

PA 05430/02: Re-location of a kerb-side pump and the change of use of part of existing plant yard into a fuel filling station, works include demolition of existing rooms and their re- location , landscaping of site, cleaning, upgrading of existing yard and to sanction, Site at, Tal-Blata I-Għolja, Mosta.

1. BRIEF DESCRIPTION OF THE PROPOSAL

The Malta Environmental and Planning Authority (MEPA) requested an Environmental Planning Statement (EPS) to support PA 05430/02 for *the re-location of a kerb-side pump and the change of use of part of existing plant yard into a fuel filling station, works include demolition of existing rooms and their re-location, landscaping of site, cleaning, upgrading of existing yard and to sanction* at a site at Tal-Blata I-Għolja, Mosta. The proposal qualified for an EIA, as per Schedule I, Category II, Section 7.6.2 of the then EIA Regulations (Legal Notice 104 of 2001), later repealed with Legal Notice 114 of 2007.

The EPS includes a description of the proposed development, a description of the site and its surroundings, relevant legislation and policies, an assessment of impacts and a description of mitigation measures, as required by MEPA's Terms of Reference. The EPS was co-ordinated by Perit Mariello Spiteri from EMDP - Environmental Management Design Planning.

THE PROPOSED DEVELOPMENT

The proposal involves the development of a fuel filling station at Tal-Blata I-Għolja (Mosta), in a site that lies outside development zones (ODZ). The site is located within a Rural Conservation Area, according to the "Key Diagram" accompanying the *Structure Plan for the Maltese Islands*, 1990. The site is currently permitted as a contractor's yard for the storage and maintenance of heavy vehicles. The license for the fuel filling station will be transferred from a kerb side pump located in Triq Marina, Pietà.

The proposed fuel filling station will cover a total site area of 3,931 square metres. The rest of the site (c. 6,105 square metres) will retain its current use of a dry storage and contractors yard. This area will be cleaned, landscaped and repaved to ensure an impervious surface. The refuelling station will consist of:

- six pump units;
- two diesel fuel tanks of 60,000 litres capacity each and another of 30,00 litres, a biodiesel fuel tank of 30,000 litres capacity and an unleaded petrol fuel tank of 60,000 litres capacity. Originally, there was a proposal for one lead replacement petrol (LRP) tank of 60,000 litres capacity, however in view that this has been phased out since then, MEPA brought this to the attention of the EIA Coordinator and architect and it was communicated that the LRP tank is to be replaced by a 60,000 litre capacity biodiesel fuel tank (correspondence dated 13 September 2011).
- double walled fuel tanks made of steel with a coating of endoprene polyurethane;
- piping connections made of high-density polyethylene;
- multi-layered pipes;
- Stage II vapour recovery;
- Stainless steel islands to contain and handle any spilled fluids;
- Silt-traps; and
- Class I and II separators at the fuel re-filling.

Entry and exit to the fuel-fuelling station will be through an amended alignment in the existing road.

2. EIA CONSULTATION

As part of the EIA process, consultation with various consultees was carried out during the scoping and the reviewing stages. Public consultation was undertaken during the scoping 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 made available for public consultation on 5 February 2004:

- Mosta Local Council;
- Malta Resources Authority;
- Nature Group;
- Department of Environmental Health; and
- Civil Protection Department.

Comments received within the stipulated timeframes were from the Mosta Local Council. These comments are inserted in Appendix 1 to this Report.

The final Terms of Reference were issued on 22 March 2004.

2.2 Consultation during Review

The first draft EPS was submitted to MEPA on 4 October 2007 and circulated for review to the following consultees:

- Mosta Local Council;
- Malta Resources Authority;
- Civil Protection Department;
- Nature Group;
- Din l-Art Ħelwa;
- Department of Environmental Health; and
- Director of Agriculture.

The EIS was also circulated for internal review within MEPA.

Within the stipulated consultation period, comments were received from the Malta Resources Authority, Civil Protection Department, Moviment Graffiti, Department of Environmental Health, Flimkien għal Ambjent Aħjar. Comments made by MEPA and its consultees during the review stage were forwarded to the EIA Coordinator, the developer and the architect on 13 November 2007. These comments (refer to Appendix 2 to this document) were addressed by the EIA Coordinator and responses were submitted to MEPA.

2.3 Consultation following Certification

The certified¹ EPS was certified on 11 February 2011 and published for a three-week public consultation period on 25 April 2011. No written submissions were received during this consultation period.

3. EIA FINDINGS

The following characteristics of the site, assessment of impacts and mitigation measures were identified in the EPS.

3.1 LAND COVER AND LAND USE

The development site lies at an elevation of approximately 100 metres above the mean sea level and is surrounded by agricultural fields, some of which are abandoned. The closest residential dwellings lie at a distance of approximately 175 metres to the north-west of the site, along Triq il-Kbira, Mosta. Access to the site is provided from the site access road.

¹ Certification of the draft Environmental Planning Statement document is not an approval by the Environment Protection Directorate, but a declaration that the report has been satisfactorily compiled, prepared in a professional manner, and adequately meets the terms of reference issued by MEPA as per Regulation 24 of the EIA Regulations 2007 (L.N. 114 of 2007). Without prejudice to the Environment Protection Directorate's agreement with the conclusions of the documents, and the final decision on the proposal, the report can then be issued for public consultation.

The site is characterised with one specimen of *Acacia saligna* (Blue-leaved Wattle), listed as 'Invasive, alien or environmentally incompatible species' as per the Trees and Woodlands Protection Regulations, 2011. An ashlar boundary wall (c. nine to ten courses high), surrounds the area where the fuel filling station is being proposed.

PREDICTED IMPACTS

The proposed fuel filling station will be constructed on the disturbed footprint of the existing storage/builders yard which is currently operational. The EPS identified the following impacts, together with their impact significance:

- Construction of fuel filling station proposed to be built on disturbed land of an existing storage contractor's yard (beneficial impact);
- Development located within the aquifer recharge zone (significantly adverse impact);
- Increase in background traffic due to the envisaged upgrading of the local road network (small beneficial impact);
- Dust generation due to traffic during construction (no measurable impact);
- Increase in noise due to heavy vehicles during construction (no measurable impact);
- Construction traffic will not pass through Mosta conurbation (no measurable impact);
- Few ancillary buildings are to be constructed on site, however there is the need for the re-location of a farmhouse (small beneficial impact); and
- Effects on agricultural areas surrounding the site (beneficial impact).

MITIGATION MEASURES

The following are the mitigation measures proposed in the EPS:

- Impervious floor (forecourt) and bunding the site;
- Storm water collected and stored after passing through an oil separator;
- Double skinned tanks and pipes;
- Real-time and constant monitoring;
- Covering of building materials and stock piles when not in use;
- Boundary wall and wetting of the site; and
- Wheel-washing facilities.

RESIDUAL IMPACTS

The following residual impact was identified in the EPS Coordinated Assessment (Issue 4.1.1-B):

- Leaching of fuel and other contaminants on the water table (adverse impact).

EPD Note: *EPD is not in agreement with the list of beneficial impacts identified in the EPS, as summarised above. Whilst the removal of the kerbside pump from an urban area is beneficial, it is not clear how this proposal will have a beneficial impact on the agricultural areas surrounding the site. When considering the justification for such an impact as presented in the EPS i.e. that the fuel filling station is being proposed to be constructed on the existing footprint of a storage/contractor's yard, no new buildings will need to be built on site and VOCs are not expected to be emitted, EPD is of the opinion that such impact is likely to be "neutral" or "not significant". The same argument applies for the likely increase in background traffic and the construction of this proposal on an already committed area.*

3.2 GEOLOGY, WATER AND HYDROLOGY

The site lies on the Lower Globigerina Limestone Member, with the Middle Globigerina Limestone Member lying underneath the agricultural land opposite the site across Triq Durumblat. A fault line is located some 175 metres to the south-east of the site, running in a northeast and south-west direction. This fault line exposes the Lower Globigerina Limestone Member to the south of the fault line and the Middle Globigerina Limestone Member to its north. There are no particular geological features of importance within and in close proximity of the site.

The site lies above the mean sea level aquifer and within the confines of the Groundwater Protection Zone. Although the EPS states that there are no hydrogeological/hydrological features of importance within the site *per se*, according to the Central Malta Local Plan (CG 29), the site falls within the Protected Area of Hydrological Importance. The most important hydro-geological/hydrological features in the vicinity of the site are:

- Il-Wied ta' I-Isperanza watercourse (a major segment of the Wied il-Għasel valley system) running in a south-west to northeast direction (c. 400 metres to the north-west of the site);
- The Wied I-Isperanza Pumping Station (which lies c.750m from the proposed development site) and Wied il-Għasel Pumping Station (distance not specified in the EPS);
- A gallery (part of Ta' Qali Pumping Station) running at a distance of around 150 metres to the west of the site at sea level, i.e. at a depth of approximately 100 metres below ground level.

The amount of surface runoff currently being generated at the development site is estimated at around 2,000 cubic metres per year, depending on the amount of annual rainfall. This water is channelled to an underground cistern for re-use as second-class water.

PREDICTED IMPACTS

If uncontrolled, dust generated at the site may be deposited as silt at the site access road and may be carried off by runoff and increase the turbidity of water flowing along Wied I-Isperanza. It is unlikely that groundwater would be affected from dust; however it could be adversely affected by leakage of fuel and lubrication oils which could result from fuel spillage during filling and by leakages from underground fuel storage tanks. However, mitigation measures adopted can significantly reduce the impacts envisaged. Yet, given that the proposed development is in the aquifer zone and unless the flooring where fuel is handled is impervious, the site could be a source of contamination.

The EPS identified the following impacts, together with their impact significance:

- Loading of watercourses with silt and dust. Dust generation during the construction phase may result in silt that may be carried as run-off (No measurable impact);
- Contamination of surface and groundwater arising from maintenance of construction vehicles and refuelling of machinery (Adverse impact);
- Structural damage to aquifer (No measurable impact);
- Provision of potable water services (No measurable impact);
- Accidental spillage of fuel and oil leaks from vehicles waiting for refuelling. These spillages may be carried by storm water to Wied I-Isperanza or to the Ta' Qali pumping station gallery (significantly adverse impact);
- Risk of a rupture in the underground storage tanks which would discharge its contents and severely contaminate groundwater (significantly adverse impact).

MITIGATION MEASURES

The following are the mitigation measures proposed in the EPS:

- Building material and stockpiles to be covered when not in use;
- Boundary wall to reduce the amount of dust carried by wind;
- Management of storm water runoff to a cleanable sump;
- All machinery to be serviced and refuelled off site;
- Area which will retain its current use i.e. yard, to be bunded off to ensure that no liquids end up in the excavated site;
- Systems to contain contaminated or 'grey' water;
- Containment of storm water falling in the forecourt through gutter systems which lead storm water to a separator. Such water is to be cleaned prior to reuse as second class water;
- Double-bottomed tanks;
- All equipment, to be in line with EU requirements, is to be certified by an independent warranted engineer.

RESIDUAL IMPACTS

The following residual impacts were identified in the EPS Coordinated Assessment (Issues 4.2.2-B and 4.2.2-C):

- Fuel spillage during filling (adverse impact);
- Leakages from underground fuel storage tanks (adverse impact).

3.3 AGRICULTURAL LAND, SOIL AND PRODUCE

The area surrounding the proposed development site is predominantly agricultural, mostly dry agricultural land with cereals, wheat and fodder cultivation. There are also areas with irrigated crops and vines while some fields are left fallow. Most of the rubble walls are in a poor state of repair. Soil is of medium clay loam originally of a terra rossa base mixed with imported quarry excavation material.

PREDICTED IMPACTS

Dust generated during the construction phase, in particular during the excavation phase may be significant on the surrounding fields, if not properly mitigated. Other impacts include contamination from spilled hydrocarbons and leakages. No loss of agricultural land, including soil and rubble walls is envisaged in view that the proposal will be located within an existing built up area.

The following impacts were identified in the EPS:

- Removal and damage to rubble walls (No measurable impact);
- Dust generation during the construction phase, particularly the excavation phase (Adverse);
- Effects on watercourses due to the maintenance of construction vehicles (Adverse);
- Fuel spillage during filling (Small adverse impact);
- Leakages from underground fuel storage tanks (Small adverse impact);
- Removal of leakages from existing on-site uses (namely from the contractors yard) (Beneficial);
- Take up of committed land (not agricultural land) (Significantly beneficial).

MITIGATION MEASURES

The following are the mitigation measures proposed in the EPS:

- Building material and stock piles covered when not in use;
- Boundary wall to reduce dust emissions;
- Wetting of the site;
- Wheel washing;
- No on-site servicing of HGVs;
- Refuelling within a bunded area;
- Emergency fuel and oil biodegradable absorption material and containing booms to be spread throughout the site in appropriate kit containers;
- Storm water within the forecourt will be contained within a separator (such water is to be cleaned prior to reuse as second class water);
- Containers to take the whole load of the largest fuel bowsers +10%;
- Double-bottomed tanks;
- Certified EU standard equipment;
- Monitoring.

RESIDUAL IMPACTS

The following residual impacts were identified in the EPS Coordinated Assessment (Issues 4.3.2-A and 4.3.2-B):

- Fuel spillage during filling (adverse impact);
- Leakages from underground fuel storage tanks (adverse impact).

The residual impacts identified for agricultural land, soil and produce include the impacts of fuel spillage during filling on Wied L-Isperanza or the Ta' Qali pumping station gallery.

EPD Note: Whilst EPD agrees that the removal of the kerbside pump from an urban area is beneficial, and that choice of an already committed site is preferable to take-up of agricultural land or pristine land, EPD

does not agree that the take up of land per se (even if committed) is “beneficial” as predicted in the EPS, especially if one also considers its opportunity cost. In the EPD’s opinion, such impact should be considered as “neutral” or “not significant”.

3.4 LANDSCAPE AND TOPOGRAPHY

The proposed development lies within the West Mosta – Ta’ Qali Landscape Character Area (M23) as defined by the *Landscape Assessment Study of the Maltese Islands*. The area is flat, mostly occupied by an ex-military airfield. The flat areas are ideal for informal recreation, whereas the afforested areas are also popular with the public and are often favourite picnic sites.

Activities that take place in the area include vine cultivation, agriculture and to industrial activities. The highest structures are those ancillary to the National Football Stadium and the Malta Fairs and Convention Centre. There are also a number of countryside chapels in the area as well as other historic buildings.

The main elements within the landscape character areas under study has been subdivided into five distinct character areas:

- *Landscape Character Area 1:* Ta’ Qali National Recreation Centre, including extensive areas for agriculture and horticulture, storage of scrap metal and building materials, crafts village, industry, nature reserve;
- *Landscape Character Area 2:* comprising rural areas (Ġebel id-Dwejra, Tar-Rangu, Tal-Maħruq, Ta’ Sagħat, and Buqana) and the watercourse at il-Wied ta’ Ġnien Fira. Area extends as far as Mdina and is dominated by areas of agricultural value and areas of high landscape value;
- *Landscape Character Area 3:* comprising of rural areas (Ħabret il-Ward, Il-Wilġa tal-Qattara, L-Iffla tal-Minkba, Il-Minkba, It-Tellerit, Id-Dwejra, Ta’ Torri Falka, and Ta’ Torri) and parts of the watercourse at Il-Wied tal-Qlejgħa. The area is dominated by areas of agricultural value and areas of high landscape value. The Victoria Lines run along the natural geographical barrier known as the Great Fault, which flanks the northern boundary of the character area;
- *Landscape Character Area 4:* comprising of rural areas (Ta’ Xkora, Taċ-Ċawla, Ta’ Pinu, il-Busbesija, and Tal-Ħanżira) and parts of the watercourse at il-Wied ta’ I-Isperanza. The area is characterised by areas of agricultural value, and includes listed areas and sites of scientific importance (e.g. Il-Wied ta’ I-Isperanza) and protected areas of hydrological importance;
- *Landscape Character Area 5:* composed of flat and cultivated fields, a number of industrial garages, including the site earmarked for the proposed development, a residential area (Tal-Blata I-Għolja) and the Tal-Kunċizzjoni chapel.

Visually, a number of elements are dominant in the landscape. These include the following:

- The Tal-Kunċizzjoni chapel;
- The site used by the Malta Model Aircraft Flying Association;
- Ta’ Qali National Recreation Centre;
- Ta’ Buqana Service Station;
- The Malta Fairs and Convention Centre; and
- Mosta, Attard, Naxxar and Ħal Lija urban skyline.

The non-visual element of the landscape is characterised by the relative tranquillity mainly derived from its location.

Visual Amenity

Eight viewpoints (Figure 4.2 of the EPS Coordinated Assessment) to assess the visual impact of the proposed development were identified:

- *Viewpoint A:* Along the road in the area known as Il-Busbesija, Mosta;
- *Viewpoint B:* Along the road in the area known as Il-Busbesija, Mosta;
- *Viewpoint C:* Along the road corner with Triq Mons. E. Salamone and Triq Camillo Sciberras, Mosta;
- *Viewpoint D:* In the area known as It-Tellerit in the proximity of the fireworks factory, Mosta;

- *Viewpoint E:* In front of Villa Ġuljana, in the area known as Il-Ġnien ta' Torri Falka, Dwejra (l/o Mgarr);
- *Viewpoint F:* Along the road, in the area known as Il-Ġnien Ta' Torri Falka, Dwejra (l/o Mgarr);
- *Viewpoint G:* Mtarfa outskirts along Triq San David; and
- *Viewpoint H:* Mdina Bastions.

PREDICTED IMPACTS

The present state of the site is an eyesore and does not blend in well with the surrounding area. Thus although the fuel filling station will be constructed above ground level together with a shop and office from where to administer the site, adequate landscaping is being proposed to mitigate against such an impact. According to the EPS, the development is thus seen as upgrading the area.

The following impacts and impact significance were identified in the EPS:

- Impact on the landscape element (No measurable impact);
- Visual impact of the project (Beneficial);
- Construction may generate dust creating a visual impact (Adverse).

MITIGATION MEASURES

The boundary wall and adequate landscaping are expected to reduce the negative visual impact during the construction phase. The EPS also proposes frequent wetting to control dust generation.

RESIDUAL IMPACTS

No residual impacts have been identified.

3.5 AIR QUALITY

The EPS states that there is no air quality data available for the application site. The nearest towns to the site are Rabat and Mosta and the most recent published data for these localities are those related to 2003 and 2004 as published in the State of the Environment Report (2005). Data is as follows:

Locality	SO ₂ ppb	NO ₂ ppb	O ₃ ppb	Benzene ppb
Rabat	5.11	11.50	45.91	1.08
Mosta	5.13	14.51	41.40	1.13

Table 1. Air quality data for Rabat and Mosta (2003).

Locality	SO ₂ ppb	NO ₂ ppb	O ₃ ppb	Benzene ppb
Rabat	3.18	9.84	45.89	1.01
Mosta	3.84	15.55	37.24	1.34

Table 2. Air quality data for Rabat and Mosta (2004).

The air quality for the potential receptors around the proposal is currently heavily influenced by traffic, however there are very few buildings on the road. According to the EPS, pollution dispersal is very efficient compared to dispersal in urban roads where street canyoning can lead to elevated pollutant concentrations. The pollutant of greatest concern in this study is benzene and for the purpose of this study, an average of the Rabat and Mosta benzene (1.18 ppb) concentrations for 2004 were taken. The average concentration for Mosta for March 2004 to February 2005, as measured by the MEPA monitoring programme is 1.38ppb.

This average comprises of averages for the same period for the localities of Triq il-Kungess Ewkaristiku, Vjal l-Indipendenza and Triq Rużar Briffa. The averages for these locations are 1.93ppb, 1.21ppb and 1.01ppb, respectively over the same period. The area of influence for dust emissions from the construction of the proposal is 100m radius. Given that the nearest monitoring station is likely to be located at Vjal l-Indipendenza, which lies on the other side of Tal-Blata l-Għolja, i.e. the application site, the EPS has assumed that, as a worst case scenario, the annual average benzene concentration is the average measured at this location which is 1.21ppb.

PREDICTED IMPACTS

The main pollution problem associated with the operation of the service station relates to emission to air of volatile organic compounds (VOCs) released from fuels. However, these impacts will be mitigated through Stage I and II abatement measures. The following impacts and impact significance were identified in the EPS:

- Dust generation (PM₁₀) during construction (Small adverse impact);
- PM emissions from plant and vehicles transporting materials (No measurable impact);
- Emissions of benzene from station (assuming Stage I and II recovery) (Adverse).

The extent of air pollution by VOCs depends on the quantity of fuel received at the station and dispensed from it per unit time. The EPS remarks that this value reaches 26,000 litres or 26 cubic metres per week. The nearest sensitive receptor is a farm building and the EPS predicts that an increase exposure of 0.13% with a 14% margin of error is expected. It has been concluded that this exposure is minimal and is not expected to be significant.

MITIGATION MEASURES

The following are the mitigation measures proposed in the EPS:

- Frequent wetting to allow dust suppression measures (e.g. water sprays, covering of vehicles, wheel washing);
- Handling of friable material to be kept at a minimum;
- Drop heights are minimised when handling material;
- Use of suitable screening methods (e.g. stone walls, fences including temporary screens, bunds);
- Use of Stage I and Stage II vapour recovery system.

RESIDUAL IMPACTS

The residual impacts identified for air quality and provided in the 'Summary Charts' in the EPS Coordinated Assessment are emissions of benzene from the fuel station (Issue 4.5.2.2-A), assuming Stage I and II recovery.

3.6 RISK FACTORS

The major risks are those of fire and explosion and of rupture in the underground tanks. Risks to third parties are not envisaged. Mitigation measures will reduce such a risk to a very low probability of taking place.

3.7 PLANNING, POLICIES AND LEGISLATION

The EPS considers the relevance of national legislation and Maltese planning policy to the proposed development. The following is list of main regulations to which the construction and operation of the proposed fuel filling station should conform to:

3.7.1 National Legislative and Regulatory Framework

Development Planning Act, 1992 (now superseded by the Environment and Development Planning Act, 2010)

- Environmental Impact Assessment Regulations, 2007,
- Environmental Management Construction Site Regulations, 2007.

Environment Protection Act, 2001 (now superseded by the Environment and Development Planning Act, 2010)

Local Planning Policy

Structure Plan for the Maltese Islands (1990) Policies:

- Built Environment: BEN 1; BEN 2; BEN 17;
 - Agriculture, Horticulture and Fisheries: AHF 7;
 - Rural Conservation Areas: RCO 1, RCO 19, RCO 20.
- *Central Malta Local Plan, 2006 – Mosta: Map MOM 7; Map SE1; Map TRA 1; Map TRA 2; MAP CV1; CG 11; CG 24; CG 29; CG 40;*
- *Guidelines on Trees, Shrubs, and Plants for Planting and Landscaping in the Maltese Islands, 2002*

Air Quality:

- **Legal Notice 214 of 2001:** Control of Volatile Organic Compound Emissions (Storage and Distribution of Petrol from Terminals to Service Stations) Regulations, 2001;
- **Legal Notice 215 of 2001:** Air Pollution by Ozone Regulations, 2001;
- **Legal Notice 216 of 2001 (as amended by LN 235 of 2004):** Ambient Air Quality Assessment and Management (Amendment) Regulations, 2004;
- **Legal Notice 222 of 2001:** Quality of Petrol and Diesel Fuels Regulations, 2001;
- **Legal Notice 224 of 2001 (as amended by LN 231 of 2004):** Limit Values for Nitrogen Dioxide, Sulphur Dioxide and Oxides of Nitrogen, Particulate Matter and Lead in Ambient Air (Amendment) Regulations, 2004;
- **Legal Notice 11 of 2003:** Ozone in Ambient Air Regulations, 2003;
- **Legal Notice 163 of 2002:** Limit Values for Benzene and Carbon Monoxide in Ambient Air Regulations, 2002;

Energy:

- **Legal Notice 238 of 2006:** Minimum Requirements on the Energy Performance of Buildings Regulations, 2006;
- **Legal Notice 234 of 2002:** Integrated Pollution Prevention and Control Regulations, 2002;
- **Legal Notice 329 of 2002:** Limitations of Emissions of Certain Pollutants into the Air from Large Combustion Plants Regulations, 2002;
- **Legal Notice 232 of 2004:** National Emission Ceilings for Certain Atmospheric Pollutants (Amendment) Regulations, 2004;

Noise:

- **Legal Notice 193 of 2004:** Assessment and Management of Environment Noise Regulations, 2004;
- **Legal Notice 64 of 2002:** Noise Emission in the Environment by Equipment for Use Outdoors Regulations, 2002;

Water Quality

- **Legal Notice 213 of 2001:** Pollution Caused by Certain Dangerous Substances Discharged Into the Aquatic Environment Regulations, 2001;
- **Legal Notice 203 of 2002:** Regulations for the Protection of Groundwater against Pollution caused by Certain Dangerous Substances, 2002;
- **Legal Notice 23 of 2004:** Quality of Water for Human Consumption Regulations, 2004;
- **Legal Notice 194 of 2004:** Water Policy Framework Regulations, 2004;
- **Legal Notice 227 of 2001:** Limit Values and Quality Objectives for Discharges of Certain Dangerous Substances into the Aquatic Environment Regulations, 2001;

Waste Management

- **Legal Notice 139 of 2002:** Sewer Discharge Control Regulations, 2002;
- Legal Notice 318 of 2001: Dangerous Substances (Notification) Regulations, 2001;

- **Legal Notice 337 of 2001, as repealed by Legal Notice 184 of 2001:** The Waste Regulations, 2011;
- **Legal Notice 158 of 2002:** Waste Management (Batteries and Accumulators) Regulations, 2002;
- **Legal Notice 161 of 2002:** Waste Management (Waste Oils) Regulations, 2002;
- **Legal Notice 166 of 2002:** Waste Management (Polychlorinated Biphenyls and Polychlorinated Terphenyls) Regulations, 2002;
- **Legal Notice 98 of 2004:** Waste Management (Packaging and Packaging Waste) Regulations, 2004;
- **Legal Notice 168 of 2002:** Waste Management (Landfill) Regulations, further amended by Legal Notice 289 of 2002, Legal Notice 70 of 2007, and Legal Notice 146 of 2007.

Nature Protection

- **Legal Notice 160 of 1997:** Rubble Walls and Rural Structures (Conservation and Maintenance) Regulations, 1997;
- **Legal Notice 311 of 2006:** Flora, Fauna and Natural Habitats Protection Regulations, 2006.

Health and Safety

- Occupational Health and Safety Authority Act, 2000.

Fertile Soil (Preservation Act), 1973:

- **Legal Notice 104 of 1973:** Preservation of Fertile Soils Regulations.

4 EPD COMMENTS AND CONCLUSIONS

A. CRITIQUE OF THE EIA

As part of the EIA process undertaken for this proposal, the following issues have arisen. The EPS:

- i. **Uses a ‘hybrid’ system for the evaluation of impacts:** The Leopold and Canter Methods for impact assessment, on their own merits, are essentially two dimensional cross-referencing matrix models, and are probably one of the best known matrix methodologies available for predicting the impact of a project on the environment. The Leopold matrix provides a simple way to summarise and rank environmental impacts, and to focus on impacts that are considered to be the most significant, whilst the Canter technique provides a predefined scale code to define the scale of impacts. This EPS made use of a ‘hybrid’ system, essentially merging both the Leopold and the Canter methods into one matrix. This per se may be considered beneficial, since it overcomes some of the known limitations of both methods. Whilst the matrices used for this EPS appear to provide a clear numerical value for the impact based on factual information, the magnitude and significance designated for each impact (and especially the numerical scores assigned) are inherently subjective. Their application across the board for all environmental characteristics means that complex technical considerations tend to be reduced into numerical comparisons that the non-technical reader is likely to misinterpret as an objective quantification or measurement, thereby rendering the overall assessment prone to distortion. The results thus appear to give an accurate scientific assessment of impacts, whereas they are ultimately based on underlying calculations and weightings that are arbitrary and open to interpretation. Furthermore, the EPS fails to provide adequate cross-referencing between the impact assessment tables derived from this system and the discussion of impacts in the Coordinated Assessment.
- ii. **Presents a weak impact significance/mitigation/residual link:** The summary of impacts table under the ‘Summary Charts’ presents a number of impact significance/mitigation/residual flows which do not follow one another. For example, there are instances where no measurable impacts are provided for dust and noise generation under the land use section and a residual impact is identified. Also, the said table does not make a clear distinction between the impact significance

prior to mitigation measures and the residual impact significance following mitigation measures. In the said summary of impact table, the residual impacts have been described as “Yes” or “No” (or, in one instance as being “Low” or “High” for the water and hydrology aspect). Furthermore, cumulative impacts were not assessed in the EPS.

- iii. **Failure to provide timely submissions:** Submission of some of the requested EPS documentation failed to be provided in a timely manner. An example is of the responses to the EPS review consultation comments that were communicated to the EIA Coordinator on the 13 November 2007. Responses to comments made by MEPA and its consultees were submitted by the EIA Coordinator in November 2009, after MEPA issued a final reminder based on the delay in the submission of these responses and in the absence of the submission of a 2nd draft EPS. The 2nd draft EPS which was certified was submitted in November 2010. This version still had some missing information, the latter which was submitted in December 2010. This has significantly influenced the total amount of time for processing this EIA.

B. RECOMMENDATION VIS-À-VIS PROPOSED DEVELOPMENT

The EPS has predicted a number of potential impacts on the environment as a result of the proposed development. Whilst the EPS proposes mitigation measures to minimise these impacts, it still identifies potential adverse residual impacts (*i.e.* impacts that are still likely to prevail after all mitigation measures have been exhausted), particularly:

- i. Contamination of surface water and groundwater (as may arise from fuel spillage or leakages from underground fuel storage tanks), and impact on the aquifer recharge zone;
- ii. Noise and dust generation during construction, albeit temporary; and
- iii. Emissions (e.g. benzene) from the station.

The EPD recommends that the proposed development is refused, for the following reasons:

1. The EPD notes the absence of a comprehensive policy framework that regulates the development of petrol/fuel stations and sets a limit as to how many such stations are really justified. In this regard, the EPD considers the proposed development as premature, and objects to further open-ended or ad hoc commitments for new or extended petrol station developments ODZ.
2. Whilst the EPD acknowledges that the relocation of an existing kerb-side pump away from an inhabited urban area may be beneficial, this justification is being overstretched since the proposal extends way beyond simple relocation “like with like”, and in practice also entails a substantial enlargement of the facility as well as the inclusion of additional development.

Appendix 1: Scoping comments submitted to MEPA during scoping consultation (05/02/2004 - 26/02/2004).

Reference	Comment	EPD Response
Department Mosta Local Council Letter (24/ 02/2004)	The Council would like to inform you that: 1) it does not find any objection to this particular application on condition that the existing permits quoted in your report do actually cover the existing use of the site and 2) the granting of this application would not pave the way for further development in this area.	Noted.

Appendix 2: Comments received by Consultees during EIA Review (October – November 2007)

Comments

Comments by MRA

Kerb Side Pump No KP 20 currently is not licensed to either Swaey Brothers Ltd. or Mr. Paul Vella. Should the development permit be accepted, before any work commences Swaey Brothers Ltd. must show that they are in possession of a licence to operate a petroleum filling station or submit all the documents requested by the Authority in order to obtain the transfer of the licence from an existing operator.

Underground Pumps: The EIA mentions submersible pumps. Does this mean that the system which will be used is a pressure type system? This is not acceptable as this poses a higher risk than if a suction system is used should a leak develop. Suction systems are thus preferred.

Pipes: Given the closeness to the Ta' Speranza groundwater galleries pipework should be double skin pipework with interstitial monitoring. Pipework should be compliant to *MSA EN 14125 Thermoplastic and flexible metal pipework for underground installation at petrol filling stations*.

Dispensers: Dispensers should be compliant to:

- *ATEX Directive 94/9/EC – The approximation of the laws of Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres;* and,
- *MSA EN 13617-1 Petrol Filling Stations – Safety requirements for construction and performance of metering pumps, dispensers and remote pumping units for fuel dispensers.*

It is being noted that rainwater reservoirs will be used on site. Plans indicating the location of these reservoirs together with their capacity are required.

Also the location of the gutter system through which storm water will be diverted towards a separator should ideally be shown on the block plan. The management of storm water is an extremely important issue in the area particularly due to the Speranza galleries that are located in the vicinity. As the map indicates hereunder is directed towards Wied Speranza.

Effects on Water and Hydrology

On risks related to leakages from Underground fuel storage tanks the EPS states the following:

“There is a potential risk that a rupture in the underground storage tanks would discharge its contents and severely contaminate groundwater. However fields in the area make use of water bowsers, and thus contamination of groundwater will not affect agricultural land”

The MRA draws your attention to the fact that there are a number of private boreholes on site, as confirmed in the appendices (report by Saviour Vella, p.4) which are known to be used for irrigation purposes. Moreover contamination plumes are known to travel and are not stable, thus implying that agricultural land and water resources per se will be put at considerable risk. In light of this severe mitigation measures are required.

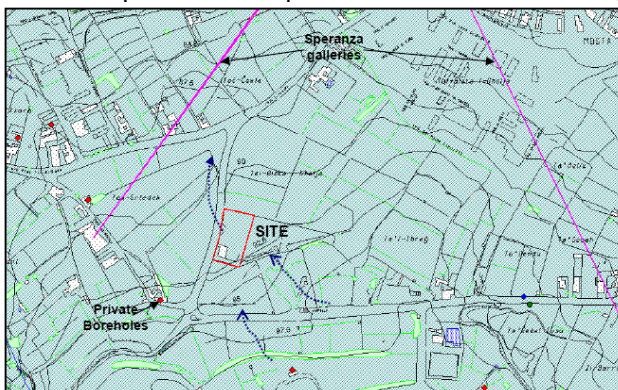


Figure 1: Surface water flow on site and surrounding area

The following should also be installed:

1. An Emergency Telephone Auto Dialler for summoning the Civil Protection Department, accessible even during periods when the station is operating as an unattended petrol station, should be installed within the

forecourt area.

2. Two emergency switches for cutting or isolating the fuel dispensing pumps from the any electrical supply should be installed. One is to be installed within the forecourt area and should be accessible to the general public even during periods when the station is operating as an unattended petrol station. This other switch is to be installed in the fuel station operator's office.

3. A fireman switch to cut off all electricity from the station, apart from those used for fire detection and security surveillance systems, shall also be installed.

Comments by CPD

The Civil Protection Department finds no objection for the proposed development and relocation of the kerbside petrol station to take place, unless the following procedures and instructions found on HSE publication ISBN 0-7176-0461-6 Petrol Filling Stations: Construction and Operation and HSE Dispensing Petrol ISBN 0-7176-1048-9 are followed accordingly.

The following procedures should also be taken into consideration during operation of the fuel filling station:

- all employees working in the station are trained in basic fire fighting;
- the filling station is to be protected by spill kits all round the premises;
- the premises are protected by means of a private fire hydrant or ring main as specified in BS 750. It should be capable of delivering not less than 2000 litres per minute with water flowing at a constant pressure of 2 bar at hydrant inlet; and
- a selection of portable fire extinguishers readily available all the time of day or night.

Comments by the Directorate for Environmental Health

All bunded areas should be certified leak proof by a competent company and this should be carried out on a regular basis i.e. yearly.

Prior to demolition of existing structures, developer is to verify if any asbestos materials are present. If this is so, these asbestos materials are to be removed, handled and disposed of in accordance to guidance from the Competent Authority as to safeguard public health.

Developer is also to verify if any material on site which needs to be excavated is not hazardous due to the present usage of the site. Any possible hazardous materials are to be removed, handled and disposed of in accordance to guidance from the Competent Authorities and such material is not to be used as backfill.

It seems that the VRF system proposed to be installed is of the closed chiller system. However we would need to have a declaration from the developer that the system is not of the Cooling Tower/Evaporative Condensers type i.e. system that use water and which may generate the dispersion of aerosols. If such systems are to be used these have to be registered and maintained in accordance to L.N. 5 and L.N. 6 of 2006 for the Control of Legionella.

If said water is to be used on the flush toilets, reservoirs are to be maintained and disinfected in accordance to L.N. 5 of 2006 – Control of Legionella. A risk assessment manual for Legionella control from any water systems on site which may generate aerosols, thus inducing the risk for Legionella is to be made available to this department as stipulated by the said regulations.

If copper pipes are to be used for the domestic potable water system, such copper pipes are to be approved for such use as not to have a negative impact on the potable water quality. Any piping for such use has to be food grade approved by the Malta Standards Authority (MSA).

In view to minimize the risk of Legionella through dispersion of aerosols, drip irrigation is preferred to sprinklers. If any transmitters are to be installed which may produce EMF's, these are to be approved and audited by the Competent Authority. Copy of the EMF Audit Report is to be provided to this department by the developer.

Can this section be clarified? What does this recommend? To which "*marina sea bed*" is this referring too? At Mosta.....? If any water is to be used from boreholes, are these boreholes registered with the Competent Authority for abstraction of water? This Department needs clarification mainly on the type of air conditioning systems being proposed to be used on site.

This section does not make any sense. Are solar water heaters being recommended for this project or not?

The author of this EIS is clearly stating that the site lies within the confines of the Groundwater Protection Zone. It is also located and practically overlies one of the galleries of the Ta' Qali Pumping Station and that of Ta' L-Isperanza Pumping Stations.

The possible risks from this proposed development on the groundwater supplies may be of high risks. Any

objections on this issue are more valued if proposed by the relevant Competent Authorities responsible for the groundwater sources and of the water utility making use of this water to provide safe potable (drinking) water to the general public.

This Department is the regulator for the quality of water intended for human consumption (L.N. 23 of 2004 as amended by L.N. 116 of 2004), thus the water utility is responsible to supply drinking water of the quality intended for human consumption in line with the requirements of the above mentioned regulations. Any preventive actions and mitigation measures to safeguard any possible contamination of the groundwater supplies are best to be recommended by the responsible competent authorities.

EU Directive 98/83/EC – On the quality of water for human consumption, has been transposed by L.N. 23 of 2004 as amended by L.N. 116 of 2004.

In this section it is being referred to that *“refueling stations are not considered to generate additional traffic to the locality; but rather the catchment area of the refueling station depends on the number of vehicles passing close to the site”*, but previously in this report it has been stated that in view of the proposed closure of the kerbside refueling stations in the core of Mosta Centre, residents would have easy excess for fuel refilling for their cars through this proposed station. Thus would this not increase the traffic flow at the site?

Does this refer to that the Water Services Corporation will be controlling any possible impacts on the groundwater from this proposed development?

As a general rule this department requests the right to ask for copies of any monitoring data/reports related to this proposed project at any time when such information is so required and these should be made available to this department at no cost.

Finally, it is recommended that all mitigation measures identified in this report are to be implemented at all time by the developer should this development permission be granted.

Comments by Moviment Graffiti

L-izvilupp propost kien ga gie irrifjutat mill- istess Mepa fi 2005 u anke l-appell ricenti

L-izvilupp propost jaggha f'zona li hi klassifikata “High Landscape Value”

L-izvilupp propost ser johloq impatt negattiv fuq l –ambjent tal-madwar, ta’ din il-fehma kienet ukoll l-Mepa sabiex waslet biex irrifjutat il-permess.

Fiz-zona tal-madwar li hi il- Mosta, Rabat u Attard hemm joperaw diga numru konsiderevoli ta’ pomp ital-petrol, fosthom l-ahhar wahda li nbriet fejn Mt Carmel u l-ohra li ghad trid tinbena gewwa ta’ Buqana. Ghalhekk fuq bazi ta ippjanar u sostenibilita ma’ jaghmilx sens li jinghata l-permess.

L-Mepa ghandha tirisolvi l-precedentli holqot hi stess,meta approvat il-permess ghal pompa tal-petrol gewwa ta’ Buqana

Il-Moviment jesigi li jsir Environment Planning Statement.

Comments by Flimkien Ambjent Ahjar

This site practically overlies the galleries of the Ta’ Qali pumping station from which water for the potable water supply is pumped up.

As this site is already committed to an industrial activity, and is used for the servicing of commercial vehicles, yachts, cranes etc (i.e. a polluting activity) and in the absence of MEPA or MRA carrying out any controls (on waste oil handling and disposal for example), we not only call for the refusal of the above-mentioned permit, but especially for clearing of the potential threats and contaminants from the present activity and ongoing monitoring of this and similar sites.