Environment Protection Directorate Report on Environment Impact Assessment

PA 01254/09 (GF 00041/11) - To scuttle "Tugboat TUG 2" off Exiles Coast, Sliema, at, N 35 ° 55.26899' & E 14 °29.97863 off Coast of Exiles off , Triq It-Torri, Sliema, Malta

November 2012

1. BRIEF DESCRIPTION OF THE PROPOSAL AND OF THE SITE

The Environment Protection Directorate was consulted on the full development permit application PA 01254/09: Scuttling of Tugboat TUG 2 at the coordinates of N 35°55.26899' & E 14°29.97 863 corresponding off the coast of Exiles, Triq It-Torri, Sliema, Malta. In view of the potential environmental implications of the project, and since the proposed intervention is a Category II project in terms of the EIA Regulations, 2007 (Section 4.2.2.4, Schedule IA of Legal Notice 114 of 2007), the Directorate requested an Environmental Planning Statement (EPS).

The EPS included a description of the project and its surroundings, relevant legislation and policies, an assessment of impacts and a description of mitigation measures, as required by the Terms of Reference issued by the Directorate (06.01.2011, revised 27.01.11). The EPS was coordinated by ADI Associates Environmental Consultants Ltd (coordinators Adrian Mallia, Krista Farrugia and Rachel Xuereb).

THE PROPOSED DEVELOPMENT AND ITS RATIONALE

The proposal, brought forward by the Professional Diving Schools Association (PDSA) with assistance from the Malta Tourism Authority, seeks to scuttle a disused vessel so as to establish an artificial reef which will function as a recreational dive site. The vessel originally considered for scuttling was the trawler "Hannibal", but this was later substituted by “TUG 2” by the applicant. This change was effected during the scoping phase of the EIA and the Terms of Reference were revised to reflect this change. The revised TORs were issued on the 27th January 2011.

The vessel TUG 2 is currently owned by Bezzina Ship Repair Yard Ltd which is also the appointed cleaning contractor (excluding asbestos materials as discussed below). It is a 30m-long out-of-service tugboat that has a 7.5m beam and is 15.24m high including the mast (9.5m to the top of the wheelhouse) - see Figure 4.9 and 4.10 of EPS Coordinated Assessment. The vessel will be occupying a footprint of circa 200sqm.

SITE LOCATION

The proposed scuttling location is located circa 250m off Il-Ponta ta’ San Ġiljan and 380m off the Portomaso breakwater. It is approximately 500m to the southeast of a shallow reef known as Is-Sikka tal-Merkanti. The final coordinates for the proposed scuttling location are 35°55.26899N, 14°29.97863E (using coordinate datum WGS84). This location is an alternative one to that originally proposed in the development permit application and was identified as a result of the EIA process. The former proposed location was 35°55. 270 N, 14°29.930 E, as indicated Figure 4.2 in EPS Coordin ated Assessment.

This revision of the final site location came about due to the findings from the benthic survey and through consultation with the Harbour Master, Ports Directorate (Transport Malta) and other stakeholders (primarily Vodafone Ltd.) in view of the existing and proposed uses in the area.

EXISTING LAND AND SEA USES

A land and sea use survey was carried out in August 2011 and covered the coastline of part of Sliema and San Ġiljan, including Balluta and Paceville. The predominant land use is residential, together with various commercial facilities including public recreational areas such as Ġnien l-Indipendenza. The site also includes 4 swimming zones and one swimming pool. The swimming zones are located at Fond Għadir, the area

beneath Ġnien l-Indipendenza (also known as "Exiles") and two areas at the mouth of Id-Daħla ta' Spinola. This stretch of coast also includes a diving school. Fisheries activities are located at Id-Daħla ta' Spinola.

The Spinola area in San Ġiljan is the main area supporting boat facilities, including boat houses and hard standing facilities. Hardstanding facilities are also located near Ġnien l-Indipendenza at Sliema. At the time of the survey, the Area of Influence included around 373 boats and 33 buoys moored in different areas.

EXPLORATION OF ALTERNATIVES

The EPS discusses the exploration of alternatives in terms of location, technologies and vessels.

In the EPS, alternative locations were discussed within the identified area of study off the coast of Exiles. This was deemed sufficient given that the Malta Tourism Authority (MTA) has conducted a number surveys aimed at establishing the need for dive sites in Malta. For the eastern coast of Malta, MTA and PDSA have identified Sliema as a target location. The nearest shore-based wreck dive sites to the application site are the HMS Maori, off Il-Fossa (Valletta), and the X127 Water Lighter off Lazzarett (Manoel Island). These two sites are the most popular dive sites in the central region of Malta. However, the HMS Maori is slowly disintegrating, and future access to the X127 Water Lighter is uncertain due to the ongoing development on Manoel Island. Hence, an alternative wreck site is being proposed.

Alternative Technologies
With regard to alternative technologies, the main discussion in the EPS concerned the level of intervention that should be adopted for the vessel. The main interventions consist of the removal of hazardous solid and liquid materials, general cleaning, transportation and vessel preparation.

The degree of paint stripping was discussed in view of experience with similar scuttling operations where subsequent monitoring reports have occasionally indicated that large segments of paint can peel off even after these have been colonised by algal growths causing pollution. Paint can be located on both the interior and the exterior surfaces of a ship. Paint coatings above and below the water line have different chemical compositions depending on their functionality: Paints above the waterline are intended to protect topside surfaces from physical degradation whereas paints below the waterline also include anti-fouling biocides (e.g. copper, organotins, zinc) that prevent biotic colonisation of the hull. The major concerns relate to the paints below the waterline.

The EPS concluded that the exfoliating paint in the areas above the water line should be removed by means of power washing in preference to more aggressive methods such as sand blasting. With regard to the area under the water line, it was noted that this is already colonised by algal growth indicating that the anti-fouling properties are no longer effective thus this paint will not require power washing.

2. EIA CONSULTATION

As part of the EIA process, consultation with various consultees was carried out during the scoping stage and EIA review stages. Public consultation was undertaken during the scoping stage and following the certification of the EPS.

2.1 Consultation during Scoping

During the scoping stage, the Project Description Statement (PDS) was circulated to the following consultees and was also made available for public consultation from 15th November 2010 until the 6th December 2010

- Sliema Local Council;
- San Ġiljan Local Council;
- Malta Resources Authority (MRA - Water, Energy and Minerals Directorates);
- Nature Group (group of eNGOs);
- Superintendence of Cultural Heritage (SCH);
- Malta Tourism Authority (MTA);

- Environmental Health Directorate (EHD);
- Transport Malta (TM); and
- MEPA internal consultees.

Within the stipulated consultation period, comments were received from the internal consultees and from the MRA. These are summarised in Appendix 1 to this Report. The Final Terms of Reference (TORs) were issued on the 6th January 2011, later revised on the 27th January 2011.

2.2 Consultation during Review

The first draft EPS was submitted to MEPA on 16th May 2012 and circulated for review to the following consultees on the 4th June 2012:

- San Ġiljan Local Council;
- Sliema Local Council;
- Malta Resources Authority (MRA - Water, Energy and Minerals Directorates);
- Nature Group (group of eNGOs);
- Superintendence of Cultural Heritage (SCH);
- Malta Tourism Authority (MTA);
- Environmental Health Directorate (EHD);
- Transport Malta (TM); and
- MEPA internal consultees.

Within the stipulated consultation period ending 28th June 2012, comments were received from the internal consultees, MTA, SCH, TM and EHD. These comments were forwarded to the EIA Coordinator on 18th July 2012 and addressed by the EIA Coordinator. Responses were subsequently submitted to MEPA, all of which can be found in the Addendum to the EPS. Comments received during the review consultation period are also inserted in Appendix 2 to this Report.

2.3 Consultation following Certification

The certified EPS was published for a three-week public consultation period on the 2nd August 2012, with hard copies of the certified EPS made available at the Sliema and San Ġiljan Local Councils and at MEPA offices in Floriana. The deadline for submissions was 24th August 2012. Comments were received from Vodafone Malta Ltd. All comments made during the public consultation have been appended to the EPS as an Addendum, and are also inserted in Appendices 3 to this report.

3. EIA FINDINGS

The following sections detail the findings of the Environmental Planning Statement as follows:

3.1 Marine Environment (Ecology)

A field survey was conducted during August/September 2011 by Ecoserv Ltd, which included sediment sampling for granulometric and infaunal (macrofauna animals larger than 1mm) studies as well as a fish survey. Throughout the marine environment study, waves and currents were considered based on experience from similar EIAs such as those conducted for the scuttling of P29 off Ċirkewwa and the scuttling of P31 off Comino.

The baseline survey identified three main biotic communities:

(1) Infralittoral algae:
(2) Mixed coarse sands; and,
(3) Fine gravels and meadows of *Posidonia oceanica*.

The survey indicated that no extensive area was free from patches of such sea grass (inc *Posidonia oceanica* and *Cymodocea nodosa*)

Predicted Impacts
The following potential impacts were identified:

During deployment (i.e. during scuttling of the vessel):

- Loss of habitats through burial under the wreck *(Insignificant*); and,
- Damage or disturbance to habitats and species in the Area of Study through increased human presence (*Insignificant to minor positive*).

Post-deployment (i.e. post scuttling of the vessel):

- Loss of habitats through permanent burial under the wreck (*Insignificant*);
- Alteration to currents and sediment movement around the wreck (*Minor to Uncertain*);
- Availability of new habitat space for colonisation (*Minor to insignificant)*
- Availability of new food sources, shelter, etc. (*Minor positive*)
- Disturbance to habitats and species from increased human activity (from fishing or diving visits, including anchoring impacts) (*Insignificant to Minor positive*);
- Attraction of new species (that were previously absent due to the unavailability of the habitat) to the area (*Minor to insignificant to potentially positive impact); and*
- Changes in ecological relationships and succession (*Minor to insignificant to potentially positive).*

Mitigation Measures
The main consideration raised by the EPS was the impact on the mosaic biotic assemblage reported during the detailed benthic survey, but as long as the scuttling is controlled and the vessel is sunk on the sandy seabed in the preferred location, the overall residual impact was considered insignificant.

Residual Impacts
As long as the scuttling is controlled and the vessel sunk in the intended location, the EPS states that no residual impacts are expected from the scuttling. Residual impacts from the operational phase would depend on the structural integrity of the vessel, on whether it moves under wave action, and on the impact of human presence in the area.

According to the EPS, the presence of the diving wreck will also provide new habitat for marine organisms and with time may contribute to the productivity of the area leading to positive residual impacts.

3.2 Archaeology and Cultural Heritage

Onshore features

A number of features of historic/cultural significance exist in the general surroundings of the onshore area surrounding the scuttling site. The most prominent ones are the military architecture of the Sliema Point Battery (also known as "Il-Fortizza"), built during the British period and the coastal watch tower at Il-Ponta ta' San Ġiljan (also referred to as "It-Torri"), built under the reign of Grandmaster De Redin as part of a military plan which saw the construction of thirteen coastal towers. Both these buildings today house food and beverage outlets. Another military structure is the remaining part of the coastal entrenchment wall built by the Knights across Il-Ponta ta' Spinola and now located within the grounds of the Portomaso complex. Other buildings of cultural significance in the area include old residential properties, especially in the San Ġiljan (Balluta) area and including (among others) the iconic Balluta Buildings and Villa Priuli, and ecclesiastical buildings, including churches, chapels and convents.

The proposed development is unlikely to have any impact on these features.

Offshore features on and surrounding the scuttling site

The desk study carried out in association with this EPS did not identify any large scale anthropogenic impacts on the seabed in the area (e.g. dredging works), apart from those arising from the nearby Portomaso

development (1996 - 1998). The latter impacts were restricted to the area in the immediate vicinity of the Portomaso marina entrance. Other chronic-type impacts relate to fishing and anchoring and are small-scale influences in the area, which would only have minimal short-term effects on the general seabed topography of the area. A recent impact within Exiles Bay was the accidental sinking of a barge loaded with fireworks.

For underwater finds within the area, the main sources used were the Museums Department Annual Reports (dating from 1904 to 2002), the Cultural Heritage Inventory Management System (CHIMS) and the library at Heritage Malta. The following references were found:

- A Roman 'jar or amphora' off Ras id-Dragunara;
- Part of a flour mill and medieval pottery near St. George's Bay;
- Roman pottery off St. Julian's Bay; and,
- Some pieces of modern debris are present within the area of study, most notably rubber tyres including one very large tyre.

The EPS identified that the area is not seemingly rich in archaeological discoveries and no archaeological features were visible on the sea bed during the visual dive survey. Even if objects were present on the seabed these may have been dispersed over the centuries by wave action. However, one cannot discount the possibility of objects (individual or in groups) becoming embedded and eventually buried in the sand within the area of study.

Predicted Impacts
No features were found during the field survey and therefore no immediate loss or damage to archaeological artefacts can be identified at this stage. Potential negative impacts can be considered on artefacts that may be buried within the Area of Influence. Such artefacts may become exposed as a result of scouring by the presence of the vessel and therefore could become vulnerable to damage or removal by divers. Buried artefacts may also become damaged as a result of vessel placement. The significance of any of these impacts would depend upon the significance of such artefacts and could therefore range from insignificant to major significance. Since the scuttling location was shifted to the southeast of the original location following discussions with Transport Malta, and is now located at the edge of the area of survey, it would be appropriate to monitor the site following scuttling in the event that any artefacts are uncovered. Thus, the EPS states that the overall predicted impact on archaeological and cultural heritage features is *insignificant to major*, depending on the findings located in the scuttling site.

Mitigation measures
The EPS states that given that no artefacts were found during the field survey, all that is required to minimise potential impacts on potentially buried artefacts is regular monitoring. This monitoring can be combined with monitoring of the wreck as carried out for other reasons, but it should be carried out by a qualified archaeological monitor periodically until the wreck has stabilised.

Residual Impacts
As long as the scuttling is controlled and the vessel is sunk in the intended location, no residual impacts are expected from the scuttling. Residual impacts from the operational phase would depend on the structural integrity of the vessel, whether it moves under wave action, and on the impact of human presence in the area. Thus, residual impacts can be assessed only through monitoring discussed below.

The potential damage to buried artefacts from the vessel deployment is being considered as being *insignificant to major* in terms of residual impact significance.

The potential exposure of previously buried artefacts as a result of scouring caused by the vessel is being considered as *insignificant to major* in terms of residual impact significance.

The loss, damage or disturbance to artefacts from increased human activity is being considered as insignificant to major in terms of residual impact significance as it is dependent on whether artefacts are discovered.

Environment Protection Directorate note: ***The Environment Protection Directorate recommends that an Environmental Monitoring Plan (EMP) is requested as part of the permit conditions. The monitoring must include archaeological monitoring as required by MEPA's Heritage Planning Unit and by the Superintendence of Cultural Heritage, and this may need to include remote sensing or sub-bottom profiling for increased accuracy. The final position of the wreck should be at the centre of the surveyed area.***

3.3 Infrastructure and Utilities

The EPS indicated the existence of infrastructural utilities that had not been identified clearly at the scuttling site. However, through the consultation process it resulted that a telecommunications cable is situated within the Area of Influence. This was highlighted by the proprietors (Vodafone Malta Ltd), as the wreck may potentially hinder any required cable maintenance. Following discussion by the consultants and the entities concerned, it was noted that the distance of circa 88m from the cable to the site of scuttling is adequate and safe enough for such maintenance operations to take place.

Environment Protection Directorate note: ***The Environment Protection Directorate notes that the scuttling must be carried out in the designated location with enough clearance from the existing telecommunication cables in service, and has brought the matter to the Planning Directorate's attention for further consideration through the development permitting process.***

3.4 Waste Management

The waste generated from the vessel is expected to consist predominantly of obsolete vessel components (*e.g.* engine block), rusted/flaking body parts and random waste accumulated throughout its storage at the shipyard. All waste handling and disposal (except for asbestos-containing waste) is the responsibility of Bezzina Shipyard being the owner of the vessel and responsible cleaning contractor (monitored by MEPA through separate environmental permit). Any equipment that can be salvaged from the tugboat will be removed and re-used on other vessels as part of the shipyards routine activities. As part of the vessel preparation, a number of body parts (such as doors, hatches and other existing openings) that may be unsafe for recreational divers will be removed or widened.

Asbestos waste

During the survey carried out for the EPS, asbestos-containing material (ACM) was identified and the consultant requested that a specific survey was to be carried out in order to assess and manage this potential hazard. The survey revealed that a number of materials on the boat contained ACM. ACM materials were found in the bridge, on deck and mostly in the engine room; these materials included various gaskets, floor lino, pipe lagging, pipe insulations, insulation blocks, round engine block, and the exhaust system. The presence of ACM was confirmed through laboratory analysis carried out at certified laboratories in the UK (Resource & Environment Consultants Ltd). The EPS states that the ACM will be properly bagged and exported for disposal in licensed facilities abroad. All the necessary documentation will be provided to MEPA and to the Occupational Health and Safety Authority (OHSA) by the licensed contractor.

Once the vessel is adequately cleaned, it can no longer be considered as waste in line with the London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1975 Art III 1(b) (ii), as it can be considered as the *"placement of matter for a purpose other than the mere disposal thereof, provided that such placement is not contrary to the aims of this Convention".*

4. PLANNING, POLICIES AND LEGISLATION

The EPS considers the relevance of international and national legislation and Maltese planning policy to the proposed development. The main regulations to which the proposed scuttling should conform are listed and discussed in Chapter 5 of the EPS Coordinated Assessment.

Once the vessel is scuttled, the following actions shall further regulate directly or indirectly the designated area:

- Plotting of the exact position of the vessels on nautical charts and their presence signalled by means of a Notice to Mariners to be issued by Transport Malta;
- Declaration of the dive site as a "no anchoring zone" by Transport Malta; and,
- Declaration, by the Veterinary Affairs and Fisheries Division of the Ministry for Resources and Rural Affairs, of a "no fishing zone" up to a minimum of 200m from the vessel.

The EPS has also suggested the drafting of a diving subject plan.

5. EIA CRITIQUE AND EPD COMMENTS AND CONCLUSIONS

The Environment Protection Directorate notes that this project is limited to the scuttling of the relatively small disused vessel "TUG 2" on a patch of sandy seabed located off Sliema/San Ġiljan (coordinates N35°55.26899' E14°29.97863'). The chosen location i s situated just outside a marine protected area (Special area of Conservation of International Importance as per Government Notice 851 of 2010) and is not located on any sensitive habitats or seabed features. The potential issues identified in the EPS are essentially the following:

- Potential movement of the wreck during scuttling or post-scuttling, leading to damage to surrounding habitats (C*ymodocea nodosa* patches or *Posidonia oceanica* meadows), which was considered as a residual impact of no significance as long as appropriate precautionary measures (e.g. avoidance of inadequate weather conditions) are adopted during scuttling, .
- The potential longer-term shifting or instability of the wreck after scuttling. Shifting from the proposed NW-SE prevailing current direction may increase the wreck's deterioration and erosion. Submission of regular monitoring reports will be required accordingly.
- Scouring of the seabed, which may potentially damage or expose artefacts of archaeological and cultural heritage importance, and ensuing erosion or looting. A monitoring plan needs to be requested as part of the permit conditions and the monitoring must include archaeological monitoring to the satisfaction of the relevant authorities.
- Risk of damage to existing underwater telecommunications cable systems should the scuttling not be carried out as detailed.
- Contamination due to underwater deterioration of the vessel and its paintwork, particularly anti-fouling paints.

The immediate impacts arising from the proposal are expected to be *minor or insignificant* as long as relatively basic pre-emptive measures are implemented, notably adequate clean-up and preparation of the vessel prior to scuttling. The other potential impacts are also expected to be of limited significance, noting the scale and nature of the intervention. Nonetheless, monitoring of the wreck is still considered appropriate, with a view towards facilitating suitable and timely action as relevant (not excluding possible decommissioning and removal) in the unlikely event of any longer-term environmental implications. The monitoring and any ensuing management measures are to be identified in an Environmental Monitoring Plan (EMP) that will be requested as part of the permit conditions. Moreover, the proposed conditions should also ensure that:

- An appropriate marker buoy is installed, properly signalling the location of wreck to avoid navigational hazards and any associated secondary impacts; and
- The relevant approvals from OHSA and certificates of export related to the removal of asbestos are to be officially presented in the EMP.

In light of the above, the Environment Protection Directorate (EPD) agrees with the general conclusions of the EPS (including the comments in the Addendum) and is of the opinion that as long as the necessary precautions are adopted, no significant adverse environmental impacts are envisaged. The integration of appropriate mitigation measures into the development permit conditions is being recommended.

In particular, the Environment Protection Directorate recommends that an Environmental Monitoring Plan (EMP) is requested as part of the permit conditions, which should include archaeological monitoring as required by MEPA's Heritage Planning Unit and by the Superintendence of Cultural Heritage, and which may include remote sensing or sub-bottom profiling for increased accuracy. The final position of the wreck should be at the centre of the surveyed area.

The EPS and its ancillary consultations also identified other potentially important issues and constraints that go beyond the Environment Protection Directorate's remit, particularly the proximity of the submarine telecommunications cable linking Malta to Sicily and the navigational approaches to Ir-Ramla tal-Balluta and Id-Daħla ta' Spinola. These issues are being flagged for further consideration through the development permitting process.

Appendix 1: Scoping comments submitted to MEPA during scoping consultation.

Stakeholder	Comments received	EPD comment:
A. MRA (MALTA RESOURCES AUTHORITY)	[17/11/2010] MRA does not require any further information for the update to the EIS. However we recommend the document should be forwarded to EneMalta and WSC to ensure that the scuttling will not interfere with present or planned submarine cables or pipelines. [18/11/2010] Further to yesterdays e-mail it appears from records held at MRA that the proposed scuttling site is very close to the Vodafone sub-marine cable. This cable has landing point in Balluta bay. You might wish to ask the developer for further details re the effect of the development on the cable.	Correspondence noted.

Appendix 2: Review Consultation comments submitted to EPD (04/06/12 – 28/06/12)

Stakeholder	Comments received	EPD comment:
A. TRANSPORT MALTA	(15/04/2012) Dear ---------- **Case number** : PA/01254/09 **Location of development:** N 35 °55.270' & E 14 °29.930 off coast of exil es off, triq It-Torri, Sliema. **Description of works:** To scuttle "Tugboat TUG 2" off exiles coast, Sliema in location shown above. Reference is being made to the abovementioned proposal. Transport Malta has no objection to this development subject to the following conditions: 1. The top of the mast must not be less than 6meter below the surface of water. 2. The proposed location of the scuttling of the wreck is to be as indicated however this location may be shifted to 10m north so as to ascertain necessary depths. 3. Within 3 working days from scuttling TM must be furnished with the exact position of the wreck and least depth of the artificial reef.	Noted. Points 1 and 3 to be included as a permit condition should the proposal be considered favourably. Point 2 has been superseded, following consultations the final proposed location has been shifted to N 35 ° 55.26899' & E 14 °29.97863
B. MALTA TOURISM AUTORITY (MTA)	(11/06/2012) Please refer to your correspondence dated 04th June 2012 requesting our comments on the application in caption. Strictly from a tourism point of view, there are no adverse remarks to the request, provided that other interested entities- including the Malta Environment and Planning authority, the Malta Maritime authority and the Sliema local council – find no objection to the proposal under request.	Noted.
C. ENVIRONMENTAL HEALTH DIRECTORATE COMMENTS	(20/06/2012) With reference to your e-mail dated 4th June 2012 regarding subject indicated in caption and following review of the EPS submitted, please be informed that this Directorate would like to submit the following comments/recommendations regarding this proposal :	Noted.

Stakeholder	Comments received	EPD comment:
	Applicant is to adopt best practice methods and guidelines to so as to strip and extensively clean the vessel to remove all potentially hazardous and liquid materials as is being proposed. It is pertinent that all necessary precautions and preventive measures be taken so as to prevent any adverse impacts on the bathing water quality of the official bathing areas. The safety of the divers must also be ensured by taking proposed (and any others if need be) necessary actions/interventions to prepare the vessel for diving purposes A waste management strategy should be adopted and strictly implemented so that all generated waste streams from vessel cleaning and preparation for scuttling will be handled and disposed of safely through the appropriate facilities and according to the necessary permits/licences. With regards to removal and disposal of any hazardous waste, adherence to regulatory codes and procedures and due diligence is important in view of the heath and safety of workers It is recommended that all proposed mitigation measures regarding any major impacts which may arise from this proposal are to be strictly implemented by applicant to mitigate any significant adverse health effects and nuisances. The possible health effects of any residual impacts that cannot be mitigated should also be taken into consideration. Moreover any other unpredicted impacts and nuisances which may arise from this proposal and that may have a significant adverse effect on public health should be immediately addressed by the applicant and the necessary mitigation measures taken. All relevant complaints lodged should be investigated and remedial action taken immediately. All complaints lodged and actions taken are to be recorded and such records are to be readily available to the Competent Authorities when requested. It is also recommended that the proposed monitoring plans be also implemented.	Noted and agreed. Cleaning certificates will be provided. Handling and management of wastes is the responsibility of the cleaning contractor, who is licensed to do such work. Removal of asbestos was undertaken in accordance with asbestos legislation and under licence from the OHSA. Noted.
D. COMMENTS FROM THE SUPERINTENCE OF CULTURAL HERITAGE (12/07/2012)	We refer to your e-mail of the 4th June 2012 and to the Environment Impact Assessment as received from the Malta Tourism Authority. The Superintendence states the following: - The conclusions of the Report are based exclusively on a visual inspection of the seabed. Consequently, the Report cannot discard the possibility of major archaeological targets, including buried wrecks that might be uncovered at the site or in its vicinity. - The Report also draws attention to sporadic archaeological finds recorded in the area of St Julian's Bay, which corroborates the possibility of shipwrecks in the area.	An Environmental Monitoring Plan is to be requested as part of the permit conditions, the monitoring must include Archaeological monitoring as required by MEPA's Heritage Planning Unit and the Superintendence of Cultural Heritage. Remote sensing or sub-bottom profiling was not

Stakeholder	Comments received	EPD comment:
	- The data capture does not include any form of remote sensing or sub-bottom profiling, despite the recommendation in the Terms of Reference communicated to MEPA by the Superintendence on 10 December 2010. Such sub-bottom profiling would have given a clearer picture of the situation. - In the absence of sub-bottom profiling, there is no secure way of assessing and mitigating the threat of exposure and damage to archaeological remains. The issue of a permit would pose a threat to archaeology that might survive within and around the site. These risks are confirmed by the Marine Archaeology Baseline Report (Tech App 3) that specifically identifies "scouring of the seabed" as a potential threat that might eventually "expose buried archaeology". Such exposure would subject archaeological remains to erosion or looting. The Superintendence agrees with the need for monitoring as a mitigation measure. Nevertheless, the EIA should make clearer recommendations regarding provision to be made for such monitoring and should propose a viable and effective programme for such monitoring. Monitoring must be under the direction of the Superintendence of Cultural Heritage and in keep with Terms of Reference issued by the same. The cost of such monitoring is to be borne by the developer.	requested in the Terms of Reference, this requirement can be addressed in Environmental Monitoring Plan.

Appendix 3: Public Consultation Comments (04/08/2012- 24/08/2012)

Comments received	EIA Coordinator Reply	EPD comment
Vodafone Malta Limited Email 21/08/2012 In terms of the coordinates provided, the tugboat will be approximately less than 20 metres away from Vodafone's cable and hence there is the risk that this would damage the said cable. N 35 °55.26899' & E 14 °29.97863 off Coast of Exiles off, Triq It-Torri, Sliema, Malta PA01254/09 To scuttle "Tugboat TUG 2" off Exiles Coast, Sliema in location shown above. Due to the above, we will be submitting our comments accordingly.	This comment seems to imply that the coordinates provided by MEPA were the original set submitted with the application. These were subsequently changed in June 2012 following the findings of the EPS and the discussion with the Harbour Master. The proposed scuttling location is approximately 85m away from the route of the Vodafone cable.	Noted
Vodafone Malta Limited - Letter 24/08/2012 We write with reference to the Malta Environment & Planning Authority's (hereinafter referred to as 'MEPA') public consultation regarding the permit application in caption with respect to a tugboat that will be scuttled off Exiles Coast, Sliema (hereinafter referred to as the 'Tugboat'). Vodafone Malta Limited (hereinafter referred to as 'Vodafone') is hereby providing its feedback in relation to the aforementioned permit application. After evaluating the application submitted further to the proposal of the Professional Diving Schools Association, specifically the coordinates pertaining to the location where the Tugboat will be scuttled, Vodafone has apprehended that the Tugboat will inevitably come in close proximity to the route of its submarine cable VMSCS which links Sicily to Malta terminating at Balluta, Sliema(hereinafter referred to as the 'Cable'), with the risk that the said Tugboat might cause damage to the Cable and/or prevent Vodafone from repairing the Cable in case of damage. An image illustrating the route of Vodafone's submarine Cable is being provided in Annex A hereto attached. Following the assessment carried out by Vodafone, it has transpired that the proposed location of the Tugboat is not adequate to ensure the protection of the Cable, which was installed in March 2004. According to the coordinates pertaining to the permit application, the Tugboat will be lowered approximately sixty metres (60m) away from Vodafone's submarine Cable, however Vodafone recommends that, as a minimum, the Tugboat is lowered two hundred metres (200m) away from the Cable. Below please find the reasons behind Vodafone's recommendation.	Noted The presence of the submarine cable was highlighted by the Harbour Master in discussions to identify a better location for the scuttled wreck following the findings of the EPS. The new location proposed in the EPS places the tugboat approximately 88m away from the cable, which cable is buried in approximately 70cm of sand (info: Vodafone Malta Limited; meeting held at Transport Malta on 29/08/2012). This distance was deemed to be sufficient by the Harbour Master in terms of navigational safety and distance from the cable. The image referred to as "Annex A" (see Figure 1 in Annex 1 to this Addendum) is noted and is generally correct. Vodafone's concerns and suggestions are noted. As explained, the tug boat will be scuttled at a distance of approximately 88m (not 60m) from the cable (this was also ascertained by the hydrographer's office of Transport Malta who plotted the route of the cable (coordinates provided by Vodafone Malta Limited) and the scuttling location –. Noted	Noted. This matter is being brought to the Planning Directorate's attention for further consideration as part of the development permitting process.

Various factors need to be taken into account when determining the proximity of a wreck site to a cable route. Firstly, unless an adequate distance is maintained there is a risk that the Tugboat moves to a different location while it is being scuttled and lowered into the sea and/or due to movement once settling on the seabed. To this end, Vodafone hereby requests MEPA to also ensure and guarantee that, in the long term, following its scuttling there is no significant movement of the Tugboat on the seafloor towards the Cable. In the event that Vodafone's recommendations are not taken into consideration and damage is caused to the Cable, Vodafone would necessarily have to recover the costs allocated to such repair. Therefore, Vodafone reserves its rights to claim damages for any damage and/or loss caused to Vodafone (as well as its employees, agents and sub-contractors) and affecting its operations and/or its property. In addition, Vodafone advises that MEPA ensures that the entity responsible for the lowering of the Tugboat draws up and maintains an adequate insurance policy with a reputable insurance company to cover the risks that could ensue from the scuttling of the Tugboat and therefore the cost, including but not limited to Cable repair and traffic restoration costs, of any Cable repair operation arising from the work which would necessarily have be undertaken by Vodafone in case of damage. The insurance policy would be required to be in force for the whole period during which the Tugboat would remain in the area identified in the pertinent permit application. Considering the risk at stake, Vodafone considers this condition as being more than fair and reasonable. If the Tugboat is laid in close proximity to Vodafone's Cable there is also the threat of a hindrance to a possible repair operation which would need to be carried out by a cable repair ship (hereinafter referred to as the 'Ship') in the area. Such hindrance could be attributable to various factors, namely: Ship manoeuvring may be hindered due to insufficient water clearance between the Cable and the scuttled Tugboat; Grapnel run to recover Cable may be hindered due to the proximity of the Tugboat Final Cable bight laying after completion of repairs may be hindered due to the proximity of the scuttled Tugboat; Cable snagging during a recovery operation due to proximity of the Tugboat. The clearance between Vodafone's submarine Cable and the Tugboat should be sufficient in order to allow the Ship to conduct a repair	The proposed location of the wreck was moved further to the east in order to maintain an adequate distance from the buried cable. A distance of 88m was deemed by the Harbour Master to be adequate. The scuttling operation is a controlled descent to the seabed. In recent similar operations, the movement of the vessels from the target location was of only a few metres. The possibility of the vessel shifting considerably during the scuttling operation is therefore close to zero. Following the scuttling, the vessels monitored over a period of time (normally approximately 2 years) for environmental issues but also to determine any movement of the vessel, sand scour or accumulation, and the vessel's structural integrity. Movement of the vessel would be evident very quickly and mitigation measures could be taken. As a precautionary measure, the vessel will be weighted through the introduction of concrete in the hulls and diesel tanks to compensate for the loss of weight from the removal of the engines. It should also be noted that any shifting of the vessel post-scuttling will likely be minimal if at all. The reason for this is that the vessel will be scuttled approximately 30m from a reef and the depth of sediment in this area is approximately 80cm. Movement of the vessel will most likely embed it further into the sand. In addition, the chances of the vessel coming closer to the cable location are also remote since: (1) the cable is located to the north of the scuttling location; (2) the prevailing exposure (and hence currents) in the area is the NW, N, and NE direction, so that any shifting (which would only happened, if at all, as a result of severe storms) would push the vessel away from the cable if the currents are from a NW to N direction and largely parallel to the cable if from the NE; (3) Any movement as a result of a NE storm would need to push the vessel up a slope since the seabed's gradient increases outwards and therefore any such movement of the vessel will most likely also embed it further into the sand. Insurance issues are outside the scope of the EIA and will need to be discussed between the parties. Nonetheless, insurance cover would depend on the risk involved, which in this case is not deemed to be high in view of the unlikely movement of the vessel and the fact that the cable is buried in approximately 70cm of sand. It is not clear why the presence of the tug boat should hinder maintenance operations. The proposed scuttling position was determined in consultation with the	

operation. The minimum recommended water clearance from the Tugboat to the surface is that of ten metres (10m). But considering that the proposed scuttling location has a depth of twenty metres (20m) and the Tugboat has a height of nine and a half metres (9.5m), clearance for the Ship would be only marginally sufficient, which is worrying. Due to the fact that there is marginal clearance from the Tugboat to the Ship, it is important to compensate with a longer distance between the location of the Tugboat and that of the Cable. According to standard practice, this distance is to be calculated as twice the average length of the Ship, thereby allowing a full 360° rotation about the stern when the bow of the ship is just over the Cable. The Ship is approximately one hundred metres (100m) long, implying that there would have to be a distance of two hundred metres (200m) between the Cable and the scuttled Tugboat. Even if the above recommendations are implemented, any repair operation would still need to be carried out with additional precautions. By way of example, a precaution required would be to have the wreck marked with a buoy during the entire repair operation. Moreover, it should be noted that further to the scuttling of the Tugboat, and hence the creation of an artificial reef, the area covered by the permit application would be declared a protected marine conservation area. In view of the fact that Vodafone's submarine Cable was laid along the affected route back in 2004, Vodafone does not believe that the declaration is applicable, and that therefore there will be no restriction of marine activity over the wreck site should there be the need to affect any Cable maintenance. Consequently, the distance of two hundred metres (200m) between Vodafone's submarine Cable and the Tugboat to be scuttled is being proposed as a result of an assessment of the foreseeable threats to the aforementioned Cable. In conclusion, Vodafone hereby solicits MEPA to kindly involve and coordinate with Vodafone, as appropriate, on matters related to this permit application (also allowing us to be present when the Tugboat is scuttled), as well as any other future applications which may have an impact, whether direct or indirect, on Vodafone's operations and/or property. Whilst thanking you in advance for your consideration, we remain at your disposal should you require any clarifications.	Harbour Master, who deemed a clearance of 10 - 12m to be adequate for navigational safety While grapnel hooks are used to recover cables from the seabed even in depths of several kilometres, maintenance work in water depths of 20m are normally carried out from barges and/or by divers (see also: http://www.k-kcs.co.jp/english/solutionMaintenance.html). It is therefore unlikely that the tug boat position in 20m of water and on the shoreward side of the cable would hinder any such operations. Likewise cable bight laying, since any such operations (if undertaken by the "ship") would necessarily take place from the other side of the cable due to the presence of the reef at about 110m from the cable route. The reef is at a depth of 10m. The water depth above the tug boat will be sufficient (10 -12m) as already ascertained by the Harbour Master. In addition, the rounded hull of the tug boat would mean that the vessel will have a tilt, further increasing the clearance by a couple of meters. Furthermore, it must be noted that a mere 30m from the scuttling location, the natural water depth is of only 10m due to the presence of the reef. Since the water clearance was deemed by the Harbour Master to be sufficient for safe navigation, it is not clear why this additional compensation is required. In any case, if the ship is 100m long and needs a draft of10m, it cannot work from the shoreward side of the cable, since the distance from the cable to the shore is less than the 200m quoted and the natural depth of water at approximately 110m is less than the 10m required (further towards Exiles the cable is substantially closer to the 10m contour. It is therefore evident that should cable maintenance in this area be carried out by ship, this will work from the seaward side of the cable. In fact, once the position is charted (all scuttled wrecks are charted on the official nautical charts), it is assumed that any ship carrying out maintenance or repairs to the cable (which would be an exceptional circumstance) can approach the cable from other sectors with the bow facing out to sea and therefore the ship which will be with DP etc can still carry out works safely. This assumes that such maintenance will be carried out by ship, although it is actually more likely that maintenance in such shallow waters will be carried out from barges and/or by divers. All repair operations would always need to be undertaken with care, also for other marine users; appropriate Notice to Mariners would need to be issued and in the event of repairs close to the scuttled wreck, all diving activities in the area would be curtailed. As regards the proposal of a marker buoy, one such buoy will be installed on the wreck immediately after scuttling. This will not be a temporary measure during repairs but a permanent marker for navigational safety.	

	The deployment of a diving wreck does not necessarily result in the declaration of a marine conservation area. A Marine Protected Area has already been designated in the vicinity of this location (MT0000105) and there are no plans for new conservation areas to be declared. What may happen is that the Notice to Mariners No 5 of 2008 would be extended to afford protection to the wreck This would restrict fishing and anchoring but would not impede any maintenance work on the cable. From the preceding discussion, the recommendation of scuttling the wreck at a distance of 200m from the cable cannot be supported. It has been amply demonstrated that the distance of approximately 88m from the cable of the current proposed scuttling location is adequate and safe enough in view that: (i) the cable is itself buried in some 70cm of sand; (ii) should the tug boat move under storm action, this would likely move away from the cable under NW, N or NE wave action; (iii) the likelihood of maintenance on the cable taking place by Ship is remote in view of the restricted water depth in the area (cable ships normally work in much deeper waters) and it is more likely that maintenance would be carried out from barges or by divers; (iv) should maintenance be carried out by ship, there is ample space seaward of the cable for the ship to approach the cable and undertake the work in a safe manner; (v) the cable was laid in 2004 and its route takes it close to a WWII wreck (the Bristol Beaufighter), which is located in approximately 32m of water off Exiles. When the location of this wreck was plotted together with the cable route and the proposed scuttling location (see Figure 3 in Annex 1 to this Addendum), it was ascertained that the cable was laid at approximately the same distance from the Beaufighter as the distance that the tug boat is proposed to be scuttled from thecable route (with the difference that the tug boat will be at the shoreward side of the cable whereas the Beaufighter is located on the seaward side, which makes it more of an obstacle for maintenance work). Hence, if the presence of the Beaufighter did not create maintenance concerns or insurance risks during the laying of the cable in 2004, the scuttling of the tug boat at a similar distance (and on the shoreward side) should likewise not create such issues. Vodafone representatives would be welcome to witness the scuttling of the tug boat once this is permitted. Should Vodafone want, the PDSA would also organise a dive for Vodafone's representatives to inspect the tug boat once this is laid on the seabed.	