PA/08471/19 - CONSTRUCTION OF A BERM AND REVETMENT INCLUDING DREDGING AT VALLETTA GRAND HARBOUR

&

PA/04783/20 - CONSTRUCTION OF NEW BREAKWATER ARM BENEATH ST ELMO TO OFFER PROTECTION TO THE GRAND HARBOUR DURING NORTH WESTERLY STORMS

ADDENDUM TO ENVIRONMENTAL IMPACT ASSESSMENT REPORT

Version 1: September 2025

Report Reference:

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Quality Assurance

Construction of a berm and revetment including dredging at Valletta Grand Harbour & construction of new breakwater arm beneath St Elmo
Addendum to Environmental Impact Assessment Report
September 2025

Report for: **Infrastructure Malta**

Revision Schedule

Rev	Date	Details	Written by:	Checked by:	Approved by:
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CONTENTS

INTRODUCTION

This Addendum has been prepared following the consultation on the Environmental Impact Assessment Report (EIA Report) prepared for the proposal for the construction of new wave attenuating infrastructure to provide further protection to the Grand Harbour and to improve navigation conditions in the outer Grand Harbour. Specifically, the document outlines the responses to the comments received from the Environment and Resources Authority (ERA), consultees, and the general public, following publication of the EIA Report on 2 March 2025.

COMMENTS ON THE ENVIRONMENTAL IMPACT ASSESSMENT REPORT

PA/08471/19 & PA/04783/20

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
Site at Valletta Grand Harbour, Il-Port Il-Kbir, Belt Valletta

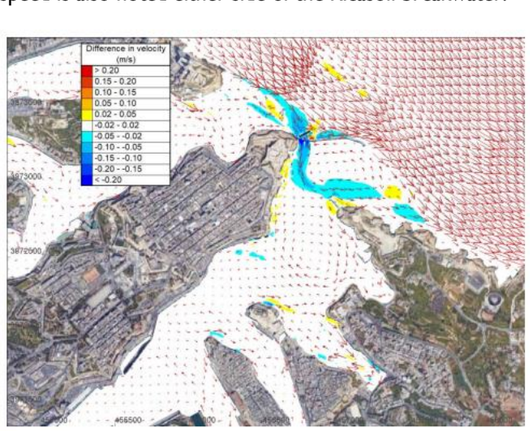
22 September 2025

1. ERA Comments:

A. EIA Volume 1 - Coordinated Assessment

No.:	Ref.:	Page No.:	ERA Comments	EIA Coordinator Response (28 May 2025)	ERA reply (1 July 2025)	EIA Coordinator (4 July 2025)
1	N/A		Noting the potential changes at the water body level which may affect the Biological Quality Elements of the Water Framework Directive (WFD) coastal waterbodies as updated in Malta's 3rd River Basin Management Plan (2024), an expert opinion on this matter is being requested.	We understand that the BQEs for coastal waters in the 3rd RBMP for the Maltese Islands address the following: (i) Composition, abundance, and biomass oh phytoplankton (ii) Composition and abundance of other aquatic flora (littoral shore communities & angiosperms) (iii) Composition and abundance of benthic invertebrate fauna The proposed Scheme is not expected to result in nutrient /organic enrichment that would affect the phytoplankton community. As regards impacts on benthic habitats, this impact is explained and assessed in Chapter 7 (see para 7.41 – 7.54). The main impact of concern, which varies from minor to major significance is that impacting the association with *Cystoseira* sp, *Dictyopteris polypodioides* and *Padina pavonica*. There are no *Posidonia oceanica* meadows in the Grand Harbour. As for benthic invertebrate fauna, the main impact will not be from nutrient/organic matter enrichment but the destruction of the habitat in the footprint of the defence structures. Since the scheme footprint is mostly on rock, the impact is not on benthic infauna but surface dwelling faunal species such as crabs, worms (polychaetes and nematodes), molluscs and sipunculids, etc.	Noted, no further comments.	Noted
2	3.81	82-83	Para 3.81 states that waste generated during construction of the berm, the revetment, and the outer breakwater will be disposed of at the official offshore dumping site. On the other hand, Table 6.10 specifies that sediment from point E is to be collected separately for treatment and confined disposal. In this regard, a clarification is being requested in view that sediment from point E has exceeded the Dumping Limit Values 2 for PAHs and is not permitted for disposal at sea. Kindly also note that an environmental permit would be required for the disposal of inert material at sea.	Para 3.81 is referring to the excavation of bedrock. One needs to consider the entire description of the interventions as follows: Para 3.53 – states that "the seabed in this area is mostly rocky, **with little or no sediment encountered** during the sediment analysis (see below) and geotechnical investigations." Para 3.72 – states "Most of this intervention [*i.e. the excavation for the toe trench*] is expected to take place in bed rock since studies have shown that the seabed along the footprint of the structures **is almost devoid of sediment**." Para 3.75 – states (when referring to the formation of the toe trenches) …" [T]his will involve the removal of any sediment and loose material from the footprint of the breakwater (amounts are negligible), berm, and revetment, followed by the excavation of foundation trenches along the entire perimeter for the forward and rear footings of the slopes of the breakwater, the berm, and the slope of the revetment."	Response is noted; no sediment is to be disposed of at sea with the excavated bedrock. In this regard kindly provide information on the final fate of the sediment, if there is any sediment left at station E, once collected separately.	Noted. As I explained, it is likely that there is no more sediment at that location since we did not even have enough sediment to carry out leachate testing. Nonetheless, if any sediment is encountered in the vicinity of Sampling point E at the start of the works, this will be collected separately (properly by air lift) and contained for disposal overseas as contaminated waste **ERA Reply (7 August 2025): Noted, no further comments.**

No.:	Ref.:	Page No.:	ERA Comments	EIA Coordinator Response (28 May 2025)	ERA reply (1 July 2025)	EIA Coordinator (4 July 2025)
				Para 3.81 – states "waste generated during the construction of the berm, the revetment, and the outer breakwater **will largely be excavated rock** (EWC 17 05 06)." Para 3.82 – states "**In view of the limited amounts of sediment present**, the use of an airlift or similar pumping system is advisable if this will ned to be excavated separately from the bedrock." Also, Para 6.35 – states "Only thin veneers of sediment appear to cover the exposed bedrock to the seaward side of the breakwater, where ethe new breakwater is proposed." Para 6.92 – states "The seabed coring exercise attempted to recover sediments from the different locations down to the design depth for the dredging at each location. In some of the stations, the sampling did not reach the target depth due to a lack of sediment. In the case of Station E, while it is true that this was found to exceed the DLV2 for PAHs, there was so little sediment at this location that it is likely that the entire amount of contaminated sediment has already been removed during the sampling. In fact, Para 6.93 states: "The sample from station E, on the other hand, exceeded the DLV2 for PAHs. This sediment is therefore not eligible for dumping in the offshore spoil ground and would need to be collected separately (assuming it still exists in view of the limited amounts of sediment encountered here during the sampling)." Finally, Para 6.100 states: "The Scheme site is also practically devoid of seabed sediments to a distance of approximately 100 m offshore, where the bedrock interfaces with the seabed sediments. Sediment sampling along the Scheme footprint only retrieved samples in two locations. For the rest of the Scheme, any dredging will be done in bedrock." Therefore, as explained, if there is any sediment left at station E, this will be collected separately. The vast majority of the dredging, however, will be done in bedrock, which is inert material and hence eligible for dumping at the offshore disposal site. Any such disposal will follow the usual environmental permitting procedures.		
3	6.58	159	The wave height is expected to decrease under most conditions, especially improving NW conditions in the Area of Influence (AOI). The project aims to enhance harbour wave conditions using submergible structures. However, expected changes in currents and circulation patterns specifically due to the introduction of proposed structures have not been included in view of the decrease in wave action envisaged by this project. Kindly provide.	This section is referring to the wave disturbance study and the modelling for the pre-concept design of the berm and revetement. The detailed explanations are in the Technical Appendices. In Summary, the simulations show that the Lascaris/Barriera Wharf area experiences significant wave heights in exceedance of 0.85 m roughly three days a year and more than 0.3 m roughly one and a half months each year, with the large part of the wave periods being in the range 4 – 7 s. Under storm conditions, Barriera Wharf is still the most exposed and it is also a lot less protected against storms from the NE than from the E (see para 6.49 and 6.50). In the pre-concept design, the wave disturbance studies showed that reflection along the NE shoreline plays an important role in the propagation of waves from the NE and E sectors, which is why the Scheme is being proposed. The main objective of the Scheme is not to protect the coastline from extreme waves but to reduce the reflection coefficient (para 6.55). The addition of the outer	Noted, no further comments.	Noted

No.:	Ref.:	Page No.:	ERA Comments	EIA Coordinator Response (28 May 2025)	ERA reply (1 July 2025)	EIA Coordinator (4 July 2025)
				breakwater further improved the harbour conditions, decreasing wave agitation for every condition and particularly for the NW conditions. (para 6.57) As explained in Para 6.59, the detailed review of hydrodynamic conditions (including effects on currents and circulation) is elaborated further in Technical Appendix 4. In TA4 (Wave Disturbance in Valletta Harbour – Report R1 Hydraulic Studies and Pre-Concept Design – Rev 2), in the section on Hydrodynamics of the Harbour (Section 7.4, two scenarios (winter and summer) are considered. Under the winter conditions (7.4.1), the currents are generally weak (under 0.10 m/s) off the Grand Harbour and in the port irrespective of the state of the tide. The flow patterns are the same, with and without the project works, except for the vicinity of the proposed breakwater. There, the currents are diverted in response to the obstruction created by the structure, resulting in an acceleration of the flows at the proposed breakwater head and deceleration through it. The eddy formations between the St Elmo and Ricasoli breakwaters are also modified as a result. The impact of the proposed works is mostly limited to the entrance of the harbour with a lesser proportion of the flows going under the breakwater bridge and out of the harbour with the proposed breakwater than without. A local increase in current speed is also noted either side of the Ricasoli breakwater.  *Figure 63. Impact of the project on the hydrodynamics at the peak of the wind event (scenario 1)* Overall, the effect of the proposed breakwater is thought to be minimal in the Grand Harbour under this wind scenario. Flows under the St Elmo bridge are noticeably reduced under the project configuration (0.30 m/s compared to 0.43 m/s). On the other hand, flows are locally stronger over the submerged berm (0.10 m/s with the southern part experiencing currents up to 0.14 m/s. In the summer conditions (7.4.2), similar observations are true, although on a more moderate level and the flows are weaker. Current speeds in the harbour are generally under 0.05 m/s throughout the wind event. The effect of the project works is again localised in response to the obstruction of the proposed breakwater. Flows under the St Elmo bridge are reduced and their direction changed to be more transverse. Flows are slightly stronger over the submerged berm (in particular the northern part).		

No.:	Ref.:	Page No.:	ERA Comments	EIA Coordinator Response (28 May 2025)	ERA reply (1 July 2025)	EIA Coordinator (4 July 2025)
				As regards water renewal of the harbour (section 7.5), this was studied by means of a conservative tracer. For the winter scenario, the study showed that the evolution of the tracer is very similar with and without the project works. The proposed outer breakwater changes the dynamics and eddy formations locally in the approaches to the harbour. As a result, the evolution of the tracer differs more noticeably at the entrance to the harbour and at St Elmo bridge. Overall, the influence of the proposed works is considered to be minimal on the exchange rate in the harbour. It is noteworthy that, under this scenario, only the port entrance (north of the Ricasoli breakwater) is considered to be well flushed. In the summer scenario, the winds are quite moderate over the period of the simulation, their effect on the hydrodynamics of the harbour is limited and water renewal is mainly the result of tidal flows. Dockyard Creek, French Creek, and Ras Hanzir are not flushed, with or without the project. Rinella Bay, Kalkara Creek, and the Pinto wharves experience a slight degradation in the rate of renewal with the proposed development, whereas the entrance to the harbour (north of the Ricasoli breakwater) is relatively well flushed.		
4	6.89, 6.90, 6.91	166-168	Kindly justify any expected changes on water circulation that could affect the water quality.	As explained, this part of the harbour actually has good water quality. Area A (outer Grand Harbour) had good water quality for most parameters with only a few heavy metals exceeding the acceptable threshold concentration for good water quality though most contaminants were found in minimal quantities. Area C (outside the harbour) presented typical oligotrophic conditions characteristics of this part of the Mediterranean and was classified as having excellent quality with only minimal traces of a few contaminants detected in the samples. Area C appears not to be affected by the activities going on inside the harbour. As explained above, the development's effect on the hydrodynamics of the harbour is limited and water renewal is mainly the result of tidal flows and hence the Scheme is not expected to impact the water quality of the harbour.	Noted, no further comments.	Noted
5	6.92	168	Sampling Station H is featured within Table 6.9; however this location is not marked as part of scheme site as per figure 1.1. Kindly clarify.	Correct, Station H is at Lascaris Wharf. This is also identified in Table 6.10. It was included as the sample was tested with the same lot as those in the Scheme. Information can be omitted.	Noted, no further comments.	Noted
6	6.93	168	In view, that waste from sample station E exceeds level 2 dumping limit vales for PAHs, sediment from this area must be exported to an authorised waste management facility for disposal. Despite the waste is not hazardous, export is subject to the prior informed consent procedure since the waste is unlisted waste as per Article 3(1)(b)(iii) and (iv)) of Regulation (EC) 1013/2006 on shipments of waste and Regulation 1157/2024 of the European Parliament and of the Council of 11 April 2024 on shipments of waste (as applicable).	Noted. As explained in Para 6.93 and Table 6.10, if any more of this sediment still exists on site (note that this was a very small patch and it might no longer exist following the sampling for testing), it will be collected separately for treatment and confined disposal. If it needs to be exported, the procedure indicated will be followed.	Noted.	
7	6.99	172	Further justification is required to ensure that water quality is not adversely affected during operations, despite the expected wave action benefits. Kindly provide.	Para 6.99 is reporting the current (baseline) conditions. See above regarding the expected impacts of the Scheme on water quality as a result of changes in hydrodynamics.	Noted.	
8	6.102-6.106	172-173	The impact significance of the Berm and Revetment regarding *changes in the configuration of the coast or seabed* is not clearly stated within Para 6.102-6.106. Kindly include.	Comment not understood. Impact significance on the configuration of the coastline is explained in the different paragraphs and summarized in Table 6.11, with varying significance for the berm (not significant), the revetment (minor) and the breakwater (major). Impacts on the configuration of the seabed, on the other hand is major for all structures.	Noted.	

No.:	Ref.:	Page No.:	ERA Comments	EIA Coordinator Response (28 May 2025)	ERA reply (1 July 2025)	EIA Coordinator (4 July 2025)
9	6.101	172	A justification is required pertaining to the current dynamics and features to justify the expected changes on water circulation.	Para 6.101 is referring to the improvements in hydrodynamics for harbour operations, which are undeniable. The effects of hydrodynamic changes on rate of renewal / circulation and currents were addressed above and in detail in Technical Appendix 4.	Noted.	
10	6.107	173	Although the defence structures will result in permanent changes to the coastline, any potential changes in hydrodynamics within the Area of Influence are not specified, particularly given the expected reduction in wave action. Clarification is requested regarding these features, noting that any potential hydrodynamic changes may also be permanent.	As explained, the main objective of the Scheme is not to protect the coastline from extreme waves but to reduce the reflection coefficient. Therefore, while there will be an expected decrease in wave action, the impact of the development on currents and rate of renewal is minimal, with flows more affected by tides, as explained above and in Technical Appendix 4. See also explanation above.	Noted.	
11	7.54	212	Para 7.54 assesses the residual impact and not the significance of impact prior to mitigation measures. Kindly amend.	The paragraph quoted assesses the unmitigated impact. In this case, one has to assume that the operations are carried out correctly and not in a way that deliberately impacts the seabed. The impacts would be greater if operations are not carried out properly. See also Table 7.11.	Para 7.54 provides the significance of impact as minor and temporary in nature with "proper measures" taken. Table 7.11 states that the impact significance is of Not significant to Major.	Para 7.54 explains the impact as follows: "Impact significance will depend on the extent of the impact and the importance / sensitivity of the benthic habitat affected." This is also explained in Table 7.11, which states that the impact significance is "Not significant to Major (depending on habitat / species affected)" Para 7.54 and the mitigation measures in Table 7.11 explain that the effects from the construction craft deployment will need to be minimised through careful management and supervision of the marine operations, correct on board operations to avoid discharges or loss of anthropogenic items overboard, controlling of speed of movement of craft to restrict impact from prop wash, and using appropriately sized craft to avoid seabed abrasion. The residual impact is then deemed to be Not significant to Minor. **ERA Reply (7 August 2025): Noted, no further comments.**
12	7.55	212	Provide clarification regarding the expected changes in currents due to wave action decrease and the expected impacts.	Chapter 7 deals with marine biodiversity not hydrodynamics. Hydrodynamics were addressed in Chapter 6 (see above). Para 7.55 is referring to the availability of new space for colonisation.	Noted.	
13	7.66	214-215	Justification is required on the following statement: "*On the other hand, flushing of the outer Grand Harbour is not expected to be affected*". Kindly also clarify potential circulation changes between the new breakwater and St. Elmo Bridge-breakwater.	This paragraph is referring to hydrodynamics as they could impact the settlement of larvae. As regards the statement referred to, this is explained in Chapter 6 and in Technical Appendix 4 (also explained again above). The development will not affect the flushing of the outer Grand Harbour.	Noted.	

No.:	Ref.:	Page No.:	ERA Comments	EIA Coordinator Response (28 May 2025)	ERA reply (1 July 2025)	EIA Coordinator (4 July 2025)
14	10.11	314-315	Provide clarification regarding specific hydromorphological parameters, including currents and circulation patterns.	This chapter summarizes the key impacts described in previous chapters. See previous responses with regards to this comment.	Noted.	

B. Non-Technical Summary

No.:	Ref.:	Page No.:	ERA Comments	EIA Coordinator Response (28 May 2025)	ERA reply (1 July 2025)	EIA Coordinator (4 July 2025)
1	Further Recommended Mitigation Measures (point 2, right hand side)	39	The second bullet on the right-hand side states that "*Dredged material to be handled in line with accepted waste management procedures and will be transferred to licensed hopper barges for disposal at the offshore spoil ground*." Material exceeding dumping limit values cannot be disposed at the offshore spoil ground and will require alternative disposal methods. Kindly amend.	As explained, the vast majority of the dredging material is bedrock and hence inert. Any contaminated material (as already identified) if still in existence due to the minimal amounts encountered during sampling will be collected separately as explained. This mitigation measure refers solely to material that can be disposed offshore.	Noted.	

C. Technical Study

No.:	Ref.:	Page No.:	ERA Comments	EIA Coordinator Response (28 May 2025)	ERA reply (1 July 2025)	EIA Coordinator (4 July 2025)
1	Technical Appendix 7: Marine Ecology Baseline Report	85, 89, 105	Marine Ecology Baseline Survey in the Grand Harbour determined the presence of protected species *Cladocora caespitosa*. The species is protected under Flora, Fauna and Natural Habitats Protection Regulation, Schedule VI (S.L. 549.44) as a species of national interest in need of strict protection. Clarification is required whether the specimens will be translocated as such intervention would require to be permitted in line with S.L.549.44.	Note that the Technical Appendix covered several sites within the Grand Harbour as it was part of a wider study. *Cladocora* was identified at sites C (Ras Hanzir), D (Deep Water Quay) and H (Barriera Wharf). No *Cladocora* specimens were recorded from the Scheme site.	Noted, no permit is required in this regard.	Noted
2	Technical Appendix 4: Hydrodynamic Modelling Reports 7.4.1 and 7.4.1.1	99-100	Kindly confirm whether any permanent alterations in currents, particularly reductions in current, would lead to significant effects on flushing and residence times in this region.	The pattern of currents and flushing / water renewal are of course closely linked, but the effect of the project on flushing is addressed in section 7.5 of TA4. See replies to comments below.	Noted.	
3	Technical Appendix 4: Hydrodynamic Modelling Reports 7.5.2	101-102	Clarification is required on whether the reduction in terms of wave disturbance and the expected changes in exchange rate will be significant in the AoI between the new breakwater and the St. Elmo Bridge.	Please note that water renewal in Grand Harbour depends on the astronomical tide and on wind and not on wave disturbance. As shown in TA4, the exchange rate in Grand Harbour mainly depends on the passage between the Ricasoli and St Elmo's breakwaters. Between the new breakwater and St Elmo's breakwater, the exchange rate will be reduced. It is not possible at this stage to quantify the decrease, but the results shown in TA4 Section 7.5.2 and Appendix N show that this is not significant at the scale of the harbour.	Noted.	

No.:	Ref.:	Page No.:	ERA Comments	EIA Coordinator Response (28 May 2025)	ERA reply (1 July 2025)	EIA Coordinator (4 July 2025)
4	Technical Appendix 4: Hydrodynamic Modelling Reports 7.5.3	102-103	It is noted that water renewal will be similar to the baseline scenario. However, it is also mentioned that some areas in the harbour will experience reduced flushing. The statement "*not flushed with or without the proposed works*" is unclear, and some areas may see slight degradation. Further clarification is requested on this matter, including whether these changes could lead to significant impacts in these areas and across the Grand Harbour, particularly affecting water renewal around the new breakwater.	The statement "*not flushed with or without the proposed works*" means that in the baseline configuration, the water renewal is already poor for the areas that are mentioned. Figures N-19 and N-26 of TA4 show that the general pattern of water renewal in the Grand Harbour is unchanged with the project; in particular the inner port (SW of Senglea point) is not flushed in the baseline configuration. Slight degradation (10% at most) is indeed observed in the outer port (Rinella Bay and, to a lesser extent, Kalkara Creek). However, water renewal is satisfactory around the new breakwater, due to its position at the entrance of the port.	No further comments.	Noted
5	Technical Appendix 4: Work Package 11 1.3	99-100	The new structures are expected to improve wave conditions, but the breakwater may cause increased wave disturbance between the breakwater and the St. Elmo Bridge. Kindly provide further details on circulation patterns and flushing in this area or within the AoI of the submerged berm.	This is addressed in detail in the Technical Appendix. For a more detailed review, the reader is referred to (i) the report related to the 3D physical modelling of the area and (ii) the reports related to the examination of alternative types of breakwater (vertical / hybrid / rubble mound), where disturbance in this bottleneck is closely examined	Noted.	
6	Technical Appendix 5: Sediment Analysis Report Section 4 – 4.4.	24	Technical Appendix 5 does not provide the leachate results of sampling point E. In this regard, kindly provide said leachate test results.	As shown in Table 5, the sediment at Station E was only a superficial amount (0.1 m depth). In fact, only a surface sample was retrieved. As a result, there was not enough material to carry out the leachate test on this location. It is for this reason that we state that it is possible that there is no more contaminated sediment in this location.	Noted, no further comments.	Noted

2. Consultees' Comments on the EIA Report (2 March 2025 – 2 April 2025):

No.:	From	Comments	EIA Coordinator Response (28 May 2025)
1	Environmental Health Directorate Date (27/03/2025)	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: EHD Comments and recommendations: Dredging Works and Construction Phase 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 curtainsis not approved, adequate alternative measures should be implemented.	Noted

No.:	From	Comments	EIA Coordinator Response (28 May 2025)
		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. Waste Management 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. 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. Air, Noise & Vibration Pollution 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. Traffic Pollution 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. 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. Fuel Storage 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. Conclusion 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. 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. 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. 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. Regarding any future plans for Scheme decommissioning, a full decommissioning plan should be prepared for approval by the relevant competent authorities.	Noted Noted Noted Noted Noted Noted Noted
2	Planning Authority Date (11/03/2025)	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

No.:	From	Comments	EIA Coordinator Response (28 May 2025)
3	Superintendence of Cultural Heritage Date (02/04/2025)	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 The Scheme is entirely marine based and located within a highly culturally and visually sensitive area across three sites along the Sciberras Peninsula, namely: • A berm that stretches from St Elmo Point to the northern side of Mgerbeb Point; • Two revetments located on the southern side of Mgerbeb Point close to Barriera Wharf; and • A new breakwater at St Elmo Point, located outside the current St Elmo breakwater. 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. Cultural Heritage Context 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. 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. 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: • 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) Report on Cultural Heritage 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). 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). EIA Report and Non-technical Summary (Report on Cultural Heritage) The EIA's report on cultural heritage refers to the following potential impacts: 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 Mgerbeb 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. 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. c. Impacts on the Cultural Landscape of Valletta- The EIA reports that 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 Mgerbeb 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	All comments noted

No.:	From	Comments	EIA Coordinator Response (28 May 2025)
		protected landscape, which includes historic fortifications, and the surrounding coastal environment designated as an Area of High Landscape Value. 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 Mgerbeb 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. 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. Benefits of the overall scheme 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 Mgerbeb Point, while also improving conditions for harbour communities, maritime industries, and small craft navigation. Additionally, it does not impact tourism dynamics in the harbour. 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. Mitigation Measures 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. 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. 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. Report on Visual Impact 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. 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. 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. Conclusion and Recommendations	

No.:	From	Comments	EIA Coordinator Response (28 May 2025)
		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. 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. The Superintendence acknowledges the Scheme's overall benefits, particularly in coastal protection, conservation of fortifications, and improved maritime operations. 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. 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: - 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) 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.	Noted Noted Noted