stylish blocks (Figure 13 and Figure 14). All of the apartments have large windows and/or balconies to allow the residents to enjoy the views of the bay. Further inland, the majority of the residential properties are traditional townhouses interspersed with the odd villa (Figure 15 and Figure 16).

The commercial outlets are located in the lower floors of apartments blocks or townhouses (Figure 17 and Figure 18). This is a common phenomenon across the Maltese Islands due to the limited land space available. The commercial businesses include eateries, a supermarket, estate agents and a pharmacy. Adjacent to the site, on the opposite side of Triq George Borg Olivier, lies a small planted area and carpark (Figure 19).

A promenade extends along the whole length of the coastline. It is decorated with plants and benches to increase the attractiveness of the area and to provide comfortable places to sit and relax (Figure 20). The coastline to the south of the site is artificial, whereas the coastline to the north of the site is a combination of both natural rock and artificial concrete platforms (Figure 21). This coastal stretch is a very popular spot for swimmers and sunbathers during the hot summer months.

On the south eastern edge of the AoI lies part of the Neptunes Waterpolo and Swimming Club (Figure 22). The complex consists of an outdoor heated pool with surrounding deck, small gym and restaurant.

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Figure 13: Old style apartment blocks, Triq George Borg Olivier (7th January 2020)



Figure 14: Modern apartment blocks looking out over the bay, Triq George Borg Olivier (7th January 2020)

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Figure 15: Townhouses, Telgħa ta' Birkirkara (7th January 2020)



Figure 16: Villa, Main Street (7th January 2020)

PROJECT DESCRIPTION STATEMENT



Figure 17: Bar with overlying residential units, Triq George Borg Olivier c/w Main Street (7th January 2020)



Figure 18: Eateries on the ground floor of town houses, Main Street (7th January 2020)

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Figure 19: Carpark and planted area, Triq George Borg Olivier (7th January 2020)



Figure 20: Promenade along Triq George Borg Olivier (7th January 2020)

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Figure 21: Artificial and natural coastline to the north the Scheme site, Triq George Borg Olivier (7th January 2020)



Figure 22: Neptunes water polo and swimming club, Triq George Borg Olivier (7th January 2020)

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Figure 23: Land use map within a 100m buffer zone

8.2 Geology, Geomorphology, Soil and Hydrology

8.2.1 Geology, Geomorphology and Soil

The Scheme site and the majority of the terrestrial portion of the 100m buffer zone is located on Lower Coralline Limestone, specifically the Xlendi Member (refer to Figure 24). The Lower Coralline Limestone formation was formed in the Chattian age of the Oligocene epoch, making it the oldest rock formation of the Maltese Islands. It is pale grey in colour and characterised by beds of marine calcareous coralline algae, which was deposited in shallow water environments. The Xlendi member is the second youngest of the Lower Coralline Limestone members.

The western edge of the AoI is situated on Lower Globigerina Limestone. Lower Globigerina Limestone is characterised by medium sized grains and is pale yellow brown to yellow in colour. It is the oldest of the three Globigerina Limestone members, being formed during the Aquitanian age of the Miocene epoch.

The Scheme lies on the coastline within a natural bay. The site is located opposite the mouth of the bay, meaning that although it is in a bay, the site is not particularly sheltered. This lack of natural protection is added to by the fact that the mouth of the bay is relatively wide.

The AoI has no exposed soils, it is either seabed or man-made impermeable surfaces due to the surrounding development, refer to Figure 25.

8.2.2 Hydrology

San Ġiljan is situated above the mean sea level aquifer, as shown in Figure 26. It is the largest aquifer of the Maltese Islands, covering an area of 216.6km².² The presence of the aquifer is a direct result of the stratigraphy of the Maltese Islands. The top rock layers are highly porous which allows rainwater to percolate through to form the ghyben-herzberg system. Since freshwater is less dense than seawater, the fresh water lens lies above the saline seawater.

² ERA (2015). *The 2nd Water Catchment Management Plan for the Malta Water Catchment District 2015 – 2021*. Valletta, Malta.

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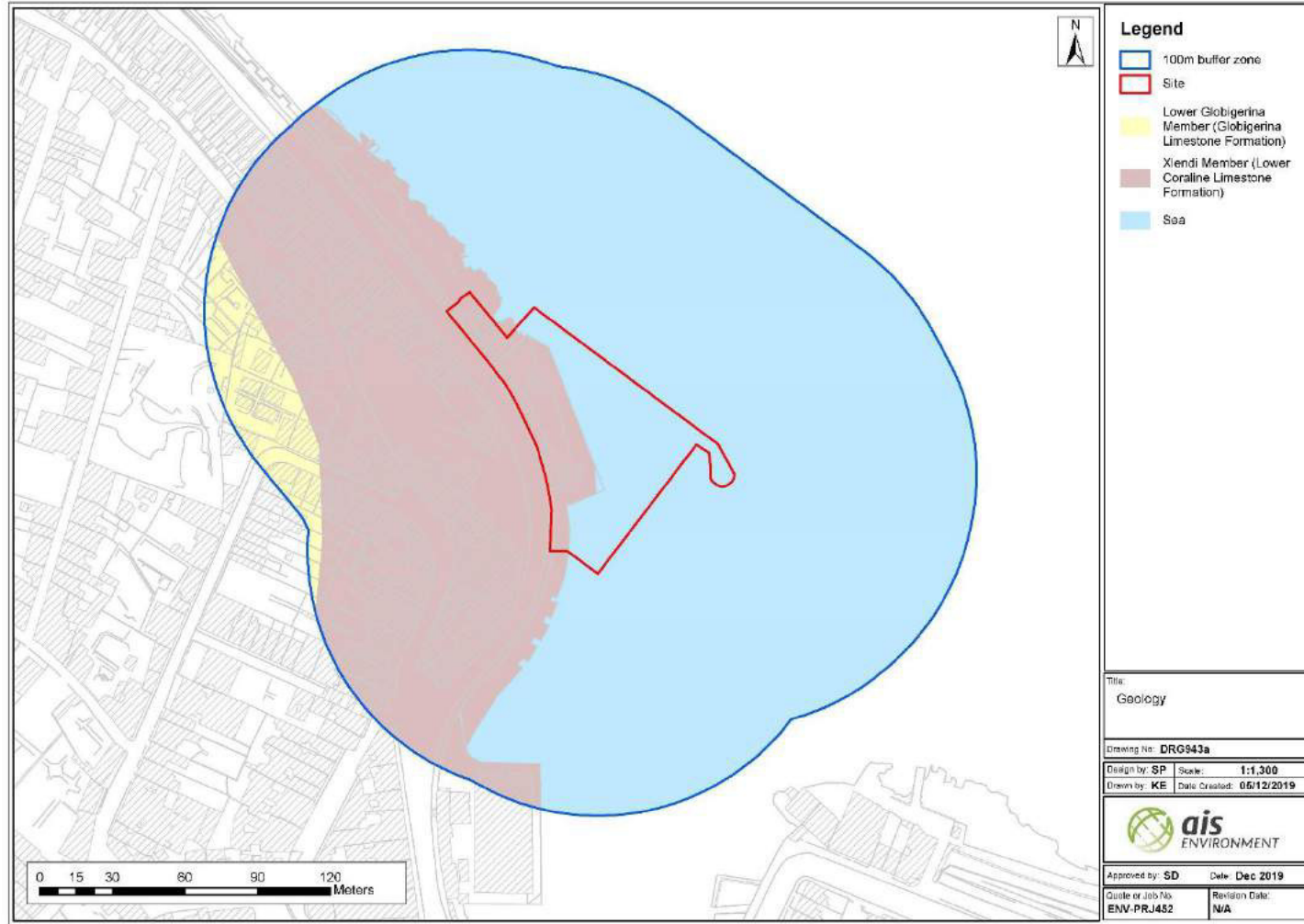


Figure 24: Geological map of the area surrounding the proposed development

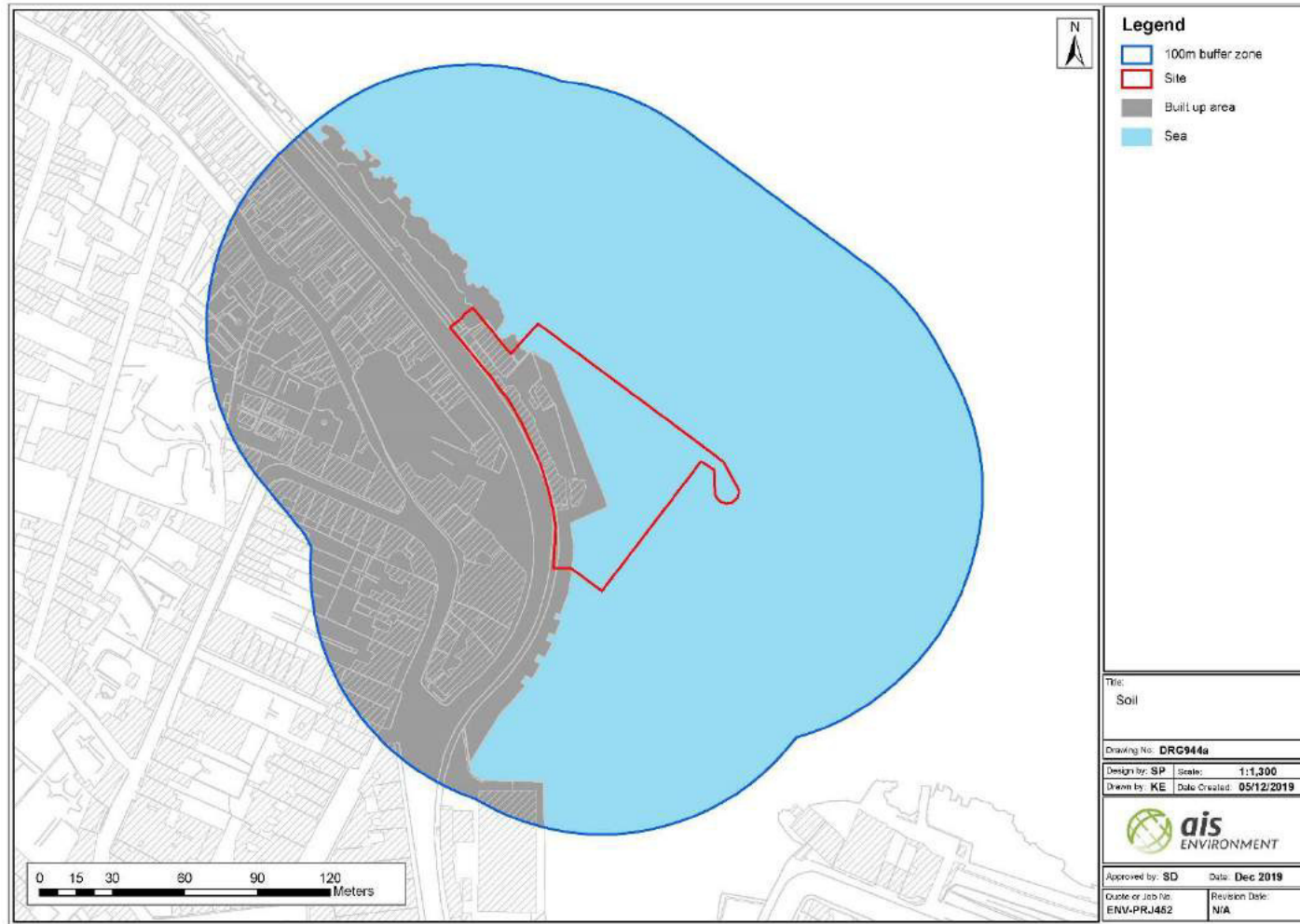


Figure 25: Map of the soil types in the area surrounding the proposed development

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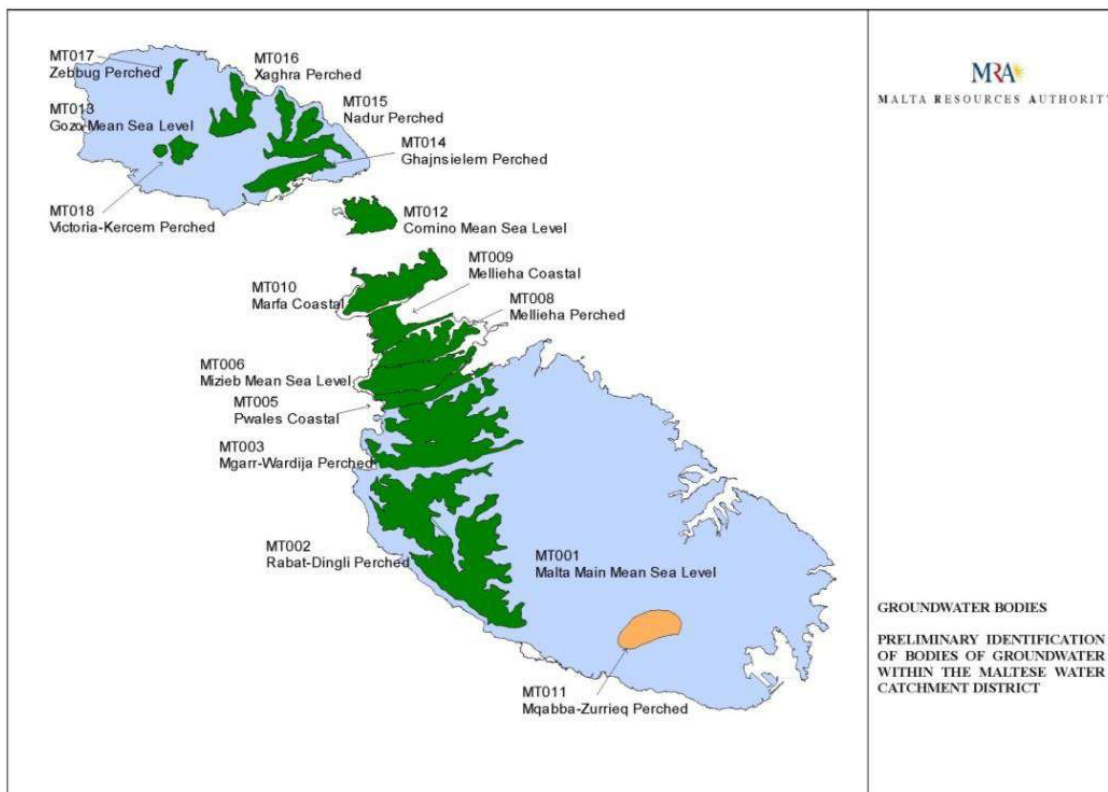


Figure 26: Preliminary identification of bodies of groundwater within the Maltese Water Catchment District
(Source: Malta Resources Authority)

8.3 Cultural Heritage

The status of the cultural heritage of the buildings within the 100m buffer zone was researched on the PA geoportal website. The AoI around the proposed development site contains the following scheduled buildings:

- » Chateau en Mer, Triq il-Kbira (grade 2 degree of protection)
- » Casa Caruana Dingli, Triq il-Kbira (grade 2 degree of protection)
- » Villa Leoni, Triq il-Kbira (grade 2 degree of protection)
- » Seawall and stairs, Triq il-Kbira (grade 2 degree of protection)

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Figure 27: Scheduled buildings and structures within the Aoi highlighted in dark blue. The location of the Scheme is indicated by the red triangle (Source: PA geoportal)

8.4 Ecology

Since a significant proportion of the Scheme is located in the sea, the marine ecology of the area will be affected by the proposed works. In order to assess the impact upon the marine environment a benthic study of the area will be carried out in the coming months.

There are no naturally occurring areas of vegetation or agricultural fields within the terrestrial section of the Aoi. The majority of the vegetation found within the buffer zone is found in private gardens, along the edge of the promenade and in the small planted area located on the opposite of Triq George Borg Olivier to the Scheme site (Figure 28).

There are no Special Areas of Conservation (SACs), Special Protected Areas (SPA) or tree Protection Areas (TPA) with 100m of the Scheme site.



Figure 28: Planted area on Triq George Borg Olivier (22nd January 2020)

9 Services Available on Site

9.1 Energy and Water

The site is already serviced by the main Enemalta electricity supply and WSC water infrastructure. The expansion of the facilities will necessitate the upgrading of the existing services. The Applicant will consult the competent authorities (Enemalta and WSC) to identify what infrastructural and utility arrangements need to be made.

9.2 Sewage

The Scheme site is already connected to the main sewer network. The Applicant will contact the competent authority (WSC) to identify what modifications need to be made to the existing system to accommodate the Scheme.

9.3 Surface Water Run-Off and Storm Water Drainage

The surface water and storm water will be channelled towards an onsite reservoir via a network of gutters and piper. The reservoir will be located underground in front of the staircase, close to the main pool. It will have a capacity of 486m³, which equates to 20% of the volume of water required to fill both of the pools. The collected water will be used to maintain the pool levels and water any plants within the site.

10 Nature and Quantities of Raw Material, Energy, Waste and Machinery Used

10.1 Raw Materials

10.1.1 Construction Phase

The raw materials required for the construction phase are listed in Table 2.

Table 2: Approximate quantities of raw materials required for the construction phase of the Scheme

Raw Material	Approximate Quantity
Reinforced concrete	31,265 m ³
HCB walls	3,000 m ²

Any raw materials stored onsite will be kept within dedicated areas within the confines of the site boundary.

10.1.2 Operational Phase

The operational phase will require minimal raw materials for the maintenance of the facilities only. Some chemicals may also be required for the maintenance of the pool; however, as the pool is salt water only relatively small quantities will be needed.

10.2 Energy

10.2.1 Construction Phase

The estimated quantities of energy required in the construction phase are summarised in Table 3.

Table 3: Estimated energy consumption required during the construction phase

Activity	Sub-Activity	Power	Unit
Mobilisation	Delivery of materials and equipment	50	Litres
	Crane operations	100	kWh
Demolition	Machinery operations (diesel)	750	Litres
Excavation	Machinery operations (diesel)	250	Litres
Construction	Tower crane operations	10,000	kWh
	Concrete pump operations	100	Litres
	Other large machinery operations	100	kWh
	Handheld equipment	75	kWh
Waste removal	High up operations	50	Litres
Demobilisation	Removal of materials and equipment	25	Litres

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10.2.2 Operational Phase

The Applicant commissioned a study by a warranted engineer to calculate the energy requirements of the Scheme during the operational phase. Table 4 outlines the electrical load required for the various facilities included in the proposed Scheme.

Table 4: Breakdown of the electrical load required for the Scheme (Source: Ing. Johan A. Psaila & Associates Engineering Consultants, 2019)

Level	Facility	Electrical Load (kVA)	Electrical Supply*
Deck	Dive Care	6.45	SP + N
	WC facilities	4.20	SP + N
	Gym/weights room	7.29	TP + N
	Pump room and pool lighting	30.13	TP + N
	Take-away interconnected to a store	16.86	TP + N
	Kitchen interconnected to store	38.64	TP + N
	WC facilities	4.20	SP + N
	Showers/changing rooms	4.20	SP + N
Promenade	General lighting for deck area	3.50	SP + N
	Kiosk	21.65	TP + N
	Passenger lift	5.11	TP + N
TOTAL THREE PHASE LOAD = 127.20			
* SP = Single Phase, N = Neutral, TP = Three Phase			

The report concluded that “the total connected load results in a total current of approximately 185 Amperes. Applying an overall diversity factor of 80%, results in a total current of 148 Amperes and hence the overall electrical supply requirements for this development shall be 160 Amperes TP & N”.

A full version of the report can be downloaded from the e-apps portal (Document 58a).

10.3 Machinery

10.3.1 Construction Phase

The machinery to be used during the construction phase of the Scheme is listed in Table 5. It should be noted that the proposed machinery and quantities may differ from those listed below depending on their required usage and mobility.

Table 5: Quantities of machinery required for the construction phase of the Scheme

Machinery	Estimated Quantity
Concrete mix supply trucks	2
Concrete pump	1
Hydraulic rock breaker	1
Hydraulic shovel	1
Mobile crane	1
Piler	1
Tipper trucks	3

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Tower crane	1
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10.3.2 Operational Phase

There will be no heavy-duty machinery in use during the operational phase.

10.4 Waste

10.4.1 Construction Phase

The waste generated during the construction phase will be predominately from the demolition and excavation works. The quantities of waste generated during these works are listed in Table 6.

Table 6: Approximate quantities of waste expected during the construction phase

Phase	Waste	Approximate Quantity
Demolition works	Reinforced concrete	90 m ³
	Walls	150 m ³
Excavation and piling works	Rock	800 m ³
Construction	Estimated 1% of building materials	320 m ³

All waste generated onsite will be stockpiled within the confines of the site and transported off site by appropriately licensed waste carriers to ERA approved waste management facilities.

Chemical analysis of the excavated seabed material will be required to assess whether the material is hazardous or not. This will determine how it can be disposed of.

10.4.2 Operational Phase

All of the waste generated by the Scheme will be of a domestic nature. The 3R Principle (Reduce, Reuse and Recycle) will be applied throughout the Scheme to limit unwanted waste that will be eventually disposed into the landfill. All material generated onsite will be separated at source and stored in a dedicated area. All waste will be transported offsite by an appropriately licensed waste carrier and taken to an ERA registered facility.

It is not possible to approximate the quantities of waste which will be generated at this early stage of the project development.

11 Access and Parking Requirements

11.1 Access

11.1.1 Construction Phase

A temporary ramp connecting the site to Triq George Borg Olivier will be constructed to allow vehicles and machinery to easily access the site. This ramp will be made of loose material and be removed once the construction of the Scheme is complete.

No vessels will be used during the construction phase. Therefore, access to the site will not be required from the sea.

11.1.2 Operational Phase

During the operational phase, the site will be accessible on foot via a staircase and lift from the promenade.

The Scheme site is located just off a main road so it is already easily accessible by car. Due to the popularity of the area, it is already well served by the public bus, with a bus stop located within 50m of the sports club. A pedestrian crossing is also already located within a short walking distance to the north of the Scheme.

11.2 Parking

11.2.1 Construction Phase

During the construction phase, all machinery and vehicles will be parked within the confines of the site.

11.2.2 Operational Phase

The Scheme does not involve the provision of any additional carparking. However, abundant street parking can be found on the surrounding roads.

12 Major Environmental Impacts and Mitigation Measures

A preliminary indication of the environmental impacts that are likely to be associated with the Scheme are described in this section, and may serve as an initial scoping assessment in the context of the ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS OF 2017 (S.L. 549.46).

The Scheme involves the redevelopment of the San Ġiljan Aquatic Sports Club, specifically the reclamation of land to accommodate two permanent swimming pools and large surrounding deck. The deck level of the development includes the provision of a range of facilities including a gym/weights room, restaurant and changing rooms. The Scheme also incorporates the upgrading of the promenade.

The potential impacts of the Scheme and their respective mitigation measures are listed in Table 7.

Table 7: Potential impacts and their mitigation measures

Features Potentially Impacted	Description of Potential Impact	Mitigation Measures
Land and Sea Use	<p>Moderate Adverse</p> <p>During the construction phase, especially the land reclamation work, the other users of the marine area will be disrupted. The access along the coastline will also be temporarily restricted and the club will be unable to operate at the premises during this time.</p>	<p>The developers should issue a “notice to mariners” detailing the schedule of work in order to allow other users of the sea to adapt their plans if required.</p>
	<p>Moderate Beneficial</p> <p>The Scheme site is currently home to the waterpolo club, restaurant and dive school during the summer months. Therefore, the proposed Scheme will not alter the use of the land. The land reclamation proportion of the site will change the use of the marine environment; in that the structure will be permanent, instead of a temporary pitch set up during the summer months.</p> <p>The proposed project will upgrade the existing facilities so that they can operate all year round and improve the safety of the site. However, the extended site will reduce the area of sea in which private vessels can berth.</p>	<p>N/A</p>

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	Overall, the alteration of the land/sea use is considered to be moderate beneficial.	
Archaeology and Cultural Assets	<p>Unknown</p> <p>The presence of artefacts within the marine extent of the site is unknown.</p> <p>An underwater video survey should be carried out to determine whether there are any important artefacts within the footprint of the Scheme.</p>	Should any artefacts be discovered during the survey and/or land reclamation work, the SCH should be contacted immediately for guidance on how to proceed.
Marine Ecology	<p>Moderate - Major Adverse</p> <p>The land reclamation work and piling will have an adverse effect upon the marine environment, specifically the habitats and organisms living on/within the seabed. The ecology within the footprint of the land reclamation area will be permanently destroyed.</p> <p>During the construction phase there is also a risk of leakages and contamination from raw materials and machinery, which may result in harmful substances being released into the sea.</p>	<p>The Applicant has already commissioned a benthic survey to identify the benthic habitats and organisms present within the site and immediate area. This will be carried out in the coming months. If the survey does identify any protected specials within the site boundary, the project layouts and designs may need to be revised.</p> <p>Throughout the duration of all activities within the marine environment, a silt curtain should be installed to minimise the dispersal of suspended sediment caused by the works.</p> <p>To avoid the occurrence of leakages and spills raw materials should be stored away from the water's edge in bunded areas or spill trays. In case of accidental spillages, spill kits should be readily available onsite. Furthermore, all machinery present on site should be well maintained to prevent the occurrence of fuel/oil leaks.</p>
Geology, Geomorphology, Palaentology,	Minor Adverse	N/A

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Hydrology and Hydrogeology	<p>The reclamation of land and the piling works will alter the geology and geomorphology of the area.</p> <p>It is envisaged that there will be no changes in the hydrology and the hydrogeology as a result of the development.</p>	
Wave Hydrodynamics	<p>Unknown</p> <p>The extension of the site into the bay and the construction of a sea defence wall will inevitably alter the hydrodynamics of the bay.</p>	<p>Detailed studies need to be carried out to establish the effect that the proposed Scheme will have upon the hydrodynamics within the bay. The studies will allow the Applicant to refine the Scheme if needed, to ensure that it is as protected as possible from the waves and does not cause problems in other areas of the bay.</p>
Landscape and Visual Impact	<p>Moderate Adverse</p> <p>During the construction phase, the construction machinery will temporarily reduce the landscape and visual amenity of the area.</p>	<p>All machinery should be confined within the site boundary.</p>
	<p>Moderate Adverse</p> <p>The redevelopment of the existing site will have some effect on the visual amenity of the site. The extension of the site into the sea and the construction of the protective sea defense wall may be viewed as an adverse impact. Nevertheless, the site is not located in an area of high landscape sensitivity.</p> <p>Detailed photomontages of the Scheme and surrounding area can should be compiled to assess the visual impact of the development in a more objective manner.</p>	<p>The project has been designed with the surrounding area in mind to ensure that it blends in as much as possible.</p>
Air Quality	<p>Minor Adverse</p> <p>During the construction phase, especially the demolition works, dust emissions will be generated which will temporarily affect the air quality of the area.</p>	<p>The ENVIRONMENTAL MANAGEMENT CONSTRUCTION SITE REGULATIONS of 2007 (S.L. 435.79) should be enforced and implemented during all phases of construction to minimise</p>

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		the dispersal of dust into the surrounding environment. For example, all stockpiles should be kept covered by a heavy-duty sheet when not in use.
	<p>Minor-Moderate</p> <p>Detailed traffic studies need to be carried out to determine the intensity of the impact.</p> <p>The upgrading of the facilities means that the club and restaurant will operate all year round, as opposed to currently when they are only open during the summer months. This will most likely result in additional vehicular trips to the site. However, as the Scheme is located next to a busy road, the increase in the traffic in the area as a result of the development unlikely to be major.</p>	Employees and members of the club should be encouraged to partake in car sharing schemes and make use of alternative modes of transport to reduce the impact.
Noise	<p>Moderate Adverse</p> <p>During the construction phase of the Scheme, substantial amounts of noise will be generated which may disturb the local residents and businesses.</p>	<p>The ENVIRONMENTAL MANAGEMENT CONSTRUCTION SITE REGULATIONS of 2007 (S.L. 435.79) should be implemented to minimise the disturbance to locals in line with S.L. 435.79. Specific measures include restricting working hours to daylight hours and switching off machinery when not in use.</p>
	<p>Minor Adverse</p> <p>The increased numbers of people visiting the sports club will generate additional noise, especially as the swimming pools and restaurant areas are located outdoors. The additional number of vehicles visiting the area will also increase the ambient noise levels. However, as the Scheme is located within a busy neighbourhood the additional noise will not be excessive. The impact is only considered to be minor as the site is already heavily frequented in the summer months.</p>	<p>The operating hours of the facility should be restricted and signs should be placed around the site to remind people to be respectful of the nearby residents. The volume of any music being played at the lido should also be kept to a reasonable level.</p>

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Waste Management	<p>Moderate Adverse</p> <p>During the construction phase of the Scheme, the transport of material/waste to and from the site be a nuisance to local residents and businesses.</p> <p>The waste from the seabed excavation works should be chemically analysed to determine whether the material is of a hazardous nature. If the material is not hazardous it can be dumped in a non-hazardous landfill or at sea if the dumping limit values are not exceeded. Export/treatment of waste needs to be considered for hazardous material.</p>	<p>The ENVIRONMENTAL MANAGEMENT CONSTRUCTION SITE REGULATIONS of 2007 (S.L. 435.79) should be implemented to ensure that waste is stored and managed on site in an appropriate manner before being transported to a registered waste disposal facility.</p> <p>Where possible any waste material should be re-used on site to limit the volumes of waste that needs to be disposed of.</p>
	<p>Minor Adverse</p> <p>The Scheme will not generate substantially more waste than the current facility. Furthermore, all waste will be of a domestic nature.</p>	<p>The 3 Rs (Reduce, Reuse and Recycle) will apply to all recyclable material.</p> <p>Unrecyclable waste will be disposed of accordingly in authorised landfills or waste disposal facilities.</p>
Social Impacts	<p>Moderate Adverse</p> <p>During the construction phase of the Scheme, the disruptions to traffic, access restrictions, noise and dust generation will be a nuisance to local residents and businesses.</p>	<p>The ENVIRONMENTAL MANAGEMENT CONSTRUCTION SITE REGULATIONS OF 2007 (S.L. 435.79) should be implemented to minimise the disturbance to local residents and businesses. If deemed necessary, a traffic plan for the area should be developed to minimize the traffic impacts Triq George Borg Olivier.</p> <p>The applicant should also regularly consult the local council and residents to identify and rectify any causes of concern.</p>
	<p>Moderate Beneficial</p> <p>The redevelopment of the San Ġiljan Aquatic Sports Club will benefit members of the club, local residents and nearby business owners. The project will result in a sports facility and restaurant which</p>	N/A

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	<p>can be used all year round. This is important in helping to improve the general health and fitness levels of the nation. The increased numbers of people that will visit the facility will also help support the economy of local businesses.</p> <p>However, the project may be a nuisance to some local residents and business owners as it does not include any car parking spaces so the increased numbers of people visit the area will have to make use of the existing street parking.</p>	
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