

***Annex I Summary of the Environmental Impact Assessment process and
consultants' findings
March 2026***

1. INTRODUCTION

1.1 General Background

The proposals are within the scope of the Environmental Impact Assessment Regulations (S.L. 549.46), specifically the following criteria in Schedule I, Category II:

- Section 6.2.2.2 – *Dredging or other changes to the seabed, excluding maintenance dredging within an already existing harbour or its official fairway*); and
- Section 6.2.2.3 – *Coastal works to combat erosion and works capable of altering the coast (through the construction of, for example, breakwaters, dykes, moles, jetties, groynes, sea-walls, wave-breakers, underwater berms, and other sea defence works) not covered by Category I, excluding the maintenance and repair of such works.*

The EIA was coordinated by Adi Associates Environmental Consultants Ltd.

1.2 Description of the site and proposed development

The development, proposed by Infrastructure Malta is aimed to improve the operational and extreme wave climate within the port, especially in the outer eastern part where waves entering from an easterly direction expose the north side along Barriera Wharf to wave conditions that render it unsuitable for multi-seasonal access for all commuter services by sea.

This proposal consists of two separate but complementary interventions (Figures 1 & 2); the first (PA/08471/19 – See Figure 3) is the construction of a submerged berm and revetments offshore between St Elmo bridge and Barriera Wharf. These structures will absorb wave energy, limiting reflection into the harbour creeks and reducing wave exposure along Barriera Wharf. The second (PA/04783/20 – See Figure 4) is the creation of a new outer breakwater arm extending north of St Elmo Point. This will counteract wave penetration from the north-west, one of the most problematic directions for the harbour.

The site covers two main areas at the mouth of the Grand Harbour. The first lies offshore between St Elmo bridge, Ras l-Imgerbeb and Barriera Wharf, where the berm and revetments will be constructed. The seabed here is mainly rocky with little sediment. The second is at St Elmo Point, north of the existing breakwater, where the new outer breakwater will be anchored to a gently sloping limestone coast beneath Fort St Elmo.

The terrestrial surroundings are of considerable cultural and historical significance. Nearby sites include Fort St Elmo and its National War Museum, the Mediterranean Conference Centre, Casa Rocca Piccola, the Knights Hospitallers exhibit, the Lower Barrakka Gardens, and the Siege Bell War Memorial. The adjacent Valletta neighbourhoods of Il-Fossa, L-Arċipierku,

and Il-Camerata are primarily residential but also include small shops, restaurants, offices, churches, schools, and community facilities.

The coastline exhibits rock-cut stairs, slipways, boathouses and swimmers' ladders, reflecting long-standing human use. The waters off St Elmo Point are frequented for swimming, diving, and fishing, though the exposed nature of the site makes it less intensively used than other parts of the harbour.



Figure 1: Location of the site. Source: EIA Report, February 2025.

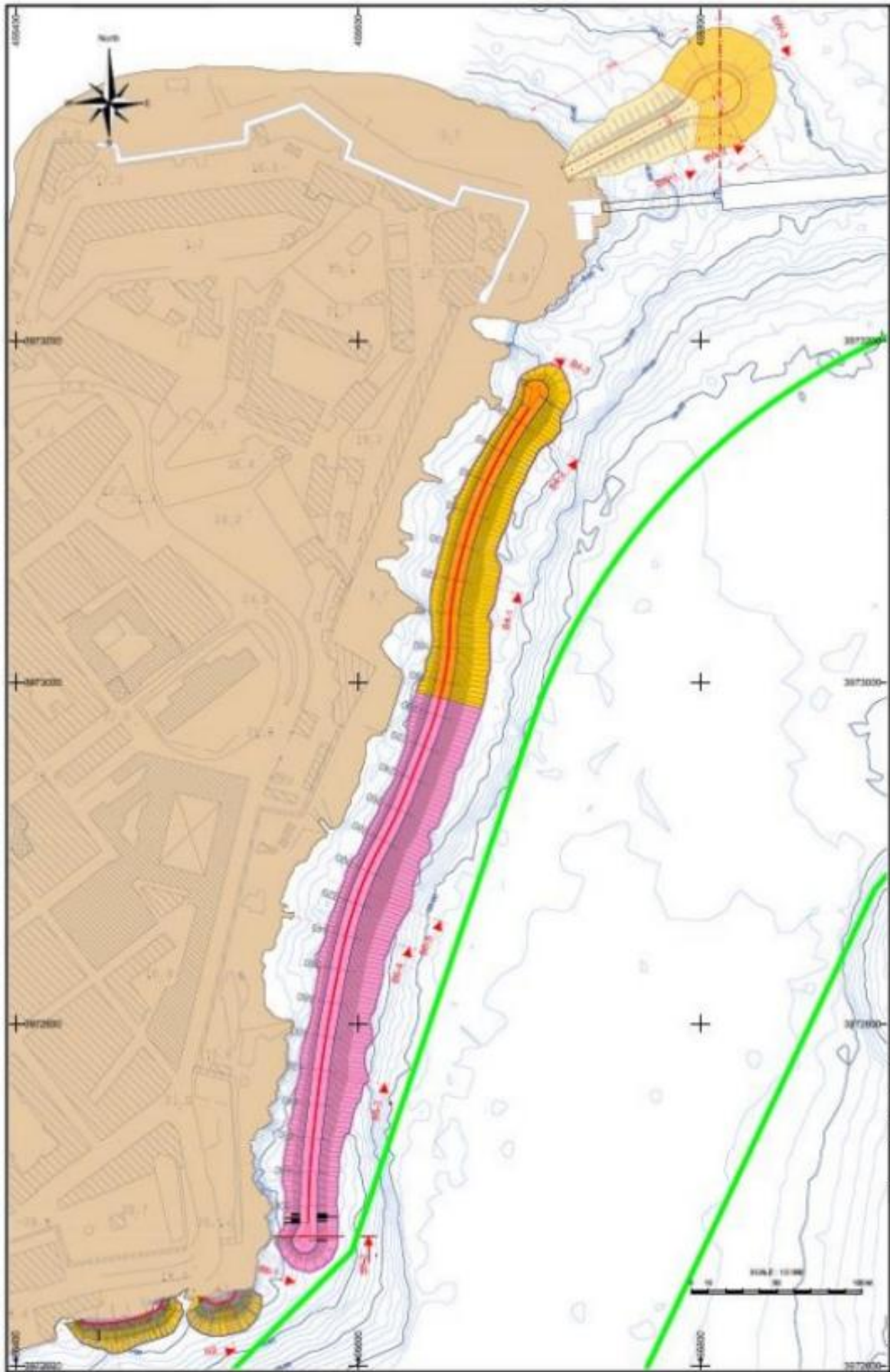


Figure 2: Proposed layout. Source: EIA Report, February 2025.



Figure 3: Proposed layout of Berm and Revetments. Source: EIA Report, February 2025.

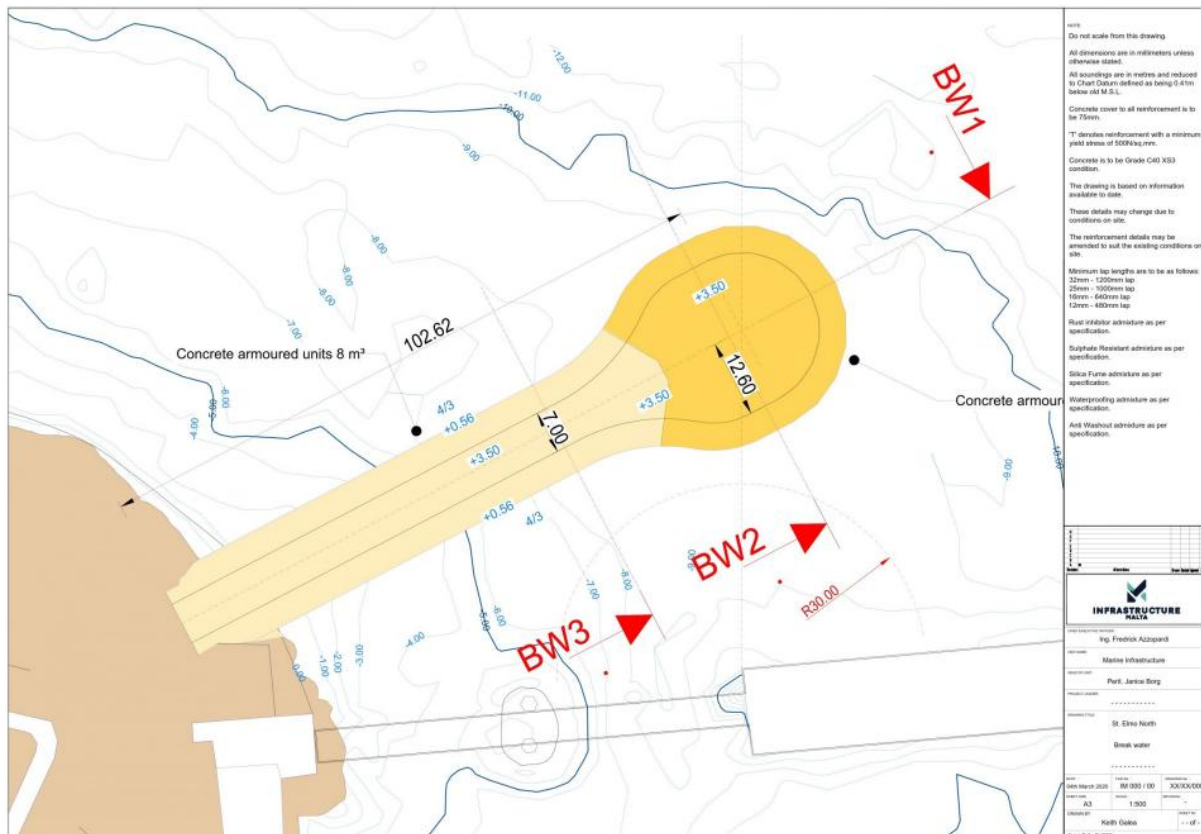


Figure 4: Proposed layout of Outer Breakwater. Source: EIA Report, February 2025.

2. EIA CONSULTATIONS

2.1 EIA Scoping

During the scoping stage, the Project Description Statement (PDS) was made available on the ERA website. A 30-day public consultation period took place between 4th August 2021 and 3rd September 2021. In addition, the following consultees were consulted via email during the consultation period:

- Planning Authority;
- Malta Resources Authority;
- Regulator for Energy and Water Services;
- Ministry for Agriculture Fisheries and Animal Rights;
- Malta Tourism Authority;
- Energy and Water Agency;
- Environmental Health Directorate;
- Occupational Health and Safety Authority;
- Civil Protection Department;
- Transport Malta;
- Superintendence of Cultural Heritage;
- Valletta Local Council; and

- *Environmental NGOs:* ACT Malta, Archaeological Society Malta, Biological Conservation Research Foundation, BirdLife Malta, Capers Malta, Centre for Sustainable Development, Din L-Art Ħelwa, Entomological Society of Malta, Environment Commission, Flimkien Għall-Ambjent Aħjar, Fondazzjoni Patrimonju Malti, Fondazzjoni Wirt Artna, Friends of the Earth, Front Ғarsien ODZ, GAIA Foundation, Għaqda Sgar Maltin, Gozo Action Group, Greenhouse Malta, International Tree Foundation, Light Pollution Awareness Group, Majjistral Action Group Foundation, Malta Bat Conservation Group, Malta Beekeepers Association, Malta Energy Efficiency and Renewable Energies Association, Malta Organic and Agriculture Movement, Malta Health Network, Malta Water Association, Malta Youth in Agriculture, Moviment Graffiti, Moviment Ғarsien Hondoq, Nature Trust Malta, Noise Abatement Society of Malta, Ramblers Association of Malta, Sharklab Malta, Sustainable Built Environment Malta, Wirt Għawdex, Youth for the Environment, Young Reporters for the Environment Malta and Żminijietna.

Within the stipulated consultation period, comments were received from Occupational Health and Safety Authority (email dated 5th August 2021); Environmental Health Directorate (email dated 31st August 2021), BirdLife Malta (email dated 2nd September 2021) and the Superintendence of Cultural Heritage (email dated 3rd September 2021). A comment on 15th August 2021 was made by a member of the public. Feedback is presented in Section 6.

The final Terms of Reference were issued on 4th November 2021.

2.2 EIA Review

The EIA Report was submitted to ERA on 27th of February 2025 and was published for a 30-day period on 28th February 2025 with the public and the following consultees:

- Planning Authority;
- Regulator for Energy and Water Services;
- Energy and Water Agency;
- Ministry for Agriculture, Fisheries and Animal Rights;
- Civil Protection Department;
- Malta Tourism Authority;
- Environmental Health Directorate;
- Transport Malta;
- Occupational Health & Safety Authority;
- Superintendent of Cultural Heritage Heritage;
- Valletta Local Council; and
- *Environmental NGOs:* ACT Malta, Archaeological Society Malta, Biological Conservation Research Foundation, BirdLife Malta, Capers, Malta, Centre for Sustainable Development, Din L-Art Ғelwa, Entomological Society of Malta,

Environment Commission, Flimkien Għall-Ambjent Aħjar, Fondazzjoni Patrimonju Malti, Fondazzjoni Wirt Artna, Friends of the Earth, Front Harsien ODZ, Għaqda Sgar Maltin, Greenhouse Malta, International Tree Foundation, Light Pollution Awareness Group, Malta Bat Conservation Group, Malta Beekeepers Association, Malta Energy Efficiency and Renewable Energies Association, Malta Organic and Agriculture Movement (MOAM), Malta Health Network, Malta Water Association, Malta Youth in Agriculture, Moviment Graffiti, Nature Trust Malta, Noise Abatement Society of Malta, Ramblers Association of Malta (RAM), Sharklab Malta, Sustainable Built Environment Malta, Youth for the Environment, Young Reporters for the Environment Malta and Żminijietna.

Notifications of the submission of the Report were published in the form of adverts in local newspapers on 3rd March 2025 by the developer. The EIA Report was also uploaded on the ERA website and circulated for internal review within ERA.

Within the stipulated consultation period, comments were received from the Planning Authority (email dated 11th March 2025); the Environmental Health Directorate (email dated 27th March 2025) and the Superintendence of Cultural Heritage (email dated 2nd April 2025).

Comments made by ERA and its consultees during the EIA review were forwarded to the EIA Coordinator and the applicant on 16th May 2025. These comments were addressed and responses are included in Section 6.2 of this document.

An addendum, along with the EIA review comments was submitted on 22nd September 2025.

3. ASSESSMENT OF ALTERNATIVES

3.1 *Alternative sites*

As outlined in the EIA Report, the proposed development focuses on enhancing the wave conditions at the entrance of the Grand Harbour; therefore, the applicant did not consider alternative locations.

3.2 *Zero Option*

If no action is taken on the site, the wave conditions at the entrance to the Grand Harbour and within the port would remain unchanged and may worsen over time due to the impacts of climate change. This could result in greater storm damage and coastal erosion along Valletta's eastern shoreline.

3.3 *Alternative layouts*

In 2017, five main options were examined. These included:

1. a berm between Ras l-Imgerbeeb and St Elmo bridge to reduce eastern wave reflections, later adapted from a visible to a submerged berm due to visual concerns;
2. an offshore berm east of the Ricasoli breakwater to counter eastern and northern waves;
3. an offshore berm at the tip of Valletta to mitigate NW–N waves entering beneath St Elmo bridge;
4. reconstruction of revetments on both sides of the St Elmo breakwater to diffuse northern and eastern wave forces; and
5. a new breakwater off Fort Ricasoli to reduce eastern wave penetration.

Modelling showed that some options, particularly Option 5, were ineffective. The main wave issues came from NE, E, and NW directions, with NW most frequent and NE/E producing higher waves. Option 1 with a revetment at Ras l-Imgerbeeb gave the best results, though later revised to protect coastal caves and reduce visual impacts. The final design replaced part of the revetment with a berm extension, retained smaller revetments, and added a new breakwater at St Elmo Point to counter NW waves.

Two alternative berm designs were evaluated during the EIA process, with the preferred design being chosen due to reliable technology and being a more proven option.

With respect to the outer breakwater, three options were considered:

- a) A rubble mound structure armoured with concrete artificial blocks;
- b) A vertical breakwater; and
- c) A composite breakwater.

Based on an assessment of both technical performance and cost considerations, the outer breakwater design selected for the project is the classical rubble mound structure. This traditional approach was judged to offer the most balanced and reliable solution, providing effective wave protection while remaining cost-efficient. As a result, it has been carried forward in the EIA as the preferred option for implementation.

4. EIA FINDINGS

The summary of the characteristics of the site, assessment of impacts, mitigation measures and residual impacts identified in the EIA Report are as follows:

4.1 Geo-environment

The Grand Harbour lies at the terminal end of a major valley system where the basins have been infilled with mud and alluvium. Its geomorphology reflects a sequence of geological events linked to the Globigerina Limestone Formation, later disrupted by two fault systems: the east–northeast to west–southwest faults and the northwest–southeast trending Magħlaq Fault system, which caused the Maltese Islands’ tilt. Streams and rivers in the post-glacial period likely carved deep valleys and creeks, later infilled with sediment.

The following are the impacts as assessed in the report:

- Extraction of resources/features is *major adverse* as c.19,000m³ of mineral resources will be excavated.
- Change in underwater geomorphology is:
 - *Major adverse* at the outer Grand Harbour area;
 - *Minor adverse* at the whole Grand Harbour area; and
 - *Not significant* at Ras l-Imgerbeb.
- Protection of coast against erosion is a *minor positive*.

The EIA report notes that the material cannot be reused for aggregate in view of its properties and will be disposed of at the offshore dumping site outside the Grand Harbour. A detailed method statement regarding the dredging and dumping of the dredged material will be submitted for further evaluation.

The residual impact regarding the extraction of resources will remain a *major adverse* impact and the residual impacts pertaining to the changes in underwater geomorphology remain a *major adverse* at the outer grand harbour area, a *minor adverse* at the whole grand harbour area and *not significant* at Ras l-Imgerbeb. In terms of the residual impact for the protection of the coast against erosion is a *minor positive*.

4.2 Marine Environment

The Grand Harbour’s seabed is generally stable, with thin sediment veneers near St Elmo’s breakwater and thicker deposits in the inner navigation channels, but no significant archaeological or hazardous features were identified via the remote sensing exercise. Hydrodynamic modelling highlighted that wave energy from the northeast can penetrate the harbour, with Barriera Wharf being the most exposed location under both operational and

storm conditions. Water and sediment analyses revealed good to excellent quality in outer areas, while inner harbour sediments contained localised contamination requiring management during dredging. The study consisted of hydrographic and geophysical surveys, subsea sediment sampling and desk studies.

The following residual impacts were assessed:

- Impacts due to changes in baseline hydromorphological, chemical and physicochemical elements:
 - *Minor adverse* throughout the construction phase; and
 - *Not significant to minor positive* throughout the operation phase.
- Impacts related to the changes in the configuration of the coast due to the construction of the marine defence structures are:
 - *Not significant* due to the berm in view that the structure will not be visible above sea level in most conditions;
 - *Minor adverse* due to the revetments as they will be installed +3.5m above mean sea level; and
 - *Major adverse* due to the breakwater in view that a new rubble mound structure at a crest height of +3.5m above mean sea level will be constructed.
- Impacts on the seabed from the construction of the defence structures are *major adverse* in view of the obliteration of the natural seabed.

Proposed mitigation measures include the use of silt/bubble curtains to contain the spread of turbid waters throughout works and the use of cutter suction dredging equipment instead of hammer and grab arrangement. The impacts from the construction of the structures themselves cannot be mitigated.

With respect to the residual impacts, only the impacts due to changes in baseline hydromorphological, chemical and physicochemical elements throughout the construction phase have changed, from *minor adverse* to *minor adverse to not significant*.

Impacts due to changes in baseline hydromorphological, chemical and physicochemical elements remained *not significant to minor positive* throughout the operation phase. Impacts due to changes in the configuration of the seabed remained as *major adverse* and impacts due to changes in the configuration of the coast have also remained *not significant* in the berm area, *minor adverse* in the revetments area and *major adverse* in the breakwater area.

4.3 Marine Biodiversity

The Area of Influence for the marine biodiversity study included a benthic survey from St Elmo Point to Ras I-Imgerbeb) and outside the breakwater and a desk study. The area hosts diverse benthic substrates and high biodiversity. The area from St Elmo Point to Ras I-Imgerbeb

harbours the richest infauna and benthic communities. Invasive species were identified in both areas of study.

The following impacts are expected:

- Loss of/damage to benthic habitats is:
 - *Not significant* in the revetment area;
 - *Minor to major adverse* in the berm area; and
 - *Minor adverse* in the breakwater area.
- Damage or disturbance to benthic habitats due to turbidity is a *minor adverse*;
- Damage or disturbance to benthic habitats due to deployment of construction vessels is *not significant to major adverse*;
- Impacts on marine species in terms of availability of new habitat, food, shelter, etc.:
 - *minor to major adverse* in the short term;
 - *neutral* in the medium term; and
 - *minor positive* in the long term.
- Impacts on marine species in terms of attraction of new species and changes in ecological relationships is a *minor adverse*; and
- Impacts from changes in waves and hydrodynamic conditions is *not significant to minor positive*.

As mitigation measures, the EIA Report identified good construction practices, keeping footprint to the minimum required, supervision throughout works and utilisation of silt curtain. The submission of a construction management plan is also recommended.

The residual impact for loss of/damage to benthic habitats is *not significant* when it comes to revetments, *minor to major adverse* (short term) and *minor adverse* (long term) in the berm area and *not significant to minor adverse* (short term) to not significant (long term) in the breakwater area.

The EIA report states that the residual impact for damage or disturbance to benthic habitats due to turbidity is *minor to not significant adverse* as it depends on the possibility of deploying mitigation measures. While the damage or disturbance to benthic habitats due to the deployment of construction phase vessels is *not significant to minor adverse*.

The residual impact on marine species in terms of availability of new habitat, food, shelter, etc is deemed to be *neutral to minor positive* while both the residual impacts for “impacts on marine species in terms of attraction of new species” and “changes in ecological relationships and impacts from changes in waves and hydrodynamic conditions” are *not significant to minor positive*.

4.4 Archaeology and Cultural Heritage

The Area of influence for the cultural heritage study includes the site area, both of the Grand Harbour and Marsamxett harbour, south up to Paola, west to Hamrun and north to Sliema. The study consisted of the identification of any of archaeological and cultural heritage features within the area of influence, a desktop study, remote sensing surveys. No marine archaeological findings were recorded from St Elmo's Bridge to Ras l-Imgerbeb. The site is within an Area of High Landscape Value due to its location within the Grand Harbour and it is also adjacent to a UNESCO listed World Heritage City in Valletta.

The following impacts are expected:

- Loss of or damage to artefacts or deposits through the construction of the marine defence structures is *not significant*.
- Disturbance to artefacts or deposits from sediment scour or accumulation is *not significant*.
- Impacts on the Cultural Landscape of Valletta is:
 - *Not significant* due to the berm; and
 - *Major adverse* due to the revetments and breakwater.
- Impacts on the World Heritage status of Valletta due to the berm and revetments is:
 - *Not significant* to the World Heritage City status and the Outstanding Universal Value;
 - *Not significant* to the wider context.
- Impacts on the World Heritage status of Valletta due to the outer breakwater is:
 - *Not significant to minor adverse* the World Heritage City status and the Outstanding Universal Value;
 - *Not significant to moderate adverse* to the wider context.

No features were identified on the seabed therefore no mitigation measures are proposed in this regard. Archaeological monitoring is being proposed throughout the dredging works in order to help mitigate any impact on undiscovered archaeological artefacts.

Since the main impact on cultural heritage is the visual intrusion of the outer breakwater, the consultants state that a redesign of the breakwater could reduce this impact. The effectiveness, performance and cost of the redesign would need to be assessed and compared with the current proposal.

Redesigning the outer breakwater to a lower crest height or replacing it with a submerged berm would still result in a residual impact of *minor to major* adverse on the Cultural Landscape of Valletta due to the breakwater. It would also result in a *not significant to minor adverse* impact on the World Heritage status of Valletta, because the breakwater would remain visible above sea level.

4.5 Landscape and Visual Amenity

A desk study and a field survey were carried out to determine the landscape baseline conditions. In terms of the Visual Amenity Assessment nine viewpoints were identified to represent short, medium and long-distance views and were captured via the use of an Unmanned Aerial Vehicle drone (for viewpoint 9) and standard photography (Figures 6-14):

- Viewpoint 1: Fort St Angelo, Birgu (looking northeast)
- Viewpoint 2: Gardjola, L-Isla (looking northeast)
- Viewpoint 3: Bighi, Kalkara (looking northwest)
- Viewpoint 4: Bighi, Kalkara (looking north)
- Viewpoint 5: Fort Ricasoli, Kalkara (looking northwest)
- Viewpoint 6: Tigné Point, Sliema (looking southeast)
- Viewpoint 7: Manoel Island, Gzira (looking east)
- Viewpoint 8: Fort Ricasoli, Kalkara (looking west)
- Viewpoint 9: Offshore (looking southwest)

With regards to Visual Amenity the residual impacts are listed in the Table 1, below.

Table 1: Visual Amenity residual impacts.

Viewpoints	Berm	Revetments	Breakwater	Cumulative
Viewpoint 1	Not significant to adverse	Minor to moderate adverse	Not significant to major adverse	Moderate to Major adverse
Viewpoint 2	Not significant to adverse	Minor to moderate adverse	Not significant to adverse	Minor to moderate adverse
Viewpoint 3	Not significant to adverse	Minor to moderate adverse	Not significant to adverse	Minor to moderate adverse
Viewpoint 4	Not significant to adverse	Not significant to adverse	Not significant to moderate adverse	Minor to moderate adverse
Viewpoint 5	Not significant to adverse	Not significant to adverse	Not significant to major adverse	Moderate to major adverse
Viewpoint 6	Not significant to adverse	Not significant to adverse	Not significant to major adverse	Moderate to major adverse
Viewpoint 7	Not significant to adverse	Not significant to adverse	Not significant to minor adverse	Not significant to minor adverse
Viewpoint 8	Not significant to adverse	Minor to moderate adverse	Not significant to adverse	Minor to moderate adverse
Viewpoint 9	Not significant to adverse	Not significant to minor adverse	Minor to major adverse	Moderate adverse

With regards to the Local Landscape Tract (LLT) the residual impacts are as following:

- LLT: Valletta:
 - *Not significant* due to the berm;
 - *Not significant to minor* due to the revetments; and
 - *Not significant to major* due to the breakwater.
- LLT: The Three Cities:
 - *Not significant* due to the berm and revetments; and
 - *Not significant to minor adverse* due to the breakwater.
- LLT: Tigné Peninsula
 - *Not significant* due to the berm and revetments; and
 - *Not significant to minor adverse* due to the breakwater
- LLT: Manoel Island:
 - *Not significant* due to the berm and revetments; and
 - *Not significant to minor adverse* due to the breakwater

The EIA consultants propose the redesign of the outer breakwater by either lowering the height of the breakwater or by substituting it with a submerged berm structure. The EIA Report also states that should the redesign of the outer breakwater not be possible, the impacts can be mitigated by choosing a colour for the revetments and the outer breakwater that will better match the colour of the natural rock, bastions and stonework of the existing structures/features on site.



Figure 5: Visual showing from viewpoint 1, Fort St Angelo, Birgu looking northeast. Source, EIA Report, February 2025.



Figure 6: Visual showing from viewpoint 2, Gardjola, L-Isla looking northeast. Source, EIA Report, February 2025.



Figure 7: Visual showing from viewpoint 3, Bighi, Kalkara looking northwest. Source, EIA Report, February 2025.



Figure 8: Visual showing from viewpoint 4, Bighi, Kalkara looking north. Source, EIA Report February 2025.



Figure 9: Visual showing from viewpoint 5, Fort Ricasoli, Kalkara looking northwest. Source, EIA Report, February 2025.



Figure 10: Visual showing from viewpoint 6, Tigné Point, Sliema looking southeast. Source, EIA Report, February 2025.



Figure 11: Visual showing from viewpoint 7, Manoel Island, Gzira looking east. Source, EIA Report, February 2025.



Figure 12: Visual showing from viewpoint 8, Fort Ricasoli, Kalkara looking west. Source, EIA Report, February 2025.



Figure 13: Visual showing from viewpoint 9, Offshore looking southwest. Source, EIA Report, February 2025.

5. Summary of Residual Impacts

The EIA Report identified significant residual impacts on:

- Geo-environment:
 - due to extraction of c.19,000 mineral resources (berm c.13,000m³; revetments c.2,244m³; outer breakwater c.4,000m³); and
 - change in underwater geomorphology in the outer Grand Harbour area.
- Marine environment:
 - changes in the configuration of the coast due to the breakwater; and
 - changes in the configuration of the seabed due to the interventions.
- Marine biodiversity in terms of the loss or damage to benthic habitats mainly relating to algal species such as *Cystoseira* sp., *Dictyopteris polypodioides* and *Padina pavonica* due to the construction of the berm will be a major adverse in the short term however it will shift to minor in the long term due to the berm providing a new space for colonisation and possible regrowth;
- Cultural Heritage due to the impacts on the cultural landscape of Valletta via the construction of the revetments and the outer breakwater;
- Landscape character in terms of change in land use for 'the Local Landscape Tract: Valletta' due to the outer breakwater; and
- Visual Amenity:
 - due to the construction of the outer breakwater from viewpoints 1 – Fort St. Angelo, 5 – Fort Ricasoli (looking northwest), 6 – Tigné Point and 9 – Simulation of cruise passenger liner approaching the Grand Harbour (looking northwest); and
 - cumulative impact from viewpoints 1 – Fort St. Angelo, 5 – Fort Ricasoli (looking northwest) and 6 – Tigné Point.

The level of significance for the residual impacts pertaining to cultural heritage, landscape character and visual amenity will depend heavily on the design and mitigation measures that are implemented.

6. COMMENTS RECEIVED DURING THE EIA PROCESS

6.1. Comments received during the EIA scoping stage (4th August 2021 – 3rd September 2021), all comments have been acknowledged by ERA

A. Occupational Health & Safety Authority (email dated 5th August 2021)

Please find below OHSA's comments. The employer at this place of work shall ensure that:

- A. All work activities comply with the requirements of Act XXVII of 2000 and all relevant OHS regulations;
- B. One or more persons having the necessary aptitude, capabilities, competence and training shall be designated to assist the employer in undertaking the measures which are required to be taken in relation to the protection of occupational health and safety and the prevention and control of occupational risks, as per LN 36 / 2003;
- C. ALL work activities falling under one's responsibilities are covered by a suitable, sufficient and systematic risk assessment carried out as per LN 36 / 2003 and other relevant OHS regulations. Without prejudice to the legal obligations of an employer, this risk assessment shall, inter alia, refer to:
 - (i) The measures to be taken against risks from manual handling of loads as per LN 35 / 2003;
 - (ii) Protection against exposure to chemical agents at work as per LN 227 / 2003 including, but not limited to measures against inhalable dusts and metals;
 - (iii) The measures to protect workers from risks from exposure to the sun and adverse weather conditions;
 - (iv) The required emergency prevention, preparedness and response arrangements including first aid and firefighting measures;
 - (v) Protection against physical agents at work including but not limited to risks from noise and vibration;
 - (vi) Protection of workers from risks of electrocution as required by LN 44 of 2002;
 - (vii) Personal protective clothing / equipment to be used by workers;
 - (viii) Suitable welfare facilities to be made available for staff;
 - (ix) The required health and, or safety signs and;
 - (x) Training and competence of workers to perform the assigned tasks;

This risk assessment shall also make reference to the necessary health surveillance that is required wherever there is revealed an identifiable occupational disease or adverse health condition related to the work involved OR the likelihood that a disease or condition may occur under the particular conditions of work, as per LN 36 / 2003 and other applicable OHS regulations.

- D. All work equipment complies with the relevant provisions of LN 293 / 2016, including where applicable, by ensuring that work equipment is duly examined by a competent person and a report of such examination is kept by the employer and (where applicable) also sent to OHSA and;
- E. Furthermore, all construction related works falling under the applicability of LN 88 / 2018, shall be conducted in compliance with the provisions of these regulations.

B. Member of the Public (email dated 15th August 2021)

Please find my written comments on matters I wish to see included in the Terms of Reference, as required integral components of the EIA:

UN Sustainable Development Goals

The TOR must ensure that the EIA fully assesses the impact of the proposed project on the UN Sustainable Development Goals defined in 2015, to be achieved by 2030.

SDG 11: Sustainable Cities and Communities is particularly relevant. The following dimensions will need particularly careful scrutiny in the EIA:

- Bathing Water Quality

Bathing water quality is a focus in the Indicators for European cities to assess and monitor the UN Sustainable Development Goals (SDGs) copublished by the European Environment Agency in 2020, and which includes the following indicators as examples of best practice under the aspect of Urban Water:

- Demonstrating that all non-industrial water bodies are swimmable and fishable during 90% of days in the past year
- Demonstrating a steady reduction in water closures of at least 2% annually towards achieving 90% of days being swimmable and fishable
- Contribution of surface water features to the attractiveness of the city and wellbeing of its inhabitants
- Actions to improve the quality of surface waters in city area and beyond

- Projects to reconnect citizens with waterbodies e.g. creation of wetland parks, improving water quality to allow for swimming. The shoreline from the Siege Bell Memorial to Fort Saint Elmo represents the only presently swimmable area of the Grand Harbour presently available to the Valletta community. It is therefore an important component of the quality of life the community. The proposals described in the PDS appear to pose a threat to bathing water quality and swimmability in this area for at least three reasons:
- The proposed breakwater at Fort Saint Elmo is likely to have a direct negative impact on the rate of replacement of water in the harbour, resulting in higher concentrations of toxins, and therefore a reduction in bathing water quality;
- The proposed berm will disrupt and irreversible change this shoreline, making it much less suitable for swimming;
- The proposal appears to be part of a wider vision aimed at further intensification of use of the harbour by shipping, which appears to be in conflict with a vision for the harbour which makes its shorelines more livable and its seas more swimmable.

It is therefore strongly recommended that the TOR ensures that the scope of the EIA will include a Health Impact Assessment that includes a thorough and unequivocal study of the short, medium and long-term implications of the proposed works on bathing water quality.

- Social Impact Assessment

A closely related concern is the social impact of the proposed project. The shoreline in question is one of the few areas available to Valletta residents to moor or land a small boat. This represents an additional important element in the quality of life and the recreational and social fabric of the city.

It is therefore strongly recommended that the TOR ensures that the scope of the EIA will include thorough Social Impact Assessment, incorporating a genuine consultation process with the local communities and interest groups that would be impacted.

World Heritage Considerations

The works outlined in the PDS have a direct and significant impact on the shoreline of Valletta, which is a UNESCO World Heritage Property. For this reason, Malta is required, in terms of paragraph 172 of the Operational Guidelines of the World Heritage Convention, to seek the views of the UNESCO World Heritage Centre on the impact of the project at this early stage, before any commitments are made.

It is therefore strongly recommended that the TOR requires the EIA to undertake the required consultation with the UNESCO World Heritage Centre, and to incorporate its outcome in the EIA report.

Cultural Heritage Impacts

In addition the World Heritage considerations outlined above, the proposed works would have a significant impact on a number of features which fall within the scope of the Cultural Heritage Act, some of which are listed below (this is not an exhaustive list).

- Geological Features

The shoreline that would be impacted by the proposed works is of considerable geological interest. The area below the Siege Bell Memorial is characterised by a large cave with two interconnected tubes which have formed along two parallel fault-planes, with an opening to the harbour at either end. Although not scheduled to date, this cave system certainly merits scheduling.

- Industrial Archaeology

The shoreline that would be impacted by the proposed works is characterised by a concentration of features of great industrial archaeological interest, which although not scheduled to date, certainly merit scheduling. These include an extensive infrastructure which was integral to the proper functioning of the historic breakwater that as built in the early twentieth century. A series of wave-traps were cut into the globigerina limestone in order to help reduce reflection of waves into the harbour during a north-westerly storm. The rock-cut wave traps are complemented by large blocks laid on the seabed to help absorb waves entering from the main entrance of the harbour.

It is unclear if the performance of these wave traps has been scientifically measured as part of the studies on which the recommendation for a berm has been made. Nor is it clear if there is yet any scientific study in how the berm may interfere with the performance of the wave traps, and an objective comparison which gives a true picture of what the net improvement in wave climate would be.

It is therefore strongly recommended that the TOR requires the EIA to conduct a thorough Cultural Heritage Impact Assessment, which includes a thorough survey of the documented as well as unknown cultural heritage features in the area, on land and underwater, ranging from geological, to architectural or industrial heritage.

It is further recommended that the TOR requires the EIA not to take the recommendations for the breakwater and the berm at face value, but to ensure that there are thorough scientific studies of the performance of the existing historic wave mitigation and water replacement measures, and the impact of the proposed works on their effectiveness, in order to have a clear base line against which to evaluate the usefulness or otherwise of the proposed works.

C. Environmental Health Directorate (email dated 31st August 2021)

With reference to your e-mail dated August 2021 regarding subject indicated in caption and following review of the Project Description Statement, please be informed that we would like to have the following issues related to public health included in the terms of reference for this proposed development:

1. Air pollution impacts assessment
 - Emissions from heavy vehicles
 - Transports, storage and handling of waste materials
 - Operational traffic
 - And their effects on the surrounding.

Necessary monitoring and mitigating measures must be clearly stated.

2. Noise and vibration impacts including construction activities, operational traffic and from other operational activities. Required monitoring and mitigating measures must be clearly stated
3. Traffic Impact Assessment and mitigation measures.
4. Light pollution impact and mitigation measures.
5. A Waste Management Plan shall be implanted which should include the impacts from waste generated during the construction (dredging and construction material). Hence the importance of a detailed Construction and Waste Management Plan, which should be enforced by the site project manager. Details of monitoring and feedback mechanisms must be clearly stated and adhered to.
6. Adverse impacts caused by heavy machinery used both on land and sea for this project. Necessary monitoring and mitigation measures are to be clearly stated and adhered to. Included the method used for the refueling of said machinery.
7. Adverse impacts caused by unsafe, inadequate storage and improper handling of raw materials on site and from potential accidental spillage of hazardous fluids, fuel and lubricants. Necessary monitoring and mitigation measures are to be clearly stated and adhered to.
8. Although in the area of influence of the scheme there are no official bathing sites, there are sites in the vicinity which are used for swimming. Hence monitoring and mitigation measures during construction phase are to be clearly stated.
9. Clearly identify the measures and mitigation measures to be taken in case of rain, heavy winds and storms that may affect the works and might cause undesired spillage at sea and/ or land during the project.
10. Clearly identify the hydrodynamics, and sea water circulation within the harbor. The impacts and mitigation measures are to be clearly stated.
11. Details of proposed sanitary facilities for workers.
12. The overall cumulative impacts of the development on the general public.

The EIA should also include a detailed description of the measures envisaged to prevent, minimise and where possible offset any significant temporary or permanent adverse health effects and nuisances on the Area of Influence and the general public. This should include details regarding monitoring programmes that may be proposed. The EIA should also identify, describe and discuss in detail the possible health effects of any residual impacts that cannot be mitigated.

D. BirdLife (email dated 2nd September 2021)

BirdLife Malta has reviewed the documents presented for the public consultation with regard to the Construction of a berm and revetment including dredging at Valletta Grand Harbour & Construction of new Breakwater arm beneath St. Elmo to offer protection to the Grand Harbour during North Westerly storms, and would like to provide our suggestions to be considered for the Terms of Reference.

Firstly, we would like to emphasize that the Grand Harbour Local Plan identifies St Elmo Point as a Site of Scientific Importance (Geology) and an Area of Ecological Importance. The area of Grand Harbour overall is an Area of High Landscape Value, while Valletta is listed as a UNESCO World Heritage Site and all of it, including the waterfront zones, is designated as an Urban Conservation Area. The Local Plan also states that in the areas indicated as Valleys, Areas of Ecological / Geological Importance and Sites of Scientific Importance, “development of any description which could prejudice the unique natural characteristics of the areas or adversely affect individual sites will not be permitted”. Taking into account all mentioned, a thorough Environmental Impact Assessment should be undertaken which shall include the following considerations:

- during both the construction and operation phases, the project is expected to contribute substantially to the light pollution in the area. The impact of an additional source of light in the area which is already heavily polluted needs to be closely analysed, and feasible mitigation measures should be offered to minimise an adverse impact on biodiversity;
- as it is said in the PDS, all works will be carried out from the marine side, which means the involvement of heavy vehicles, like barges. In this case, there is a risk of oil spill, increase in turbidity and contamination of the surface water;
- the impact on water quality should be evaluated as well, specifically the contamination of water during excavation due to the release of hazardous substances, like Mercury and PAHs presence of which on the site is mentioned in the PDS;
- the project will generate a significant amount of waste - about 17,000m³ of excavated rocks and other waste which will be dumped offshore. Considering the presence of contaminants found on the site, as well as the volume of waste, there is a need to work out a proper waste Management Plan and relevant mitigation measures;
- a proper assessment of noise and vibration generated during the construction phase should be included into the EIA;
- given the nature of the project, the assessment of environmental impacts associated with the waves hydrodynamics should be undertaken;
- the construction phase of the project will include the excavation and dredging of a seabed (about 14,000 m³), therefore the assessment of the impact on geomorphology shall be carried out;
- the impact on the disturbed marine habitat, including marine flora and fauna species present on site must be assessed, given that the site hosts a rich benthic community.

E. Superintendence of Cultural Heritage (email dated 3rd September 2021)

In response to your email of 4th August 2021, please find recommended Terms of Reference for a Cultural Heritage Assessment i.c.w. the Environmental Impact Assessment (EIA).

1.0 Preamble

The proposed project would involve intensive development over a large area. Potential impacts may occur within the footprint of the project, in the immediate environs, and along access routes in the course of works. Potential impacts may include direct and immediate material impacts, as well as subsequent impacts that might arise from the modification of the existing situation.

More specifically, the proposed development will impact directly on the Grand Harbour and its approaches. The Superintendence immediately draws attention to the very high cultural heritage value of this area noting that the Grand Harbour is identified by the Planning Authority as an Area of High Landscape Value, immediately congruent to Valletta and the Three Cities.

The Superintendence draws attention to the status of Valletta which is inscribed on UNESCO's World Heritage list. The Grand Harbour itself falls within the buffer zone drawn up to protect the cultural heritage value of this World Heritage site. The Grand Harbour, defined even by its spatial and visual relation to Valletta and the Three Cities, is a cultural landscape of very high value achieving an iconic status that defines the national cultural identity. Perceptions and appreciation of the Grand Harbour as a visual and spatial experience are of very high value that warrants protection at the very highest levels.

The Superintendence further notes that the littoral of Valletta along which these works are proposed is characterised by a wealth of cultural heritage assets including scheduled fortifications of very great cultural heritage value and features specifically associated with maritime activity.

These features also include British period architectural and engineering works related to the defence of the harbour. These features would include gun and searchlight emplacements, and features related to the Boom Defence System, dating to the Second World War.

Other very significant features include historical civil engineering works, specifically associated with wave climate and its control, including the breakwaters constructed in the early twentieth century and concomitant features such as spending beaches cut into the bedrock, and large boulders/blocks laid on the seabed and also intended to control wave activity.

The works as proposed will impacted directly on tracts of the seabed and may impact on archaeological remains that may survive on or within the seabed. Such remains may included features related to shipwrecks or to material lost or jettisoned at sea.

2.0 Scope and Definitions of the EIA

For the purposes of this document, cultural heritage is defined by Article 2 of the Cultural Heritage Act (2019). This includes movable or immovable objects of artistic, architectural, historical, archaeological, ethnographic, palaeontological and geological importance.

2.1 The study area will include:

- a) The total footprint of the proposed project including proposed installations at sea
- b) A 500 metre stretch along the littoral away from the proposed works.

2.2 In the context of this particular application, cultural heritage considerations may include:

- Perceptions and legibility of the Grand Harbour, Valletta and the Three Cities
- Features of archaeological value and potential, including known and unknown underwater features present on or within the seabed
- Military and civil architecture from the Knights period to British period
- Civil engineering works related to coastal and maritime activity
- Vernacular structures, related even to traditional maritime or coastal activity
- Distinguished buildings or gardens
- Features related to traditional maritime or coastal activity, such as saltpans, boat houses and mooring points

The above cultural heritage definitions and considerations are not to be considered as exhaustive. The EIA must consider all other forms of cultural heritage, both known and unknown.

2.3 The Environmental Impact assessment will:

- Describe the Cultural Heritage assets within the study area
- Analyse the cultural heritage features within the context of the cultural landscape
- Assess the physical, spatial and visual impacts of the proposed development on the cultural heritage assets
- Propose corrective measures for the protection of the cultural resources.

3.0 Methodology In quantifying the cultural heritage assets within the study area, and assessing the impacts of the proposed development, the EIA will undertake:

- Description and assessment of the context and of cultural heritage properties;
- Desktop and archival research along the footprint and extending along the littoral including fortifications, civil engineering works including breakwater and Fort St. Elmo, and from the Great Siege memorial under Lower Barrakka Gardens;
- Given the location of the proposed works, data capture must include visual inspection of the seabed and sub-bottom profiling, as may be necessary. Such inspection and profiling is to be within the footprint of proposed interventions and to a distance of 50 meters from such interventions;

All fieldwork is to be authorised by the Superintendence of Cultural Heritage as defined below under point 4;

- Consultations with any relevant bodies, including the Superintendence of Cultural Heritage, Heritage Malta, the University of Malta, NGOs and Local Councils;
- Compilation of an inventory of the cultural heritage assets identified within the study area. The features of cultural heritage are to be described and plotted with grid references, on Data Capture Sheets, the design of which should be approved in advance by the Superintendence of Cultural Heritage. The Data Capture Sheets will be presented as an appendix to the EIA. The analysis of the features will be included in the main report;
- A cultural heritage Risk Assessment Map examining the various impacts of the proposed project is to be included in the EIA;
- In view of the very high landscape value of the proposed development site, the study is to include visual impact assessment including the compilation of photomontages of the proposed development in relation to the harbour and the scheduled city of Valletta.

Viewpoints are to be at various locations within the harbour area, including the existing breakwaters, Fort St Elmo, the Lower Barracca gardens, various points on the littoral of Valletta and from maritime approaches to the Grand Harbour.

4.0 Authorisation by the Superintendence of Cultural Heritage

As per Cultural Heritage Act 2019, any form of investigation or prospection required for the identification of cultural heritage (including excavation, field walking, topographic survey and remote sensing) may only be undertaken by the Superintendence of Cultural Heritage or with its written approval.

6.2 Comments received during the EIA Review (From 2nd March 2025 – 2nd April 2025)

F. Planning Authority (email dated 11th March 2025)

<u>Comments</u>	<u>Coordinator's reply (28/05/2025)</u>
The Planning Authority has no comments on the Environmental Impact Assessment pertaining to PA 08471/19 and PA 04783/20. The conclusions of the EIA assessment will be taken into consideration once these are forwarded to the Planning Authority.	Noted

G. Environmental Health Directorate (email dated 27th March 2025)

<u>Comments</u>	<u>Coordinator's reply (28/05/2025)</u>
<p>With reference to environmental impact assessment and appropriate assessments dated March 2024 regarding subject indicated in caption, please be informed that the Environmental Health Directorate (EHD) would like to submit the following comments/recommendations regarding this proposal:</p> <p>EHD Comments and recommendations:</p> <p>Dredging Works and Construction Phase</p> <p>Should this proposal be accepted, the applicant is to adopt best practice methods together with good site practices and is to ensure compliance with Environmental Management Construction Site Regulation during the construction phase. The applicant is to also implement all proposed mitigation measures so as to cause least nuisance and mitigate adverse air, (for dust dispersal and emissions from vehicles and machinery), noise and vibration impacts on sensitive receptors in the Area of Influence and on the general public. Such measures highlight the importance of the drawing up and the implementation of a Construction Management Plan, CMP, to ensure adherence to proper site management practise so as to address sea water pollution and to mitigate other adverse construction impacts, including construction traffic impacts and any other measures related to public health. The CMP shall include, as indicated in the EIA, the Dredging Management Plan to address all impacts that will arise from such activity. Monitoring of construction works is also highly recommended in order to ensure the implementation of all necessary mitigation measures and adherence to work practices throughout all phases of the project. Although the proposed project does not interfere with any official bathing site, measures must still be taken in order to preserve the sea water quality. Any silt curtain used is to be fixed to the ground in order to prevent the propagation of dredging generated particles into open water. If the use of a silt curtains is not approved, adequate alternative measures should be implemented.</p> <p>Safe and proper handling of raw materials on site should be ensured in order to reduce the risk of spillage that may lead to the contamination of the area of influence and surrounding waters. Good practices and adequate preventive measures are to be taken for any accidental spillage of construction material and/or excavation waste, hazardous fluids, and fuel and lubricants, the latter which is to be well managed and adequately stored.</p> <p>Waste Management</p> <p>A waste management strategy should be adopted and implemented during the construction phases as to ensure that all generated waste streams are well contained, separated, and disposed of safely through the appropriate facilities and according to the necessary permits/licenses. With regards to removal and disposal of any hazardous/ and non-hazardous waste, adherence to regulatory codes and procedures and due diligence is important in view of the health and safety and any adverse impacts on nearby sensitive receptors.</p> <p>Generated waste, cleaning chemicals, etc. from any temporary sanitary facilities for on-site workers should be properly disposed of. Temporary sanitary facilities are to be supplied with water for human consumption.</p> <p>Air, Noise & Vibration Pollution</p>	<p>Noted</p> <p>Noted</p>

<p>All necessary mitigation measures are to be implemented during the construction phase to reduce the level of air pollution, noise and vibrations affecting any sensitive receptors in the area.</p>	Noted
<p>Traffic Pollution</p> <p>Within the report it is stated that impacts on vehicular traffic is expected to be low due to the majority of work being conduction on the marine-side of the shore however, adequate traffic management measures should be implemented to ensure minimal disruption.</p> <p>Offshore vehicles and construction equipment are to be in a good state of repair. At no time any chemicals, fuels, lubricants, and any other anthropogenic material is to end in the sea during the transportation of any construction material. If any such material reaches the sea, the responsible person is to take necessary action immediately.</p>	Noted
<p>Fuel Storage</p> <p>Any fuels to be stored on site must be placed in a sealed and leak-proof container in order to minimise the risk of contaminations through leakages into the underlying surface. Contingency plan should be in place in the event of spillage of any fuels or hazardous material into the sea or surrounding areas.</p>	Noted
<p>Conclusion</p> <p>All proposed mitigation measures regarding adverse impacts arising from this development during the construction and operation phase are to be implemented by the applicant to mitigate any significant adverse health effects and nuisances on sensitive receptors in the area of influence and to the general public. The possible health effects of any residual impacts that cannot be mitigated and the overall cumulative impacts should also be taken into consideration.</p> <p>Moreover, any other unpredicted impacts and nuisances which may arise from this development and that may have a significant adverse effect on public health are to be immediately addressed by the applicant and the necessary mitigation measures taken.</p> <p>Complaints lodged by the public regarding any adverse impacts/nuisances should be immediately addressed by the applicant. All complaints lodged and actions taken are to be recorded and such records are to be readily available to the Competent Authorities when requested.</p> <p>A pollution incident control plan should also be in place. Records of all pollution incidents, especially regarding potential pollution of the surrounding environment, are also to be kept and reported to the respective authorities accordingly.</p> <p>Regarding any future plans for Scheme decommissioning, a full decommissioning plan should be prepared for approval by the relevant competent authorities.</p>	<p>Noted</p> <p>Noted</p> <p>Noted</p> <p>Noted</p>

H. Superintendence of Cultural Heritage (email dated 2nd April 2025)

Comments	Coordinator's reply (28/05/2025)
<p>Proposal The proposal is for the construction of a berm and revetment (including dredging) at Valletta Grand Harbour and the construction of a new Breakwater arm beneath St. Elmo to offer protection to the Grand Harbour during North Westerly storms</p> <p>The Scheme is entirely marine based and located within a highly culturally and visually sensitive area across three sites along the Sciberras Peninsula, namely:</p> <ul style="list-style-type: none"> • A berm that stretches from St Elmo Point to the northern side of Mgerbeeb Point; • Two revetments located on the southern side of Mgerbeeb Point close to Barriera Wharf; and • A new breakwater at St Elmo Point, located outside the current St Elmo breakwater. <p>The proposal has undergone consideration and amendment reflecting engineering and hydrodynamic studies and is deemed to be the most effective solution to achieve the intended level of protection.</p> <p>Cultural Heritage Context</p> <p>The proposed works are set within the historically significant Grand Harbour and the city of Valletta, a designated UNESCO World Heritage Site. This location is distinguished by a rich tapestry of historical and architectural elements, including the British-period breakwater, the Knights' period fortifications, and various heritage features along the foreshore. Among these are the Boom Defence and searchlight installation, both linked to historical defence against enemy action, as well as rock-cut spending beaches designed to mitigate wave action.</p> <p>Furthermore, the harbour itself holds substantial archaeological potential, with the possibility of significant remains and deposits that reflect its long and evolving history of coastal and maritime activity.</p> <p>The cultural significance of this context is formally acknowledged through various planning mechanisms designed to identify, protect, and preserve these invaluable heritage assets. These protective mechanisms include:</p> <ul style="list-style-type: none"> • Area of High Landscape Value of the Harbour Fortifications (G.N. 133 of 2001) • Grade 1 Military Bastions, including Bastions Is-Sur Ta Santa Barbara, Bastions Is-Sur t'Isfel ta' Castille, Bastions Is-Sur Ta' San Lazzru, Bastions Is-Sur Ta' Abercrombie • Grade 1 Grand Harbour Boom Defence and Grand Harbour Breakwater (G.N. 276 of 2008) <p>Report on Cultural Heritage</p> <p>The Superintendence has assessed the data gathered and compiled in the reports entitled EIA Report, EIA technical appendices and the Non-Technical Summary (Final Versions).</p> <p>It should be noted that beyond the independent studies and analysis, the Environmental Impact Assessment (EIA) makes reference to the findings of the Heritage Impact Assessment (HIA) carried out in the light of the UNESCO World Heritage Status of Valletta and assessing potential impact on its Outstanding Universal Values (OUV).</p> <p>EIA Report and Non-technical Summary (Report on Cultural Heritage)</p> <p>The EIA's report on cultural heritage refers to the following potential impacts:</p> <p>a. Loss of or damage to artefacts or deposits through the construction of the marine defence structures - remote sensing surveys found no cultural heritage targets within the Area of Study (AoS) from St. Elmo's Bridge to Mgerbeeb Point. This absence is likely due to extensive dredging and other activities, including the creation British-built submerged berm/spending beach. Combined with the lack of seabed sediments, this suggests the Scheme's impact through artifact or deposit loss is minimal.</p>	<p>All comments noted.</p>

<p>b. Disturbance to artefacts or deposits from sediment scour or accumulation - Since the remote sensing survey recorded no features and the Scheme is largely on bedrock (with some required dredging), no immediate loss or damage to archaeological artifacts is expected. Additionally, the lack of sediment and site seabed profile suggest minimal impact from sediment scour or accumulation as a result of works. The impact is therefore not considered significant.</p> <p>c. Impacts on the Cultural Landscape of Valletta- The EIA reports that the insertion of defence structures in the Grand Harbour will have varying effects on Valletta's cultural landscape. The submerged berm will generally remain unseen, except for navigational markers. In rare cases, such as during storms or extreme low tide, it may become briefly visible above sea level. Given its location in a functional harbour, its impact on the cultural landscape is considered minimal, with negligible visual effects as it remains submerged most of the time. Conversely, the revetments south of Mgerbeeb Point, including the natural cliff below Lower Barrakka, the tunnel entrances, and the outer breakwater north of St. Elmo, are expected to have a major visual impact. These interventions are considered intrusive within the Grand Harbour's protected landscape, which includes historic fortifications, and the surrounding coastal environment designated as an Area of High Landscape Value.</p> <p>d. Impacts on the World Heritage status of Valletta (berm & revetment)- The EIA refers to the conclusions of the HIA on potential impact on the OUV. The berm and revetments between St. Elmo Bridge and Mgerbeeb Point are assessed to have no significant impact on the area's visual, historical, or heritage value. While undoubtedly visible, they are not deemed to be visually intrusive from land or sea, do not affect the historical significance of the site in relation to the two sieges, and have no impact on maritime tourism, the UCA and AHLV designations, or the World Heritage Site's OUV. Additionally, they do not compromise the wholeness, integrity, or key attributes of the fortifications.</p> <p>e. Impacts on the World Heritage status of Valletta (outer breakwater)- The Heritage Impact Assessment (HIA) also evaluated the proposed St. Elmo's Point breakwater, and it concludes that the breakwater is visually intrusive, affecting visual connectivity, particularly from the sea, and impacts the industrial heritage of the historic St. Elmo breakwater and bridge. It also affects the historical significance of the area, a key reference point in the two sieges, and may influence maritime tourism. Additionally, the project impacts the UCA and AHLV designations, potentially altering the form, design, location, and setting of the World Heritage Site's Outstanding Universal Value (OUV). While it does not compromise the wholeness or integrity of the site, it poses some threat to key fortification attributes.</p> <p>Benefits of the overall scheme</p> <p>Ultimately, the Scheme (including the revetments, berm, and outer breakwater) offers significant benefits, classified as majorly beneficial under ICOMOS guidelines. It will reduce wave action, minimising erosion of wharves, sea walls, fortifications, and coastal caves at Mgerbeeb Point, while also improving conditions for harbour communities, maritime industries, and small craft navigation. Additionally, it does not impact tourism dynamics in the harbour.</p> <p>The HIA evaluation concludes that the outer breakwater poses minor risks, with its impact on the WHC OUV rated as "negligible to minor change" and on the wider context as "negligible to moderate change." The berm and revetments present no significant risk to heritage integrity. The submerged berm is considered non-threatening to the wholeness, intactness, and authenticity of the site.</p> <p>Mitigation Measures</p> <p>The HIA concludes that the project supports the long-term conservation of the WHC and its context. Nevertheless, the HIA recommends redesigning the outer breakwater at St. Elmo's Point to reduce its impact on authenticity and integrity—potentially replacing it with a lower structure or a submerged berm. Further studies on mitigation effectiveness and hydrodynamic performance are advised.</p> <p>Since no features or deposits were found in remote sensing surveys, no seabed mitigation is deemed necessary. Nevertheless, archaeological monitoring during dredging in sediment areas could help identify and protect any undiscovered artifacts.</p> <p>The proposed structures will reduce coastal erosion, benefiting Valletta's restored heritage. The main concern is the visual impact of the outer breakwater on the industrial and cultural heritage of the Sciberras peninsula. A redesign could lessen this impact, but its feasibility must be weighed against costs and effectiveness.</p> <p>Report on Visual Impact</p>	
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<p>The berm and revetments are located along the Valletta coastline beneath the Siege Bell War Memorial and Lower Barrakka Garden, while the breakwater is positioned at St. Elmo Point, with an interface on both the Grand Harbour and Marsamxett Harbour. This maritime setting is framed by the historic urban landscape of Valletta, a UNESCO World Heritage Site, and the Harbour Fortifications AHLV. The Grand Harbour is dominated by the fortified skylines of Valletta and the Three Cities, while the modern, high-rise landscape of Sliema and Gzira contrasts sharply along Marsamxett Harbour. The sea and harbour activity remain integral to the area’s cultural and visual identity, with the outer Grand Harbour retaining its historic character, unlike the northern Marsamxett coastline, which has undergone significant transformation.</p>	
<p>The Superintendence notes that the visual impact of the Scheme varies by viewpoint, with effects ranging from minor to major negative significance. The impact level depends on the scale of change, the view’s intrinsic value, and viewer sensitivity. Of the nine viewpoints, two show major impacts, two moderate to major, and four show moderate impacts.</p>	
<p>While a lower structure could reduce visual impact, any above-sea-level structure would still be visible. This office notes that a lower breakwater would offer some shelter but acknowledges this would be less effective than the proposed design. If redesigning is not feasible, mitigation of visual impact may be achieved through matching the colour of the revetments and breakwater to the natural rock.</p>	
<p>Conclusion and Recommendations</p>	
<p>The proposed Scheme, including the berm, revetments, and outer breakwater, represents a long-term solution to improve the Grand Harbour’s resilience against north westerly storms. The design has been refined based on engineering and hydrodynamic studies, ensuring its effectiveness in wave attenuation, erosion reduction, and improved maritime conditions.</p>	
<p>From a cultural heritage perspective, the berm and revetments are assessed to have no significant impact on Valletta’s UNESCO status or historic landscape. However, the outer breakwater at St. Elmo’s Point is considered visually intrusive, affecting perceptions of historic fortifications, visual connectivity, and perceptions of the area’s industrial heritage. While it does not compromise the wholeness or integrity of the site, concerns remain regarding its impact on authenticity and the visual setting.</p>	Noted
<p>The Superintendence acknowledges the Scheme’s overall benefits, particularly in coastal protection, conservation of fortifications, and improved maritime operations.</p>	
<p>Reflecting the EIA’s recommendation, the Superintendence would not be averse to a lowering of the proposed breakwater so as to lessen visual impact. Nevertheless, if a redesign is not feasible, alternative mitigation measures—such as colour matching the new structures to the surrounding natural rock and heritage elements—should be explored to enhance visual integration within the historic setting. Should the redesign of the breakwater prove not feasible, the Superintendence recommends that the project proponent submits a comprehensive justification in the full development application detailing such reasoning. Any additional documentation supporting such reasoning is highly recommended.</p>	
<p>In addition, the Superintendence reserves the right to impose specific measures including monitoring to ensure the safeguard of archaeology as may survive within the site and as may be impacted by proposed works. To this end, the Superintendence asks for more details and access to the surveys carried out by Geomara. More specifically:</p> <ul style="list-style-type: none"> - Files of all the remote sensing data that was collected of the Grand Harbour (including side scan, magnetometry, sub-bottom, and multi-beam) - A full report listing every contact (including their coordinates, description, and a high-res close up) 	Noted
<p>The Superintendence urges that this data be made accessible for review and verification at the earliest possible and prior to the start of any works</p>	Noted