



**PROPOSED ADDITION OF
90,000 CUBIC METRES OIL STORAGE CAPACITY
AT BIRZEBBUGIA**

TERMS OF REFERENCE

FOR THE PREPARATION OF AN

ENVIRONMENT PLANNING STATEMENT

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Note 1: All requirements set out in these terms of reference must be complied with. If there are any sections that are not relevant to this study, the reasons for not including the relative information in the study must be stated and justified. The Malta Environment and Planning Authority (MEPA) reserves the right to request additional studies should the findings of the EIA not be sufficient to adequately inform the decision making process or if the EIA identifies matters which should be subject to further (or new) studies.

Note 2: Difficulties, including technical difficulties and lack of information, encountered by the consultants in compiling the required information shall be made clear. All references to published works and sources of information shall be duly acknowledged. No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the consultation period. Any material which is based on proprietary data which is not available shall not be incorporated by reference.

Note 3: A list of all permits, licenses and other forms of authorization (other than the development planning permit) which must be obtained by the applicant in terms of any other law in implementing the development if permission is granted must be included in the EPS. If consultants are uncertain whether an authorisation is necessary, they shall so indicate in the EPS.

Note 4: Following the review of the EPS, the MEPA usually submits comments to the EIA consultants for further clarifications. Once the consultants respond to these comments to the satisfaction of the MEPA, a second draft of the EPS, that includes these clarifications, must be prepared. The MEPA will only accept an Addendum containing these clarifications if the clarifications are few or where the EPS is still easy to follow with the Addendum.

Note 5: Any requirement for confidentiality of any section of the EPS must be justified and a formal request in this regard must be submitted to the MEPA. Should the MEPA grant confidentiality for specified sections, alternate material that excludes confidential details must be provided for public consultation.

An Environmental Planning Statement (EPS) is to be prepared for the proposed development at Birzebbugia, as required by the Environmental Impact Regulations, 2001 (Schedule I, Section 7.6.2.4v, Category II). The components of the EPS are to be:

- i. a **technical report**, in conformity with Sections 1-6 and their contents as outlined below. This report should describe the project in its totality;
- ii. a **separate appendix** containing all original survey reports as prepared by individual consultants for specific topics.
- iii. a separate **non-technical summary** of all sections of the technical report (to be also provided in digital format and in both the Maltese and English languages). This summary

should include any assumptions made in the report; key features of the site (including surroundings) and proposed development; key impacts and any proposed mitigation measures to minimise costs (externalities) and maximise benefits arising from the proposed development. Technical terms, lists of data and detailed explanations of scientific reasoning should, where possible, be avoided.

- iv. A **digital copy** of the final version of all elements of the EPS, which includes all of the above, including any plans, maps, photographs, graphs, and any other contents of graphical/visual nature contained within the EPS. This should be provided at the end of the EIA process.

1.0 JUSTIFICATION OF THE PROPOSED DEVELOPMENT

1.1 A Justification for the Proposal

1.1.1 *Objectives*

A description shall be provided of the environmental, social and economic objectives which the development will seek to address, and whether such objectives stem from current international obligations and National, Regional or Local Policy, plans and Guidance.

1.1.2 *Demand*

This shall be accompanied by a description of the **current and expected demand** for the storage and use of petroleum products. The study shall explain how the proposal (its size and nature) will address this demand.

2.0 A DESCRIPTION OF THE PROPOSED DEVELOPMENT

Note 6: The description of the proposed development is to include consideration of the aspects outlined below. This description must take into account the proposal and ancillary facilities connected with the project such as any infrastructure required. Where relevant this section should include maps, plans and diagrams.

2.1 A Description of the Physical Characteristics and Features of the Project including Constructional Features of the Project

- 2.1.1 Description of the proposed development including details of the proposed site layouts showing the design (size, area, height, volume, proposed elevations [scale 1:100]), external appearance, location of all buildings and proposed access arrangements.
- 2.1.1 Land use requirements and site details should be identified, including land take required for facilities ancillary to the proposed development. Proposed facilities on the ground (including infrastructure, storage, servicing facilities, security etc.) in terms of size, area, height and volume, proposed elevations, layout, method of construction, etc.
- 2.1.2 Proposed project management arrangements, including expected duration of construction, types and quantities of raw materials including water, energy, stone and other resources to be consumed, retained and disposed of and its location. Please refer to Appendix 1 for Terms of Reference for Waste Management Plan.
- 2.1.3 The depth of excavation and volume of excavated material required to construct the proposed development, including any ancillary facilities to support the development are to be quantified, clearly identifying the types of material envisaged to be excavated.
- 2.1.4 Identification of the routes that construction vehicles will use to and from the site, the number and size of construction vehicles and their respective frequency of use, and the time of day when construction traffic is likely to be heaviest.
- 2.1.5 Facilities for the on site servicing of equipment, vehicles and other machinery.

2.2 A Description of the Operational Features of the Project

- 2.2.1 Quantities and types of waste to be handled by the proposed development; quantities and types of waste/resource to be retained and disposed of and its location. Please refer to Appendix 1 for Terms of Reference for Waste Management Plan.
- 2.2.2 Residues and emissions by source, type, quantity, composition and concentration. These should include estimated noise levels and vibration within the plant and at the site boundary; discharges to water (e.g. discharges from storage tanks, fuel spillages, fuel emissions, pipeline leaks, transport and refuelling spillages, and storm water run-off); emissions to air (including volatile organic compounds, sulphur oxides, nitrogen oxides, carbon monoxide and carbon dioxide, ozone, heavy metal compounds); light, and other deposits/residues into land and soil; their disposal and/or reuse.

2.3 Consideration of alternatives

2.3.1 *Alternative Technologies*

An assessment of the alternative technologies (during construction and operation) should be considered. This section should contain a detailed explanation of the

proposed technology to be used (including that for reducing emissions) and an assessment of alternative technologies which can be used to achieve the objectives of the proposed development. The use of Best Available Techniques (BAT), considering the geographical location and local environment shall also be addressed. The information shall be presented in tabular format indicating technologies and associated environmental impacts, in sufficient detail.

2.3.2 *Alternative Sites and/or Layouts*

An identification of alternative sites (including the proposed site and other suitable sites), based upon the possibilities and constraints posed by physical characteristics and features of the project, its operational features, and land-use requirements. A description of the sites and site-specific environmental impacts shall be provided. A comparative analysis of the alternative development layouts is to be provided together with a zero option assessment (that is, an assessment of the way the site would develop if it were left in its current state).

- 2.3.3 The findings on the environmental impacts of alternative technologies shall be combined with those on the environmental characteristics and environmental impacts in alternative sites. This will enable the identification of best technology/site combinations. The technical and planning reasons why a particular technology and site was selected in preference to all the others must be clearly explained. The discussion should cover construction, operation and distribution aspects.

3.0 A DESCRIPTION OF THE PROPOSED SITE AND ITS SURROUNDINGS.

Note 7: This description is identified by area of influence for each relevant parameter. The area of influence for each parameter shall be determined by the consultants who shall also justify the extent of the chosen area of influence. **This must be approved by the Malta Environment & Planning Authority prior to commencement of the EIA.**

This description should include:

3.1 Land Use

Including settlements, workplaces, production, commercial, recreational, marine activities and other uses. Details including nature and magnitude, proximity to site etc. should be included.

3.2 Geology and geomorphology

This should include a survey and characterization of the sites' geology, geomorphology and soils.

3.3 Hydrology

Water and hydrological features (such as aquifers, watercourses, wells, water channels, cisterns, springs, freshwater catchment areas etc.).

3.4 Landscape, topography and visual assessment

This should include a landscape characterisation of the area and visual amenity of the area. 'Non-visual' aspects of the development should also be considered and include those impacts which reduce the possibility for the public to enjoy the landscape including emissions, noise, etc.

3.5 Air quality including odour

This section shall clearly establish and identify the current background levels of pollution, including dust and odour. Details on prevailing wind and climate conditions shall also be included, amongst other relevant parameters.

3.6 Land contamination

The existing level of contamination, if any, of the site shall be investigated. The types and concentration of the contaminants shall be identified, including the extent of contamination in terms of depth.

3.7 Marine survey

Survey of water quality including characterization of water quality in the area.

3.8 Any other relevant environmental features

4.0 PLANNING, POLICIES AND LEGISLATION

- 4.1 The relevance of Maltese legislation and Maltese planning policy (notably the Structure Plan and Local Plans for the surrounding areas) and its compatibility (or otherwise) with the development or its impacts should be described and analysed. In particular, policies on the following should be noted: conservation areas and zones, protected buildings and sites, areas of natural beauty, areas of scientific, ecological, archaeological, agricultural, architectural, historical, antiquarian or artistic value, aquifer protection and run-off, transport policies (including parking standards), marine protection.
- 4.2 Policies of other ministries will provide an important context for the proposed development. Reference should also be made to environmental regulations, policies concerning waste treatment, transport, public health, agriculture and tourism.
- 4.3 International polices or conventions which may affect the site or area. For instance details about compliance with European Union regulations, directives and conventions should also be considered, their relevance to the project highlighted, as well as how compliance will be achieved.
- 4.4 The following legislation is particularly relevant, but not exclusive, to the proposal:
- **EU Council Directive 96/82/EC:** The control of major-accident hazards involving dangerous substances (Seveso II);
 - **Act XXVII of 2000:** Occupational Health and Safety Authority Act;
 - **Legal Notice 37 of 2003:** Control of Major Accident Hazard (COMAH) Regulations;
 - **Legal Notice 45 of 2002:** Work Place (Provision of Health and, or Safety Signs) Regulations;
 - **Legal Notice 121 of 2003:** Minimum requirements for the use of personal protective equipment at work regulations, 2003;
 - **Legal Notice 282 of 2004:** Work Equipment (Minimum Safety and Health Requirements) Regulations;
 - **Legal Notice 44 of 2002:** Work Place (Minimum Health and Safety Requirements) Regulations;
 - **Legal notice 36 of 2003:** General Provisions for Health and Safety at Work Places Regulations.

5.0 ASSESSMENT OF ENVIRONMENTAL IMPACTS AND RISKS OF THE PROPOSED DEVELOPMENT.

All significant impacts of the proposed project (as described in Section 1), both **during construction and during operation**, should be assessed, given the environmental characteristics of the site outlined in Section 3 and the policies outlined in Section 4. A descriptive and quantitative analysis (including magnitudes and timing) of the impacts of the proposed development should be made, and presented in summary chart format. The various techniques, methods and assumptions used in the analysis and predictions should be outlined. It is recommended that impact assessment should include:

- i. description of impact;
- ii. magnitude and significance
- iii. duration (temporary and permanent);
- iv. extent (in relation to site coverage and surroundings and associated features);
- v. whether direct or indirect;
- vi. adverse or beneficial;
- vii. reversible or irreversible effects of the impact and extent of irreversibility as well as a description of any associated conditions / assumptions for irreversibility;
- viii. sensitivity of resources to impacts;
- ix. probability of impact occurring;
- x. confidence levels/limits to impact prediction;
- xi. scope of mitigation / enhancement; and
- xii. residual impacts

Worse case scenarios should be assessed where relevant.

5.1 Effects on Land

Including the physical effect of the development on the local topography e.g. via earth-moving, soil stability and erosion; chemical emissions, deposits and waste.

5.2 Effects on Geology and Hydrology

The assessment shall describe whether the development will have any impacts upon or pose a risk to the mean sea level aquifer. Any effects of the development springs, drainage patterns, wells, channels, run-off, coastal and valley hydrology should be included.

Discharges to land, sea and sewer will be identified, clearly quantifying the estimates and their likely contents.

The contamination of surface water should be identified and assessed. This assessment shall consider the effect of leaching storage products into the bedrock and effects on the hydrosphere.

The assessment shall investigate the effects and risks of excavations on the stability of the surrounding land, given the type of bedrock and deposits in the area.

5.3 Effects on the Marine Environment

Impact on water quality resulting from the discharge of wastes into the marine environment, surface runoff and leaching of stored materials. The extent of the impact should also be identified.

5.4 Effects on Air Quality including Odour

Including emissions to air during construction and operation by source, type, concentration, composition and the distribution of each. This shall include identified chemical emissions (including VOC), particulate matter and odour.

5.5. Effects on Public Health

This shall assess the effects on the health of both on-site personnel and of the population within the relevant area of influence. Reference should be made to published epidemiological and other studies, where relevant.

5.6 Visual & landscape impact

Including views into the site. Colour photomontages of the proposed development should be included.

Colour photomontages taken from points agreed with the MEPA are to be submitted on A4. Photomontages are to show the situation from a height of 1.7m above ground level (unless specific obstacles justify heightening the viewing point - in which case this should be made clear in the document submitted or unless the MEPA asks for a different viewing height which may include aerial shots).

Apart from the photomontage itself, the following are required:

- A copy of the base photograph used in the preparation of the photomontage (this should enable a comparison of the situation as existing and as proposed - hence the size of the photograph depicting the situation as at present is to be of the same size as the photomontage);
- Date when the base photograph was taken;
- A site map indicating the exact positions from where the photographs were taken and to which the photomontages should cross-refer.

5.7 Risk assessment

A risk assessment shall be carried out to identify the form, dimensions, significance and characteristics of risks *posed* by the development (including risk of damage from handling or storing toxic or harmful substances, risk of accident), and also *mitigated* by the development (e.g. search and rescue in case of accident), if any.

The risk assessment should incorporate the potential risk of the development on the nearby SAC. The risk of the development during the construction and operation in terms of vibration, noise, dust, lighting and other disturbances to the SAC must be assessed.

5.8 Impact on surrounding land uses

Specific reference to sensitive receptors should be made.

5.9 Secondary impacts

Mainly arising from the extraction and consumption of resources necessary to implement the project, as well as from developments supporting the project (e.g. new roads, sewers, power lines, pipelines, telecommunications), such as water, energy, construction materials, and the resultant need (if any) of development of new supplies.

5.10 Interaction between any of the foregoing

Experts contributing to the EIA should be specifically asked to consider impact interactions and to communicate information between each other. In addition, any environmental components not listed in the Directive or Regulations that are likely to be affected should not be discounted.

Predictions of impact interaction will nearly always involve a greater degree of uncertainty than prediction of impacts on individual components. This should be referred to in the EIA rather than ignored.

6.0 DESIGN OF MITIGATION MEASURES, IDENTIFICATION OF RESIDUAL IMPACTS AND MONITORING PROGRAMME

6.1 Mitigation Measures

This should include a description of the measures envisaged to prevent, minimise and where possible offset any significant adverse effects on the environment of the project during both construction and operational phases (including reference to consideration of alternatives in section 1. above). Such measures could include technological features; alternative technological features; operational management techniques; enhanced site-

planning and management; aesthetic measures; conservation measures; reduction of magnitude of project; and health and safety measures.

A description of safety measures envisaged in case of accidents such as spills at sea and on land and fire should also be included.

6.2 Residual Impacts

Any residual Impacts, that is those impacts that cannot be mitigated or those remaining impacts following implementation of mitigation measures, should also be described, quantified and presented in tabular format.

6.3 Monitoring Programme

Consultants must propose a monitoring program which should take into account monitoring of those features considered to have a negative or an uncertain impact. In particular, monitoring of air and water quality of the surrounding area is suggested.

The program must be proposed at different stages: before, during and after construction. Details regarding type of and frequency of monitoring must also be given. This program shall include an audit and evaluation of forecasts, predictions and mitigation measures made in the EPS.

APPENDIX 1: TOR FOR WASTE MANAGEMENT PLAN

The Waste Management Plan (WMP) is aimed at identifying the waste management requirements which will arise from a project and proposing solutions how this waste should be managed using the Best Practicable Environmental Options.

The Waste Management Plan must refer to and abide by the following:

- 1) Maltese Legislation pertaining to waste management
- 2) Structure Plan (1990 – 2010) for the Maltese Islands

- 3) Space for Waste: The Waste Management Subject Plan
- 4) The Solid Waste Management Strategy for the Maltese Islands (2001)
- 5) Any international obligations as applicable

The WMP should cover all waste streams and target the following stages of the project: -

- **Soil removal and Site excavation phase**
- **The Construction phase;**
- **The Operational phase.** This section of the WMP should also target wastes arising from possible spillages on site. Annex 3 identifies a number of scenarios where pollution from spillages may occur, however does not state how waste generated from these situations will be eventually disposed of. Applicant should be requested to submit this information. Any personal protecting clothing or equipment which may become contaminated with fuels, and which will require disposal, should be considered as hazardous waste. The same information should be submitted for waste generated from scenarios listed under Annex 4.

Waste analysis estimates requested (please see below) should be presented separately for the three different phases of the project. A global estimate would not be acceptable.

General requirements:

The following information is to be provided separately for each phase identified above.

- 1) A general policy statement and commitment by the developer to reduce waste generation and minimise landfill disposal where possible.
- 2) Identify those processes or activities (resulting from the project in question) that would result in waste generation;
- 3) Provide information pertaining to:
 - The identification of all possible waste streams which may be generated by the each activity including wastes generated from any ancillary facilities required on the site;
 - The nature of each type of waste (whether hazardous or non-hazardous; the appropriate European Waste Catalogue code as listed in Schedule 1 of L.N 337 of 2001, is also to be included);
 - The projected quantities for each type of waste stream identified (details of assumptions made and the methodologies adopted for achieving such estimates should also be included);
 - The predicted sequence and time frame for waste generation. This will help determine the work site facilities required to deal with the wastes arising as the project progresses.
- 4) Information on the measures to adopted to manage the wastes identified such as: -
 - Infrastructural elements required for the storage and management of waste on site;
 - Measures to be adopted to ensure protection of the surrounding environment from such wastes.
- 5) Information on the disposal methods (i.e. recycling, land filling, etc) to be utilised and the sites where the waste will be deposited. Items to be documented in this section include: the type of waste, the location of disposal facility or recycler, the type of disposal method to be utilised (land filling, recycling etc). A description of the means of

transportation to be used should also be included, as well as measures to be taken to protect the surrounding environment during transport of waste.

6) Any recommendations on requirements for monitoring in order to ensure that waste is ultimately managed according to the provisions of the waste management plan.

7) The following information should also be submitted:

- Layout plan of site (to scale) including and indicating all waste management infrastructure existing and required including bunded areas as well as flow of surface water runoff and storm water drainage to the water treatment systems (As mentioned under section 3.2.5 of the PDS) and eventually to the sea (as stated under section 3.2.5 of the PDS). Discharge into the Marine environment is an issue which should be checked with the Marine Pollution section of PPCU, MEPA).
- Cross-sections (to scale) of waste management infrastructure to be installed or used on site.
- Plans and cross-sections, (to scale) of all waste management infrastructure required on site to treat surface water run-off and storm water drainage, as mentioned under section 3.2.4 of the PDS.

Project Specific requirements:

Disposal of any excavated material at sea requires a permit from the Waste Management Team within MEPA. Material to be disposed of at sea should be first characterised as per criteria listed in the Convention on the Prevention of Marine pollution by dumping of waste and other matter (London Convention 1972), to which Malta is a party.
