

Our Ref: 043/23.01

Date: 2nd October 2023

To Whom It May Concern

**Re: Method statement for clearing of unstable material at Bighi Heritage Malta
Complex, Kalkara**

Works proposed relate to making an area which has collapsed earlier this year safe. The collapse has occurred probably due to rock movements beneath a massive retaining wall holding circa 8m height of loose fill (Fig. 2 & 3). The wall is located on a stretch of rock parallel with the sea edge where wave induced erosion has caused the supporting area to subside. The stone retaining wall seems to be quite wide at the bottom though the parts which have not collapsed exhibit several patches where the blocks themselves have deteriorated heavily further undermining the stability of the said wall. Another wall seems to exist behind the wall facing the shore which has also collapsed in the event.

The following works are being proposed to enable the zone to be rendered safe given that the location is in a dangerous state and further collapses can occur with immediate effect.

- Mobilisation by fencing off the working area to make safe for the passage of vehicles towards the building side
- Form pathway parallel to building
- Clear area at the end of the area close to the ramp to allow space for the stored items to be shifted upon

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- Move stored items into locations as directed by Heritage Malta or discard materials accordingly. Shifting might require placing items afresh on new timber pallets
- Install a silt curtain within the sea in front of the area of works
- Remove surface agricultural soil and cart away in dump trucks to authorised site
- Mobilise long reach excavator within site and commence creating a slope of circa 45 degrees as shown in Fig. 1.
- Resulting material shall be loaded onto dump trucks
- Upon completion, site shall be closed off and locked thus rendered inaccessible



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Fig. 1 - Site plan showing proposed slope to allow material to stay in angle better than natural repose

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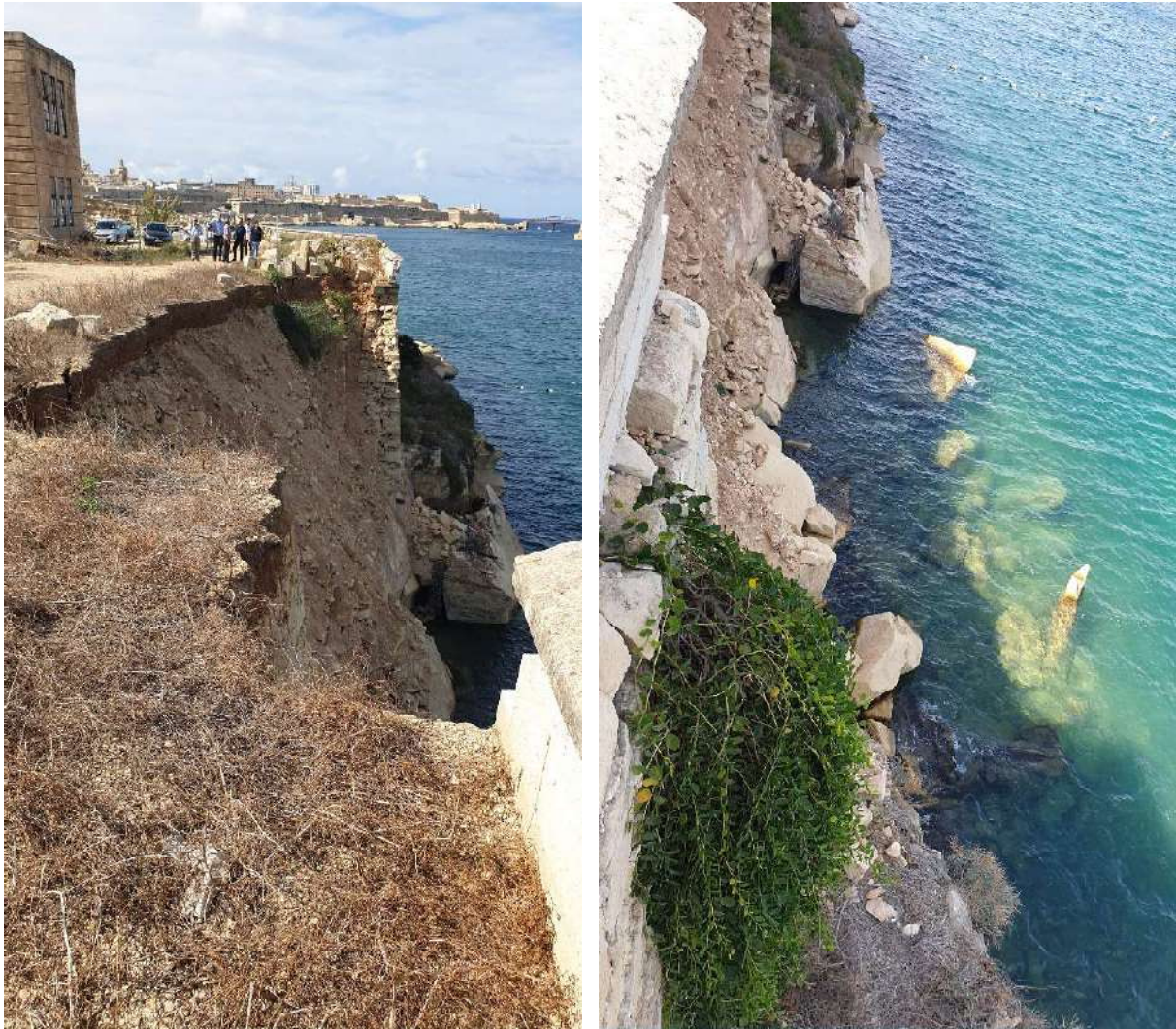


Fig. 2 - Existing site conditions (photos from above)

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Fig. 3 - Existing site conditions (photos from sea level)

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Removal of loose material to render area safe following collapse at ex Bighi Hospital, Kalkara

Site Setup



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Programme of Works



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List of Machinery to be utilised during project

- Long reach excavator
- 10t excavator
- Tipper trucks
- 40t mobile crane
- Dumper 1m³
- Flat bed truck

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Mitigation Measures

General

Considering the nature of the project, the Contractor will be responsible to implement effective measures to safeguard the environment. The contractor will be obliged to leave the site clean every day. No loose material will be left on site uncovered. Furthermore, Contractor will be obliged to make good any damages on site resulting from his intervention.

The Contractor will take care so that machinery used does not leak fluids and will provide drip trays were necessary to contain any leaking fluids. Where appropriate, the Contractor is to have booms and absorbent pads available to be used in case of accidental oil spillage or run off into the sea. The contractor shall also provide bins, skips and bunds for the placement and temporary storage of wastes/debris on site, prior to their removal and legal disposal.

Once all the works have been completed, the contractor will be responsible to survey the seabed for any fallen construction debris and material. In the eventuality of such material present on the seabed, the contractor will be obliged to remove the material and clean the area prior to demobilisation.

Silt Curtain

The Contractor shall be required to adopt work methods to contain and prevent construction debris and waste from falling into the sea that could create a plume. Where such methods are not adequately effective, the contractor shall deploy a silt curtain around the area where work is being carried out to contain the amount of plume that disperses into the adjacent sea areas. Silt curtain shall be kept in good condition. It shall be constructed from heavy double skin woven filter fabric or a proprietary silt curtain fabric to allow water to pass through the barrier yet retain sediment. The fabric will be rolled onto continuous floats and stitched to a rigid skirt to keep the upper part of the silt curtain at least 20cm above water level. The curtain will be weighed to the seabed using steel weights positioned at a distance of around 50cm or with a steel chain. Sinkers will be deployed as necessary at intervals to keep the silt curtain sufficiently away from the site/work boundary. The silt curtain will be kept in place for at least 3 days after the works have been completed and until any plume has settled. It will be removed vertically by rolling out of the water and shifted to the new area earmarked for works. The contractor shall remove from the seabed any waste material that may have accumulated/settled on the seabed, including congealed/caked fines and other construction debris.

Diagram below show the configuration of the silt curtain.

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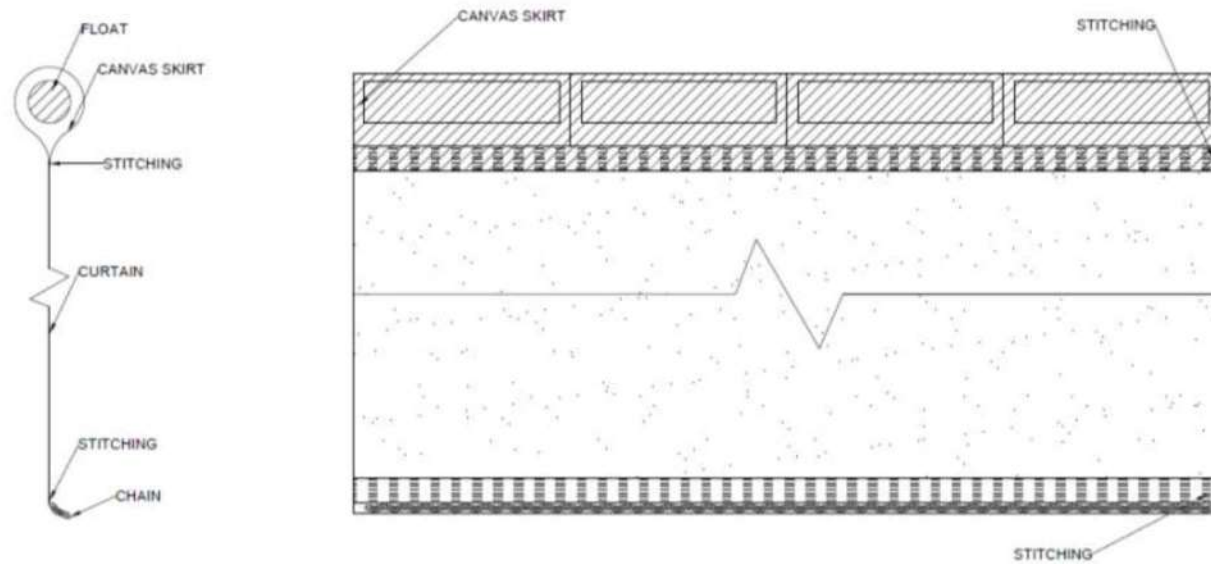


Figure 6 – diagram showing silt curtain configuration

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Waste Generation and Disposal Mitigations

<u>Waste Type</u>	<u>Activity generating the waste</u>	<u>Handling method</u>	<u>Disposal Site</u>
Site clearance	Clearance of site from materials stored	Collection in heavy duty skip or directly to HGV	To be disposed of at a licensed & registered disposal facility
Excavation Waste	Excavation of site to design level	Collection in heavy duty skip or directly to HGV	To be disposed of at a licensed & registered disposal facility
Wood	Waste Construction Shutters/ Formwork	Collection in heavy duty skip or directly to HGV	To be disposed of at a licensed & registered disposal facility
General Waste	Generated by the workers during work breaks	Collection in appropriate wheelie bins /containers for disposal at central waste facility	To be disposed of at a licensed & registered disposal facility
Fuel, oils, lubes	Re-fueling of vehicles, maintenance works, operational / accidental spillage	Containment by means of oil spill kits, collection of material and disposal as hazardous waste or incinerated under the hazardous waste consignment permit procedures	To be disposed of at a licensed & registered disposal facility

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