



TRIHILLS HEAVY INDUSTRIES Ltd.

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Fire Risk Plan

Document Review Number: 3

Date: 31/03/2021



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2.0. SITE DETAILS

Site Name: Trihills Heavy Industries Ltd.

Site Address: Tal-Barrani Road, Għaxaq GXQ9020

Operator Name: Mr. Joseph Cassar

3.0. INTRODUCTION

3.1 A Fire Prevention Plan (FPP) identifies the possible causes of a fire on a site and sets out the measures to address fire risks. These measures will depend on the onsite activities and will take in to account Waste Management activities as well as any other activity carried out on the site that could be a fire risk.

3.2 The aim of a Fire Prevention Plan (in respect of an Environmental Permit) is designed to meet these three main objectives:

- minimise the likelihood of a fire occurring
- aim for a fire to be extinguished within the shortest possible time
- minimise the spread of a fire within the site and to neighbouring sites

3.3 A site storing any amount of combustible waste should have a Fire Prevention Plan to protect the business. It is also a regulatory requirement.

The Environment and Resources Authority (ERA) requires that Waste Management Facilities, storing combustible waste, have a Fire Prevention Plan in conjunction to the Environmental Permit. The Fire Prevention Plan needs to be approved by the Regulatory Authority.

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4.0. FIRE PROTECTION PLAN USERS

This 'Fire Risk Plan' has been prepared for:

- 4.1 the Owner and Operator of the Scrap Yard for the safe operation of the Yard
- 4.2 the 'Environment and Resources Authority' (ERA) for assessment regarding the Environmental Permit of the Scrap Yard
- 4.3 the 'Civil Protection Department' (CPD) for the assessment of the safe operation of the Scrap Yard
- 4.4 all the personnel working on the site and
- 4.5 contractors assigned jobs on the site.

5.0. TYPES OF COMBUSTIBLE MATERIAL

Combustible material is material that can catch fire and burn easily. It includes (but not exclusively):

- 5.1 combustible waste material:
 - 5.1.1. paper and cardboard
 - 5.1.2. rugs and textile
 - 5.1.3. wood
 - 5.1.4. rubber natural or synthetic including obsolete rubber tyres
 - 5.1.5. plastic including that recovered from the 'End of Life Vehicle'
 - 5.1.6. scrap metals, including ELV's contaminated or mixed with other waste such as oils and plastic
 - 5.1.7. waste fuels resulting from plant, equipment and vehicles and ELV's

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- 5.1.8. waste oils (lubricating and hydraulic) resulting from plant, equipment and vehicles and ELV's
- 5.1.9. obsolete batteries resulting from plant, equipment and vehicles and ELV's
- 5.2. combustible non-waste material:
 - 5.2.1. gas cylinders
 - 5.2.2. oils (lubricating and hydraulic) for plant, equipment and vehicles use
 - 5.2.3. fuels (petrol and diesel) for plant, equipment and vehicles use
 - 5.2.4. aerosols and other combustible liquids
 - 5.2.5. new batteries for plant, equipment and vehicles use and
 - 5.2.6. new tyres for plant, equipment and vehicles use.
- 6.0. USING THE FIRE PREVENTION PLAN
 - 6.1. The Fire Prevention Plan should form part of the company Management System, as appropriate. It sets out the fire prevention measures and procedures in place and in use on the site.
 - 6.2. The Fire Prevention Plan must be a standalone document within the Management System so that all company personnel can easily refer to it.
 - 6.3. A suitable location for a Fire Prevention Plan could be the customer reception area within the Administration Building which is an area accessible to all.
 - 6.4. It shall be ensured that all personnel know where the Fire Prevention Plan is kept and can access it easily at all times, including during an incident.
 - 6.5. All personnel and contractors working on the site must understand the contents of the Fire Prevention Plan so that they know what they must do:
 - 6.5.1. to prevent a fire occurring

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6.5.2. during a fire if one breaks out.

6.6 Regular exercise must be carried out to test how well the plan works and make sure that all personnel understand what to do. The Plan shall set out the frequency of these exercises.

7.0. FIRE PREVENTION PLAN CONTENTS

The Fire Prevention Plan must set out all the measures in place to reduce the risk of a fire breaking out. Possible causes of a fire on the site and the measures in place to be addressed must be identified. These depend on the activity carried out on the site.

The Fire Prevention Plan must cover the following:

7.1 The Activity on the Site

The Fire Prevention Plan must provide details of the different types of activities carried out at the site. This includes the waste management activities and any other activity that could be a fire risk.

7.2 Site Plot Plan

The Fire Prevention Plan must include a Site Plot Plan showing:

7.2.1. layout of buildings

7.2.2. any area where hazardous material is stored on the site (location of gas cylinders, process areas, piles of combustible waste material, oil and fuel tanks)

7.2.3. main access routes for fire engines and possible alternative access

7.2.4. access points around the site perimeter to assist fire fighting

7.2.5. hydrants and water supplies

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- 7.2.6. the location of fixed plant and of mobile plant when not in use
 - 7.2.7. drainage runs, pollution control features and fire water containment systems
 - 7.2.8. storage areas with pile dimensions
 - 7.2.9. the Quarantine Area.
- 7.3 A Site Plan (part of Fire Risk) shall show all sensitive receptors within close proximity of the site that could be affected by a fire. Such receptors may include:
- 7.1.1. schools, hospitals, residential areas and other workplaces
 - 7.1.2. protected habitats, groundwater and boreholes
 - 7.1.3. roads, bus routes, utilities and airports.
- 7.4 The Site Plot Plan and the Site Plan are Appendices 1 and 2 in this document.
- 8.0. MANAGE COMMON CAUSES OF FIRE
- 8.1 Common fire sources and mitigation

The following table outlines common examples of fire sources, their associated risks and the mitigation measures necessary to manage them.

Source	Risk Specific	Mitigation
Arson or vandalism	Deliberate ignition of waste by intruders or vandalism of the site infrastructure, plant/ machinery which may cause malfunction and compromise the integrity of the Site	Site security measures shall be enforced at all times.

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Source	Risk Specific	Mitigation
Plant and Equipment	Spillages of fuel, sparks from machinery or malfunction caused by ineffective maintenance	All plant preventative maintenance checklists shall be kept adequately away from the risk of fire
Open burning on the site or on adjacent sites	Risk of ignition from radiative heat or from open burning on the site or an adjacent site	Control open fires on the site and train all personnel working on the site regarding fire implications.
Hot work	Welding, cutting involve the use of high temperature equipment which may be a source of both primary and residual heat to stored wastes	All hot work carried on the site shall follow procedures and controls set by management

8.2 Fuel/Oil Storage

The location of fuel storage on the site should be away from the site operations. A lock will be fitted to the tank valve to prevent unauthorised use. No combustible waste will be stored within close proximity of the tank.

8.3 Hot Works Procedure

Hot works can take place in various areas of the site. Hot work should ideally be carried out distant from waste material piles on the site. If hot work is carried out

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close to stored waste material special attention should be taken during the hot cutting. Ensure that fire extinguishing means is close at hand. The type of fire extinguishing means would depend on the working environment but in general Fire Hydrants, Carbon Dioxide or powder extinguishers would be appropriate.

8.4 Plant and Equipment

Separation distances should be observed between plant which is not in use and stored waste material and other combustible material. All plant, equipment and vehicles should have fire extinguishers in the cab. Fuels and combustible liquids from site vehicles (forklift trucks etc.) will be stored appropriately.

9.0. PREVENT SELF-COMBUSTION

Some material can self-combust under certain conditions particularly if left for long periods of time in a hot ambient . These include:

- Tyres – whole or processed
- Rusty materials can generate heat resulting in self combustion if the material has traces of oil
- Plastic and similar material resulting from an 'End of Life Vehicle' facility.

Control of pile sizes and rotation of stored material can help to control and prevent self combustion.

10.0. MANAGE WASTE MATERIAL PILES

Manage all Waste Material Piles to within appropriate sizes and separation distances.

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- 10.1 Waste material piles shall be kept to sizes which can be safely and quickly handled in case of a fire.
- 10.2 Have adequate water supplies available at all times to fight a fire:
An adequate water supply shall be available to start extinguishing all potential fires on the site. External help for the provision of sufficient water supply may be necessary in the case of fire of a high extent
- 10.3 Enable adequate access for emergency vehicles throughout the site:
Easy access throughout the site should be possible in the event emergency fire fighting and personnel safety is necessary.

11.0. DETECTING AND SUPPRESSING FIRES FROM SPREADING

If a fire starts, the quicker it is detected and tackled the better.

- 11.1 Adequate procedures shall be in place to detect a fire in its early stages to reduce its impact.
- 11.2 If a 'Fire Detection System' if installed should be proportionate to the nature and scale of the Waste Management activities carried out and their associated risks.
- 11.3 The design, installation and maintenance of a 'Fire Detection System' must be covered by an appropriate and accredited certification.
- 11.4 Provision of appropriate portable fire extinguishers:
The quantity and type of portable fire extinguishers shall be available on the site and their location is known by all personnel working on the site.
- 11.5 Fire Hydrant system with the necessary supply of water:
The nature of the operation on the site may necessitate the installation of a Fire Hydrant System around the yard. The system shall have an adequate supply of

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water to start extinguishing all potential fires on the site. The help of Civil Protection Department may be required depending on the extent of the fire.

11.6 Regular periodic inspections

Regular and periodic inspections shall be carried by a competent person to ensure that all fire fighting equipment is in place and functional. An inspection should be carried out at least once every two months.

12.0. THE QUARANTINE AREA

12.1 In accordance with the Authority guidelines, an area on the site has to be designated as the 'Quarantine Area'. This area should be accessible at all times and allow an adequate buffer from the site perimeter and other waste material stored on the site.

12.2 The quarantine area shall be of a size depending on the height of the free-standing waste material stockpile. This area should be of a size to hold over 50 per cent of the maximum stockpile of combustible waste material.

12.3 Waste material should be moved to the 'Quarantine Area' using appropriate plant available on the site.

12.4 In the event of a fire the quarantine area shall be used to isolate smouldering waste and allow safe dissipation of heat. The waste material, near the fire, shall be moved to the 'Quarantine Area' within a short but safe time. This helps to prevent the fire spreading to adjacent material piles.

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13.0. FIRE FIGHTING TECHNIQUES

- 13.1 It is important that the site layout allows for active firefighting. This helps to allow a fire to be extinguished within the shortest time possible.
- 13.2 A variety of firefighting techniques can be used together or separately to extinguish a fire. These include:
- applying water to cool unburned material and other hazards
 - separating unburned material from the fire
- 13.3 These techniques may be used by company personnel on the site if they are adequately trained and supervised at all times by the the Civil Protection Department. The safety of these personnel shall be guaranteed.

14.0. WATER SUPPLIES

- 14.1 Adequate water supplies shall be able on the site for fire fighting purposes and to be able to manage a worst case scenario incident.
- 14.2 An adequately sized water reservoir shall be available on the site. The reservoir could an underground cistern.
- 14.3 A 'Fire Hydrant System' may necessary due to the nature of the activity carried out on the site. A consultant has been requested to investigate this matter and make recommendations. It has been decided to fix three Fire Hydrants along the inside perimeter of the Yard. These are shown on the Site Plot Plan. The sizing of the fire hydrant piping is being prepared.

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14.4 Easy access throughout the site should be possible in the event the Civil Protection Department is called in, allowing easy manouvering of their fire-fighting vehicles.

15.0. MANAGING FIRE WATER

15.1 Fire water drainage arrangement for the site shall be clearly shown on a plan.

15.2 All drainage from buildings, access road, car park area and other concrete surfaced areas shall drain to interceptors and discharge eventually into the sewer system.

15.3 All foul liquids shall drain through appropriate filtering and shall flow to the waste water reservoir for eventual discharge to the sewer system.

15.4 All concrete surfaced areas shall be impermeable to prevent ingress of rainwater and all other liquids which could possibly flow on the surface.

16.0. DURING AND AFTER AN INCIDENT

16.1 Notify the appropriate authority and nearby properties in the case of a severe fire:

17.1.1. the appropriate authority/s shall be notified

17.1.2. nearby properties, within a range that could be affected by the fire .
smoke flying ash, shall be notified to action as appropriate.

16.2 Contingency Planning

In the event of a fire the site shall cease accepting waste. Customers delivering waste shall be turned away. Urgent deliveries shall be directed to an alternative facility. When post-fire recovery procedures have been fully implemented, the site

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shall restart accepting waste.

16.3 Post Fire Site Recovery

If a recovery procedure is required, the following should be investigated.

16.3.1. remove damaged material material to a permitted facility that is able to deal with it appropriately

16.3.2. carry out repairs on plant, vehicles and infrastructure as appropriate

16.3.3. carry out a fire investigation and seek professional advise if necessary

16.3.4. review the 'Fire Prevention Plan' (FPP) and the 'Environment Management System (EMS) procedures and improve as appropriate

16.3.5. review personnel training requirements

16.3.6. ensure all fire equipment used is replenished

16.3.7. remove fire water to a certified disposal facility.

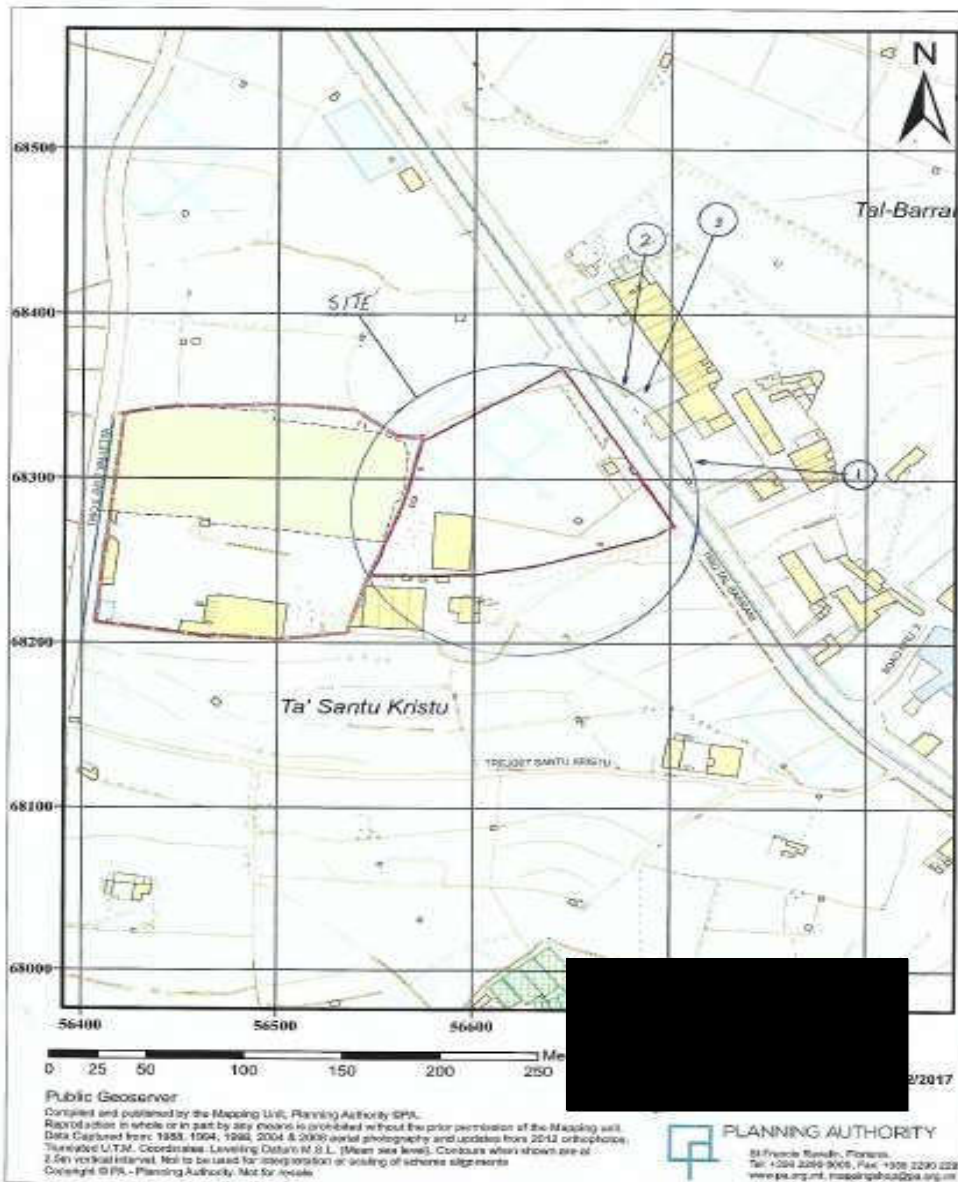
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APPENDIX 2



Scrap Yard Site Plan

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Notes

1. Fire Prevention and Control

Trihills Heavy Industries Ltd. shall follow the measures for the reduction of risk of a fire and identifying possible causes for a fire as set in Paragraph 08 of this document – ‘MANAGE COMMON CAUSES OF FIRE’. The measures shall also include the segregation and control of Waste Piles.

2. The Activity carried out on the site

The activity carried out on the company’s Scrap Yard at Tal-Barrani Road Hal-Għaxaq include incoming metal waste material originating from the following industries:

2.1 Canned Food

2.2 Construction

2.3 Light Metal

2.4 Mechanical Treatment and

2.5 Off-shore

2.6 and an End of Life Vehicle Facility

the processing of this waste material by hot work and mechanical means. It also includes baling of the processed material. After processing the incoming material shall be stored in the outgoing waste material designated area for export in containers or transferred to the quay in appropriate and licensed vehicles to be loaded on ship.

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3. The Scrap Yard Site Plan

The Site area has been investigated and it has been concluded that:

- 3.1 no schools or hospitals are in close proximity of the Yard although residential areas and workplaces exist at some distance away
- 3.2 no protected habitats, groundwater and boreholes were found in close proximity of the Yard
- 3.3 the airport and other utilities are within reasonable distance from the Yard. Public roads and bus routes are in rather close proximity however it should be highlighted that the Yard Perimeter Wall is separated from the public road, a two lane dual carriageway separated by a one metre wide central strip, by an approximate 5 metre service road which is the property of the company.

Prepared by: Ing. Vincent J. Bartolo C.Eng MSc.

Date: 31st March 2021

Engineer Warrant Number: 439

Signed: 

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