FUEL SERVICE STATIONS POLICY

MEPA

APRIL 2015

1.0 INTRODUCTION

1.1 Government asked MEPA to prepare a policy paper that regulates the planning of new fuel stations. A number of planning review objectives were also communicated. In the light of the above, an ad hoc committee was appointed to discuss this policy. The committee included representatives from MEPA, Transport Malta, the Ministry for Energy and the Conservation of Water and the Civil Protection Department. This committee has met a number of times in order to discuss proposals related to fuel stations to be later communicated to government.

1.2 Following the communication received from government the following policy objectives were issued for public consultation on the 13th. September 2013 after being approved by MEPA board. The communicated policy objectives were:

a) To establish a policy framework for the location, scale and design of new fuel service stations and their ancillary development with a priority, but not exclusively, for land already committed to industrial development in close proximity to the development zone;
b) To provide specific additional guidance on the relocation of existing fuel service stations located within the urban area relating to the allowable increase in the number of pumps, the proximity of the new site to the urban settlement of the existing station and the road network;
c) To set out appropriate design standards for vehicular access and circulation, for both new and relocated service stations;
d) To identify the prior clearances required from other regulatory agencies to ensure safety of design and operation.

1.3 The above objectives were used as the basis upon which to define specific terminology in order to, as much as possible, avoid inconsistent interpretation. These definitions are being indicated in **TABLE 1** below.

TABLE 1
DEFINTIONS

Term	Interpretation
"**Pumps**"	These are being defined as nozzles on dispensers in licensed fuel stations recorded on site on MEPA's photographic survey in September to November 2013 and/or as licensed by MRA
"Existing Petroleum Filling Station" – (EPFS)	A fuel station, whether kerbside or otherwise, that is authorised as per Subsidiary Legislation 423.37 and registered by MRA on 1st. January 2014 and/or as recorded per MEPA's photographic survey by the same date.
"**Relocated Fuel Station**" – **(RFS)**	For the purpose of this policy, the term ***Relocated Fuel Station (RFS)***, refers to the relocation of an EPFS operating within the Development Zone under a permit issued by MRA and appearing with a license to this effect on MRA's register on 1st. January 2014 to a new location that has been granted development planning permission.

Term	Interpretation
"**New or Upgraded Fuel Station**" – **(NUFS)**	The proposals could be either completely new fuel stations or include upgrading to existing fuel stations which are not associated with a relocation of an EPFS. NUFS's would not have obligations associated with RFS's. In certain situations where this is permissible through planning policy, the term "upgraded" may also refer to the introduction of facilities that may not be necessarily directly related to the fuel dispensing function.
"Alternative Fuels"	B20 or higher blends of biodiesel, E85, Liquefied Petroleum Gas and Natural Gas (compressed natural gas or liquefied natural gas) and any other similar fuels that the competent regulator may from time to time indicate as falling under the alternative fuel category.
"Development Zones"	The term Development Zones refers to those areas bounded by the Development Zone boundaries approved by Parliament in July 2006. They also include areas designated for Small and Medium Enterprises approved by Parliament in 2005.
"Malta Environmental and Planning Authority – (MEPA) "	Refers to the Malta Environmental and Planning Authority or any subsequent agency which absorbs the relevant responsibilities.
"Malta Resources Authority – (MRA) "	Refers to the Malta Resources Authority or any subsequent agency which absorbs the relevant responsibilities.

1.6 For the purpose of this policy, stations which provide cars with an electrical charge top up service are also deemed to fall within the scope of this policy although parameters relating to safety distances applicable for combustible fuels may be relaxed if combustible fuel dispensers do not feature in the proposal.

1.7 7 submissions were received and the MEPA responses thereto are found in a separate document.

2.0 FUEL STATIONS IN MALTA AND GOZO

2.1 The thrust of this policy is to present a policy framework within which the sustainable relocation of EPFS's which are currently operating in undesirable areas can take place. Historically a good proportion of EPFS's have been located within residential areas. As a result of development that has occurred nearby since, changes in operations and increased traffic, some of the stations are creating operational challenges.

2.2 In the case of EPFS's operating from certain areas within the Development Zone, there are issues of amenity, or safety or transport which justify their relocation to more appropriate areas. These include:

a) Incompatibility with the surrounding urban context, especially Urban Conservation Areas;
b) Possible access and parking restrictions and issues as confirmed by Transport Malta (TM) generally associated with certain urban areas;
c) Safety issues as confirmed by the Malta Resources Authority (MRA) especially in instances of nearby ground fireworks being let off in the vicinity or other similar hazards;
d) Severe limitations to upgrading the EPFS to the requirements of National and International Standards for Petroleum Dispensing Stations as determined by MRA.

EPFSs which, following consultations with TM and MRA, are not deemed by MEPA to create issues of amenity, safety or transport shall not be eligible for relocation. EPFSs located partially of fully ODZ shall also not be eligible for relocation. Furthermore, redevelopment and change of use of both EPFSs and NUFs located partially or fully ODZ shall not be favourably considered.

3.0 NEW/UPGRADING OF FUEL STATIONS NOT CONTEMPLATING RELOCATION OF AN EPFS

3.1 The planning review objective in **para 1.2 a)** indicates the requirement "*To establish a policy framework for the location, scale and design of new fuel service stations and their ancillary development with a priority, but not exclusively, for land already committed to industrial development in close proximity to the development zone*. Planning Objective in **para 1.2 b)** indicates the requirement "*To provide specific additional guidance on the relocation of existing fuel service stations located within the urban area relating to the allowable increase in the number of pumps, the proximity of the new site to the urban settlement of the existing station and the road network*".

3.2 In terms of Objective in **para 1.2a**, current and emergent planning policy indicates a number of designated areas which are potentially considered to be suitable to accommodate fuel stations without creating adverse incompatibilities. These include:

a) Designated Industrial Areas
b) Small and Medium Enterprise Sites
c) Areas of Containment
d) Open Storage sites as identified in the Open Storage policy
e) Other areas designated for development in a subsidiary plan for:

(i) non-residential development; or
(ii) planning designation or existing uses which do not contemplate a Social and Community facility or function;

and where in both cases MRA, CPD and TM deem it would be safe to locate a fuel station.

f) Sites already occupied by fuel stations
g) Sites opposite to, or adjacent to designated industrial areas, as well as sites opposite or adjacent to Areas of Containment

On such sites, facilities which complement fuel stations in terms of economic sustainability of the fuel stations would be encouraged subject to other relevant planning, environmental, transportation, civil protection, amenity or resource protection constraints. Unless already directed by existing planning policy, the height of the resulting structure above the surrounding terrain would be determined on a case by case basis but special attention should be given to sites which are distant from designated Development Zones so that the resulting structures do not contrast with or dominate the surrounding rural landscape.

Fuel stations located on sites described under 3.2(f) which existed prior to the coming into force of this policy and are located opposite to, or adjacent to designated industrial areas and Areas of Containment, or outside any of the other appropriate locations listed under this paragraph, shall have a footprint not exceeding that of the already physically committed area on the site itself or three thousand (3,000) sqm whichever is the larger; and the height of any built structures shall not exceed that of the already existing structures already on site as at the date of coming into force of this policy, or 7 metres, whichever is the higher.

Fuel stations located on sites described under 3.2(g) shall have a footprint not exceeding three thousand (3,000) sqm and the height of any built structures shall in no case be higher than 7m.

Additionally other locations within the Development Zone or other areas designated for Urban Development, may also be considered as long as these conform to spirit of Structure Plan Policy BEN 1 – i.e. provided that MRA deems that they will not have a deleterious impact on existing or planned adjacent uses and provided that MRA deems that the facilities conform to all the relevant National and International Standards for Petroleum Dispensing Station requirements and that adequate distances are kept from existing or planned development. **However, sites designated as Residential Areas or Residential Priority Areas should not qualify for such consideration. Save for the potential candidate sites indicated in para 3.2 (c) to (g), NUFS's will not be allowed Outside the Development Zone.**

4.0 RELOCATED FUEL STATIONS (RFS's)

4.1 Relocated Fuels Stations (RFS) may be sited on the same potential candidate sites indicated in **para 3.2 (a) to (g),** together with sites lying outside areas designated for development in a subsidiary plan legitimately committed for non-agricultural uses through planning permission and disused quarries. There will be no constraint on the overall number of nozzles or ancillary facilities where the RFS is relocated to one of these sites subject to visual, transport, amenity and environmental considerations being taken into account and to other relevant planning, environmental, transportation, civil protection, amenity or resource protection constraints. Unless already directed by existing planning policy, the height of the resulting structure above the

surrounding terrain would be determined on a case by case basis but special attention should be given to sites which are distant from designated Development Zones so that the resulting structures do not contrast with or dominate the surrounding rural landscape.

4.2 However where a case can be made to consider sites other than indicated in **para 4.1** above, this may be favourably considered especially in instances where the community would benefit from the relocation of an EPFS due to one of the reasons cited in **para 2.2** and where the site proposed for relocation does not give rise to unacceptable adverse environmental concerns**.** In such instances the applicant would also be required to enter into an agreement with MEPA and MRA on conditions to remove and decommission the EPFS. This decommissioning requirement would also be applicable to the instances of permitted non-agricultural use and disused quarries mentioned in **para 4.1** above. See also **para 5.5.**

4.3 For RFSs located on sites described under **para 4.2** the following additional criteria shall apply:

a) In line with the spirit of Structure Plan policy SET12 the proposal should be justified on technical and/or planning grounds that there is no other feasible or suitable location within the areas identified as appropriate for an RFS by this policy. If qualifying through the published thresholds, an Environmental Impact Assessment (EIA conforming to the Terms of Reference as issued and approved by MEPA) may also be required in order to identify and address significant effects that the proposal may have on the surrounding environment; and

b) The proposal should **not** be located on:
   i) Good quality agricultural land as thus certified by the Department of Agriculture; or
   ii) Areas of High Landscape Sensitivity as indicated in the respective Subsidiary Plans; or
   iii) Special Areas of Conservation (SAC's)/ Special Protection Areas (SPA's); or
   iv) A site within 50m from a listed or scheduled site. In cases where a scheduled buffer zone is included, the distance shall be measured from the edge of the buffer zone and shall be reduced to 20m ; or
   v) Garrigue or maquis; or
   vi) A designated watercourse/valley-system; or
   vii) A designated Area Prone to Flooding; or
   viii) A site whose perimeter lies within the distance stipulated by law from a fireworks factory complex; or
   ix) A site lying on an escarpment, ridge edge or a comparatively steep slope; or
   x) A site whose boundaries are closer than 15m or more than 500 m from the nearest Development Zone boundary.; and

c) The proposal should **not** negatively impinge on areas protected for their scenic value or buildings or structures which, in the opinion of the MEPA constitute 'landmark buildings' and whose context deserves protection from visual intrusion; and

d) The developer is to ensure that measures are taken to discourage further expansion of the urban development, namely by creating landscaped buffer strips within the fuel station site to minimize the visual impact. Future expansion of fuel stations should not be considered to be automatic with the granting of the initial permit and care should be taken to address further incursion into ODZ land; and

e) The developer is to demonstrate how infrastructural services to the fuel station (i.e. water, electricity, drainage and communication services) will be achieved without being detrimental to the environment. Details of any required services, including cess pits, oil water separators, vents, underground storage tanks and reservoirs, are to be submitted with the application together with relevant endorsement by the relevant regulator agencies

f) The site shall have a footprint not exceeding three thousand (3,000) sqm.

4.4 The number of nozzles in a RFS which is deemed to qualify under the provisions of para **4.2** will not exceed an overall of 24 nozzles and some of these nozzles should be preferably allocated for alternative fuels. This number is based on EPFSs which have a higher overall number of nozzles. The nature of the RFS will be mainly guided by the provisions of **Sections 5 to 9** below. There will also be no constraint on ancillary facilities subject to visual, transport, amenity and environmental considerations being taken into account.

5.0 COMMON SITING AND OTHER PROVISIONS FOR NEW/UPGRADED/RELOCATED FUEL STATIONS

5.1 Sites for RFSs or NUFs should not be located within 300m from a groundwater source that is used for the abstraction of groundwater intended for human consumption or intended for future use, such as boreholes, underground galleries of pumping stations and spring valley systems.

5.2 Sites for RFS's or NUFS's should be located at an appropriate setback from a Distributor or Arterial Road. In all cases, the entrance to the fuel station should be visible from the Distributor or Arterial Road and the access thereto should preferably be already a schemed road. Any remedial highway works or junction improvements required to facilitate safe access to the Relocated or New/Upgraded Fuel Station development shall be determined in consultation with Transport Malta and shall be carried out at the expense of the applicant and prior to the commissioning of the fuel station. The environmental implications and potential impacts associated with the modification of the road footprint or alignment shall also be taken into account in the relevant decision-making and permitting processes.

5.3 Sites that may create a hazard (be it direct or indirect) to the traffic flow or the surrounding environment will not be acceptable. The design speed of the road on which the fuel station is proposed should be taken into consideration. It is the onus of the developer to demonstrate that the entry and exit points of the station are clearly visible and measures should be taken to minimise the risk of collision.

5.4 Due to the confusion that may be created for the motorist, MEPA will not normally permit the location of a NUFS or RFS within a 500m distance of an EPFS, in the same direction of traffic. However, MEPA may favourably consider fuel stations on the opposite side of the road from an EPFS, if it can be demonstrated that traffic on the opposite lane from the EPFS cannot easily access it. In the case of two way single carriageways, fuel stations may not be allowed to be located directly opposite each other in view of possible conflicting entry and exit paths to each station.

5.5 The planning permit for any fuel station will condition the developer to a planning obligation in the form of a legal agreement to the decommissioning of the station. In the case of RFSs, the planning obligation shall stipulate that the RFS cannot start/continue operating unless the

existing fuel station/s and related infrastructure (including any underground tanks, dispensers and canopies) tied to the permit will be decommissioned to the satisfaction of both MEPA and the Malta Resources Authority. A compliance certificate for the new RFS shall not be issued until the development permission for the decommissioning of the EPFS has been granted. The permit for the closure of existing fuel stations is to indicate how the decommissioning of the station will occur and will also indicate the new use of any ancillary buildings. Decommissioning may also include the requirement for decontamination of any contaminated substrate including the management of any waste arising from such decontamination.

6.0 GENERAL EXTERNAL ACCESS ARRANGEMENTS

6.1 The following general guidelines should be taken into consideration when designing the access layout for a new fuel station. Access points to Fuel Stations should:

- Not be located on or close to a major junction.
- Have separate entry and exit points separated by at least 20m
- Preferably operate using a one-way system
- Have a entry / exit minimum approach width of 6.0m
- Visibility splays kept free of any visual obstruction for motorists such as advertising signs

6.2 **Simple Access Layout**

Entry and exit access points shall be provided in the form of a simple access layout on single and dual carriageway roads with design speed of 70km/h or less as shown in **Figs 1 and 2**

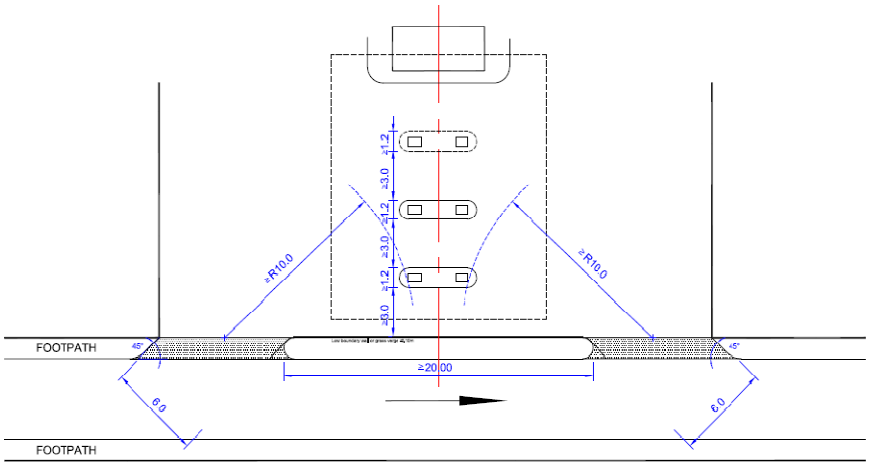


Figure 1 – Access Layout for Fuels Stations on One-way Streets and Dual Carriageways

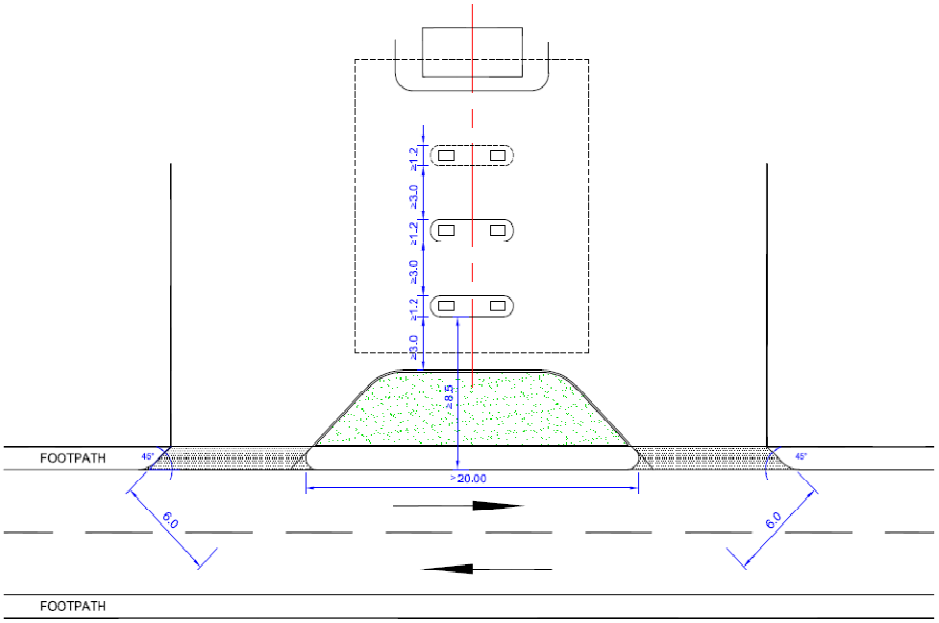


Figure 2 – Access Layout for Fuel Stations on Single Carriageways where Right-turn Exit is permitted

6.3 Corner Sites

Corner sites may be used only in exceptional cases and are not considered to be a suitable layout for Fuel Stations that are highly frequented by large vehicles. **Figure 3** illustrates.

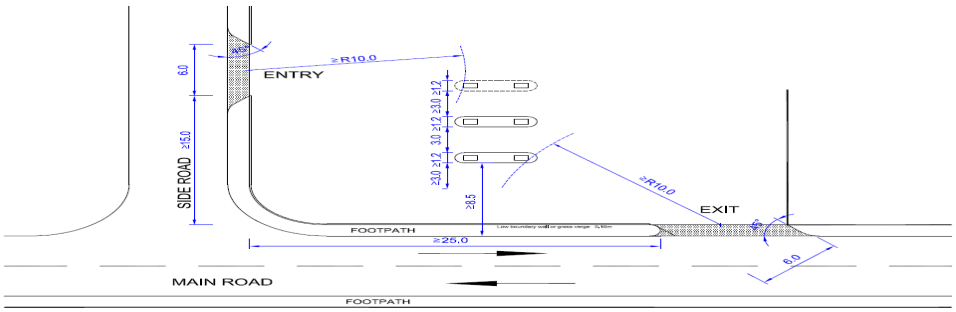


Figure 3 – Access Layout for a Corner Site.

6.4 Diverge Taper

Nearside diverge tapers allow left turning traffic from the arterial and distributor road to slow down and leave the trunk road without impeding the flow of through traffic on the main road.

Nearside diverge tapers should be introduced on either single or dual carriageway roads with a Design Speed of 85km/h (posted speed limit of 80km/h).

A diverge taper shall be formed by a direct taper to a width of 3.0m at the corner of the access to the Fuel Station. **Figure 4** illustrates.

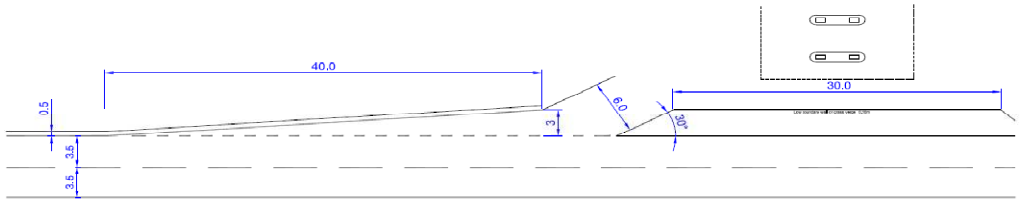


Figure 4 – Diverge Taper Access for Fuel Stations on Dual Carriageway roads (85km/h Design Speed)

A diverge taper shall not be provided where the access to the Fuel Station is on a sharp curve, as this can adversely affect visibility lines for drivers exiting the Fuel Station.

6.5 Merge Taper

Merge tapers allow traffic turning left out of the Fuel Station to accelerate before joining the main road.

A merge taper should only be introduced where the main road is a dual carriageway with two or more lanes and the design speed for that road is 85km/h (posted speed limit 80km/h). The length of merge taper shall be 70m. **Figure 5** illustrates.

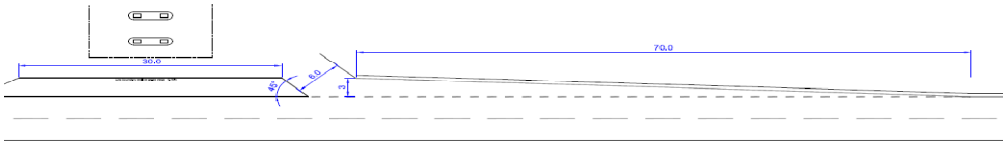


Figure 5 – Merge Taper Access for Fuel Stations on Dual Carriageway roads (85km/h Design Speed)

6.6 Ghost Islands

Ghost islands should be used on single carriageway roads to provide right turning vehicles entering the Fuel Station from the main road with a degree of protection from the through traffic on the main road. A ghost island should be provided where the Annual Average Daily Traffic (AADT) for the main road is more than 13,000 vehicles and the forecast number of vehicles turning right from the main road into the Fuel Station is more than 150 vehicles AADT. The width of the ghost island shall not be less than 3.0m with a taper of 1:40. **Figure 6** illustrates.

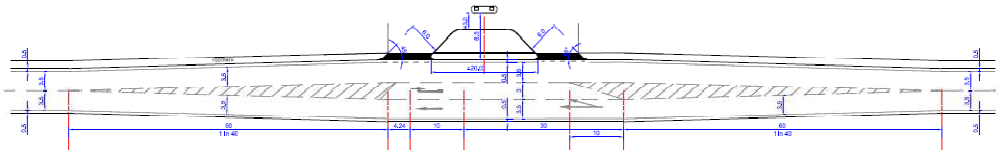


Figure 6 – Ghost Island Layout for Right-turning Vehicles on single carriageway roads

6.7 **Signage**

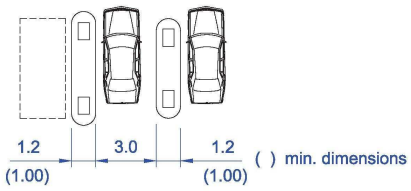
Advanced warning signs indicating the fuel station will be required to inform motorists that they are approaching a fuel station. Such signs are not to include any form of advertising and will be considered purely as traffic signs. Through design, such traffic signs must pose a minimum visual intrusion.

7.0 GENERAL INTERNAL ARRANGEMENTS

7.1. The internal arrangement of the fuel station is a very important consideration in the suitability of the site. These arrangements would be applicable to all fuel stations approved through the implementation of this policy.

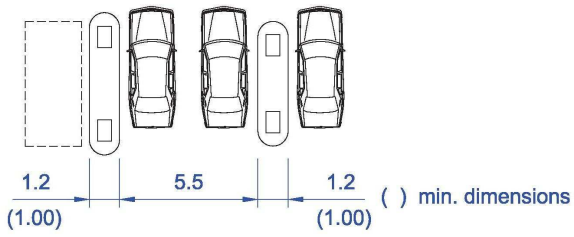
7.2. Queuing lanes or reservations must be provided in order to accommodate normal queuing vehicles waiting for service. The capacity of these queuing lanes is to be determined by the number of vehicles using the road together with the number of other fuel stations in the same locality.

7.3. The pump islands need to be designed in such a way so as to give safe access to vehicles and pedestrians. Clear signage should provide the motorist with information regarding which pumps are available and the type of fuel they serve. This is essential to avoid unnecessary reversing or other manoeuvring within the site. The indicated guidance and diagrams in **Section 7.0** are not intended to be binding but only to help with the internal design of a station which is safe from an access point of view. Moreover the arrangements are intended to mitigate against unnecessary congestion. **Figures 7, 8 and 9** illustrate.



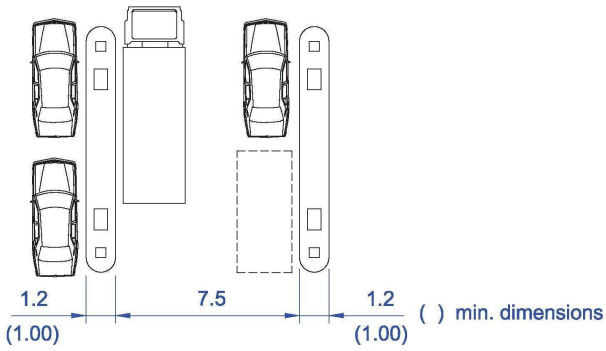
2 SHORT ISLANDS, PARALLEL TO THE ROADWAY

Figure 7 – Internal parking arrangement for 2 short islands parallel to the roadway with a 3.0m access between them.



2 SHORT ISLANDS, PARALLEL TO THE ROADWAY

Figure 8 – Internal parking arrangement for 2 short islands parallel to the roadway with a 5.5m access between them.



2 LONG ISLANDS, PARALLEL TO THE ROADWAY

Figure 9 – Internal parking arrangement for 2 long islands parallel to the roadway with a 7.5m access between them.

7.4. The fuel station requires a discharge zone for fuel tankers. The tanker needs to be able to enter and leave the site in a forward direction. The discharge zone should be located in an area where there will be no blockages on the forecourt or queuing lanes.

7.5. In cases where they are permitted, the access to any car-wash or other facility not related to the sale of fuel is to be separate from the fuel pump area and vehicles should not pass through the forecourt to reach other facilities. A separate queuing lane is also required for a car-wash facility, in areas where such uses may be permitted.

7.6. In cases where the sale of other fuels takes place on site not directly related to vehicles (e.g. gas), an appropriate service area must be provided, where customers may un/load such fuels without

affecting the operation of the fuel pump, particularly with regard to queuing – as stated previously, vehicles must not queue on the public road.

7.7. All technical/operational arrangements shall be subject to prior clearance by the Malta Resources Authority prior to the submission of a planning application to MEPA.

7.8 Other general planning policy provisions shall remain applicable to fuel stations.

8.0. OTHER GENERAL DESIGN CONSIDERATIONS

8.1. In all cases but especially in cases of fuel stations lying outside designated areas, the scale, external materials and use of colour shall take into account the context within which they are located and should fit rather than contrast with the surrounding landscape. Fuel storage tanks and services (including services leading to the site) should be located underground unless safe construction and operation considerations are deemed to dictate otherwise.

8.2 In areas identified as appropriate by this policy, innovative design proposal may be considered provided they also respect the scale and style of their surroundings.

8.3 Any buildings or structures on sites located outside potential candidate sites indicated as appropriate by this policy shall not exceed 7m in height. Any services should be located inside the structure or the basement and where this is not technically possible shall be adequately screened.

8.4 The canopy of the fuel station should be aesthetically pleasing and compatible with its surroundings through appropriate design. It should be designed in light weight materials and cover the least possible area. Such canopies should not have an excessive amount of advertising on them. They should also have light fittings in order to illuminate the station forecourt at night (down lighting). However, such lighting should be designed in such a manner so as to avoid direct light distracting motorists along the highway and causing undue light pollution or disturbance to the surrounding environment, especially in the countryside. Canopies should not protrude onto the road or footpath.

8.5 The use of photovoltaic panels on the roof of the canopy shall be encouraged. In cases where the fuel station is located outside potential candidate sides indicated as appropriate by this policy, these shall be mounted flat on the canopy so as to impart the least possible visual signature.

8.6 The fuel station shall include a landscaping scheme which shall screen the development as much as possible whilst enhancing its appearance. The landscaping shall comply with MEPA's Guidelines on Trees, Shrubs and Plants for Planting & Landscaping in the Maltese Islands and shall also include specifications for hard landscaping and lighting. **APPENDIX 1** is being annexed to provide further guidance on lower flammability tree species that are recommended to be used in such stations. The lighting scheme shall include luminaires with horizontal beam cut-off features. Thus, lighting schemes would be more safe and energy efficient and light pollution would be curtailed.

8.7 Any signage, including for the display of pricing, logos, etc. shall be included in the application for development permission and shall be located in such a way as to create the least possible visual intrusion into the surroundings. In cases of fuel stations located ODZ, the use of illuminated panels shall be kept to a minimum.

8.8 From a Civil Protection point of view, the operation of the station shall be guided by the provisions indicated in **APPENDIX 2**. These conditions are not deemed to be part of this planning policy. They are intended to provide additional guidance and may be amended from time to time by the Civil Protection Department. Moreover, the implementation of these conditions would be under the responsibility of the Civil Protection Department.

8.9 In order to address onsite and offsite environmental health issues, the Environmental Health Department should also be a mandatory consultee in the determination of fuel station related development planning applications.

9. SAFETY IN USE

9.1. The fuel station should be designed to take into consideration the health and safety of the general public, users, employees and the environment. All fuel stations approved through the application of this policy are to adhere to the regulations as set out by the European Union and other legislation and policies currently applicable. These include Environment Protection Directorate (EPD), Malta Resources Authority (MRA) guidelines and the Civil Protection Department (CPD) guidelines. A Fire and Safety Plan should also be included with the application. Transport Malta (TM), will require an assessment of access and safety arrangements based on terms of reference that it will issue. Clearance from Transport Malta to this effect will be required.

10. OTHER CONSIDERATIONS

10.1 Petroleum Filling Stations, whether new or relocated, shall include at least one nozzle for the sale of biofuels or other alternative fuels and one charging point for electric vehicles. Unless and until government policy deems otherwise, the sale of bottled LPG from any fuel station shall not be permissible. The new fuel stations would also require to be covered by an environmental operational permit.

10.2 MRA recognizes a class of fuel stations known as "Commercial Petroleum filling stations". These fuel stations can only dispense fuel to their own fleet but not to third parties. The provisions of this policy are not applicable to "Commercial Petroleum Filling Stations". Development permit applications related to this class of fuel stations would be considered on a case by case basis.

11. SUPERSEDED POLICIES

11.1. This policy shall supersede policy GZ-UTIL-10 in the Gozo and Comino Local Plan approved in August 2006. In the case of conflict with other planning policies approved before this policy, the provisions of this policy shall prevail.

APPENDIX 1

Guidance on Lower Flammability Soft Landscaping in Areas Outside Development Zones (ODZ)

1. Flammable vs. Non-Flammable Plants

1.1 There is a general presumption in favour of landscaping of fuel stations to improve the setting in the surrounding landscape characteristics and keep a constant visual amenity. However, since all plants are flammable, especially when located within a semi-arid climate, striking the right balance is essential.

1.2 A number of local species of trees, shrubs and plants are flammable, will ignite fast and burn readily. However, other plant species are more fire resistant than others and thus termed *fire resistant* plants. These are characterised by having properties which:

- Are less likely to ignite from a wildfire;
- Burn less intensely when they do ignite, and spread the fire slower;
- Are lower growing or smaller;
- Have stems and leaves that are not resinous, oily, or waxy;
- Have a high moisture content- succulent plants;
- Easy to maintain and prune;
- Have less accumulated debris and fewer dead branches;
- Have an open, loose branching pattern; and
- Are drought resistant, requiring less irrigation.

2. Applicable Guidelines for Landscaping

2.1 The current applicable guidelines are the *Guidelines on Trees, Shrubs and Plants for Planting and Landscaping in the Maltese Islands* (MEPA. 2002). Appendix 3 of the latter specify which trees and plants are acceptable in Outside Development Zone (ODZ) areas and in urban fringes, whereas Appendix 6 lists the species considered suitable for non-crop planting on agricultural land. Hence the species listed within these Appendices are applicable to be planted around fuel filling stations located ODZ.

The latter G*uidelines* also specify good practice notes for maintenance of the landscaping, and which are applicable for these scenarios. These include removal of dead wood and stubble, hence further reducing fire risk.

3. Principles of fire-resistant landscaping

3.1 The principle of fire-resistant landscaping lies within the species chosen, the design implemented, and its regular maintenance. Permits for development consent can regulate the species and design, and regular maintenance is dependant on good practice during the regular running of these installations. On the presumption that species used are indigenous, and the majority are trees, the following guidelines are applicable:

3.2 ***Non-Acceptable species are to be avoided and replaced with species having a low flammability***. In general flammable species are deciduous, produce clear resins or aromatic oils, and produce a lot of dead branches and leaves. Some examples of the more flammable plant species are given in **TABLE 1** below:

TABLE 1 – More Flammable Plant Species

Flammable Indigenous species

- All pine species i.e. *Pinus halepensis* (Żnuber), *P. brutia* (Żnuber tal-lvant), *P. pinea* (Żnuber ta' l-ikel);
- Cypress- *Cupressus sempervirens* (Ċipress), and its variants;
- Holm oak- *Quercus ilex* (Ballut);
- Junipers- *Juniperus phoenicea* (Ġniepru);
- Lentisk- *Pistacia lentiscus* (Deru)
- Olive- *Olea europaea* (Siġra taż-żebbuġ)
- Common sumach- *Rhus coraria* (Xumakk tal-konz);
- Strawberry tree- *Arbutus unedo* (Imbragla);
- Grasses and other oily shrubs e.g. aromatic herbs.

Flammable Alien Species

- All wattle/ acacia species- Acacia sp. (Siġra ta' l-akaċja)
- Tree-of-heaven- *Ailanthus altissima* (Xumakk);
- All eucalyptus- Eucaluptus sp. (Ewkaliptus);
- Castor oil tree- *Ricinus communis* (Siġra tar-tiċnu);
- Tree tobacco- *Nicotania glauca* (Tabakk tas-swar);
- Brazilian pepper- *Schinus terebinthifolius* (Siġra tal-bżar).

3.3 Less flammable trees, shrubs and plants are more adequate for landscaping of fuel stations located ODZ and hence are normally favourably considered. Moreover, consideration should be given to the

context and hence, if the site is within an area of dry-agricultural land, the use of species which require high volumes of water should preferably be avoided.

3.4 A non-exhaustive list of examples of ubiquitous species applicable in most scenarios are given in **TABLE 2** below, although it may be considered that all tree species listed in Appendix 3 and 6 of the Guidelines are applicable, provided they do not fall within the list above.

TABLE 2

Recommended Indigenous Lower Flammability Plant Species

- Carob - *Ceratonia siliqua* (Ħarrub);
- Judas Tree - *Cercis siliquastrum* (Siġra ta' Ġuda);
- Hawthorn - *Crataegus azarolus/ Crataegus monogyna* (Għanżalor/Żagħrun)
- Quince - *Cydonia oblonga* (Sfarġel)
- Fig - *Ficus carica* (Tin)
- Narrow - leaved ash- *Fraxinus angustifolia* (Fraxxnu);
- Bay laurel - *Laurus nobilis* (Rand);
- Medlar - *Mespilus germanica*;
- African tamarisk - *Tamarix africana* (Bruk);
- Elms - *Ulmus canescens,* Ulmus minor, *Ulmus procera* (Ulmu)

3.5 Design: The design and maintenance of the landscaping should be such to prevent fires spreading through fuel reduction. However plants around fuel stations are likely to be used at the periphery and therefore some distance away from the potential fire source. Hence closer planting may be permitted to mitigate from external viewing

3.6 Maintenance: Although fire resistant plants may be grown, a firm commitment must be made to keep the landscaping maintained through a number of key points. When maintaining a fire-resistant landscape the following is essential:

- Remove all leaf clutter and dead and overhanging branches, especially in dry months;
- Keep all grasses and stubble low by using a grass cutter or mower, especially in dry months;
- Keep trees pruned and in shape. Remove major branches which touch each other;
- Dispose of cuttings and debris away from the site and according to local regulations;
- Irrigate regularly and be sure the irrigation system is well maintained; and
- Dispose of smoking materials carefully.

APPENDIX 2

FUEL Service Stations Fire Safety Policy 2013

1. The system shall comprise of a number of smoke or heat detectors, monitored by a central control panel, which shall signal an alarm through an indoor and outdoor sounder unit, in case the threshold of any of the detectors is exceeded. The system shall also include a number of fire manual call points, installed at a strategic location, to enhance the safe evacuation of the building in case of an emergency. The fire alarm system shall control any magnetic fire door holders such that these doors are released in case of a fire signal.

2. An Emergency Telephone Auto Dialler System located within the forecourt area should provide one or more manual call points, for summoning the Fire Brigade in case of a fire. This system provides a level of emergency support during periods when the Fuel Station is unattended.

3. A Fireman Switch shall be provided and duly labelled at the entrance to the station, such that the Fire Service can isolate at once the electrical supply to the entire complex by the operation of such single switch, ensuring that the site is safe for any subsequent intervention by the fire service. This will also ensure the total shut down of the dispenser.

   - The fireman switch is a specialized switch disconnector /isolator. These switches are often located on the outside wall of shops, industries or commercial buildings. They are used by firemen to turn off neon-lighting or other electrical equipment in case of fire to prevent the overheated equipment from exploding.

   - The enclosure is made of non flammable material and painted red to be easy to spot. The on & off positions are clearly indicated on the front side with “I” and “O”. The operating handle is designed in such a way that a fireman-hook or axe can be used to switch off. To reset a so called “two hands grip” must be used. The interlocking mechanism prevents accidental manoeuvres. The equipment should comply with IEC 60947-3 and BS7671

4. All the zones of the fuel Station need to be covered with a flame detection system approved by the CPD.

5. A portable fire extinguisher in good working condition and complying with the EN3 standard should be made available according to the hazard class of the premises in appropriate, properly labelled and easily accessible boxes located in a prominent position.

6. Hose reels as per MSA EN 671 part 1 shall be installed inside all the floors of the fuel dispensing station building, in the basement car parks and in the fuel dispensing area, ie covering all the premises area. Where more than one hose reel is required they should be required to overlap each other.

7. A basement car park level shall all be protected with sprinkler system in accordance with BS EN 12845-2004

8. Dispensing must be totally shut down in case of any ground fireworks displays in the vicinity. No ground fireworks display will be permitted inside the hot zone buffer area, while in the warm zone, a Fire Appliance will be required on location.

9. All the employees working in the fuel station should be given basic fire fighting training.

10. Fuel spill kits should be made available to address fuel spillages.

11. In the case of new fuel service stations located outside Urban Conservation Areas it is recommended that two nearby fire hydrants, complying with BS 750 should preferably be located between 50-100m from the perimeter of the station. These are to be connected to either the WSC mains or to a private water reservoir and fed via a fire pump. Each hydrant should be capable of delivering a non-static pressure of 3 bars with 2000 lts per minute of fire fighting water for a minimum of

one hour at each hydrant outlet and the possibility of simultaneously using the two fire hydrants should be contemplated. Ideally the overall water reservoir/s capacity should not be less than 120,000lts.

It is also desirable that where possible such facilities would also be made available for fuel stations located within Urban Conservation Areas.

Flammable Gas Auto filling station

All the provisions related to liquid fuel stations shall also be applicable to flammable gas stations. Moreover, the following additional provisions should be considered.

12. The possibility of fires or other incidents at Flammable Gas filling stations is minimised by careful site planning and design, sound construction and installation of tanks and other equipment, and good operating practices.

13. All storage tanks, filling lines, couplings and other pipes carrying LPG should be electrically bonded and earthed. Any flanged joints in liquefied gas pipelines should be fitted with metal bridges to ensure electrical continuity.

14. In addition to **para 10**, that flammable gas filling stations should have two 9 kg dry powder fire extinguishers always readily available and a 50 kg trolley type dry powder fire extinguisher during the daily operation of the station.

15. The MRA LPG code of practice should further be consulted.

Note: The standards quoted may be updated from time to time and any reference to particular standards is intended to refer to the latest relevant applicable standard at the time.