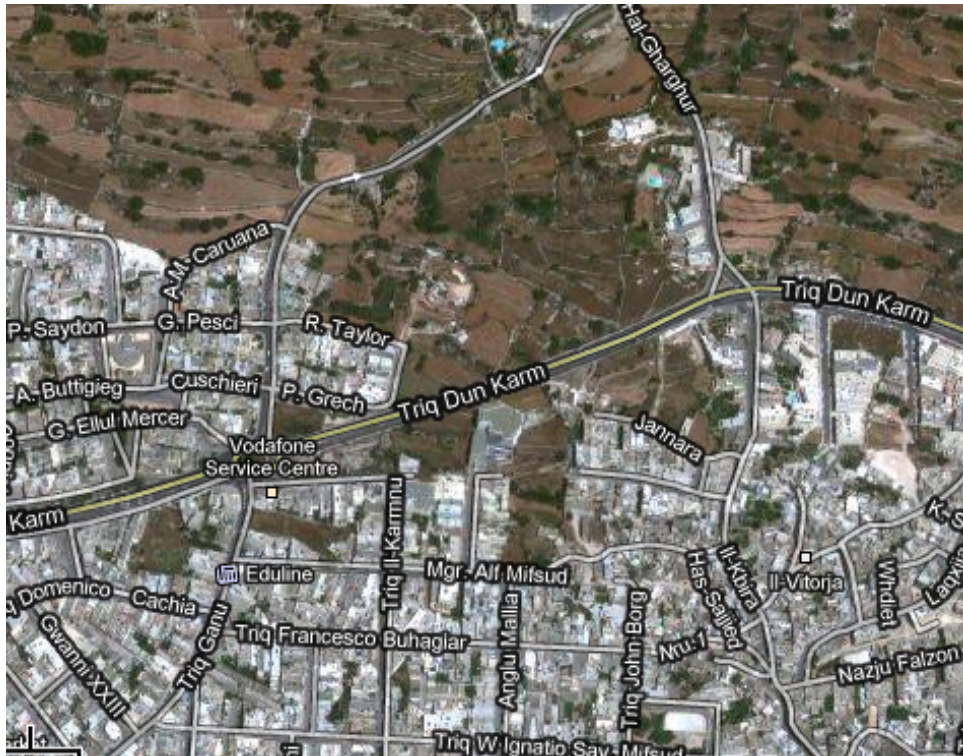


# **PROJECT DESCRIPTION STATEMENT**

## **FALZON PETROL STATION B'KARA BY-PASS**



33 / 34,  
St. Fredrick Street,  
Valletta.

**Architects, Civil Engineers & Structural Consultants**

Tel: 21247356, Fax: 27247356, E-Mail: rsdesign@onvol.net

## **Contents**

### **Chapter 1. Introduction**

- 1.1 Details of applicant
- 1.2 Background off the project
- 1.3 Current state of property

### **Chapter 2. Objectives of the proposed development**

- 2.1 Project Proposal
- 2.2 Expected project duration

### **Chapter 3. Physical Characteristics of the site**

- 3.1 Site location and description
- 3.2 Physical Characteristics
- 3.3 Current site usage
- 3.4 Surrounding land uses and environment

### **Chapter 4. Description of the project**

- 4.1 Size and scale of development
- 4.2 Design adoption and reasons
- 4.3 Duration and phasing of the development
- 4.4 Services necessary on site (water, electricity etc.)
- 4.5 Amount of workers and parking during each construction phase
- 4.6 Energy and waste generation during construction and operation
- 4.7 Storage and waste handling during construction/operation
- 4.8 Mitigation measures
- 4.9 Machinery requirement, parking and traffic arrangements
- 4.10 Fire Prevention Measures
- 4.11 Economic viability of the project

### **Chapter 5. Environmental Impacts and proposed Mitigation Measures**

- 5.1 Visual Impact
- 5.2 Noise Impact
- 5.3 Shade generation
- 5.4 Environmental impact during construction
- 5.5 Environmental impact during operation

### **Chapter 6. Preliminary Conclusions**

## Chapter 1. Introduction

*The purpose of this Project Description Statement (PDS) is to enable MEPA to take a screening decision regarding whether an Environmental Impact Assessment is required. If in the affirmative, whether this should be a full EIA or a limited EPA. Furthermore terms of reference are to be prepared for the EIA in consultation with various interested parties including the general public. This PDS is based on the initial designs prepared by the same office.*

### 1.1 Details of Applicant

The proposed development is being carried out by Mr. Carmelo Falzon on behalf of Falzon Group.

### 1.2 Background of the project

The development being proposed consists mainly of the construction of a filling station known also as petrol station and ancillary areas. Like the majority of the petrol stations the structure will be consisting of a fuelling installation underground, pump machines located centrally in a large open area reachable from the 3 main access points and a point of service inside the control room.

This service station will also offer other services such as a coin operated car wash service where the client can either choose to do the washing by him/herself using "jet washing" options including soap, tyre cleaner, wax and much more; or else use the automatic car wash machine which will do the cleaning automatically using a mechanised computer to control the rotating brushes inside the conveyor.

Other ancillary facilities will include 'Air and water Supply' for the vehicles making use of the filling station and a 'services area' located at the back of the site, for the repair of different range of vehicles from small ones such as motorcycles to larger ones such as trucks.

Being a large area there will be enough space to accommodate other facilities which might be useful to clients. This area will be dedicated mainly to a cafeteria and for other shopping requirements.

The whole area will be surrounded with different type of landscaping, the aim of which is to reduce the visual impact and to enhance the layout of the station itself.

### 1.3 Current state of property

A large proportion of this land has been abandoned. Agricultural activity is not intense in this area and all the fields have rubble wall boundaries besides vegetation which cover in their proximity. In general the area is characterized by moderate soil cover, vegetation and some trees especially within the field boundary.

The rural structures within the area include a two storey field room and a gather of field rooms forming a farmhouse complex. The rural structures are being used mainly as rural storage facilities and associated rural activities.

A MEPA application has been submitted PA 05987/08 for the Construction of fuel station and ancillary services.

## **Chapter 2. Objectives of the proposed development**

The area in which the development is being proposed is close to a high traffic area. Although it is true that in the vicinity there are other petrol stations, these are not equipped enough to serve a large amount of vehicles. People find petrol stations like the one being proposed very convenient since they are easily accessible and do not create any traffic congestion since a large area is being proposed within the same part for vehicles to pass through, thus avoiding a traffic build up along the main road.

Apart from being accessible from the main road, where mainly workers will be travelling daily; it may also be accessed from the side street 'Triq Mary Butcher' consequently offering the service for the residents who live in the neighbourhood.

As mentioned previously apart from offering the fuelling service, this station will offer other services such as 'car wash', 'air and water supply', 'service area' and a commercial space mainly to be used as a cafeteria and an shopping outlet. In this region there is need of these services, and offering them all in the same area will help to satisfy the requirements of the residents living nearby and all the people who use the main road daily.

### 2.2 Expected project duration

The project is expected to take six months from initial construction till completion. During this period, the project will be split in zones and individual zones will be split and developed independently, however the infrastructure/services will be developed in a holistic manner.

## **Chapter 3. Physical Characteristics of the site**

### 3.1 Site location and description

The site is located in the central region of Malta. The central region of Malta has a population 108, 490. This is about 27% of the entire population of the Maltese islands. This area is highly urbanised due to widespread urban sprawl and rapid development experienced in the past, when many green corridors and open space buffer zones between towns and villages were developed. Most of the surrounding areas are residential in character. This form of urbanisation has increased congestion especially in this area. The use of public transport has declined and private car use increased. This has repercussions on this area as substantial through traffic uses this area's road network especially at peak traffic hours.

### 3.2 Physical Characteristics

Birkirkara is known for the large amount of water that is gathered in its roads after substantial rainfall. Each time there is huge amount of rain B'Kara gets flooded. This happens because this village was built around a valley, from which rain water (from Naxxar and Attard) passes. This parcel of land is on higher ground and thus more traffic passes through when it rains.

### 3.3 Current site usage

A large proportion of this land has been abandoned. Small portions of the land are being used for agricultural purposes; however the rural activity is not intense in this area.

However rural structures are still being used mainly as rural storage facilities and associated rural activities.

### 3.4 Surrounding land uses and environment

The buildings in the surrounding are mainly urban used for residential purposes, much of them being utilised as residential apartments.

However there are other structures used for other purposes apart from those residential such as commercial and offices.

Prolongation along the main road not much far away there is a portion of land dedicated for industrial structures, the University of Malta and 'Mater Dei' Hospital. Along the other side of the road there one will find

him/herself in the locality of iklin, dominated mainly by residential buildings.

## **Chapter 4. Description of the project**

### 4.1 Size and scale of development

The proposed development is being designed in such a manner as to localise the development around the entire area of the site, being well designed along the whole site. The scale of the development is such that only 7% of the floor area will be developed as permanent structures being utilised as control, shop and service areas. For the rest of the development lightweight structures will be used mainly to cover the fuelling and the car wash areas. The surrounding of the area will be covered with landscaping to enhance the visual aspect of the project.

### 4.2 Design adoption and reasons

The fuelling area will be located centrally easily accessible from the two access points, one from 'Triq Dun Karm' and the other from 'Triq Mary Butcher'. Since the area is classified as 'highly traffic area' it is expected that during peak hours quite a number of vehicles will be making use of the fuelling station, hence it was thought that a three lane of pumps will be required.

The layout of the plan makes it easy for the steering of vehicles on to site and for cars to line up while waiting for a place at pump; easy steering away from pump with no blocking of exit and good visibility for driving out on to road.

The 'air and water supply' is located away from the fuelling area having an adequate parking space to avoid traffic obstruction on site. Even the other services such as car wash are kept separate from the filling area for the same motive and for safety measurements.

A canopy is required to cover all filling positions with enough projection beyond pumps on both sides.

Other site essentials such as control room, service area and the shop will be placed at the back of the site surrounded by landscaping. Since the petrol station adjoins residential zone, a landscape buffer strip of at least 3m along the common boundary is to be planted and maintained. External lights are to be directed away from the residential zone to prevent light spill and glare.

#### 4.3 Duration and phasing of the development

The proposed development will be phased in zones and the duration of the project is expected to be as follows:

<b>Zone</b>	<b>Works</b>	<b>Duration</b>
Fuelling zone including underground storage	Demolition/excavation Construction	4 months
	Finishing	1 months
Shop/Services/ Control	Construction	2 months
	Finishing	1 months
Car wash/ air- water supply	Construction	1 months
	Finishing	1 months

#### 4.4 Services necessary on site (water, electricity etc.)

A nominal amount of electricity and water supply will be necessary. This is due to the fact that an amount of hand tools (to carry out localised works) and pumps (for wheel washing facility) will be necessary and thus electricity supply is needed during the full duration of the project. Water facility will also be necessary for the sanitary areas were the workers would be able to change, wash and also provide the basic sanitary requirements.

The site office is to be equipped with internet connections and also fixed line telephones. Temporary toilets will be used and thus drainage facilities will not be necessary during the construction works.

Thus during the development / construction, most ancillary facilities will be necessary including, electricity, water, telephone/internet

#### 4.5 Amount of workers and parking during each construction phase

Since the site is quite large and easily accessible from various areas, the workers will be parking their vehicles within the site and thus minimal inconvenience/effect to the surrounding activity is expected. It is estimated that not more than ten (10) workmen will be on site at any one time. During the finishing period, the amount of workmen might increase but this is dependent on the various trades necessary during the finishing period. However should the amount of workers (during the finishing period) increase, this can be easily be absorbed within the site as the parking area would have been constructed.

#### 4.6 Energy and waste generation during construction and operation

During the construction phase of the development all waste generated will be recycled, this is due to the fact that the stone being excavated will be crushed and used as screed. Extra steel cuttings and waste will be carted away for recycling, whilst wasted concrete will be crushed and used as screed.

With regards to the energy generation during operation, the development will be in line with the approved 'Energy Directive' and thus this development will have a reduced amount of energy demand for heating and cooling.

#### 4.7 Storage and waste handling during construction/operation

Various materials are to be collected on site, these include steel, timber and plastic. These are to be stored on site and taken away in truck loads. On the other hand, the demolition waste consisting of masonry blocks and concrete is to be loaded on trucks and carted away.

The proposed development shall require the use of the following raw materials up to shell form:

- Graded backfill material which can be generated from the excavated material and crushed on site
- Franka stone blocks
- Concrete blockwork/insulated bricks
- Various grades of concrete (cast in situ or precast)
- Steel reinforcements
- Structural steel beams and columns

The excavation material (were necessary) will be cut in blocks and carted away on trailers, however some of these blocks are to be crushed on site and graded backfill material is to be generated. This method (cutting of masonry large blocks) will reduce the amount of noise/vibration generated on site, whilst the excavated material will be reused to construct retaining walls. On the other hand, whilst crushing of masonry blocks will generate an amount of noise and dust, this will reduce the amount of traffic activity within the area.

Waste generated during the construction phase is considered to be on the minimal side. This is due to the fact that the generated waste will originate from the following:



- cutting of masonry franka stone to the desired size, the remaining off cuts are to be kept and used were possible
- cutting of bricks to the required size, the remaining offcuts are to be kept and used were possible
- cutting of steel reinforcement and steel structural elements, minimal steel cutting will take place on site.

During the operation of the development, Waste from a vehicle wash area must drain into a public sewer or a settlement and oil separation system. The system must comply with the relevant regulations and be installed to the satisfaction of the responsible authority.

The fuelling area: during operation should a leak occur, all operation must be stopped immediately. Any waste oil products must be contained, reported and action taken for clean up.

To allow for expansion and to prevent a spill, the tanks shall not be filled above 95% capacity.

When topping up tanks

1. The valve to the next tank to be filled should be opened gradually and the valve to the tank being topped up closed gradually until full.
2. When topping up the final tank the flow is to be reduced accordingly and stopped when there is ample volume remaining to drain the hose, and piping to be purged.

#### 4.8 Mitigation Measures

A 3m high boundary wall will be constructed around the surrounding of the site overlooking the main and side roads, whilst, an adequate hoarding of a minimum height of 2.7m shall be built around the remaining site perimeter. Site access will be through 'Triq Mary Butcher' to avoid construction vehicles entering and going out of the site to the main road, which will obviously create an inconvenience to the traffic passing through this road.

It would be ideal that the excavation would take place during weak/mild winds to reduce the propagation of dust. The demolition works are to be carried out in such a way that there will be no overspill into the surrounding properties and the road. Excavation works will be cut vertically using a chain saw machine which will close to eliminate all the vibrations generally created during excavation works

Mobile cranes shall be used during the full construction process. These shall be necessary to lift and erect various heavy items. The method of construction shall be a mix between steel structures (for the canopy covering the filling positions), whilst the low rise structures situated at the back of the site shall be constructed using concrete blocks.

Works on site are to be carried out on a six day basis (except Sundays and Public Holidays). The operating hours shall be from 7.00am to 7.00pm during week days and from 7.00am till 1.30pm on Saturdays.

Dust within the area is to be kept to the minimum and monitored. This can be achieved using adequate watering during the demolition works, whilst vacuum equipped tools are to be used during the construction phase. Furthermore dust monitoring will be carried out to ensure that the measures taken are being effective.

Site office, lavatories and storage areas are to be located within the site and adequate gate controls are to be carried out to ensure that the site is restricted to passersby. Furthermore a site safety officer is to be appointed to ensure that all site activity is carried out according to the current health and safety legislations

#### 4.9 Machinery requirement, parking and traffic arrangements

Various machinery is needed during various phase of the project:

All Phases:

- Wheel Washing Facility. This machinery is necessary to ensure that all the access roads are kept clean during all the periods of demolition and construction.
- Mechanical sweeper. This would be necessary to ensure that the access roads are occasionally washed and kept clean

Demolition:

- Bulldozers and loaders. These are necessary to collect the demolished material and load onto transportable vehicles.
- Trucks. These are needed to cart away all the un-necessary demolished material to an approved dumping site

Excavation:

- Chain Saw Machinery. These will be needed to cut the excavated rock into large blocks and carted away from the site.
- Mobile lifting cranes. These are to be used to erect the masonry blocks and load them onto trailers and carted away from the site

Construction

- Mobile crane. This is necessary to be able to lift and transport heavy items within various areas/levels within the site.

Parking and Traffic Arrangements

- All parking for workers working on site is to be provided within the site. Thus during the construction/finishing of the project, the on street parking should not be effected.
- Traffic arrangements will be such that all heavy vehicles will approach the site from Triq Mary Butcher.

#### 4.10 Fire Prevention Measures

All the electrical cables to be installed are to be of the right size and correctly insulated to avoid any electrical fault either because of the cable being overloaded during power outages or electrical short due to poor insulation.

- Fire extinguishers are to be located in the main control room and at easily accessible points outside; these are to be regularly inspected.
- Moreover there is the need to install sand buckets and fire blankets.
- Clearly posted fire-hazard warning signs like for example “ no smoking”
- Instructions/steps/procedures should be clearly posted at different positions on site like for example: entry, exits.

#### 4.11 Economic viability of the project

The petrol station will ensure development of part of the plot, which has been abandoned for some time.

The proposed project will create employment opportunities especially for the pump attendants and other service providers.

The project will provide a modern service station to both the nearby residents and those who will pass by next to it. Due to the different services offered at the station i.e. fuelling, service station, carwash, air-water supply and a retail outlet, the project will have multiple benefits to customers.

Some people will be employed by the project as management agents, mechanics, pump attendants, security personnel and others

## **Chapter 5. Environmental Impacts and proposed Mitigation Measures**

### 5.1 Visual Impact

Whilst the proposed service area will result in specific and localised visual impacts it is considered that when taken in conjunction with the proposed provision of landscaping the impact will be slight.

It is recommended that part of the topsoil excavated from the construction site be re-spread in areas to be landscaped to enhance plant health which will lead to improved visual quality of the area.

### 5.2 Noise Impact

The main sources of noise in the operational stage of the proposed petrol station include services noise, car parking, filling station activities, traffic movement within the proposed site and refrigerated vehicles parked on the proposed site.

The selection of low noise pumps, plant and the location of noisy equipment as far away from the residential buildings, as permitted by site perimeter, will ensure that the resultant noise impact related with the petrol filling station is insignificant

### 5.3 Air Quality Assessment

To ensure that the air quality is up to standards the following measures should be secured:

- Provide solid waste handling facilities such as waste bins and skips.
- Ensure that solid waste generated is regularly disposed of appropriately at authorised dumping site.
- Ensure efficient waste management through recycling, reuse and proper disposal procedures.
- Provide adequate and safe means of handling sewage generated at the petrol station.

#### Energy Consumption

- Switch off electrical equipment, appliances and lights when not being used
- Install energy saving fluorescent tubes at all lighting points instead of bulbs which consume higher electric energy

These measures will help in minimizing the impact of the pumping station during its operation.

#### 5.4 Environmental impact during construction

Particulates in the form of dust generation, engine exhaust accidental spillage of chemicals/oils, vibration and noise are the main environmental impacts during the construction phase.

To reduce the dust generated, it is being recommended that the site is often. Furthermore, minimal stock piling is to be stored on site, thus reducing the amount of dust generated by wind.

Vehicles are to be inspected and ensured that they are road worthy and that their emissions are adequate.

All liquid stored on site is to be stored within a pond to make sure that all spillage is easily controlled. Furthermore all stationary machinery within the site is to be equipped with an adequate drip tray.

Vibration and noise is to be reduced using adequate machinery and regularly monitored.

#### 5.5 Environmental impacts during operation

The proposed development is such that it will have least effect on the environment during its operation.

Liquid waste generated from the service station will be passed to the septic tank/soak.

Proper facilities will be provided for handling solid waste generated within the station. These include dust bins/skips for temporarily holding of solid waste within the premises before final disposal at an appropriate dumping site.

The management will be in charge of the washing and cleaning of the area and related facilities, pavements, the parking area etc. Cleaning operations will involve the use of considerable amounts of water, disinfectants and detergents.

To avoid needless power consumption at filling station the following measures need to be adopted.

- Energy efficient night-time lighting to be used at the premises.
- Light sensor switches are to be provided to ensure outdoors lights are not used in daytime.
- All energy using equipment used in lighting and heating should be switched off when not in use.
- Alternative energy sources need to be installed such as solar energy

## Chapter 6. Preliminary Conclusions

It is our considered opinion that the provision of a quality fuelling station in the proposed location will help limit traffic and refuelling within central b'kara and deviate it to the outskirts.