

Dust Mitigation Plan
Quarry SM04

April 2021

Site Location

The quarry site is located in an area to the south east of Siġġiewi known as *Ta' Sgamardi*, and to the west of Wied Xkora which together with the other valleys in the area form part of the Wied il-Kbir river valley system. The quarry area and its surroundings are situated within the territory covered by the South Malta Local Plan (SMLP). The geographical surroundings together with the immediate surroundings are presented in the aerial photo below.



Photo 1 Aerial photograph of the Quarry site with the immediate surroundings

The site has been subject to 24 years of mineral extraction of the Globigerina Limestone geological member. The soft stone quarry site has a surface area of approximately 9,700 square meters and mineral extraction has been completely exploited.

At present the quarry is being utilised for the recycling of mineral wastes to be re used for the construction industry. One of the impacts such operations is dust dispersion in the immediate surroundings of the quarry (around 100 meters).

In view of such impact the operator will be setting up a dust mitigation plan which will be effective during the operational hours of the quarry site. The aims of the Dust Management Plan are to:

- Minimise dust generation and migration from the site;
- Ensure nuisance caused to nearby receptors from dust is kept to a minimum;
- To develop a dust minimisation strategy that shall be implemented by the site management; and
- Ensure that operations at the site have consideration for potential dust generation.
- Inform continuing improvements to dust/ particulate control and site management at the site and update the Dust Management Plan detailing such improvements.

Dust Control Measures

The following section outlines the control measures that will be undertaken on site to mitigate dust emissions from the identified sources of generation.

Dust is likely to be generated from:

- Vehicle movements in / around /out of the site. Tyres and exhausts may cause dust, it thus important to keep vehicle speeds down, keep vehicular path clear of mud, keep roads damp during dusty conditions; Power washing the wheels of the vehicles will help to reduce dust dispersion and also prevent mud and dirt from being spilled don to the access roads.
- Loading and tipping operations – During this process dust may be given off through impact, therefore it is encouraged for tipping heights to be kept to a minimum. Water sprinklers will be installed alongside the perimeter wall of the concrete block bays to dampen the top end of the stockpile. This is illustrated in the block plan presented in Annex 1. However mobile equipment such a dust misting lance may be used to also suppress dust generation. An example of such equipment is shown in the diagram below.



Dust sprinklers installed on the conveyor belts



Dust Misting Lance

- Processing (Crushing, Screening) of soils, aggregates, concrete. Dust may arise due to impact (material against material, product coming off discharge belts. Material will be dampened during this process by means of water sprinklers integrated on the conveyor belt of the crushing machine to mobile to suppress any dust. This is shown in the diagram above.

- Handling and movement of stockpiles. Vehicles moving stockpiles will not over fill buckets / body of dumper, tipping heights will be kept low when emptying bucket;

Means of Prevention

In order to minimise potential generation of dust from the site, the following preventative control measures using best practicable means, shall be implemented by the site manager for the separately identified potential dust generating activities.

Vehicle Movements In/Out of Site

- All haul and access roads within the site and at the site entrance shall be kept free from mud and debris at all times by manual clearing (Brooms, spades) and road sweeping. Mud and debris on access and haul roads shall be monitored daily by the site manager and cleaned when required. If this proves to be insufficient, a road sweeper will need to be provided.
- The site management shall ensure adequate measures are used throughout the site to dampen surfaces (application of water through hoses / bowser / mobile apps) during periods of dry weather. All vehicles and plant will be checked by the driver / operator to ensure that deposits of mud are not carried outside the site (signs of this will be visible on-site roads).

Loading and Tipping Operations

- All wastes handled on site shall be done so in a controlled manner, with consideration given to the potential for dust generation at all times.
- Loading and tipping heights will be minimised to avoid uncontrolled dust emissions.
- All vehicles will be sheeted when entering and leaving the site.

Wind Blowing Across Stockpiles

- Where necessary and during periods of dry conditions, water will be deployed to dampen material
- Disturbance of the surface of the stockpiles will be minimised to maintain an intact surface crust. Some stockpiles are in concrete block bays which act as windbreaks, stockpile heights are governed by planning.

Screening of Wastes

- All inert handling/loading/screening operations on site shall be monitored by the site management, and if necessary appropriate measures shall be implemented to prevent dust generation.
- Where dust suppression systems are incorporated into plant/machinery, they should be used to minimise dust generation where appropriate, and maintained in workable condition at all times.
- Operations around the operational machinery will be carried out in a controlled manner to prevent fall out of dust (Sprays around hoppers, nose bags on end of conveyor).
- Screening operations will take place within the designated area and materials wetted prior to activities that could lead to dust generation where necessary.

Site Management

The site manager shall be responsible for the control and management of dust at the site. Site management shall ensure that all personnel operating on site are adequately trained to implement the dust control measures. If the control measures stated are implemented at the site then dust generation should be kept to a minimum.

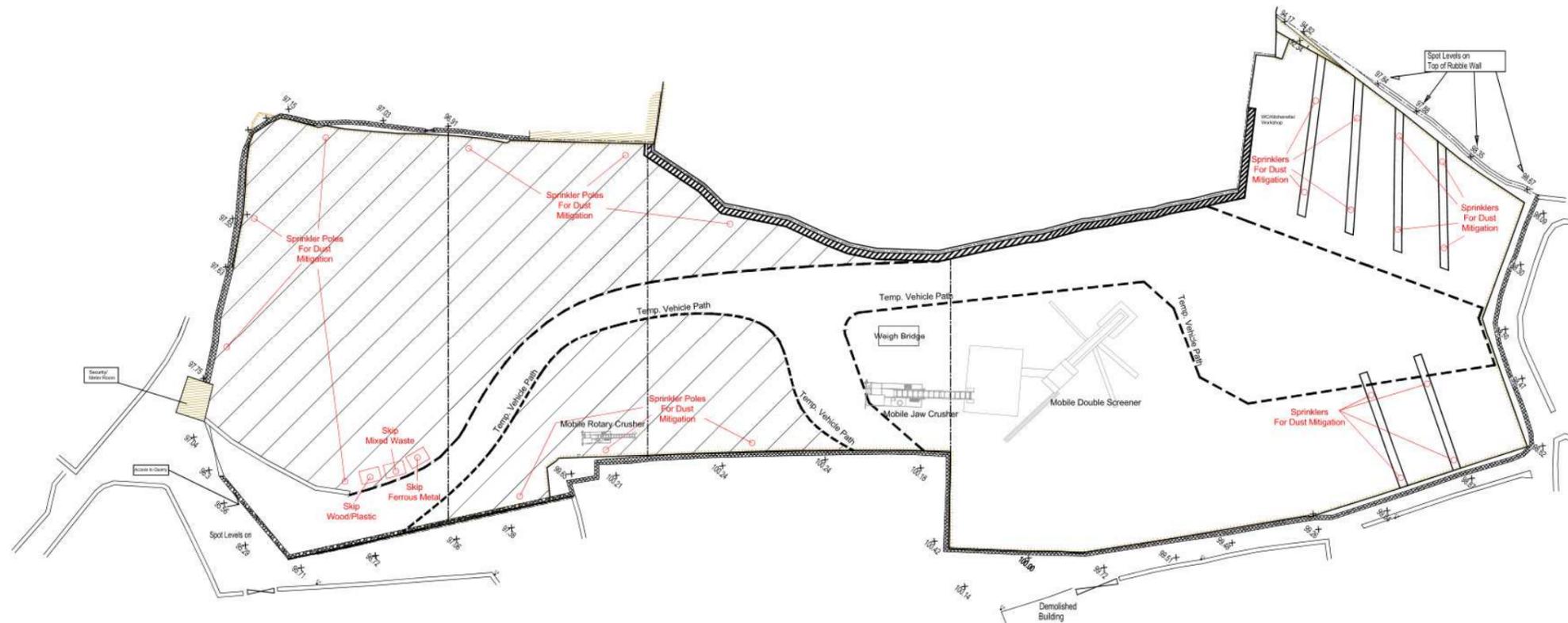
- The site manager shall ensure that a visual inspection of the activities is carried out at regular intervals during operational hours to assess the extent of dust being generated. In circumstances where visual dust inspection identifies a significant dust source, the site manager shall adopt appropriate dust suppression measures to prevent or minimise the dust being generated.
- Dust suppression systems (mobile apps, plant suppression, Bowser dampening vehicular paths) and equipment used on site shall be maintained in good working order at all times.
- Maintenance or repairs of dust suppression equipment and road / yard surfaces shall be carried out as soon as reasonably practicable and recorded within the relevant maintenance log.
- All dust control equipment will be installed on site by end of 2021.

Conclusions

The site is well screened and is set in a remote area in an area which is being used for quarrying activities. It is to be noted that some of the stated control measures are already being implemented at the site. Dust from the site operations will be controlled through sensible site management controls including careful movement by experienced operators, use of water mister and rain guns equipment, containment to shelter other processing operations, limiting location of certain processing operations, and operation of best practise in terms of housekeeping operations,

Ongoing monitoring and review of the operations of this dust management plan by the management, with appropriate updating, will ensure continuing effective dust management without any adverse dust impacts off site.

Annex 1



PROPOSED PLAN
SCALE 1:500

Notes

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This drawing should not be scaled.

Dimensions / Areas as shown on drawings are *indicative* and may vary on site except for backyards, internal yards and front gardens.

**Drawing
Quarry Block Plan**

Scale 1:500 @ A2 Job No 17083 Dwg No 02 Date 18.03.2020

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Henry Attard
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