SHIELD CONSULTANTS LTD

Fire Emergency Plan

JAC Steel Ltd.

Waste Treatment Complex Qasam Industrijali ,
Marsa, MRS 1000

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0.1 Contents

0.2 Introduction

JAC Steel Ltd. Consists of a waste management facility with permit to carry out waste management activities related to the storage and dispensing of specified types of WEEE, dismantling of End if Life Vehicles (ELVs), acceptance of batteries and for the baling and storage of recyclable and other not-hazardous waste designated for the management of pre-treated and unsorted municipal wastes.

The renewal of the permit requires the review of the Emergency Plan and this document is being compiled following a visit on site and a meeting with the site management.

0.3 Aim

To ensure that a plan is in place to deal with incidents that may occur with the JAC Steel ltd. plant and that sufficient equipment and adequate training are provided to deal with them.
The plan also looks into prevention measures in order to minimise the probability of an incident taking place.

0.4 Fires on site

1.1 Risk Assessment

The risk assessment for the compilation of the ERP considers the evaluation of the risks faced by the materials, processes and layout of the building. This serves the determination of the safety measures required for the dealing of emergencies.
This does not substitute the conduction of a General Workplace Risk Assessment which is required as a safety management tool and needs to be carried out every few years to identify, assess, and mitigate hazards within the facility.

For the ERP the following points are required:

- **Fire Load**

The nature of the facility required the bulk storage of bulky materials that need to be dismantled and sorted for exportation. These materials carry on intrinsic fire hazard since most parts are combustible in nature and in most cases, they have various levels of contamination with oils and greases.

- **Storage of combustible materials**

Most of these are stored in the open-air yard to be processed either by hand or by machine depending on the process that is required to be undertaken.

- **Storage of flammable liquids**

Bulk storage of fuels is carried out in the basement in IBC tanks. These are protected from hot temperatures but might be exposed to products of hot works that might be going on inside since a workshop is located within the same area.

This will need to be avoided by protecting the tanks from the products of hot works such as sparks and flying debris. Fire blankets or other fire rated fabric can be used here.

- **Oil contaminated materials**

Most of the materials brought to the site has the risk of being contaminated by flammable liquids to a greater or lesser extent.
This cannot be avoided but the prevention of fires and the response to any incident must be prioritised.

A breakdown of the different materials and the quantities of each material handled over the year 2021 can be seen in appendix 4 on the last page of this report.

- **Sources of ignition**

The most likely sources of ignition are identified as being:

- Hot works – Oxy-acetylene cutting equipment
- Mechanical faults in machinery
- Electrical faults
- Elevated environmental temperatures

To prevent fires from starting due to electrical or mechanical faults, a system of preventive maintenance and testing is required. This will need to be carried out by a competent person and must be documented.

When hot works are required, the accidental ignition of adjacent materials can be prevented by the workers being trained in fire safety particularly in the safety while carrying out hot works. All workers must be trained in the fire prevention and this training must be kept up to date with the training being repeated at least every 3 years.

When fires are started by natural means such as due to the elevated natural temperatures and direct intense sun exposure, the fire must be prevented from spreading and be extinguished as soon as possible.
This must be made possible by the proper preparation and installation of firefighting equipment. See below.

- **Fire Fighting Equipment**

Prompt Firefighting actions by workers is essential to determine the outcome of a fire that starts within the plant.

To enable this the equipment available must be adequate and the workers must be trained in its use.
There are a number of equipment already available while some improvement and additions are required and are being suggested in the sections below.

1. Hose Reels	
Current State	Comments/ Suggested Improvements
Two hose reels are installed onsite and are each supplied by storage tanks and a pump. (also see point no. 4 regarding fire engine)	The hose reels do not reach the entire site, and these do not have the flow of water that would normally be required to tackle fires in an environment such as a scrap yard. • Additional hose reels are suggested in locations that need to be determined according to a risk assessment. • The upgrading to a foam hose reel should be considered as this is known to have a greater effect on fires of mixed classes especially those where oil and greases are involved.

2. Portable Fire Extinguishers	
Current State	Comments/ Suggested Improvements
Several fire extinguishers are available on site. These are of varies types and all are appropriate for the types of fires that might start within the facility.	Some of the fire extinguishers on site are placed in locations that can easily become covered by materials. • All extinguishers should be prominently positioned with adequate signage displayed to pinpoint their position. • A fire risk assessment needs to be carried out to determine which type of extinguishers needs to go in which location.

3. Automatically activated powder extinguishers (Fire balls)	
Current State	Comments/ Suggested Improvements

A number of automatically activated fire extinguishers have been bought and are positioned around the building and facility.	This type of product is good especially when it is positioned in an area where a fire would reach it during its initial stages. If positioned incorrectly the fire might have sufficient time to grow and the eventual activation of the extinguisher would be too late. • A risk assessment needs to be carried out in order to identify the best location for these products to be placed.

4. On-site Fire Engine	
Current State	Comments/ Suggested Improvements
A fire engine has been bought to assist workers to fight fires with large quantities of water.	The fire engine needs some upkeep and maintenance to ensure that it will operate as required. • Its high-pressure hose reels do not have a brunch, and this will not make it possible to properly control the jet of water that comes out. • The fire engine must be parked in an area where it can be driven to the area of the fire with out the need of moving other vehicles before. • The fire engine must always be kept full. • A supply (i.e. hydrant) needs to be available in order to supply it with additional water while it is being used. • Workers must be trained in the use of fire engine and its equipment.

Image 1 – ire engine to be used as firefighting vehicle within scrap yard

Image 2 – various fixes to be done to the fire engine to be made functional

- **Alarm**

  - **Automatic alarm**

The automatic fire alarm that had been installed within the building had been deactivated as it was a source of frequent false alarms.

Of course, this system only covered the internal part of the building since the outdoor area can not be covered by such as system. The system should be converted to a heat detection instead of a smoke detection as this is far less likely to be triggered accidently by conditions in the environment.

  - **Manual Alarm**

An addition to the alarm system mentioned above, a number of Manual Call Points (MCPs) should be installed in various areas of that will need to be determined by a risk assessment.

These will enable workers who become aware of a fire to raise the alarm quickly and make others aware of the emergency without delay.

- **Management and Procedures**

  - **Housekeeping and maintenance**

It is understood that the nature of the work carried out within the plant requires the presence of bulk quantities of stored materials that are either being processed or waiting to be shipped away. This means that there will always be materials stored in varies parts of the plant and the plant will never look "clean". However this should not excuse the fact that passage ways, exit routes, firefighting equipment, etc. must remain accessible, visible, and unobstructed.

Management must ensure that housekeeping efforts are allocated whenever required to maintain a good level of access to all essential areas.

Machinery maintenance must also be carried out periodically to prevent damage or malfunction being the cause of a fire within equipment being used. This must include and forklifts, cranes, or other vehicles.

  - **Training & Drills**

Workers must be trained in fire safety, and this must include the use of all firefighting equipment on site.

Fire safety training must also include information about hot work fire safety. This is a particular requirement for this site since a lot of this type of work is carried out and this presents a substantial ignition hazard for materials stored.

When it comes to evacuation drills, that are mandatory by law to be carried out every 6 months, these must be conducted, and the use of equipment must be included in these drills in addition to the evacuation of workers from site.

- **Escape of Workers, Contractors, and Visitors**

Should the conditions in the building become untenable occupants have more then one option of escape and can make their way out from any of these that area available.

Should the fire be outside, conditions are less likely to deteriorate as quickly as when a fire is inside since convicted heat does not accumulate in the area but is vented to the outside environment.
In this case occupants will follow any available path to a safe area further from the site.

It must be ensured that this routh is always kept available, clearly identifiable and unobstructed with materials or machinery.

- **Access to the Fire Brigade**

Since the access to the site directly from Triq Giuseppe Garibaldi is no longer accessible, vehicles need to access the site from the rear passing through the single access road leading to the JAC site. This is not an ideal approach for fire service vehicles as the room for manoeuvrability is very limited.

Civil Protection (CPD) vehicles would be forced to remain stationed at a distance and display long stretches of hoses to be able to carry out firefighting efforts. This would take considerable time and would result in a fire having time to grow larger and therefore become more difficult to control.

Since the closing of the front road is not up to the management of JAC steel, they are not at liberty to open it themselves. It might be necessary to make the request to the relevant authority for the concrete blocks to be replaced with other blocks that are longer and taller in size so that a fewer number would be required to close off the opening. These would them be able to be removed, only in case of emergency and in case that the CPD need to attend, by one of the several forklift trucks operating within the facility.

Image 3 – Blocked off access to Triq Giuseppe Garibaldi

2.0 Oil Spillages

2.1 Prevention and preparedness

- A spill response procedure must be drawn by the management, and this must include the equipment that must be provided and the training that workers must undertake.
- It must be ensured that sufficient spill kits are available on site and that they are maintained and resupplied when necessary.
- The company manager must ensure that ERA is informed of any major spill that occur.

2.2 Mitigation of oil spills

- All decanting and emptying of oil and flammable liquids must be carried out in the bunded areas.
- All oils and flammable liquids must be placed in their appropriate storage tanks.
- All personnel involved in the dismantling process at the ELV shall be trained accordingly.

3.0 Chemical Spillages from leaking batteries

Similar to what was described in case of oil spill, the same contingency plans and training must be available for dealing with leaking battery acids.

In this case instead of collection of the leak with absorbents, the acid will need to be neutralised and dispersed.

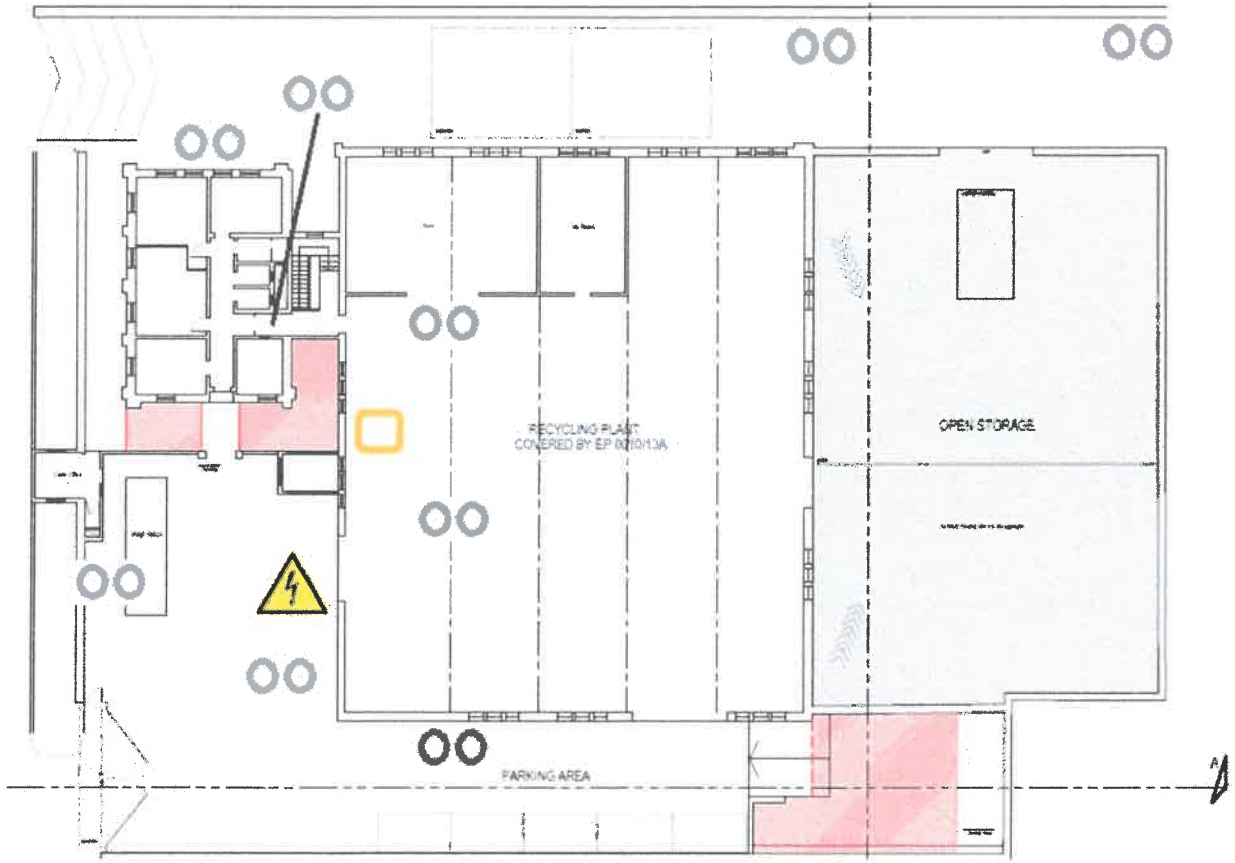
Here it is detrimental that good health and safety practices are followed by workers and that all necessary Personal Protective Equipment (PPE) is worn by those involved in the clean-up.

4.0 Conclusion

The environment and materials of any scrapyard present various challenges to safety, but when managed properly, the likelihood and consequences of an incident can be managed to be reduced to a minimum.

With the implementation and the maintaining of the provisions described in this document, it is believed that the management of JAC Steel Ltd. would be able to prevent and/ or minimised the changes of an incident to as low as reasonably practicable, and to ensure that if an incident occurs, workers will have either the means and knowledge to take action, or the ability to evacuate to safety.

Appendix 1: Ground Floor Plan

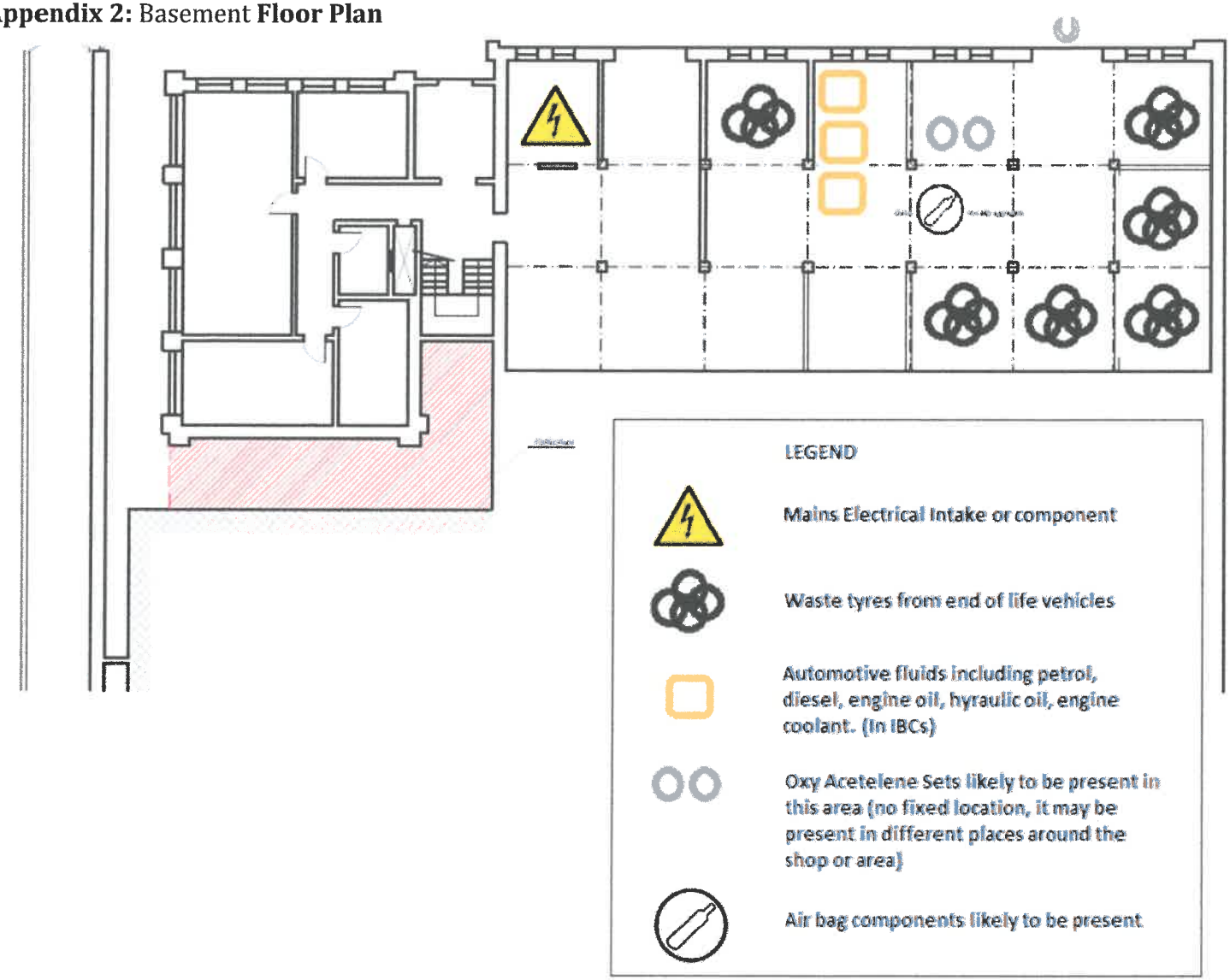


Ground Floor Plan

LEGEND

- Mains Electrical Intake or component
- Waste tyres from end of life vehicles
- Automotive fluids including petrol, diesel, engine oil, hyraulic oil, engine coolant. (In IBCs)
- Oxy Acetelene Sets likely to be present in this area (no fixed location, it may be present in different places around the shop or area)
- Air bag components likely to be present

Appendix 2: Basement **Floor Plan**



Appendix 3: Access to site

Appendix 4:

Material Supplied, Processed and Exported as per data provided for the year 2021:

Items	Amount (kg)

Energy consumption during 2021:

Type	Quantity	Unit
		KwH
		ltr
		Kg
		ltr

[redacted]

[redacted]