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ENVIRONMENTAL LIABILITY RISK ASSESSMENT

FORGE HILL RECYCLING

FORGE HILL

CORK

Prepared For: -

Forge Hill Recycling Limited,
Forge Hill,
Ballycureen,
County Cork.

Prepared By: -

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T12 WR89

May 2018

Project	Environmental Liability Risk Assessment			
Client	Forge Hill Recycling			
Report No	Date	Status	Prepared By	Reviewed By
	25/04/2018	Draft	Neil Sandes	Jim O'Callaghan MSc, CEnv, MCIWM, IEMA
	01/05/2018	Final		

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1. INTRODUCTION

Forge Hill Recycling (FHR) operates its Materials Recovery Facility at Forge Hill, Cork under a Waste Licence (W0291-01) issued by the Environmental Protection Agency (the Agency).

Condition 12.3.2 of the licence requires the completion, by an independent and appropriately qualified consultant, of a comprehensive and fully costed Environmental Liabilities Risk Assessment (ELRA), which addresses the liabilities from past and present activities. The condition also requires the ELRA to be reviewed as necessary to reflect any significant change on site. The ELRA was prepared in 2016 and subsequently revised a number of times, most recently December 2017. .

The current planning permission and waste licence limit the annual waste intake to 82,000 tonnes. FHR intends to apply for approval to increase the waste acceptance rate to 100,000 tonnes and this will require planning permission and a revision of the EPA licence. The ELRA has been revised to take into consideration the additional waste intake and storage areas and the increased annual throughput.

1.1 Methodology

The assessment was based on the Agency's *'Guidance on assessing and costing environmental liabilities' (March 2014).* The ELRA has been prepared to accurately reflect the risks of unplanned, but plausible incidents occurring.

The assessment was based on a review of the ELRA prepared by SLR Consulting in December 2017 and an evaluation of site operations, including materials and waste handling and storage practices; waste processes; emissions control and management (infrastructural and procedural); accident prevention policy and emergency response procedures;

1.2 Limitations

The ELRA is based on the current activities and the proposed increase in waste acceptance. The assessments of costs required to reduce or mitigate the environmental liabilities identified in this report are based on the information available at the time of the report preparation and may be subject to amendment based on future investigations.

The ELRA does not address the costs of dealing with the sudden, unexpected closure, as these are addressed in the separate Decommissioning Management Plan.

2. SCOPING

The ELRA addresses the liabilities from past and present activities. In this regard, all aspects of the historic and the licensable activities licence that pose a plausible risk to the environment are described and evaluated. The ELRA is based on current conditions observed during environmental assessment activities and on past conditions as determined be a review of available records.

3. RISK IDENTIFICATION

3.1 Site Operation

3.1.1 Size and Nature of the Activity

The site layout is shown on Drawing No. 14/4347-PL-01 covers. It occupies 10,110m^2 and comprises a waste processing building, which following the completion of the proposed development will be made up of four adjoining buildings, with annexes that house a compressor and maintenance area; two storey office, an electrical substation, a power wash storage hut; two weighbridges, paved open yards and a small unpaved area in the east of the site. A security fence surrounds the operational area and there are two entrances off Forge Hill Road.

FHR is authorised to accept and sort mixed dry recyclables which are then exported to overseas recycling facilities. Non-recyclable residues are sent to other waste management facilities in Ireland for processing to produce solid recovered fuel (SRF).

3.2 Site Security

There is a palisade fence around the southern, eastern and western boundary of the operational area with fencing, a block wall and two security gates (north and south) on the western boundary. There is a CCTV surveillance and a monitored alarm system.

3.3 Services

The site has connections to the mains water supply, the municipal foul sewer and telecom services. There is an electricity substation at the western boundary and a ring main fitted with 4 No. fire hydrants.

SCHEDULE OF AREAS:

BUILDING 1: 1314.2m²
BUILDING 2: 1428.6m²
BUILDING 3: 1053m²
EXTENSION 1: 1468m²
EXTENSION 2: 140m²
ADMIN BUILDING : 593.7m²
OPEN YARD AREA: 4424.54m²

BOUNDARY UNALTERED
NEW WALL ON BOUNDRY
INTERNAL DOWNPIPE
171.91
NEW DOCKING RAMP
DOCKING BAY RAMP
EXISTING WEIGH-OUT BRIDGE
BUILDING 3
BUILDING 1
EXISTING WASTE HANDLING BUILDING
BUILDING 2
F.F.L.: 42.06
RIDGE
VALLEY
FFL: 42.03
EXTENSION 1 (BUILDING 4)
PROPOSED WASTE RECEPTION AREA 1468 m²
NEW FENCE LINE
76.692
1250 Walkway
FERROUS METAL STORAGE
NON- FERROUS METAL STORAGE
3.5
5
5
42.26
Ø27m
42.17
OLD BOUNDARY FENCE LINE
SITE NOTICE
9.415
EXIT ONLY
41.98
01
02
03
04
05
1:20 RAMP
TARMACADAM
ESB SUBSTATION
42.09
BOUNDARY UNALTERED
FORGE HILL- PUBLIC ROAD
77.161
NEW GATE
FOR MODIFICATION TO ENTRANCE TO ACCOMMODATE PEDESTRIANS, SEE MHL DRAWING FHR-ENT-P01
42.34
ENTRY ONLY
42.49
42.68
42.90
SITE NOTICE
N
EXISTING ADMIN. BUILDING
06
07
EXITING TRAFFIC
25.778
13.309
22
CYCLE PARKING
08
09
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
PROPOSED PARKING SPACES
122.323
EXISTING WEIGH-IN BRIDGE
41.97
EXTENSION 2
F.F.L.: 42.06
AREA:140m²
EXISTING STAIRS MOVED TO EXTERIOR
42.22
PROTECTIVE BOLLARDS
42.12
ENTERING TRAFFIC
42.09
OLD BOUNDARY FENCE LINE
2
3
STEEL-WALLED BUNDED TANK STORAGE
PROPOSED CAR PARKING
OLD ROAD
YARD IN ADJACENT SITE

TRAFFIC MOVEMENT
INBOUND
OUTBOUND

SITE BOUNDARY IN RED
PROPOSED EXTENSION IN GREEN

SITE LAYOUT PLAN
SCALE 1:250

Notes:
ALL BOUNDARIES WHERE EXTENTION IS NOT BEING CONSTRUCTED RETAINED AS EXISTING

Notes:
1. This drawing is for planning purposes only. - If in doubt ask.
2. Do not scale, figured dimensions only to be taken.
3. Engineer to be informed of any discrepancies before work proceeds.
4. Contractor to check all dimensions and conditions on site before commencing works.
5. Drawing to be read in conjunction with current Building Regulations.
6. All components and materials to be installed fully in accordance with manufacturers instructions.

Revision	Comments	Date

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Project:
EXTENSIONS TO MATERIALS RECYCLING FACILITY AT FORGE HILL, CO. CORK

Client:
FORGE HILL RECYCLING LTD

Drawing Title:
SITE LAYOUT PLAN - PROPOSED NEW EXTENSIONS

Scale:	Date:	Revision
1:250 @A1	March 2018	R0
Drawn By: E.F.	Drawing Number: 14/4347-PL-01	

3.3.1 Surface Water Drainage System

The surface water drainage system is shown on Drawing No. 14/4347-PL-02. Rainwater run-off the paved open yard areas that are not connected to the foul water sewer is directed to a Class I Full Retention Oil interceptor, fitted with an oil alarm, from where it flows to an underground two chamber tank, located in the north west of the site. The water enters the tank's western chamber (82m^3).

Rainwater run-off from the building roofs is piped directly to the western chamber and does not pass through the interceptor. The water in the western chamber is kept at a high level for use for fire-fighting by means of a high level overflow pipe into the eastern chamber (90m^3). This chamber is used for flow attenuation and also serves as a firewater retention facility. A float activated submersible pump is used to control the water level in the chamber by pumping it out via a rising main to an inspection chamber (SW-1) at the western boundary.

There is a pipe from SW-1 to an unnamed stream to the west of the site. This stream joins the Tramore River, approximately 370m to the north of the site. There is a manual shut off valve on the system at SW-1.

Under normal conditions the roof-water flows directly to the balancing tank, while run-off from the paved areas, other than those connected to the foul sewer, passes through the oil interceptor and into the western chamber. During a heavy rainfall event the water level in the eastern chamber will increase if the inflow rate is higher that the pump capacity. If the tank fills the water will enter an overflow pipe near the top of the chamber. This pipe connects to SW-1.

In the event of an incident that has the potential to contaminate surface water the emergency response actions include switching off the pump in the balancing tank and closure of the valve at SW-1.

3.3.2 Wastewater Drainage System

The wastewater drainage system is shown on Drawing No. 14/4347-PL-03. Sanitary wastewater from the toilets and waste water from the staff welfare facilities discharge directly to the Irish Water foul sewer. Rainwater run-off from areas of the site where, due to the operations and waste types that were carried out, were susceptible to contamination, is discharge to the municipal foul sewer via a Class 1 Oil Interceptor. There is a manual shut-off valve on the foul sewer line just outside the northern exit gate.

SITE BOUNDARY IN RED

NEW EXTENSIONS IN GREEN

SITE LAYOUT PLAN - FOUL DRAINAGE LAYOUT
SCALE 1:250

Notes:
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5. Drawing to be read in conjunction with current Building Regulations.
6. All components and materials to be installed fully in accordance with manufacturers instructions.

Revision	Comments	Date

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Project:
EXTENSIONS TO EXISTING
MATERIALS RECYCLING
FACILITY AT
FORGE HILL, CO. CORK

Client:
FORGE HILL RECYCLING LTD

Drawing Title:
SITE LAYOUT PLAN
FOUL DRAINAGE LAYOUT

Scale:	Date:	Revision
1:250 @A1	March 2018	R0
Drawn By: E.F.	Drawing Number: 14/4347-PL-02	

SURFACE DRAINAGE LEGEND
DRAINAGE FROM ROOF
DRAINAGE FROM GROUND
REDUNDANT DRAINAGE
(TO BE SEALED UP)
SURFACE WATER MONITORING LOCATIONS
SW
EXISTING WEIGH-OUT BRIDGE
NEW DOCKING RAMP
DOCKING BAY RAMP
FULL ACCESS TO BE RETAINED TO INTERNALIZED MANHOLES
EXTENSION 1 (BUILDING 4)
PROPOSED WASTE RECEPTION AREA 1468 m²
INTERNAL DRAIN TO BE FILLED WITH CONCRETE
NEW FENCE LINE
BUILDING 3
BUILDING 1
BUILDING 2
EXISTING WASTE HANDLING BUILDING
1:20 RAMP
RIDGE
VALLEY
EXTERNAL CHANNEL DRAIN TO BE RETAINED
EXTERNAL CHANNEL TO BE CONNECTED TO YARD DRAINAGE SYSTEM
Ø27m
EXTENSION 2 AREA:140m²
PROTECTIVE BOLLARDS
ENTERING TRAFFIC
INTERNALIZED SURFACE DRAINAGE TO BE LEFT AVAILABLE FOR ACCESS
EXISTING CHANNEL DRAIN TO MANHOLES
EXISTING WEIGH-IN BRIDGE
PROPOSED CAR PARKING
PROPOSED PARKING SPACES
RISING MAIN
Fire Extinguishing Water Storage Tank
OIL INTERCEPTOR
EXISTING TRAFFIC
SHUT OFF VALVE
SW-1
High level overflow pipe
EXISTING ADMIN. BUILDING
OLD ROAD
YARD IN ADJACENT SITE
N
For inspection purposes only. Consent of copyright owner required for any other use.
SITE BOUNDARY IN RED
NEW EXTENSIONS IN GREEN
SITE LAYOUT PLAN - AS-BUILT SURFACE DRAINAGE LAYOUT
SCALE 1:250
Notes:
1. This drawing is for planning purposes only. - If in doubt ask.
2. Do not scale, figured dimensions only to be taken.
3. Engineer to be informed of any discrepancies before work proceeds.
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EXTENSIONS TO EXISTING MATERIALS RECYCLING FACILITY AT FORGE HILL, CO. CORK
Client:
KWD RECYCLING
Drawing Title:
SITE LAYOUT PLAN
SURFACE DRAINAGE LAYOUT
Scale: 1:250 @A1
Date: March 2018
Revision: R0
Drawn By: E.F.
Drawing Number: 14/4347-PL-03
EPA Export 17-11-2018:04:15:16

3.4 Waste Types and Volumes

The current licence authorises the acceptance of 82,000 tonnes of municipal dry recyclable waste. It is proposed to increase the annual intake 100,000 tonnes. The sources are primarily households and commercial dry recyclable collections and the materials include mainly paper, card, plastic bottles, plastic film, steel cans and aluminium cans. The composition of the additional wastes will be the same as those already accepted. The actual amount of each particular waste type may vary but the overall maximum annual input will not be exceeded.

3.5 Waste Processes

The mixed wastes are mechanically separated by type (plastic, paper , cardboard, metals) and then baled and stored prior to transfer to other facilities for further processing, for example paper mills, steel mills, aluminium smelters and plastics factories. The processing plant, which has the capacity to process 23 tonnes/hour, comprises;

- Grab Machine – to load materials into the fed bunker.
- Below ground metering bunker and conveyor – to regulate the feed rate.
- OCC Screen – to remove large flat fractions from the mix (e.g. large sheets of cardboard).
- OCC Optical Sort – to capture cardboard.
- Ballistic Separator – to separate materials by size and shape (2D, 3D and fines).
- Optical Separators (5 No.) – to separate plastic and paper fractions using the reflection and refraction properties of each material. Each optical separator is strategically placed and set up differently to capture different materials.
- Eddy Current Separator – to capture non-ferrous metals, particularly aluminium cans.
- Over-band Magnet – to capture ferrous metals, particularly steel cans.
- Balers (2 No.) – to produce bales of paper, cardboard, plastic film, plastic bottles, aluminium cans, steel cans, etc.
- Forklifts (2 No.) – to move bales to storage and to haulage vehicles.
- Teleporter – to move material to the balers.

The proposed development will involve the provision of a below ground feed hopper and a conveyor in the new intake area that will transfer the mixed recyclables to the existing process line.

Those items of plant critical to the efficient and adequate processing of waste at the facility (including inter alia waste loading vehicles and ejector trailers) have a 100% duty and 50% standby capacity.

3.6 Inventory of Raw Materials and Wastes

3.6.1 Materials

The diesel powered mobile plant are refuelled on-site as required by tanker fuel delivery trucks. To provide a contingency back-up to the tanker deliveries it is proposed to provide a 1000 litre plastic, diesel storage tank that will be located in a bund in the south-east corner of the site. This will only be used to re-fuel the plant outside of the normal fuel tanker delivery hours. The tank will comply with the design requirements specified in Condition 3.6 of the EPA licence.

Small quantities of oils such as hydraulic oil (1 No. 205 litre drum) lubricating oils and coolants (5 No. 205 litre drums) for plant maintenance purposes will be stored in a bunded pallet inside the processing building.

3.6.2 Wastes

A waste storage plan has been prepared in accordance with Condition 8.11 of the licence. It identifies discrete storage areas across the site and specifies the sizes of stockpiles, the recommended separation distances and the maximum amount of waste stored on site at any one time. The maximum amount of waste on-site at any one time will be 1,551 tonnes. A copy of the storage plan is in Appendix 1.

3.7 Plant Maintenance and Breakdown

The proposed development will involve the provision of a below ground feed hopper and a conveyor in the new intake area that will transfer the mixed recyclables to the existing process line.

As required by the EPA licence those items of plant critical to the efficient and adequate processing of waste at the facility (including inter alia waste loading vehicles and ejector trailers) have a 100% duty and 50% standby capacity and provision has been made for contingency arrangements and/or back up and spares in the case of breakdown.

The processing lines is subject to a preventative maintenance programme and critical spares are kept at the site.

3.8 Safety and Hazard Control

FHR has adopted a Corrective and Preventive Action Procedure (EP07) and prepared a Safety Statement that identifies and evaluates the major on-site potential hazards and describes the control measures in place to mitigate the hazards associated with current operations. A copy of the procedure is in Appendix 2.

An emergency is an accident/incident that has the potential to result in environmental pollution and harm to human health & safety. The EPA licence requires FHR to ensure that an Emergency Response Procedure (ERP) is in place that addresses any emergency situation that may originate on-site. FHR has prepared an ERP and a copy (EP09) is in Appendix 3.

FHR has completed a Fire Risk Assessment that specifies the fire prevention measures that are applied at the facility and informs the site specific Emergency Response (ERP) (EP09). Table 2.4 of the Risk Assessment identifies the current hazards and control measures, while Section 3 describes the fire risk action plan for the site. Copies of the extracts are in Appendix 4.

In addition to the measures outlined in the Fire Risk Assessment the new oil storage tank will be located 25 m from the processing building which will mean a fire in the building will not affect the integrity of the tank.

3.9 Emission Controls

All waste reception and processing and the majority of the storage are and will be carried out inside the processing building. The roller shutter doors are typically only opened to allow vehicles to enter and exit. The only materials stored externally are small amounts of non-recyclable residues in a fully enclosed trailer and bales of metal waste. These measures effectively mitigate noise and dust emissions and the control of odour emissions.

The processing does not generate any wastewater and the building floors, which are concrete paved are regularly inspected and cleaned as required.

Rainwater run-off from the yard areas where there is the potential for contamination to occur is collected separately and passed through a Class 1 Oil Interceptor before being discharged to the Irish Water foul sewer. Run-off from the remaining yards passes through another Class I Interceptor before entering the flow balancing tank.

During extended periods of dry weather the open yards are cleaned using the on-site road sweeper to control dust emissions.

There are shut-off valves on the foul and surface water drainage systems that can be closed in the event of an incident that has the potential to generate significant volumes of contaminated water. Ramps at the entrance doors in conjunction with the surface water balance tank provide firewater retention capacity.

3.10 Operator Performance

3.10.1 Site History

The site was initially developed in 1969 and has been used for waste management activities since 1987. In 2003 the EPA granted a Waste Licence to the company that then operated the site (IPODEC), which authorised the acceptance, processing and transfer of 82,000 tonnes/year of household, commercial, industrial and construction & demolition waste.

A redevelopment of the site in 2005 involved the demolition of the original waste handling building and the construction of a new waste processing building, weighbridge and offices and the installation of new foul and surface water drainage systems. In 2008 the waste transfer building was extended and a second weigh bridge was installed.

In 2009 the waste business was acquired by Greenstar Environmental Services Limited (Greenstar). Greenstar suspended waste operations in September 2011, following which all wastes were removed and the site closed.

In 2015 the site was acquired by the current landowner and leased to FHR. Cork County Council granted FHR a Waste Permit to operate the site as a recycling and transfer facility. The annual tonnage was limited to 49,999 tonnes. In 2016 the waste transfer building was extended to allow the internal storage of baled recyclables. In August 2017 the EPA granted FHR the current Waste Licence that authorised the acceptance of 82,000 tonnes of waste.

3.10.2 Facility Management & Staffing Structure

The Facility Manager has completed the FAS Training Programme and has 11 years' work experience in the waste industry. Facility staff include general operatives, plant drivers, and maintenance and office staff.

Condition 2 of the licence requires FHR to adopt an Environmental Management System (EMS). FHR has prepared documented EMS which comprises an Environmental Manual and a series of EMS Procedures (EP01 to EP18) and EMS Records (ER01 to ER15). The EMS requires the implementation of an Environmental Management Programme and the development of a Schedule of Environmental Objectives and Targets that provides for a review of all operations and processes, including environmental training and awareness and emergency response actions.

3.10.3 Compliance History

Since the EPA licence was issued FHR has received only one notification of a non-compliance with the licence conditions, which related to the late submission of the ELRA and Decommissioning Management Plan.

The results of the environmental monitoring carried out in accordance with the licence requirements has established that emissions from the site are generally in compliance with the specified emission limit values.

3.10.4 Enforcement History

FHR has never been the subject of enforcement action by the regulatory authorities.

3.10.5 Incidents History

There is no record of any incident at the site that had the potential to result in significant soil and groundwater contamination.

3.10.6 Complaints History

FHR maintains a register of complaints received in accordance with Condition 11.5 of the licence. Since the EPA licence was granted, five complaints have been received from occupants of nearby commercial premises; three in in relation to odour, one in relation to noise and one in relation to dust. All complaints were investigated.

3.11 Environmental Sensitivity

3.11.1 Surrounding Land Use

The surrounding land use is primarily commercial, with the lands to the north and south comprising industrial estates/business parks and other commercial developments on the western side to the road. The closest residential properties are approximately 80m to the north-west and 120m to the east, with a residential estate approximately 270m to the west.

3.11.2 Hydrology

There are no surface water features either on or immediately adjacent to the site. The site is in the catchment of a small stream to the west of the site, which is a tributary of the Tramore River. The stream rises approximately 2 km south of the site, flows north and passes approximately 140 m to the west of the site and enters the Tramore River, approximately 370 m north of the facility. The Tramore River enters a tidal basin called the Douglas River that subsequently flows into Lough Mahon.

3.11.3 Geology & Hydrogeology

The site is underlain by a layer of made ground, which is on top of approximately 3m of sandstone derived till. The bedrock comprises sandstones, mudstones and siltstone. The subsoils at the site are not significantly water bearing. The bedrock aquifer is classified as a locally important aquifer, which is only moderately productive in local zones (Ll). The aquifer vulnerability rating is Extreme. Based on the topography, the local direction of groundwater flow is to be towards the stream to the west and north of the site.

3.11.4 Designated Sites

The nearest sites that are potentially susceptible to impacts associated with the proposed development are Cork Harbour SPA (Site Code 004030) and Great Island Channel SAC (Site Code 001058), which are 3.5km and 4.5km respectively to the east. Rainwater run-off from the facility discharges to a tributary of the Tramore River, which flows into Lough Mahon, part of Cork Harbour.

4. RISK ANALYSIS

4.1 Installation Design and Operation

The licence conditions require the provision of mitigation measures, both infrastructural and procedural, that effectively minimise the risk of environmental liabilities associated with unplanned events. Such measures, which are subject to regular review by FHR include:

- Provision of an appropriately experienced Facility Management Team and implementation of appropriate staff training programmes;
- Implementation of a site specific Environmental Management System (EMS), including an Environmental Management Programme (EMP);
- Adoption of site specific Accident Prevention Policy and Emergency Response Procedures (ERPs), which will be reviewed annually;
- Provision of impermeable concrete surfaces in areas where wastes are stored and handled;
- Provision and maintenance of appropriate spill response and clean-up equipment in areas where there is a risk of spills occurring;
- Implementation of a Fire Safety Management System based on the findings of a site specific Fire Risk Assessment and includes the restriction on the amount of combustible waste on site at any one time; provision of fire walls and sprinkler systems; alarmed fire detection system; provision and maintenance of fire extinguishers and hose reels and provision of firewater run-off retention capacity, and
- Regular site inspections.

4.2 Risk Identification

Environmental liabilities arise from contamination or damage to environmental media (air, surface water, soils and groundwater), which can act as pathways to sensitive receptors. The Agency, in reaching a decision to grant the current licence, concluded that the installation, if designed and operated in accordance with the licence conditions, will not give rise to environmental liabilities.

Therefore, for the purposes of this ELRA, future environmental liabilities are confined to incidents such as fires, spills and leaks. The receptors that are potentially susceptible to adverse impacts associated with such incidents include, air, soils, groundwater, surface water, and nearby commercial activities and residences.

4.3 Plausible Risks

The plausible risks identified at the site are presented in Table 4.1. These take into account the installation history, the controls and mitigating measures that are already in place, with due regard for those controls to contain incidents and for the potential failure of the controls.

Table 4.1 Risks

Risk ID	Process	Potential Hazards/Risks
1	Diesel Storage	Accidental release of diesel from storage tank contamination of surface water drains
2		Accidental release of diesel during deliveries and dispensing- contamination of surface water drains.
3		Accidental release of diesel- soil and groundwater contamination.
4	Engine/Hydraulic/Waste Oil Storage	Accidental spill from drums –contamination of surface water drains.
5		Accidental spill from drums-soil and groundwater contamination.
6	Fire in Waste Processing Building	Emissions to air.
7		Firewater run-off to surface water and foul water drains, surface water contamination and impact on municipal WWTP.
8		Firewater infiltration to ground-soil, groundwater and surface water contamination

4.4 Risk Analysis

An assessment of the risks presented by the installation operations was completed taking consideration of site specific characteristics and the Classification Tables for Likelihood and Consequence in the Agency Guidance Document (Ref Table 4.2 and 4.2).

Table 4.2a – Risk Classification Table (Likelihood)

Risk	Category	Description
1	Very Low	Very low chance of hazard occurring
2	Low	Low chance of hazard occurring
3	Medium	Medium chance of hazard occurring
4	High	High chance of hazard occurring
5	Very High	Very high chance of hazard occurring

Table 4.3– Risk Classification Table (Consequence)

Risk	Category	Description
1	Trivial	No damage or negligible change to the environment
2	Minor	Minor/localised impact or nuisance
3	Moderate	Moderate damage to the environment
4	Major	Severe damage to the environment
5	Massive	Massive damage to a large area, irreversible in the medium term

The Risk Analysis Form is presented in Table 4.3. The assignation of the severity rating scores takes into consideration the mitigation measures that are already in place. OCM does not consider it plausible that all of the containment and control measures already in place would fail at the time of an incident, as this would require:

a) FHR to wilfully disregard the licence conditions regarding bund integrity testing; accident prevention and emergency response provisions; inspection and repair of paved areas; maintenance of plant and equipment; staff levels and training, and

b) a failure by the Agency to properly regulate the installation to such an extent that allowed all the control and containment measures to fail.

Table 4.4 Risk Analysis Form

Risk ID	Process*	Potential Risks	Environmental Effect	Likelihood	Basis of Likelihood	Consequence	Basis of Severity	Risk Score (Severity x Occurrence)
1	Diesel Storage	Uncontrolled release from 1000 litre bulk storage tank that escapes the bund and enters the surface water drains.	Contamination of the surface water drains, with consequent impact on the Irish Water WWTP.	1	The bund design and construction will comply with licence requirements and will have more than 110% capacity of the tank. The bund will be subject to regular visual inspection and routine integrity testing and repaired as required. Drains around the tank connect to an oil interceptor and discharge to foul sewer. Shut off valve on the connection to foul sewer. ERP ensures rapid response to incident. The risk is **Very Low.**	2	Relatively small volumes (1000 litres) on site at any one time. All drainage from area around the tank passes through an oil interceptor. The severity of the impact would be M**inor**	2
2	Diesel/Oil Storage	Escape of diesel to surface water drainage system during filling/ dispensing	Contamination of the foul water drains, with consequent impact on tributary of the Tramore River and the Irish Water WWTP.	1	Documented procedure on refuelling/ dispensing will be prepared and staff will be fully trained in spill prevention and clean-up. Dispensing unit will be inside the bund Drains around the tank connect to an oil interceptor and discharge to the foul sewer. Shut off valve on the connection to foul sewer. The APP and ERP minimise the risk of accidents and ensure rapid response to incident. The risk is **Very Low**	2	Relatively small volumes on site at any one time. All drainage from area around the tank passes through an oil interceptor. The severity of the impact would be M**inor,**	2
3	Diesel/Oil Storage	Uncontrolled released from bund or spill during dispensing/refilling of tank that leaks through damaged paving or leaks in the surface water drains.	Soil / Groundwater contamination	2	Diesel stored in bunded tank, staff fully trained in spill prevention and clean-up. All operational areas are paved with concrete. Routine inspection and repair of damaged paved areas. Routine integrity testing of the drains. The APP and ERP minimise the risk of accidents and ensure rapid response to incident. The risk is **Low**.	1	Relatively small volumes on site at any one time. Approx 3m of subsoils protect the bedrock aquifer. Potable water is obtained from an external source. The severity of the impact would be **Trivia**l	2

Risk ID	Process*	Potential Risks	Environmental Effect	Likelihood	Basis of Likelihood	Consequence	Basis of Severity	Risk Score (Severity x Occurrence)
4	Engine/ Hydraulic/ Waste Oil Storage	Escape of oil to surface water drainage system during handling/ plant maintenance	Contamination of the surface water drains, with consequent impact on tributary of the Tramore River and the Irish Water WWTP.	1	Oil drums stored in bunded pallet inside the building. All maintenance carried out inside the building. No floor drains in the building. Staff fully trained in spill prevention and clean-up. All operational areas are paved with concretes. The APP and ERP minimise the risk of accidents and ensure rapid response to incident. The risk is **Very Low**.	2	Small amounts of oil on site at any one time. All surface water drains are connected to a Class I oil interceptor. The severity of the impact would be M**inor.**	2
5	Engine/ Hydraulic/ Waste Oil Storage	Escape of oil to ground during handling/ plant maintenance	Contamination of soil and groundwater	2	Oil drums stored in bunded pallet, staff fully trained in spill prevention and clean-up. All operational areas are paved with concrete. Routine inspection and repair of damaged paved areas. Routine integrity testing of the drains. The ERP minimises the risk of accidents and ensure rapid response to incident. The risk is **Low**.	1	Approx 3m of subsoils protect the bedrock aquifer. Potable water supply in the area is obtained from the mains supply. The severity of the impact would be **Trivia**l	2

Risk ID	Process*	Potential Risks	Environmental Effect	Likelihood	Basis of Likelihood	Consequence	Basis of Severity	Risk Score (Severity x Occurrence)
6	Fire in Waste Processing Building	Smoke emission to air.	Air pollution	5	APP minimises the risk of fire outbreak and on-site detection and suppression systems allow a rapid response and potential containment. However if a fire occurs, the risk of smoke emissions is **Very High**.	1	Smoke presents a potential health risk. Surrounding land use primarily commercial. ERP ensures rapid response to incident. Emergency Service Co-ordinator will make decision on the need to evacuate nearby commercial premises. Could be significant disruption during incident, but no long term effect. The severity of the impact would be **Trivial.**	5
7	Fire in Waste Processing Building	Escape of Firewater to surface water drainage system	Contamination of the surface water drains, with consequent impact on the tributary of the Tramore River and the Irish Water WWTP.	2	No internal floor drains. All external drains connect to oil interceptors, with run-off from areas where contamination is possible discharging to the foul sewer and run-off from other areas discharging to balance tank. Run-off from building roofs connects directly to the balance tank. Balance tank outfalls to a tributary of the Tramore River. Outflow from balance tank controlled by level activated submersible pump. Shut off-valves on the outfall from the balance tank and the connection to the foul sewer that can be shut in the event of an incident to contain run-off inside the site. The risk is **Low**	3	ERP will ensure a rapid response to incident, including closing the shut – off valves on the surface water and foul water drains and switching off the pump in the balance tank. The severity of the environmental impact would be **Moderate,**	6

Risk ID	Process*	Potential Risks	Environmental Effect	Likelihood	Basis of Likelihood	Consequence	Basis of Severity	Risk Score (Severity x Occurrence)
8	Fire in MRF Building	Firewater leak through damaged paving and damaged surface water drains	Soil / Groundwater contamination	1	Routine inspection and repair of damaged paved areas. Integrity testing of surface water drains and repairs as required. The risk is **Very Low**	1	Operational areas are entirely paved. Approx 3m of subsoils protect the bedrock aquifer. Potable water in the area is obtained from the main supply. The severity of the impact would be **Minor.**	2

5. RISK EVALUATION

The risks associated with the operation of the installation fall into two categories:

1 Risk of surface water and/ or soil and groundwater contamination associated with diesel storage and handling.

2 Risk of surface water and/or soil and groundwater contamination associated with a fire.

Each of the risks have been ranked to assist in the prioritisation of treatment and these are presented in Table 5.1. Only those risks with a risk score greater than 2 have been included.

Table 5.1 Risk Ranking

Risk ID	Process	Potential Risk	Consequence	Likelihood	Risk Score
7	Fire in Waste Processing Building	Firewater runoff contamination of the surface water drains	3	2	6
6	Fire in Waste Processing Building	Air Pollution	1	5	5

A colour coded risk matrix (Table 5.2) has been prepared to provide a broad indication of the critical nature of each risk and is a visual tool for regular risk reviews since the success of mitigation can be easily identified.

Table 5.2 Risk Matrix

Likelihood

V. High	5	**6**				
High	4					
Medium	3					
Low	2			**7**		
V. Low	1					
Consequence		Trivial	Minor	Moderate	Major	Massive
		1	2	3	4	5

Red – High-level risks requiring priority attention.

Amber – Medium-level risks requiring treatment, but not as critical as a High risk.

Green – Lowest-level risks that do not need immediate attention but there is a need for continuing awareness and monitoring on a regular basis.

There are no risks in the red and amber zones that require either priority attention or treatment. The remaining risks are in the green zone indicating a need for continuing awareness and monitoring on a regular basis. A risk treatment programme has been prepared and is presented in Section 6.

6. RISK TREATMENT

The risk management programme for the installation is set out in Table 6.1

Table 6.1 –Risk Management Plan

Risk ID	Potential Risk	Risk Score	Mitigation Measures	Outcome	Action	Person Responsible
6	Smoke from fire causes localised air pollution	5	Firewalls limit fire spread before the arrival of the emergency services. Ring main and fire hydrants provided. ERP prepared and staff trained.	While the risk of occurrence is very high, the long term environmental impact would be trivial. No further physical mitigation measures are required.	Staff refresher training on ERP to continue	Facility Manager
7	Firewater runoff contamination of the surface water drains, with subsequent impact on the tributary of the Tramore River and the Irish Water wastewater treatment plant	4	Sprinkler systems on waste intake areas. Firewalls limit fire spread before the arrival of the emergency services. Ring main and fire hydrants provide on-site suppression capacity. All drainage from yards passes through interceptors before discharging to surface water and foul sewer system. Run-off from the building roofs discharges directly to the balance tank. Flow from tank regulated by level activated pump. Shut off-valves on the foul water sewer and the outfall from the balance tank that will be closed before the emergency services arrived. Firewater retention assessment completed and the required capacity provided. ERP prepared and staff training provided.	No further physical mitigation measures are required	Staff refresher training on ERP to continue	Facility Manager

7. IDENTIFICATION OF PLAUSIBLE WORST CASE SCENARIO

The risk analysis identified one (Risk ID 7) with a Moderate consequence and this is considered to be the 'worst case' scenario for the installation. It would have 'knock on' effects in that there would be there would be smoke emissions to air (Risk ID 6), and if the fire occurred in the building where the maintenance oils are stored then these could be released (Risk ID 4 and 5).

7.1 Source-Pathway-Receptor

7.1.1 Sources

The source is a fire in one of the following, Building 1 & 2, Building 3 and Building 4. The incident generates fumes and contaminated firewater.

7.1.2 Pathways

Potential pathways for the fumes is the atmosphere. The pathway for the contaminated firewater is the paved yard and surface water drains.

7.1.3 Receptors

Potential receptors that could be affected by the fumes are installation staff and the occupants of the nearby commercial premises. The potential receptors for the contaminated run-off are the surface water drains, the tributary of the Tramore and the Irish Water municipal wastewater treatment plant.

7.2 Impacts and Remedial Measures

The potential impacts are on human health, surface water and the operation of the municipal wastewater treatment plant. The remedial measures include spill containment; removal and off-site treatment of the firewater; removal and off-site disposal of fire damaged wastes and demolition and removal of the damaged buildings.

8. QUANTIFICATION & COSTING

The costs, which are presented in Table 8.1, are based on the following assumptions:

- The fire detection and alarm system ensure an outbreak is rapidly detected.
- The compartmentalisation provided by the firewalls will ensure that a fire outbreak will be restricted to the area it occurs (Buildings 1 &2, Building 3 and Building 4) until the Emergency Services arrive on-site
- The worst cases is a fire in Building 4 at a time when there is 500 tonnes of unprocessed materials stored.
- The fire will be extinguished in 8 hours.
- 25% of the waste will be consumed in the fire with the balance being fire damaged and not suitable for recycling.
- A maximum quantity of 1,126m^3 of contaminated firewater will be generated as detailed in the revised Firewater Retention Assessment. The available retention capacity is 1,296m^3 and all firewater generated will be retained inside the buildings
- Following the incident the fire-water can be discharged to the municipal wastewater treatment plant and that this will be managed by controlled discharge to the sewer in consultation with Irish Water and Cork County Council.
- A lump sum of €150,000 has been allowed to cover demolition works and associated clean-up and disposal costs,).
- A 20% contingency has been allowed.

Table 8.1 Worst Case Costs

Task	Description	Quantity	Measurement Unit	Unit Rate (€)	Cost (€)	Source of Unit rates
Response to major fire incorporating hydrocarbon drums stored in the MRF and diesel in mobile plant.	Fire-fighting	100	Engine Hours	480	48,000	Rate based on SLR consultation with Cork Fire Service. Largest fee ever charged was €35,000
	Testing of Fire-water	5	Samples	150	750	SLR
	Pumping of fire-water to sewer	2	Days	1,000	2,000	Conservative rate for a man, diesel and pump-hire
	Discharge of fire-water to sewer	1,216	m^3	2.13	2,590	http://www.water.ie/business/pricing / cork-county-council/ including water supply and wastewater disposal
	Removal of residual solid wastes / ash	400	Tonnes	150	60,000	Transport and landfill gate fee including levy.
	Demolition and site clearance	1	Contract		150,000	SLR
	Site management, equipment, utilities & security during Fire and subsequent clean-up	1	Month	25,000	25,000	Based on 2 or 3 key staff and remote monitoring security outside of normal working hours.
	Environmental Consultants Report	1	Report	10,000	10,000	SLR
Total (€)					298,340	
Contingency (20%)					59,668	
Subtotal					358,008	
VAT (23%)					82,341	
Final Total					**440,349**	

9. CONCLUSION

This ELRA was carried out in accordance with Agency's Guidance (March 2014). The cost associated with the 'worst case' scenario, is €440,349. The immediate cost of dealing with an incident will be covered by operational funds. These costs, along with the costs of the subsequent post incident remedial works, will be recouped from FHR's insurer.

APPENDIX 1

Waste Storage Plan Rev.1.0

1. Purpose

The purpose of this Plan is to achieve and maintain compliance with Condition 8.11 of W0291-01 in relation to the storage of waste. It is an addendum to the FHR Waste Storage Plan (November 2017) to reflect the proposal to increase the annual waste intake from 82,000 tonnes to 100,000 tonnes and the associated infrastructural works.

2. Scope

The Plan applies to all waste storage activities at the Forge Hill facility

3. Responsibilities

It is the responsibility of the Site Manager and/or Deputy to ensure this Plan is adhered to at all times.

It is the responsibility of the EHS Manager to ensure the Plan is communicated to the operatives and drivers and that the appropriate training is provided them.

It is the responsibility of the EHS Manager to revise and update the Plan in accordance with the EPA requirements. All revisions/updates shall be submitted to the EPA for approval before any changes to the agreed Plan are made.

4. Associated Documents

Conditions 9.5 and 8.11 of W0291-01

FHR Waste Storage Plan November 2017

FHR Firewater Risk Assessment December 2017

FHR Closure and Decommissioning Management Plan December 2017.

The EPA Guidance Note: Fire Safety at Non-Hazardous Waste Transfer Stations, 2013

The EPA Guidance on Fire Risk Assessment for Non-Hazardous Waste Facilities, 2016.

6. Site Layout

The site covers 10,110 m^2 and comprises a waste processing building made up of four adjoining buildings (1-4), two storey office, an electrical substation, two weighbridges and paved open yard. A security fence surrounds the operational area and there are two entrances off Forge Hill Road. There is a firewall between Building I and 3 and between Buildings 2 and 4. Rainwater run-off from paved areas where there is the potential for rainwater run-off to become contaminated is discharged to foul sewer. Run-off from the yard areas where there is a low risk of contamination discharges to a stream to the west of the site.

7. Waste Activities

The incoming mixed wastes are mechanically separated by type (e.g. plastic, paper, cardboard, metals) and the recyclables are baled and stored prior to transfer to other facilities for further processing. Non-recyclable residues are bulked up and sent to other waste management facilities for further treatment. All waste handling is carried out inside the buildings. All waste storage with the exception of baled ferrous and non-ferrous metals and non-recyclable MSW residues, is confined to inside the processing building.

8. Waste Storage Areas

8.1 The waste storage areas are shown on Drawing No. 14/4347-PL-04 with details of the maximum stockpile sizes specified in Table 1.

8.2 Combustible materials shall be stored in separate stockpiles to reduce the risk of fires spreading.

8.3 All stockpiles shall be maintained such that they are higher than 4m and do not exceed the maximum volumes specified in Table 1.

8.4 A separation distance of 6m shall be maintained between the paper bale stockpile and the plastic bale stockpile in Building 3. Baled metal cans will be stockpiled in this gap as this material is non-combustible and will act as a fire barrier

8.5 A separation distance of 6m shall be maintained between the open stockpiles of mixed dry recyclables in Building 4.

9. Waste Quantities

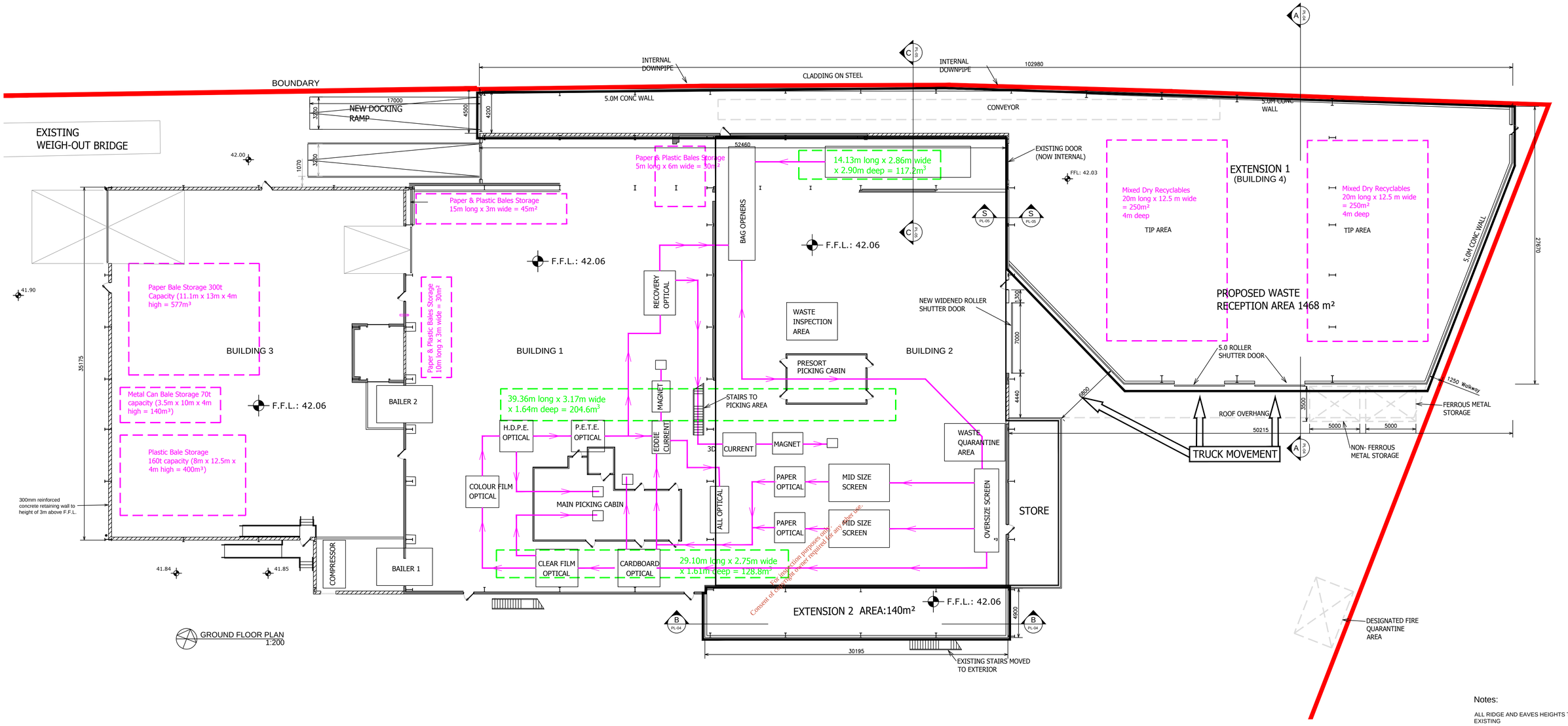
The maximum amount of waste on-site at any one time shall be 1,551 tonnes, comprising approximately 816 tonnes of baled dry recyclables 615 tonnes of loose mixed recyclables and 120 tonnes of baled metal cans,

10. Fire Quarantine Area

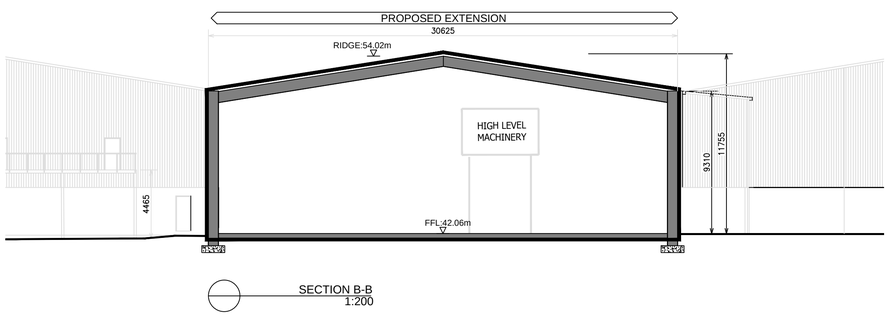
The fire quarantine area shall be not less than 6m from the building and shall not obstruct any exit routes. It area shall be kept available at all times for use if a hot load is imported or if a hotspot is identified in a stockpile and turning or digging out are considered to be suitable corrective measures.

Table 1 Maximum Planned Storage of Waste on Site

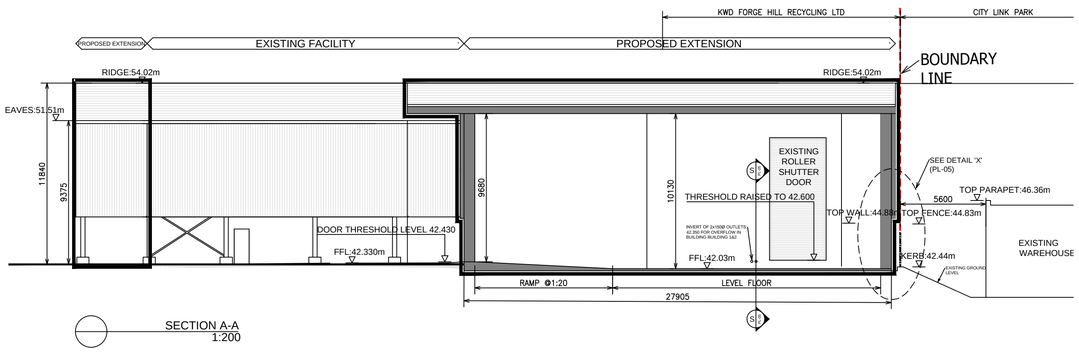
Location of Waste	Tonnes	Length (m)	Width (m)	Height (m)	Area (m^2)	Volume (m^3)	Material
Quarantine Area (Building 1)	1	2	2	1	4	4	Residual MSW
Inspection Area (Building 4)	5	3	3	2.3	9	21	Mixed Dry Recyclables
Input Storage Area (Building 4)							
Stockpile 1	250	20	12.5	4	250	1000	Mixed Dry Recyclables
Stockpile 2	250	20	12.5	4	250	1000	
Inspection Area (Building 1)	5	3	3	2.3	9	21	Mixed Dry Recyclables
Input Storage Area (Building 1)	100	20	10	2.1	200	417	Mixed Dry Recyclables
Waste on Process Line (Buildings 1 & 2)	10	n/a	n/a	n/a	n/a	42	Mixed Dry Recyclables
Paper & Card Storage (Building 2)	95	15.3	3	4	46	183	Baled Paper & Cardboard
Plastic Storage (Building 2)	95	20	3	4	60	238	Baled Plastic
Metal Can Storage (Building 3)	70	10	3.5	4	35	140	Baled Metal Cans
Paper & Card Storage (Building 3)	300	13	11.1	4	144	577	Baled Paper & Cardboard
Plastic Storage (Building 3)	160	12.5	8	4	100	400	Baled Plastic
Ferrous Metal (Outside Building 4)	25	5	3.5	4	17.5		Baled Metal Cans
Non-Ferrous Metal (Outside Building 4)	25	5	3.5	4	17.5		Baled Metal Cans
Non-Recyclable Residues (Enclosed Trailer outside Building 1)	20	n/a	n/a	n/a	n/a		Residual MSW
Total	**1,551**					**4,343**	



GROUND FLOOR PLAN
1:200



SECTION B-B
1:200



SECTION A-A
1:200

Notes:

ALL RIDGE AND EAVES HEIGHTS TO MATCH EXISTING

ALL FINISHES TO MATCH EXISTING

Notes:
1. This drawing is for planning purposes only. - If in doubt ask.
2. Do not scale, figured dimensions only to be taken.
3. Engineer to be informed of any discrepancies before work proceeds.
4. Contractor to check all dimensions and conditions on site before commencing works.
5. Drawing to be read in conjunction with current Building Regulations.
6. All components and materials to be installed fully in accordance with manufacturers instructions.

Revision	Comments	Date

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Project:
EXTENSIONS TO EXISTING MATERIALS RECYCLING FACILITY AT FORGE HILL, CO. CORK

Client:
FORGE HILL RECYCLING LTD

Drawing Title:
GROUND FLOOR & SECTIONS

Scale:	Date:	Revision
1:200 @A1	March 2018	R0
Drawn By: E.F.	Drawing Number: 14/4347-PL-04	

APPENDIX 2

EP07 – Corrective & Preventative Action Procedure Rev. 1.0

EMS Procedure	Corrective & Preventative Action Procedure		
Date:	03/02/2016	Revision No.	1.0

Reasons for Revision	

EP07 – Corrective & Preventative Action Procedure Rev. 1.0

1. Purpose

The purpose of this Procedure is to define the approach that will be taken in implementing and evaluating corrective and preventive action.

2. Scope

This procedure applies to all corrective and preventive actions raised to resolve non-conformances arising from:

,

- receiving mixed dry recyclable materials,
- specified output product quality assessment
- external compliance auditing & inspections
- environmental incidents and accidents
- health and safety incidents and accidents
- internal forms completion

3. Responsibilities

3.1. Any member of staff can initiate a corrective and preventive action form (CAF).

3.2. The Site Manager is responsible for ensuring that all corrective and preventive actions are appropriately implemented and closed.

3.3. The recipient of corrective ensures that they are applied in a timely and effective manner.

4. Procedure

4.1. Corrective Action:

4.1.1. The Corrective Action Form (CAF) is raised by the initiator and contains details of the non-conformance. Initiator passes the CAF onto the recipient or to the Manager.

4.1.2. . The Manager files a copy and determines the person (recipient) best placed to undertake the corrective action and assigns the CAF.

4.1.3. The recipient (investigation team) needs to determine cause of non-conformance (collect data, get expert advice, consult with clients, review legal and regulatory requirements etc.)

4.1.4. The recipient has to follow the investigation:

4.1.4.1. evaluate information, determine level of response and make recommendations

4.1.4.2. decide on action to be taken

4.1.4.3. assign responsibility for corrective action and allocate resources

4.1.4.4. implements appropriate corrective and preventive actions within the agreed designated timescale.

4.1.5. The recipient records the action taken on the CAF and passes onto / returns it to GM.

4.1.6. The GM ensures that the assigned actions have been completed successfully and confirms this by completing the CAF form and register. Non-competition of assigned CAF should be raised by GM at MT meetings.

4.1.7. Initiator and / or GM will investigate the effectivity of the corrective actions taken

4.1.8. Where appropriate the GM will communicate proposed corrective actions implementation schedules & completion reports to appropriate external bodies.

4.1.9. The Initiator or GM may dispose of non-conforming issue without raising a CAF if such non-conformance is considered to be without appreciable cost or further implications to other staff or to customers, and the non-conformance is not recurring in nature.

4.2. Preventive Action:

4.2.1. If preventive action is taken to prevent potential non conformances follow point 5.1

4.2.2. If preventive action is taken to prevent re-occurrence of non-conformance.

4.2.2.1. The MT will review trends for corrective action, internal audit result and other forms of quality system feedback to determine need for preventive.

4.2.2.2. Recipient and / or Initiator will identify what long term preventive action is needed

4.2.2.3. GM will make sure that the preventive action is placed

4.3. Close out & Filing

Completed CAFs must be signed off and filed in the CAF File.

5. Associated documents

- Corrective Action Form (ER04)

APPENDIX 3

EP09 – Emergency Response Procedure Rev. 1.0

EMS Procedure	Emergency Response Procedure		
Date:	09/03/2016	Revision No.	1.0

Reasons for Revision	

EP09 – Emergency Response Procedure Rev. 1.0

1. Purpose

The purpose of this document is to set out the procedure to be followed in the event of an emergency at Forge Hill Recycling. Emergency Response procedures are designed to ensure the safety of people in buildings during emergencies by coordinating and controlling building evacuations until the appropriate emergency services arrive.

.

2. Scope

This procedure applies to all staff at Forge Hill Recycling.

3. Responsibilities

Emergency Coordinator

The Emergency Coordinator shall be responsible for overall coordination of actions in connection with Emergency Response Procedures. He/she is responsible for:

Before Fire or Emergency:

- Ensuring that personnel responsible for emergency evacuation are aware of their responsibilities.

In the case of Fire or Emergency:

- Checking that the alarm has been relayed to the Fire Service.
- Ensuring that designated duties are correctly and promptly carried out.
- Acting as liaison officer with Police, Fire Service and other emergency services.
- Ensuring that all emergency service personnel are directed to the building involved in the emergency.
- Liaison with the Building Warden for the building involved in the fire or emergency.
- Advising staff and contractors when it is safe to re-enter the building.

Fire Wardens

The Fire Warden, during emergency situations, will be in control of the occupants of the whole building until the arrival of the Fire Service Senior Officer. It is the Fire Warden's responsibility to:

Before Fire or Emergency:

Assist in training of emergency personnel under their command. Designate an assembly area (or areas) for the staff. Occupants of the area should be directed to assemble at a designated location out in accordance with the emergency

plan. This will facilitate checking that all occupants are safe and enable speedy return to the building when the "*all clear*" is given.

Ensure that in each area, a current list of the Area Wardens (and telephone numbers) is displayed, together with an emergency floor plan. The emergency floor plan should show all rooms, exits, assembly area to be used in case of fire or emergency, fire alarms, extinguishers, fire hose reels and special emergency equipment.

Ensure that all staff in the building are given instruction in relation to:

- evacuation procedures;
- means of escape from the building and location of assembly areas;
- the location and operation of fire alarms; and
- the location and operation of fire extinguishers or other emergency equipment required in the building.

In the case of Fire or Emergency (the assistance of a deputy may be required to undertake some of these tasks):

- Respond immediately to an alarm; determine the nature of the emergency.
- Initiate Emergency Response Procedures for the building.
- Direct the actions of Floor and Area Wardens within the building.
- Check that all occupants have proceeded to the designated assembly area.
- In consultation with the Fire Service and the Emergency Coordinator, advise occupants when it is safe to return to the building.

All personnel

Before FIRE or EMERGENCY: All personnel should make themselves familiar with the Emergency Response Procedures for their area, the location of fire exits and the operation of fire-fighting and emergency equipment.

4. Procedure

In the case of Fire or Emergency: Until the arrival of the Fire Service, the Emergency Coordinator and fire wardens will control all evacuation and fire fighting (use of fire extinguishers) on their floor or in their area. The Area Warden should:

- Check the source, type and severity of the emergency.
- Order the evacuation of the area if necessary.

- Advise the Emergency Coordinator of the incident and the proposed action to be taken.
- Ensure that all occupants of the area are aware of the evacuation procedure, and direct the occupants to the nearest accessible exit through which they should proceed to the designated assembly area.
- Ensure that evacuation from the area is orderly and by means of the stairs.
- Ensure that necessary assistance is given to disabled and other persons in need of special care.
- Check fire doors to ensure that they are closed and post a watch so that they are kept closed except during the escape of occupants.
- Provided it is safe to do so, make a thorough search of the whole floor or area to ensure that no persons remain.
- Advise the Building Wardens when evacuation is completed.
- Assist the Building Warden in checking that all building occupants have arrived at the assembly area.
- It should be emphasised that the primary role of wardens is not to combat fire and emergencies, but to ensure, as far as practicable, the safety of occupants and their orderly evacuation from emergencies.

In the case of FIRE or EMERGENCY:

- Any person who discovers a fire or emergency: Sound the fire alarm system (if there is a push button alarm).
- Notify the Area Warden who will contact the appropriate emergency service and provide:
  - Name & location of the caller.
  - Details of location, type and scale of the emergency
  - If it is safe to do so, use the appropriate fire extinguisher to put out any fire (*do not attempt to fight a fire if the fire is large or if you are not familiar with the use of the fire extinguisher).*
- Any person who hears the evacuate mode of the fire alarm or when instructed to evacuate by the Area Warden must:
  - Walk quietly but quickly to the nearest exit and proceed to the assembly point outside the building to await further instructions.
  - Listen and follow instructions from Area Wardens.
- In order to prevent injury and possible panic during evacuation:
  - Do not run, push, or overtake
  - Do not return to your desk, office or room
  - Do not return to your building until the "all clear" is given by the Building Warden or Fire Service.

- Outside of normal working hours (08.00 a.m. to 6.00 p.m. Monday to Friday, Sat 8 a.m.-2.p.m) on hearing the fire alarm, occupants should evacuate the building.

1. Emergency Evacuation Information

- Building wardens in co-operation with the emergency co-ordinator should arrange for a sign to be placed at a prominent position on each floor or in each area showing the following:

• The name of the Building and Floor number or area description.
• A brief statement of evacuation procedures, such as:
  - Alert Fire Service, and/or other emergency service, using the appropriate call-out number
  - Warn people in the vicinity
  - Evacuate the building, if necessary
  - If safe, confine the fire or other source of danger
• The location of the assembly area.
• A floor or area plan (Property and Facilities Division can assist in the provision of floor plans and preparation of emergency evacuation signage) showing the location of:
  - fire exits and escape routes
  - manual alarm points
  - fire extinguishers, and other emergency equipment
  - The names (and telephone numbers) of the:
  - Area Warden any additional wardens appointed.

2. Where emergency ambulance assistance is required the Emergency Coordinator will dial **999** and notify the operator that an ambulance is required and provide details of the location, the nature of the emergency, and provide a contact phone number for first aider.

Points to include in emergency procedures

- Consider what might happen and how the alarm will be raised. Don't forget night and shift working, weekends and times when the premises are closed, eg holidays

- Plan what to do, including how to call the emergency services. Help them by clearly marking your premises from the road. Consider drawing up a simple plan showing the location of hazardous items

- If you have 25 tonnes or more of dangerous substances, you must notify the fire and rescue service and put up warning signs
- Decide where to go to reach a place of safety or to get rescue equipment. You must provide suitable forms of emergency lighting
- You must make sure there are enough emergency exits for everyone to escape quickly, and keep emergency doors and escape routes unobstructed and clearly marked
- Nominate competent people to take control (a competent person is someone with the necessary skills, knowledge and experience to manage health and safety)
- Decide which other key people you need, such as a nominated incident controller, someone who is able to provide technical and other site-specific information if necessary, or first-aiders
- Plan essential actions such as emergency plant shutdown, isolation or making processes safe. Clearly identify important items like shut-off valves and electrical isolators etc.
- You must train everyone in emergency procedures. Don't forget the needs of people with disabilities and vulnerable workers
- Work should not resume after an emergency if a serious danger remains. If you have any doubts ask for assistance from the emergency services

Clean-up of fire damaged waste

- ❖ Fire damaged/wet waste recycling to be sent to landfill if safe to do so.
- ❖ Fire damaged equipment will be stripped down & recycled as much as possible with unrecyclable components sent for appropriate disposal.
- ❖ Fire damaged areas will be cleaned & efforts made to redesign/redecorate to original layout.
- ❖ Area will be inspected after redesign/redecoration/clean-up to ensure it is safe for staff to return to work.

5. Fire Safety Register

Fire Prevention

- No smoking on-site (only in designated smoking area)

- Hot work permit (sub-contractors)
- Maintenance schedule on machines
- CCTV & security fencing in place around site
- All vehicles fitted with fire extinguishers
- Fire doors

Fire detection & warning systems
- Alarm system
- CCTV
- Emergency lighting

Fire control & Fire-fighting facilities
- Sprinkler system
- Fire extinguishers/blankets
- Fire hose reels
- Fire doors
- Fire hydrants
- 100,000 litres of water available at Lagoon

Fire escape, signage & lighting
- Exits free from obstruction
- Exit signage lighting & in good order with wayfinding signage
- Emergency lighting

Fire response planning & staff training
- Emergency response plan (displayed)
- Staff fire safety training & awareness
- Fire routine

Post fire actions
- Fire & accident investigation
- Safety issues
- Clean-up of fire damaged waste & fire water

APPENDIX 4

ENVIRONMENTAL BALANCE IN DESIGN AND CONSTRUCTION

FORGE HILL RECYCLING LTD.

FIRE RISK ASSESMENT: FORGE HILL TRANSFER STATION, FORGE HILL, BALLYCURREEN, CO. CORK

DECEMBER 2017

FIRE RISK ASSESMENT: FORGE HILL RECYCLING LTD.

User is Responsible for Checking the Revision Status of This Document

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Client: Forge Hill Recycling Ltd.

Keywords: fire, risk identification, risk analysis, risk evaluation, risk treatment,

Abstract: This report presents a fire assessment for FHR, at their materials recovery facility at Forge Hill, Ballycurreen, Co. Cork.

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1 INTRODUCTION

Forge Hill Recycling Ltd. (FHR) operates the Forge Hill waste transfer station and materials recovery facility (MRF) at Forge Hill, Ballycurreen, Co Cork. The facility is subject to Waste Licence IED W0291-01 granted by the Environmental Protection Agency (EPA).

Clause 9.5 of this waste licence requires that within three months of the date of grant of the license, that the licensee engage an independent consultant to complete a fire risk assessment of their facility, and every three years thereafter.

1.1 Fire Risk Assessment

The purpose of the risk assessment is to:

- Identify potential sources of ignition and combustible materials on site, both internally and externally at the facility.
- Assess all fire risks both internal and external at the facility.
- Identify controls and recommendations to eliminate or reduce the fire risk.
- Identify if prevention planning including maintenance, testing, inspections, procedures and training are in place.
- Assess the provision of early fire detection and warning systems, in accordance with appropriate standards, including consideration of automatic detection systems and out-of-hours security arrangements etc.
- Assess the arrangements for 'first-aid' firefighting, automatic fire suppression systems (area of equipment specific) and provision of water for use by the fire service.
- Provide a recommendation for the location of the fire quarantine area. (A fire quarantine area is an area away from stockpiles that is always kept vacant. This area is used in a fire event to transfer waste materials here, to prevent the spread of a fire.)
- Inspect provisions to limit fire spread

Fehily Timoney and Company were appointed by Forge Hill Recycling Ltd to undertake a fire risk assessment of the Forge Hill waste transfer station on their behalf. FT undertook the following work:

- Detailed site walkover and inspection of the facility to assess the facility construction, infrastructure and operations in compliance with the above.
- Comprehensive data gathering exercise to detail all existing plans, operations manuals, equipment specifications, certifications etc. for all physical infrastructure and associated management practices relating to fire and fire safety at the site.

The following report outlines the details of this risk assessment. The assessment has been carried out in accordance with the information contained within the following guidance notes which have been prepared by the Environmental Protection Agency (EPA) and the UK Environment Agency:

- EPA (2016) *Guidance on Fire Risk Assessment for Non-Hazardous Waste Facilities*[1]
- EPA (2013) *Guidance Note – Fire Safety at Non-Hazardous Waste Transfer Stations*[2]
- EPA (1995) *Draft Guidance Note to Industry on the Requirements for Fire-Water Retention Facilities*[3]
- UK Environment Agency (2013) *Reducing fire risk at sites storing combustible materials: Technical Guidance Note 7.01*[4]

[1] http://www.epa.ie/pubs/advice/waste/waste/guidanceonfireriskassessmentfornonhazardouswastefacilities.html
[2] https://epa.ie/pubs/reports/waste/guidanceonfiresafetyatnonhazardouswastetransferstations/guidanceonfiresafetyatnonhazardouswastetransferstations.html#.V8a7kPkrJ9M
[3] http://www.epa.ie/pubs/advice/licensee/guidancenotetoindustryonfirewaterretentionfacilities.html
[4] www.esfrs.org/EasySiteWeb/GatewayLink.aspx?alId=1637

1.2 Limitations

This fire risk assessment completed is pertinent only in respect of the storage of waste and operations on or about the waste contained within the buildings as permitted under the Waste License.

It does not extend to making reference to other statutory considerations such as compliance with Building Regulations.

1.3 Site Location and Description

Forge Hill Waste Transfer Station is located at Forge Hill, Ballycurreen, Co Cork, and is comprised of an administration building (including canteen and changing area), a material recovery facility (MRF), two weighbridges, an ESB substation, a workshop, an oil storage building, and a wheel wash area. The site area measures approximately 1.03 hectares and the areas not covered by buildings are covered by a concrete hardstanding.

Figure 1.2 gives an aerial view of the site and identifies the principal areas of the site.

1.4 Site Meeting & Walkover

Mr Richard Power of FT conducted a site meeting walkover on the 3rd October 2017 with Mr Brian Burton, EHS Manager.

The site meeting consisted of a detailed discussion and information gathering regarding the current management of fire risk at the site e.g. Records of training, management systems and standard operating procedures, inspection reports etc. Available records were inspected and several other records were provided following the site meeting. These records were referenced in the fire risk assessment are included in the appendices to this document.

1.4.1 Site Walkover

The walkover included:

- Site Entrance and Weighbridge area
- Yard and Circulation Area
  - Workshop
  - Perimeter of site
  - ESB Substation
  - Oil Storage shed
- Material Recovery Facility
  - Walk around facility and machinery
- Administration building
  - Canteen
  - Office areas
  - Changing facility

The waste tipping area is shown in Figure 1.1. The site boundary has also been shown for clarity in figure 1.2. Photographs taken during the site walkover are presented in Figure 1.3 to Figure 1.44 inclusive.

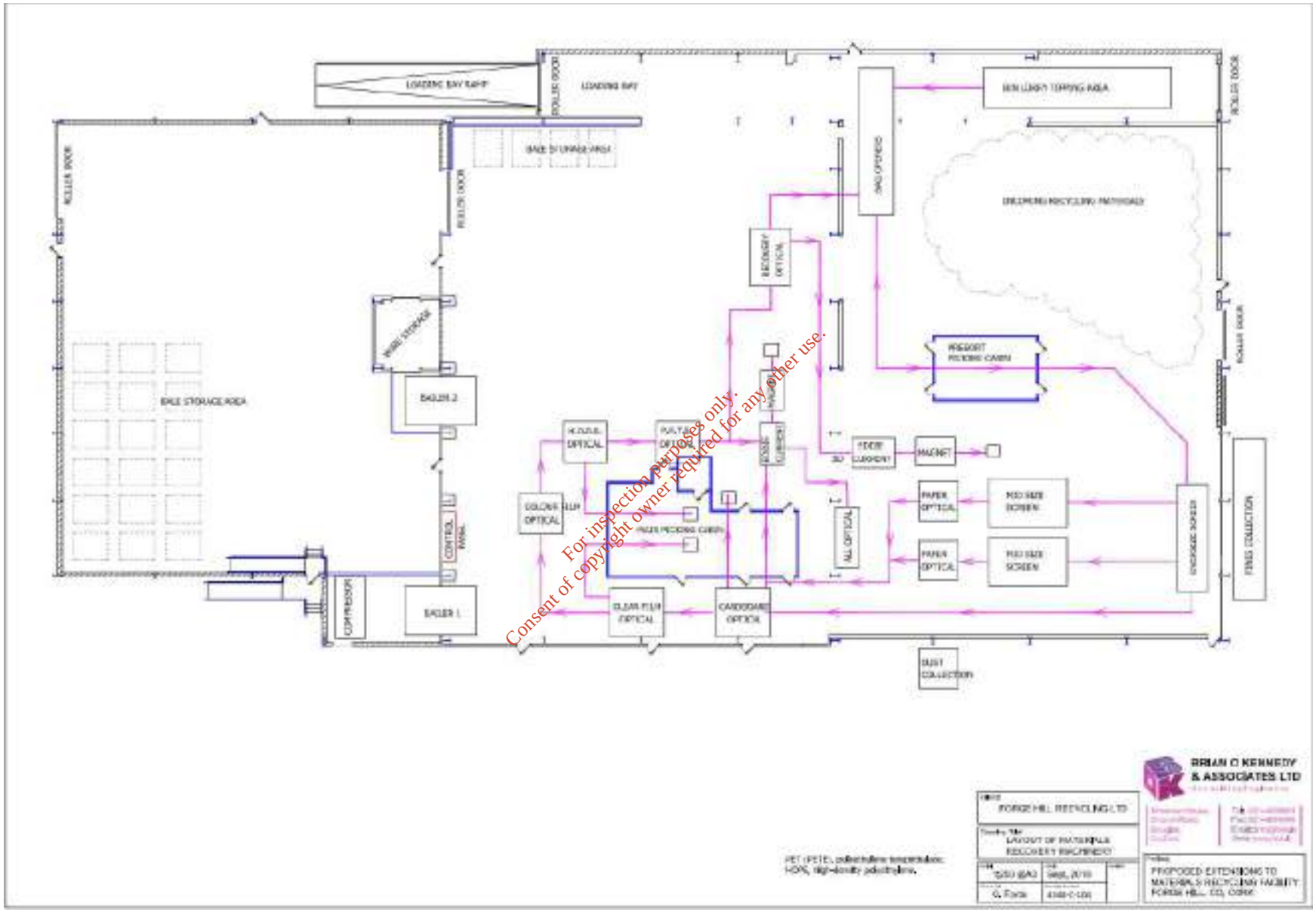

Figure 1.1: Waste Movement Drawing

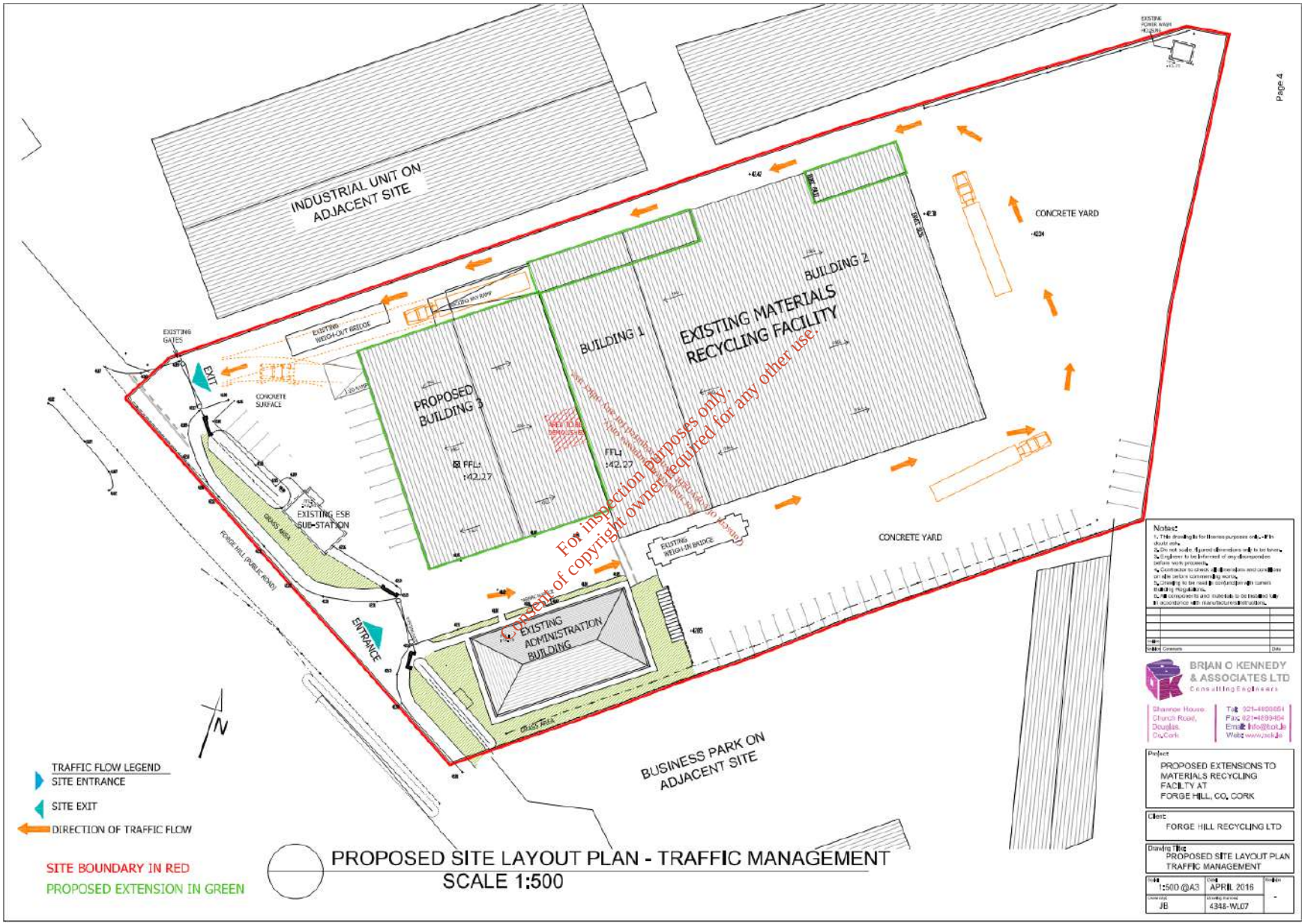

Figure 1.2: Site Layout Aerial View

Figure 1.3: Yard Area: Front of Office & Weighbridge

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Figure 1.12: MRF Building: Flame Detection System

Figure 1.13: MRF Building: Fire Extinguisher (Inspection Date)

Figure 1.14: MRF Building: Emergency Stop Button

Figure 1.15: MRF Building: Fire Reel by Emergency Exit

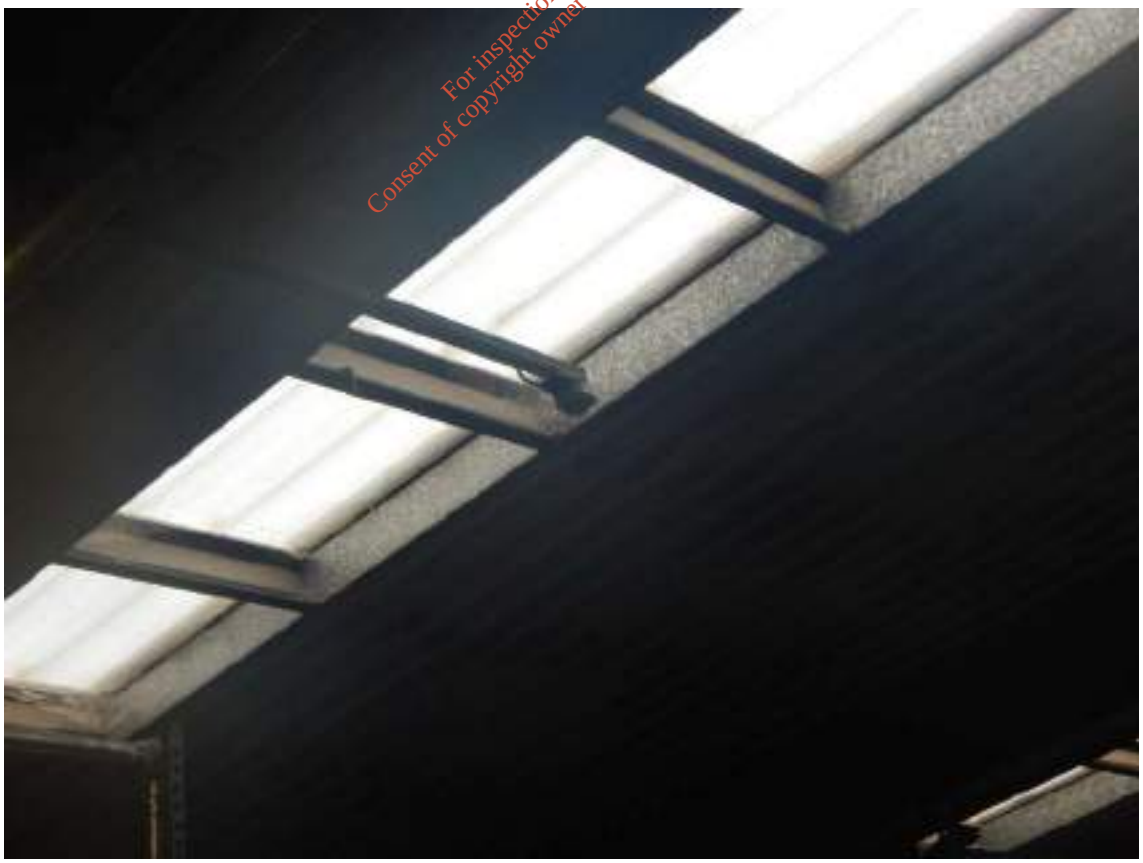

Figure 1.16: MRF Building: Smoke Detector

Figure 1.17: MRF Building: Fire Hose Reels by Machinery

Figure 1.18: MRF Building: Break-glass Fire Alarm Unit

Figure 1.19: MRF Building: Flame Detection System Control Unit

Figure 1.20: MRF Building: Flame Detection System by Electricity Controls

Figure 1.21: MRF Building: Flame Detection System by Baler

Figure 1.22: MRF Building: Emergency Exit

Figure 1.23: MRF Building: Flame Detection System & inbuilt Sprinkler System

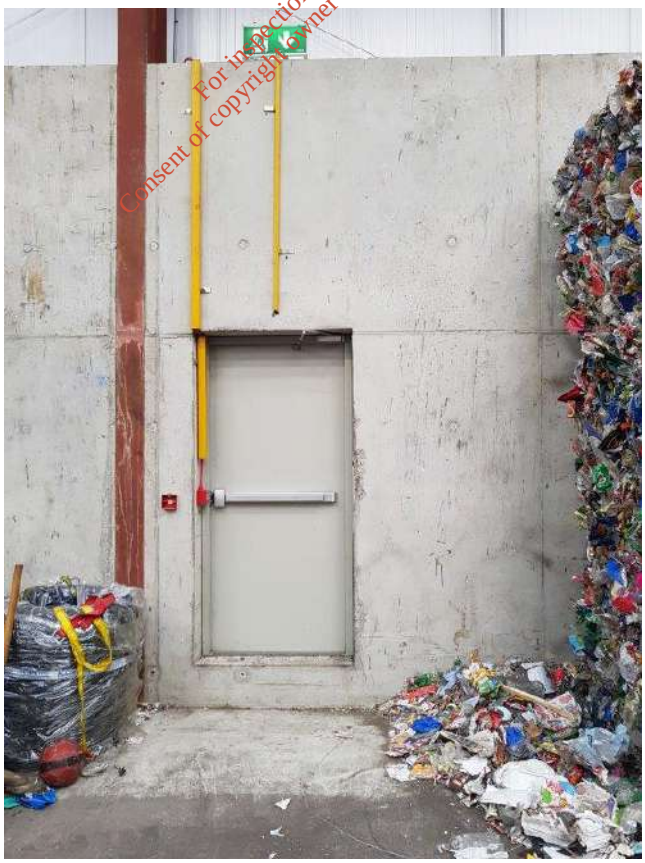

Figure 1.24: MRF Building: Emergency Exit in Bale Storage Area

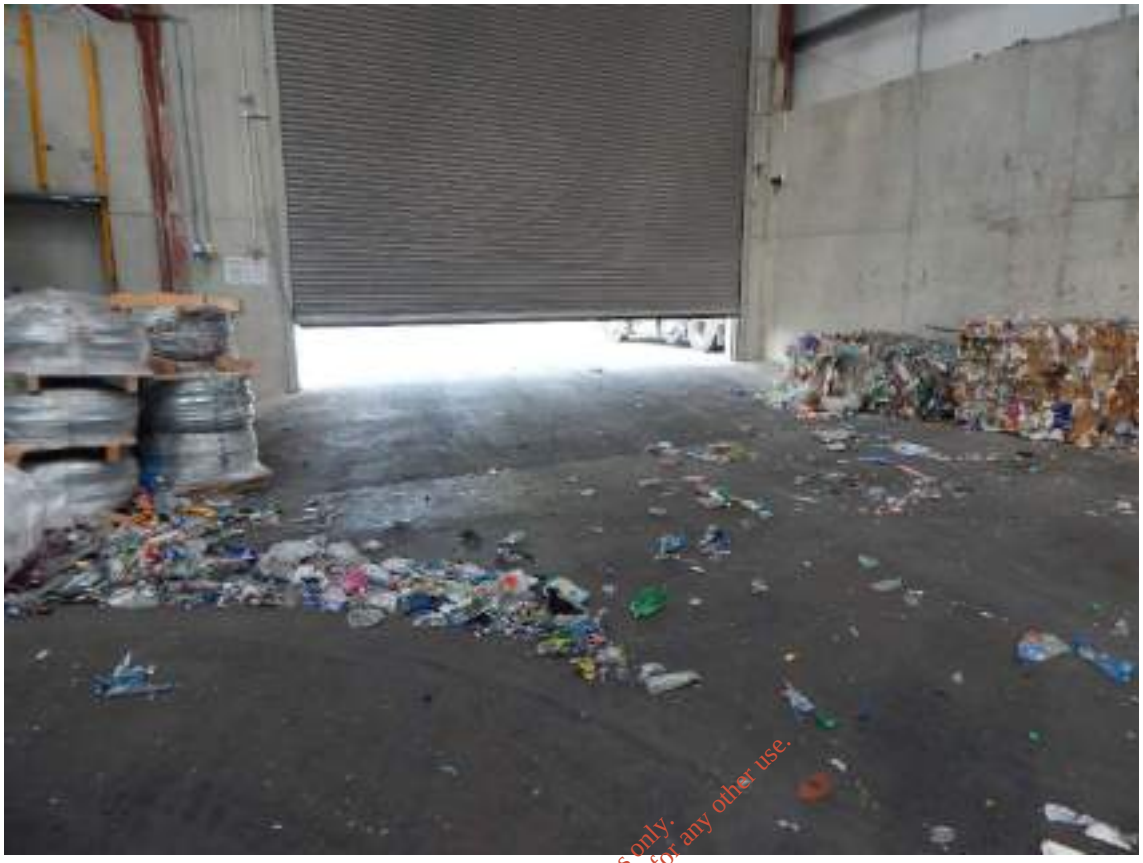

Figure 1.25: MRF Building: Fire Water Retention Ramp into and Out of MRF Building

Figure 1.26: Yard Area: No Smoking Sign

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Figure 1.35: Yard Area: Emergency Exit Stairway

Figure 1.36: Administration Building: Designated Smoking Area outside canteen

Figure 1.37: Administration Building: Canteen

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Figure 1.42: Administration Building: Fire Alarm Controls

Figure 1.43: Administration Building: Push to Exit Door

Figure 1.44: Administration Building: Fire Services Information Plan

2 FIRE RISK ASSESMENT

To determine the potential risk posed by activities onsite, a risk assessment has been carried out. A risk assessment is a tool that may be used to measure the risk involved for any scenario. In this case, it has been specifically tailored towards the risk of a fire at the site.

The assessment of a risk comprises three sub-stages:

- Risk identification
- Risk analysis
- Risk evaluation

Following the completion of the above sub-stages and a full determination of the level of risk posed to the environment, a response to the risk is outlined. The recommendations of improvements to mitigate against the risk of a fire are outlined in Section 3.

2.1 Step 1 – Risk Identification

In identifying the risk posed from a fire, the following three aspects need to be considered:

- Fire Risk – the likelihood of ignition of flammable materials
- Fire Exposure – the quantity of combustible materials located in an area at risk of a fire
- Environmental Severity – the potential damage to the receiving environment

2.1.1 Fire Risk

Fire risk identifies the likelihood of flammable materials igniting at a site. In determining the fire risk at the proposed development site, the following three aspects are considered:

- Risk of ignition
- Risk of non-detection
- Risk of failure to respond to the fire promptly

Risk of ignition considers how close a source of ignition is to the flammable material. When no source of ignition is present, there will be no risk.

The risk of non-detection considers whether a fire will be detected and the speed at which it will be detected. It is dependent on the location of the fire, the presence of a fire detection system and human presence near the fire location.

The risk of failure to respond to the fire promptly considers the effectiveness of the fire response system and procedures which will be initiated following the commencement of a fire.

In determining the fire risk for this risk assessment, the level of risk will be classified as either low, medium or high. A factor rating will be assigned to the fire risk, depending on the level of risk classified. The classification of fire risk is presented in Table 2.1 over.

Table 2.1: Classification of Fire Risk

Risk	Description	Factor Rating
Low	Low: Unusually low likelihood of a fire as a result of negligible potential sources of ignition	1
Medium	Medium: Normal fire hazards (e.g. potential ignition sources) for this type of occupancy, with fire hazards generally subject to appropriate controls (other than minor shortcomings)	2
High	High: Lack of adequate controls applied to one or more significant fire hazards, such as to result in significant increase in likelihood of fire.	3

2.1.2 Fire Severity

Fire severity attempts to quantify or rate the potential severity of a fire on persons or the environment. The severity rating considers the nature of the building and the occupants as well as the fire protection and procedural arrangements observed at the time of the risk assessment.

The severity level will be classified as either slight, moderate or extreme harm.

Table 2.2: Fire Severity Factors

Severity	Description	Factor Rating
Slight Harm:	Outbreak of fire unlikely to result in serious injury or death of any occupant (other than an occupant sleeping in a bedroom in which a fire occurs).	1
Moderate Harm:	Outbreak of fire could result in injury of one or more occupants, but it is unlikely to involve multiple fatalities.	2
Extreme Harm:	Significant potential for serious injury or death of one or more occupants.	3

2.1.3 Risk Rating

The results of the fire risk and fire severity assessment will be combined (by multiplication) to calculate the risk rating.

Table 2.3: Fire Risk Factors

Fire Hazard (Probability)	Potential Consequences of Fire (Severity)		
	Slight Harm -1	Moderate Harm – 2	Extreme Harm - 3
Low -1	Negligible	Tolerable Risk	Moderate Risk
Medium – 2	Tolerable Risk	Moderate Risk	Substantial Risk
High - 3	Moderate Risk	Substantial Risk	Intolerable Risk

Score	Risk Rating
1	Negligible
2	Tolerable
3-4	Moderate
6	Substantial
9	Intolerable

The existing site hazards will them be ranked in accordance with their risk rating and a Fire Risk Action Plan developed for those risks with the highest risk rating.

Table 2.4: Fire Risk Assessment Matrix Forge Hill Recycling

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
Fixed Installations	The following fixed installations are on site; • Balers • Compressors • Over-band magnets • Bag opener • Picking lines • OCC screen • Deck ballistic separators • Optical separators • Eddy current separators • Conveyors Machinery is relatively new and has not needed services or maintenance to date. No records available.	2	1	2
Portable Appliances	Limited portable appliances utilised onsite. All works subject to method statement and risk assessment. Electrician carries out an annual check.	1	1	1
Smoking	No smoking allowed onsite except in designated area. Smoking rules are part of the induction.	1	1	1
Arson	CCTV in place and site securely fenced across perimeter. Office building has burglar alarms installed.	1	1	1
Portable Heaters	No portable heaters on site	1	1	1
Cooking	Microwave & kettle present in canteen area. Appropriate firefighting equipment provided i.e. fire blankets and extinguishers	1	1	1
Lightning	Low risk area	1	1	1

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
Other Ignition Sources	Mobile plant is maintained and serviced in accordance with manufacturer's instructions and subject to daily checks. All mobile plant carry fire extinguishers. Some service records are in the appendices.	1	1	1
Self-Combusting Materials	Low risk of self-combustion of stockpiled materials. The following materials are stockpiled onsite: • Mixed dry recyclables • Bailed paper • Bailed cardboard • Bailed plastic	1	1	1
Frictional Heat	Mobile plant is subject to regular checks and maintenance by the associated manufacturer. Fixed plant is maintained and repaired as is needed.	1	1	1
General Housekeeping	General housekeeping outside of the MRF was seen to be of a very good standard. Loose recyclable materials were scattered on the floor of the bale storage area. FHR workers sweep floor every 30 minutes.	1	1	1
Combustible Materials	The following combustible materials are stored onsite: • Mixed dry recyclables • Paper • Cardboard • Plastic Once bailed, these materials are stored in the bale storage area. Ignition sources are managed and kept to a minimum near the combustible materials. Firefighting equipment is available near the combustible materials	1	1	1
Stockpiles	The following materials are stockpiled onsite: • Mixed dry recyclables • Bailed paper • Bailed cardboard • Loose Cardboard • Bailed Plastic Quantities, heights and widths of materials stored onsite are within tolerance set by the EPA and FHR strive to abide by these limits.	1	1	1
Outside Contractors	All outside contractors who work regularly on site are inducted. All 'one-off' visitors are escorted while on site.	1	1	1

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
Building Works e.g. hot works	Designated area (workshop) where all hot works take place. A 'Hot Works Permit' system is also in place when work is required outside this are. This area is a way from the main recycling facility.	1	1	1
Hazardous Materials	Oils for machinery stored on site in a separate building away from the main facility.	1	1	1
Works involving hazardous materials	n/a	1	1	1
Safe Systems of Works	Works subject to method statement and risk assessment. See Safety induction in appendices.	1	1	1
Explosive Atmosphere	Not applicable, dust control in place for site. Building are open and ventilated. Sweeper and water down when dusty.	1	1	1
Sources of oxygen	Oxy Acetylene for welding/cutting. Only 1 tank at a time as required. The tank is stored in accordance with its safety data sheet.	1	1	1
Oxidising Material	Not applicable	1	1	1
Means of escape	See 'PROPOSED ESCAPE ROUTES PRESORT PICKING CABIN', in appendix.	1	1	1
Fire Exits	See 'PROPOSED ESCAPE ROUTES PRESORT PICKING CABIN', in appendix. All fire exits have emergency lighting above doors and break glass units beside each exit.	1	1	1
Obstruction to Escape routes	It was noted that an exit was partially blocked by baled plastics at the time of the inspection. A clearance should be kept to the fire exits to prevent stockpiles collapsing and blocking exits in a fire event.	1	1	1
Fire Assembly Points	Designated fire assembly point sign posted on site by main gate, (see figure 1.4).	1	1	1
Fire Spread: Compartmentalisation	The following materials are stockpiled onsite: • Mixed dry recyclables • Cardboard • Bailed paper • Bailed cardboard • Bailed plastic Cardboard is stockpiled in the MRF building before being bailed.	2	2	4

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
	The stockpile is contained on one sides by a concrete wall. A clear zone exists to the three faces of the stockpiles. Baled paper, baled cardboard and baled plastic are stored in the bale storage area. These bales are stored without separation.			
Fire Spread Build Fabric	The MRF buildings is constructed using: • Steel Portal Frame • Reinforced concrete walls • Profiled Steel Cladding and Sheeting • Blockwork construction. The office is of blockwork construction.	1	1	1
Fire Spread: Suppression Systems	Fire hose reels and fire extinguishers provided, (maximum of 10m between hose reels or extinguishers in the MRF building). A local sprinkler system is installed over the baler. Layout shown on 'PROPOSED ESCAPE ROUTES PRESORT PICKING CABIN' in the appendix	1	1	1
Fire Warning: Alarm & Detection System	The following fire alarm and detection systems are installed within the following licenced areas. **Office Building** • Smoke Detection • Heat Detection • Break Glass Units • Audible Alarms **MRF Building** • Smoke Detection • Break Glass Units • Flame detection • Audible alarms All alarm and detection systems are regularly serviced.	1	1	1
Fire Extinguishing: Portable Appliances	Fire extinguishers evident about site. Subject to regular maintenance, (inspected August 2017).	1	1	1
Fire Extinguishing: Training	2 no. staff have been trained as fire wardens. This training involves the use of fire extinguishers.	1	1	1

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
Fire Extinguishing: Location and Suitability	Fire extinguishers and fire reels, strategically placed about site. Subject to regular maintenance, (inspected August 2017). See information in Appendices showing the location of all firefighting equipment on all levels.	1	1	1
Fire Extinguishing: Operational Maintenance	Inspected and certified: August 2017 Checked monthly.	1	1	1
Fire Extinguishing: Hose Reels Condition	Inspected and certified: August 2017 Checked monthly.	1	1	1
Fire Extinguishing: Hose Reels: Suitability of Supply	Hose reels located onsite are supplied from the underground storage tank and are powered by electric pumps, (these pumps have backup pumps).	1	1	1
Fire Extinguishing: Hydrants	Fire hydrant connections located at the four corners of the buildings. These hydrants are fed from an underground water storage tank. Location of all fire hydrants not immediately obvious, but FHR have organised to get signage erected by the fire hydrants and the covers re-painted yellow.	1	2	2
Fire Extinguishing: Automatic Fixed Systems	Sprinkler system in place over the baler only. A building wide sprinkler system is planned for the entire MRF building, (circa August 2018).	1	1	1
Appropriate Fire Procedures	See Safety Induction and emergency response procedures.	1	1	1
Staff Training Emergency Plan	Site Evacuation drills completed. See record in appendices.	1	1	1
Staff Training Dangerous Substances	n/a	1	1	1
Staff Training: Temporary Staff	Temporary staff subject to site induction training.	1	1	1
Training: Contractors	All contractors subject to site induction training.	1	1	1
Contractors: Training Records	Training record matrix set up for external contractors, (not used yet)	1	1	1
Training: Fire Wardens	2 no. staff are trained as fire wardens.	1	1	1
Training: Fire Response	See safety induction	1	1	1
Training: Information for Fire Response	See safety induction	1	1	1

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
Training Fire Service: Pre-Inspection	Fire Service have not conducted a pre-inspection of the facility.	1	2	2
Training: Fire Service Information Package	A Fire Service information package has been completed and is located by the fire assembly point for easy access during a fire event, (attached in appendices)	1	1	1
Training: Fire Safety	See fire safety section of safety induction.	1	1	1
Training: Refresher Training	No refresher training system in place	1	2	2
Training: Fire Drills	Site Evacuation drill completed Record in appendices	1	1	1
Testing and Maintenance: Workplace	Daily, weekly and monthly checklists. See weekly checklist attached in the Appendices.	1	1	1
Testing and Maintenance: Fire Detection and Alarm	Inspected and certified: August 2017	1	1	1
Testing and Maintenance: Emergency Lighting	Checked monthly	1	1	1
Testing and Maintenance: Fire Extinguishers	Serviced records inspected August 2017 See attached in the appendices.	1	1	1
Testing and Maintenance: Sprinkler Installations	Sprinkler system by baler is tested annually. New system which is to be installed will be tested annually.	1	1	1
Testing and Maintenance: Dry Risers	n/a	1	1	1
Testing and Maintenance: Fire Fighting Lifts	n/a	1	1	1
Testing and Maintenance: Stair cases and Gangways	Stairs at the side of MRF building are currently not inspected.	1	2	2
Testing and Maintenance: Lightening protection Systems	n/a	1	1	1
Testing and Maintenance: Fire Hydrants	Monthly testing carried out on fire hydrants	1	1	1
Testing and Maintenance: Other	Flame detection system serviced by external consultant.	1	1	1
Records: Fire Training and Evacuation Drills	Records for fire drill are kept and an example is attached in appendices.	1	1	1
Records: Fire Alarm Tests	Fire Alarm test records attached in appendices	1	1	1
Records: Escape Lighting	Emergency lighting check sheet system in place	1	1	1
Records: Other Fire Protection Systems	n/a	1	1	1

Hazard	Existing Control Measures	Risk Rating		
		Probability	Severity	Risk
Records: Fire Plan	See safety induction	1	1	1
Records: Availability to relevant third parties	Records available on request	1	1	1

3 FIRE RISK ACTION PLAN

The following sections outlies the fire risk action plan for the site. The risks identified have been ranked in order of risk rating and collated in Table 3.1 below. The proceeding sections outlines the proposed action items for each risk.

Table 3.1: Fire Risk Items

Fire Risk Items			Recommendations
Fire Spread: Compartmentalisation	The following materials are stockpiled onsite: • Mixed dry recyclables • Cardboard • Bailed paper • Bailed cardboard • Bailed plastic Cardboard is stockpiled in the MRF building before being bailed. The stockpile is contained on one sides by a concrete wall. A clear zone exists to the three faces of the stockpiles. Baled paper, baled cardboard and baled plastic are stored in the bale storage area. These bales are stored without adequate separation from each other.	4	See Section 3.1.1
Fixed Installations	The following fixed installations are on site; • Balers • Compressors • Over-band magnets • Bag opener • Picking lines • OCC screen • Deck ballistic separators • Optical separators • Eddy current separators • Conveyor Machinery is relatively new and has not required servicing or maintenance No records available.	2	See Section 3.1.2
Fire Extinguishing: Hydrants	Fire hydrant connections located at the four corners of the buildings. These hydrants are fed from an underground water storage tank. Location of all fire hydrants not immediately obvious, but FHR have organised to get signage erected by the fire hydrants and the covers re-painted yellow.	2	See Section 3.1.3
Training Fire Service: Pre-Inspection	Fire Service have not conducted a pre-inspection of the facility.	2	See Section 3.1.7
Training: Refresher Training	No refresher training system in place	2	See Section 3.1.8
Testing and Maintenance: Stair cases and Gangways	Stairs at the side of MRF building are currently not inspected.	2	See Section 3.1.10

3.1.1 Fire Spread: Stockpile Management and Compartmentalisation

Table shows the EA recommended guidance on maximum stockpile sizes.

Table 3.2: Stockpile Management: Sizing

Maximum Waste Stockpile			
Waste type	**Loose and more than 150mm**	**30 to 150mm or baled**	**Less than 30mm**
Tires and rubber	450 m^3	300 m^3	300 m^3
Wood	750 m^3	450 m^3	300 m^3
Compost and green waste (excluding during the active composting process)	750 m^3	450 m^3	450 c m^3
RDF and SRF	450 m^3	450 m^3	450 m^3
Plastics	**750 m^3**	**450 m^3**	**300 m^3**
Paper and cardboard	**750 m^3**	**750 m^3**	**450 m^3**
Textiles	750 m^3	750 m^3	400 m^3
WEEE containing plastics, including fridges, computers and televisions	450 m^3	450 m^3	450 m^3
Metals other than WEEE	750 m^3	450 m^3	450 m^3
Fragmentiser fluff	450 m^3	450 m^3	450 m^3

materials closely associated with those currently onsite in **bold*

It is noted on all waste piles:

- the maximum height allowed is 4 metres.
- the maximum length or width allowed (whichever is the longest) is 20 metres.

EA guidance on the prevention of fire spread recommends:

- combustible wastes are stored with a separation distance of at least 6 metres between stockpiles
- a separation distance of at least 6 metres between waste piles and the site perimeter, any buildings, or other combustible or flammable materials

It is further advised that distances may be reduced by using fire walls and bays. Fire walls and bays must be designed to:

- resist fire (both radiative heat and flaming)
- have a fire resistance period of at least 120 minutes to allow waste to be isolated and to enable a fire to be extinguished within 4 hours

Wastes stored in fire bays must be subject to:

- full and frequent stock rotation i.e. a first in, first out policy
- temperatures check as required

The design of fire bays should ensure:

- an adequate thermal barrier to prevent transmission
- that all joints will be adequately sealed
- that construction has into accounted calculation of flame height and radiation in preventing the spread of fire between piles
- adequate 'freeboard' to top and sides of the walls clear at all times to prevent fire spreading over the walls
- bays are accessible for the quick removal of waste and availability of a quarantine area

It is recommended that a Waste Storage Plan for the site be developed in accordance with EA and EPA guidelines for the storage of waste. The design and construction of all fire wall and separation structures should meet the requirements as outlined above.

The recommendations of the waste management plan should be further integrated into the daily checklists for the site to ensure stockpiles are maintained appropriately, ensuring maximum stockpile sizes and adequate freeboard and/or separation distances are maintained.

It is recommended that the stockpile location plan is updated as the picking line has been removed and some stockpiles locations have changed.

3.1.2 Fixed Installations

It is recommended that all electrical installations associated with fixed installation infrastructure i.e. waste processing lines be subjected to annual (or other suitable periodic inspection) testing by an appropriately qualified electrician or specialist. Testing should include infrared heat monitoring on all electrical installation panels for fault detection. Records of these services should be kept onsite.

3.1.3 Fire Extinguishing: Hydrants

Hydrants which are located at the four corners of the building are currently not marked or signposted. FHR have organised for all fire hydrant locations to be appropriately marked and signposted in accordance with guidance. Once this is complete this item will reduce to a risk rating of 1.

3.1.4 Training Fire Service: Pre-inspection

It is recommended that the local Fire station carry out a pre-inspection of the site. This site walkover will allow the fire services to become familiar with the site and be better prepared to fight a fire should one take place.

3.1.5 Training: Refresher Training

It is recommended all staff be trained in the use of firefighting equipment and refresher courses given periodically.

3.1.6 Testing and Maintenance: Stair cases and Gangways

Stair cases and gangways should be subject to regular inspection and records kept.

3.1.7 Other

The break glass unit beside the fire exit door in the bale storage area on the northern wall was not yet installed. This should be installed as soon as possible and connected into the fire alarm system.
The proposed sprinkler system which was discussed for the MRF should be installed as soon as possible.

Appendix 1

Site Safety Induction

Site Safety Induction

FORGE HILL RECYCLING

FORGE HILL, BALLYCURREEN,

CO. CORK. T12 AK44

Site Safety Philosophy

- The site has embraced Safety management and aims for the highest performance in order to provide and maintain a safe and healthy environment.
- We will comply with Legal obligations under the Health and Safety Act
- We want to ensure that all workers have a clear understanding of their responsibilities along with that of
- Maintain a high standard of Environmental care.

FHR is committed to providing and maintaining a safe and healthy working environment for all its team members and contractors.

Site Inductions

- You have probably gone through hundreds of site inductions and will probably go through hundreds more
- The induction is important as all sites are different and have a wide range of hazards which will change as the site develops
- This site induction is specific to this site and provides you with information on the current hazards of the site and tells you about the site rules

Please pay attention for the next few minutes

Standard Site Rules

- Obey site speed limit 10KPH
- Obey all safety rules and signs at all times
- Warn others if the work you are doing creates a risk to them
- Always wear the appropriate Personal Protective Equipment PPE. If your PPE is defective or damaged get it replaced immediately.
- Good housekeeping practices are mandatory. Always tidy up as you work.
- Never operate equipment unless you have been trained to do so.
- Do not indulge in horseplay

Standard Site Rules

- Never throw any objects
- Do not smoke in prohibited areas
- Do not ride on vehicles – when only the driver is permitted.
- Do not possess or consume alcohol, drugs or other intoxicants on site. Do not be under their influence when entering the workplace
- Report all accidents and dangerous occurrences
- Report all safety hazards and defects in plant or equipment immediately
- Co-operate in the investigation of accidents/incidents
- Do not carry out maintenance on operating machinery

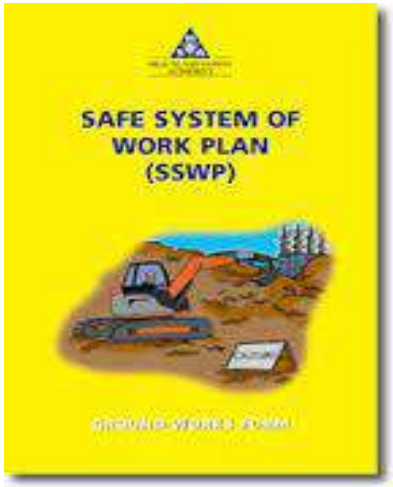
Competencies & Qualifications

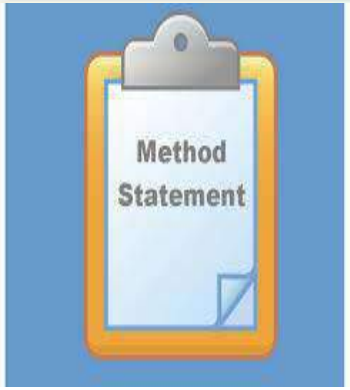
- Workers will not be allowed on site without the possession of a valid SAFE PASS CARD
- All workers must have MANUAL HANDLING training before commencing work on site
- Only competent trained personnel will be allowed use ABRASIVE WHEEL equipment on site
- Mobile machinery and MEWPs may only be operated by personnel in possession of the appropriate CSCS card.

Any personnel discovered operating any of the equipment/machinery indicated above without the possession of the appropriate training will be immediately removed from the Forge Hill Recycling site.

Method Statement/SSWP

- Method Statements and/or Safe Systems of Work Plans will be provided for all aspects of work to be performed
- MS / SSWP must be read and understood by all workers before commencing work activity
- MS / SSWP must be signed off by all workers partaking in that specific work activity
- Any unforeseen additional work activities, not included in the MS or SSWP provided, will be risk assessed and a MS or SSWP formed immediately.





Personal Protective Equipment

Please ensure your PPE is maintained and that you USE it!

Minimum Requirement

- Long Sleeve Shirts and Pants
- High Visibility Vests
- Steel Toe Cap Boots
- Gloves
- Hard Hat

Safety Equipment as Required

- Respiratory Mask
- Safety Glasses/ Goggles
- Hearing protection

Emergency Evacuation

If alarm is raised:

<u>Exit Routes</u>

Exit routes exist at each side of the Materials Recovery Facility (MRF)

Exit the site via either access gate at the south side of the site

<u>ON HEARING AN ALARM</u>

Leave the building/area by the nearest available exit route

DO NOT delay your escape

Go to the assembly point - Located at the main office just outside Canteen

Do not delay to collect belongings

Emergency & Other Contacts

Emergency Contact

Fire Brigade /Ambulance:	999 or 112
Garda Station:	(021) 494 7120
Local Doctor:	(021) 496 3664
Nearest Hospital/A&E	(021) 492 2000 (CUH)

Other Contacts

Environmental Protection Agency	(021) 487 5540
Cork City Council	(021) 496 6222
Health & Safety Authority	1890 289 389
ESB Networks	1850 372 999
Eir	1901

Full list of Emergency Contacts displayed in Main Office Corridor

First Aid & Welfare Facilities

First Aid

A first aid Kit is available in the Main Office area on wall

Occupational First Aider is DJ Gleeson 087 2530864

Welfare Facilities

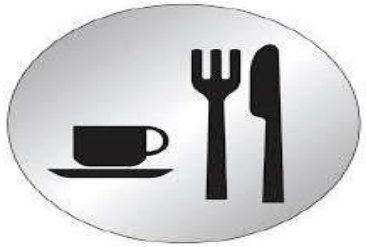
Canteen (beside main office)

Toilets (south of main office)

Changing Room (beside canteen)

Drying Room (north of main office)

Drinking water/tea/coffee facilities present in canteen



Fire Prevention

- Do NOT use a fire extinguisher unless trained.
- Using the wrong extinguisher is Dangerous.
- Fire Extinguishers are located throughout the MRF positioned on the walls
- Fire Hose reels are also positioned on the walls throughout the MRF
- Do not use a hose reel on electrical equipment

WATER

POWDER

FOAM

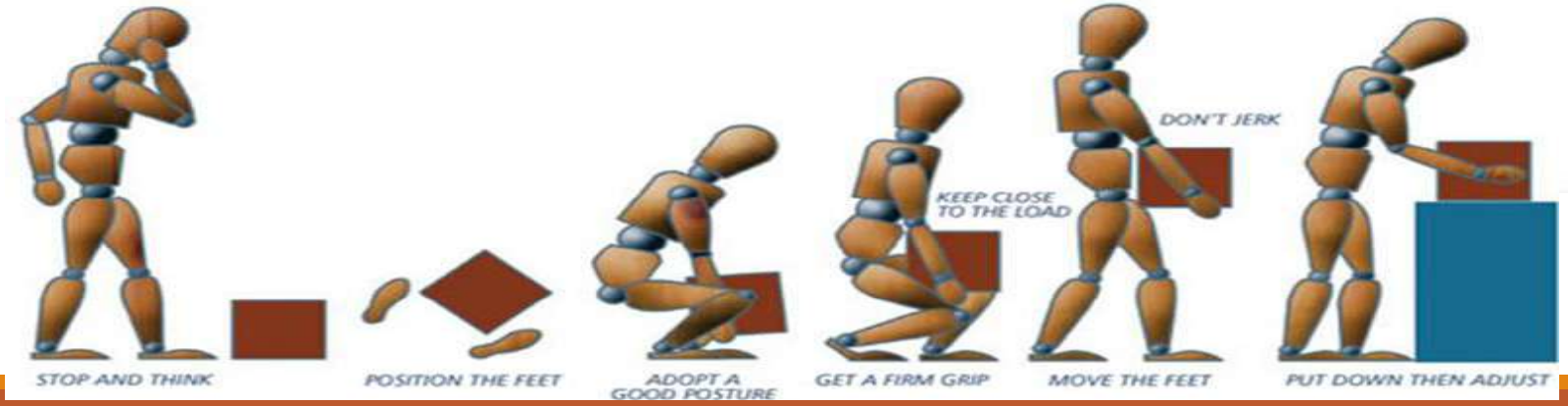
CO2

Site Risks

- Slips Trips and falls
- Manual Handling
- Hot and harmful Substances.
- Exposure to Inherent hazards whilst working at the Cork Premises.
- Chemical Hazards
- Working with electrical equipment
- Working in close range to mobile machinery
- Fall from height

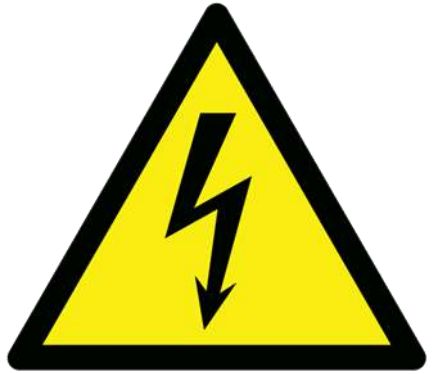
Manual Handling

- Assess the load you are about to lift.
- Get help, or a trolley if you need it.
- Bend your knees and lift with your legs.
- Keep your back in a neutral position (Not Straight).
- Keep the load close to you.
- Do not twist while holding a heavy load.



Electrical Safety

- Treat electricity with respect
- All Electrical Equipment used at FHR must have a current test label attached to it indicating it has passed the PAT test.
- Please report untested or out of date equipment to your supervisor.
- Check constantly that cables are not damaged or worn
- Keep trailing cables off the ground and away from water
- Never overload or use makeshift plugs and fuses

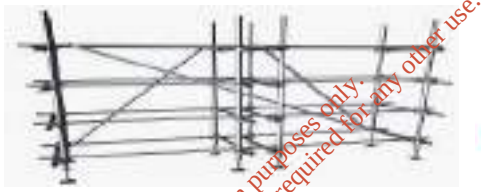


Traffic and Vehicles

- Follow Pedestrian Walkways
- When near machinery listen/watch for flashing beacons alarm
- Wear PPE at all times especially High Visibility Clothing
- All Vehicles have reversing alarms/sirens
- Never walk under a raised loader / MEWP

Working At Height

- Use secure platforms with proper edge protection
- Protect holes, leading edges and fragile materials
- Consider weather conditions
- If in doubt - speak to your supervisor



- Only trained operatives are allowed to erect alter or dismantle scaffolding or mobile towers
- Always ensure alloy towers and system scaffolds are erected to the manufacturers build guide
- Full body harness and lanyard must be used when working at height with MEWPs

- Use the safest access equipment for the job, (not the most convenient)
- Ladders and stepladders must be located on a firm level base and only used for short duration light duty work
- Keep your knees below the top tread when working on a stepladder and maintain 3 points of contact (either 2 hands & 1 foot or 2 feet & 1 hand)

Accidents & Dangerous Occurrences

- All accidents (minor or major) requiring first aid assistance (or emergency services) should be directed through Health & Safety Officer or Site Supervisor
- All accidents and incidents must have an incident form completed
- Workers must comply fully with accident/incident investigation
- Any issues relating to safety may be directed towards the Health & Safety Officer or Site Supervisor

NAME	POSITION	CONTACT NO.
JOHN BARRETT	SITE SUPERVISOR	087 262 7259
DJ GLEESON	H & S Officer	087 253 0864

Final Thoughts

- Think about what you are doing
- Develop good housekeeping habits
- Observe and be aware
- Report hazards so that they can be fixed
- When unsure please ask

Please feel free to ask any questions you may have, before you sign your induction form

Thank you for your time and co-operation

Appendix 2

Visitor & Contractor Safety Induction

Environmental Health & Safety Induction

Vis/Con Name: _____.

Signature: _____.

Date: _____.

Site Safety Philosophy

FHR is committed to providing and maintaining a safe and healthy working environment for all its team members and contractors.

- The site has embraced Safety management and aims for the highest performance in order to provide and maintain a safe and healthy environment.
- We will comply with Legal obligations under the Health and Safety Act
- We will include Employees and contractors in continuous improvement of health and safety practices
- Maintain a high standard of Environmental care.

Site Rules

- Smoking only permitted within designated area.
- **All Visitors/Contractors must sign in and out at the front desk.**
- PPE must be worn in restricted areas.
- Wash hands before eating.

Wash Hands

Site Rules-*Traffic &Pedestrians*

- Obey speed Limits 10kph
- Pedestrians and Traffic must obey the signs.
- Extreme caution should be taken due to the presence of people onsite in particular within the Materials Recovery Facility.
- **Members of the Public must be accompanied by a FHR Employee within the Material Recovery Facility and outside waste processing areas.**
- Manoeuvring, particularly reversing, must be carried out carefully using reversing sounders.

Wash Hands

Site Risks

- Slips Trips and falls
- Manual Handling
- Hot and harmful Substances.
- Exposure to Inherent hazards whilst working at the Cork Premises.
- Chemical Hazards

Emergency & Other Contacts

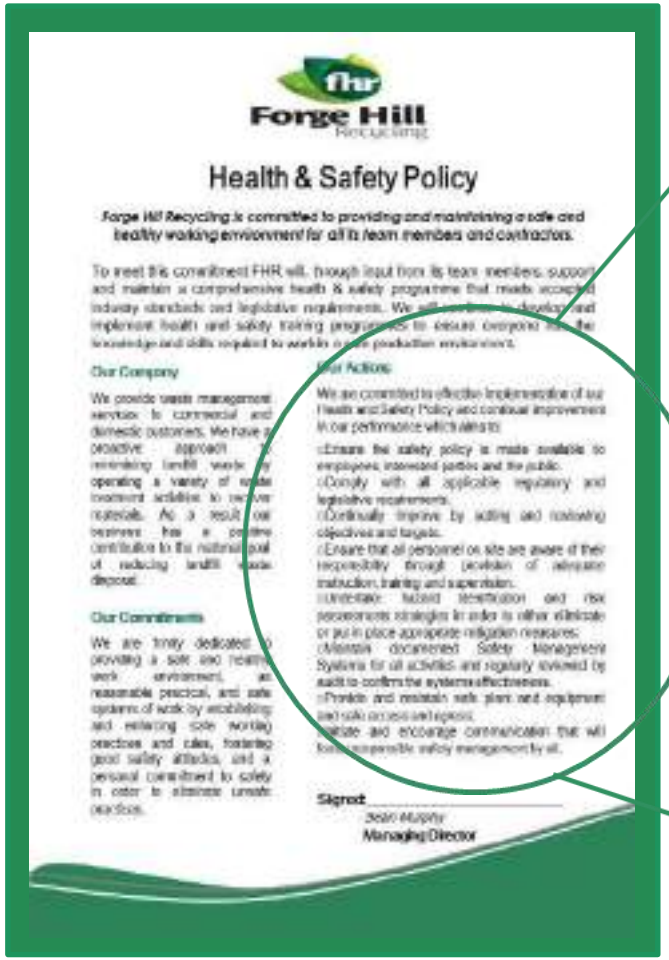
Emergency Contact

Fire Brigade /Ambulance/Police:	999 or 112

Other Contacts

Environmental Protection Agency	(021) 487 5540
Cork City Council	(021) 4966222
Eir	1901

Safety Policy Objectives



Forge Hill Recycling

Health & Safety Policy

Forge Hill Recycling is committed to providing and maintaining a safe and healthy working environment for all its team members and contractors.

To meet this commitment FHR will, through input from its team members, support and maintain a comprehensive health & safety programme that meets accepted industry standards and legislative requirements. We will continually develop and implement health and safety training programmes to ensure everyone has the knowledge and skills required to work in a safe production environment.

Our Company

We provide waste management services to commercial and domestic customers. We have a proactive approach to minimising landfill waste by operating a variety of waste treatment activities to recover materials. As a result our business has a positive contribution to the national goal of reducing landfill waste deposit.

Our Commitments

We are firmly dedicated to providing a safe and healthy work environment, as reasonable practical, and safe systems of work by establishing and enforcing safe working practices and rules, fostering good safety attitudes, and a personal commitment to safety in order to eliminate unsafe practices.

Our Actions

We are committed to effective implementation of our Health and Safety Policy and continual improvement in our performance which aims to:

- Ensure the safety policy is made available to employees, interested parties and the public.
- Comply with all applicable regulatory and legislative requirements.
- Continually improve by setting and reviewing objectives and targets.
- Ensure that all personnel on site are aware of their responsibility through provision of adequate instruction, training and supervision.
- Undertake hazard identification and risk assessments strategies in order to either eliminate or put in place appropriate mitigation measures;
- Maintain documented Safety Management Systems for all activities and regularly reviewed by audit to confirm the systems effectiveness.
- Provide and maintain safe plant and equipment and safe access and egress.
- Initiate and encourage communication that will foster responsible safety management by all.

Signed: _____

Sean Murphy

Managing Director

- Ensure the safety policy is made available to employees, interested parties and the public.
- Comply with all applicable regulatory & legislative requirements.
- Continually improve by setting &reviewing objectives and targets.
- Ensure that all personnel on site are aware of their responsibility through provision of adequate instruction, training and supervision.
- Undertake hazard identification & risk assessments strategies in order to either eliminate or put in place appropriate mitigation measures;
- Maintain documented Safety Management Systems for all activities and regularly review by audit to confirm the systems effectiveness.
- Provide & maintain safe plant and equipment and safe access and egress.
- Initiate and encourage communication that will foster responsible safety management by all.

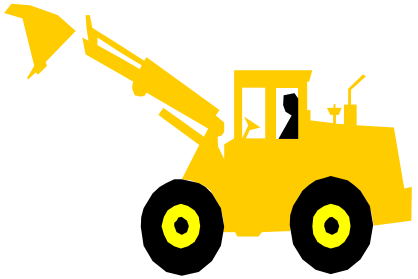
Manual Handling

- Assess the load you are about to lift.
- Get help, or a trolley if you need it.
- Bend your knees and lift with your legs.
- Keep your back in a neutral position (Not Straight).
- Keep the load close to you.
- Do not twist while holding a heavy load.

Safety Procedures

- On-Site Mobile Machinery Inspection
- Emergency Evacuation
- Pregnant Employee
- Hot Works Permit
- Lock Out Tag Out (LOTO)
- Inoculation (sharps) Injury or Blood Borne Pathogen Exposure
- Waste Acceptance (MDR)
- Waste Quarantine Procedure
- Loading Shovel & Teleporter
- 360° Material Handler
- Forklift trucks (FLTs)
- Loading Product Onto Artic Trailers
- Electrical Equipment

Traffic and Vehicles



- Follow Pedestrian Walkways.
- Use Flag system to alert fork lift drivers of presence near stacked bales.
- When near machinery listen/watch for flashing beacons &reverse alarm.
- Wear PPE at all times especially High Visibility Clothing.
- All Vehicles have reversing alarms/sirens.

Fire Prevention

IF YOU DISCOVER A FIRE

- Shout '**FIRE**'.
- Tackle the fire using the extinguishers / fire blanket / hose reels only IF TRAINED TO DO SO.
- Do not use the hoses near electrical equipment or flammable liquids.
- If you put the fire out watch for re-ignition.

IF YOU CANNOT CONTROL THE FIRE

- Sound the alarm at the nearest break glass point.
- Proceed to your designated "Fire Assembly Point" and await further instructions.
- Do **Not** go back into the building.

Fire Prevention

ON HEARING AN ALARM

- Leave the building by the nearest available fire escape route.
- DO NOT delay your escape.
- Go to the assembly area (at main entrance) and await instruction
- Do not delay to collect belongings
- If smoke is present then keep low to the floor to aid your escape

Fire Prevention

On Exiting the Building

- Report any missing colleagues to your Fire Warden
- Report any disabled persons
- Remain at assembly point until advised otherwise
- Do not wander off as it may be assumed that you are trapped in the building

Fire Prevention

Do **NOT** use unless trained. Using the wrong extinguisher is Dangerous.

WATER

Paper, wood, etc.
Not electrical, liquids or gases

FOAM

Solids (Wood, Paper, Textiles)
Flammable liquids
Not electrical or gases

POWDER

Solids (Wood, Paper, Textiles),
Flammable liquids, gases & electrical

CARBON DIOXIDE (CO_2)

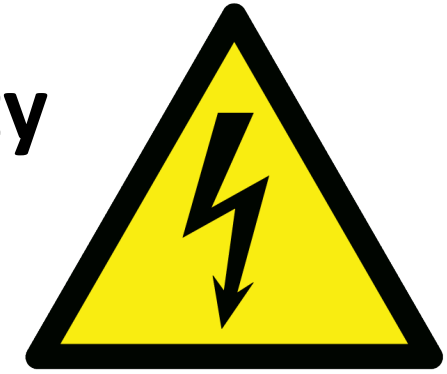
Electrical, safe on most small fires
Do **Not** Touch the Nozzle when operating

Remember: Always point at the base of the fire.

Fire Prevention

- Very effective at smothering a local fire.
- And wrapping someone who's clothing has caught fire.

Electrical Safety



- Treat electricity with respect
- All Electrical Equipment used at FHR must have a current test label attached to it indicating it has passed the PAT test.
- Please report untested or out of date equipment to your supervisor.
- Check constantly that cables are not damaged or worn
- Keep trailing cables off the ground and away from water
- Never overload or use makeshift plugs and fuses

Lock Out Tag Out (LOTO)

- All energy sources e.g. motors, conveyors, valves. Pipes etc. will be isolated and locked out prior to commencing any work.
- Primary isolation will be performed by an authorised person prior to any isolation.
- Primary isolation consists of a yellow Tag and an Out of Service Tag.
- Personal isolation will be performed by persons who are working on the equipment.
- Personal isolation consists of a red lock and danger tag.
- Personnel isolation must be removed when the work is complete or at the end of the shift which ever is earlier.

Lock Out Tag Out (LOTO)

- The DANGER Tag:

Identifies the person placing the tag and their department.

- The Out of Service Tag:

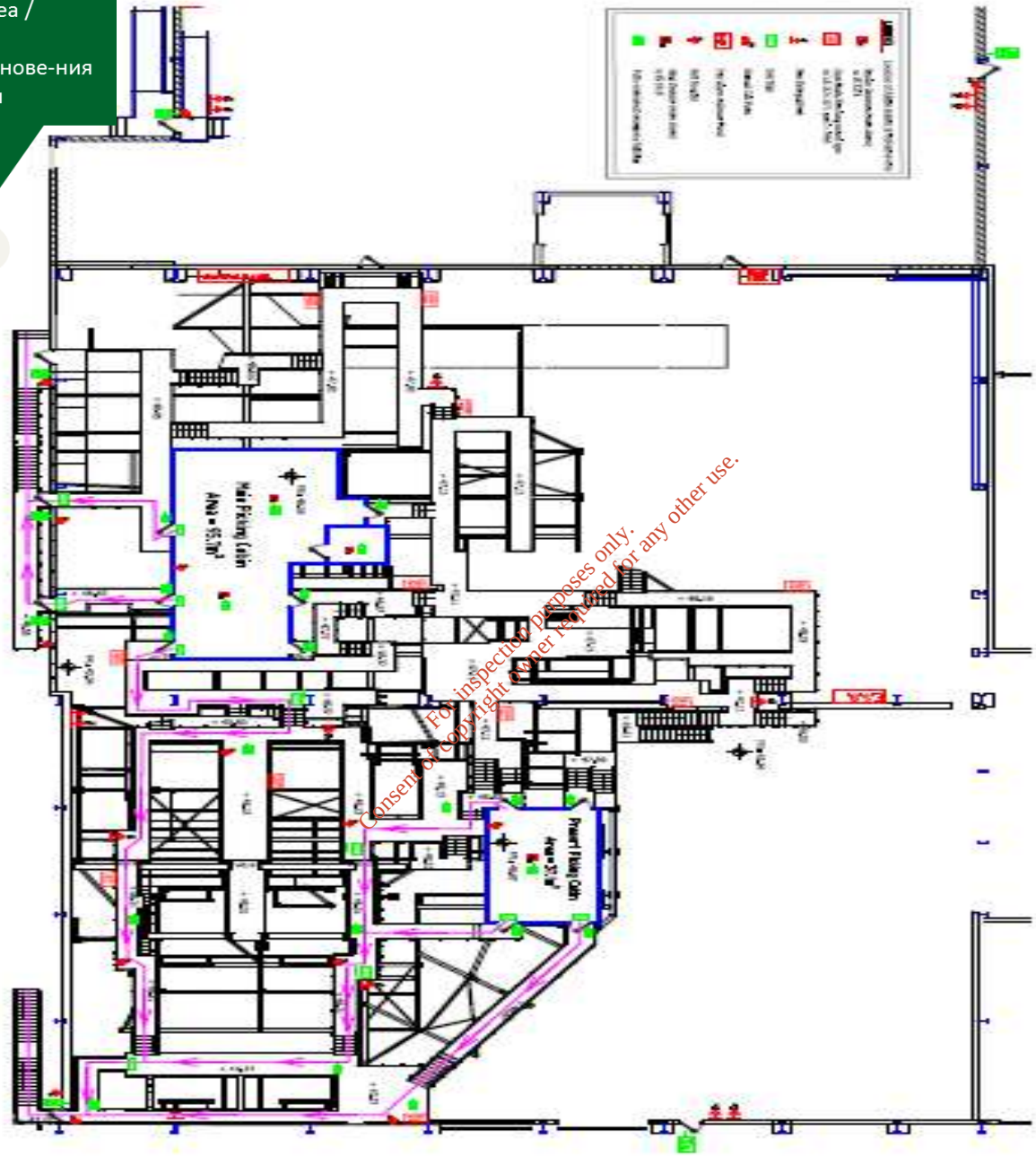
Identifies the person performing the primary isolation their department the time and date it was placed and the reason for placing it.

Contractor Hot Works Permit

- Contractors require a Hot Works Permit for any hot works activities that will be undertaken in the Materials Recovery Facility (MRF)
- Hot works activities includes but is not limited to grinding, welding (all types), hot cutting, soldering, brazing, cutting and any other work with the potential to generate a spark or an ignition source.
- A Hot Works Permit Procedure will be communicated to you before commencing hot works in the MRF
- Hot Works Permits are available from H&S Officer, Production Manager & Maintenance Manager
- All aspects of the Hot Works Permit when issued must be adhered to

Emergency Assembly Area /
Miejsce zbiórki /
Место сбора в случае возникнове-ния аварийной ситуации

Assembly point



Legend / Legenda / Надпись

- Fire Exit / Wyjście ewakuacyjne / Пожарный выход
- Emergency Assembly Area / Miejsce zbiórki / Место сбора в случае возник Пожарный новения аварийной ситуации
- Walkways / Ścieżki dla pieszych / Пешеходные дорожки

Forge Hill Recycling

Personal Protective Equipment (PPE)

Please ensure your PPE is maintained and that you **USE** it!

Minimum Requirement

- Long Sleeve Shirts and Pants
- High Visibility Vests
- Steel Toe Cap Boots
- Gloves

Safety Equipment as Required

- Respiratory Mask
- Safety Glasses/ Goggles
- Hearing protection

Personal Hygiene

- Wash hands & face before eating
- Change work clothes every day
- Shower and washing hair after work

First Aid

- A first aid Kit is available in the Canteen, Production Managers Office and in Main Office area
- First Aid officers include:

Accidents

All accidents (*minor or major*) requiring first aid assistance (or emergency services) should be directed through the EHS Department.

All accidents and incidents must have an incident form completed, and immediately forwarded to the EHS Department.

Final Thoughts

- “Duty of Care”
- Safety is a two way street. There is responsibility on both Employer and Employee to contribute to a healthy safe workplace.
- Think about what you are doing.
- Develop good housekeeping habits.
- Observe and be aware
- Report hazards so that they can be fixed.
- When unsure please ask.

Appendix 3

Fire Warden Certificates

frs training

Certificate of Training

This is to certify that

Adam Sikorski

Successfully completed the FRS Programme

FIRE WARDEN TRAINING

And in recognition thereof is awarded this certificate on:

1st July, 2017

(Expiry: 1st July, 2020)

Seamus O'Rjain

Instructor

frs training

Certificate of Training

This is to certify that

Rinalds Berzins

Successfully completed the FRS Programme

FIRE WARDEN TRAINING

And in recognition thereof is awarded this certificate on:

1st July, 2017

(Expiry: 1st July, 2020)

Seamus O'Riain

Instructor

Appendix 4

Training Matrix

IRE Staff		Safety Induction	Date Completed	Manual Handling	Next Due Date	Forklift 2500kgs	Next Due Date	Teleporter	Date Completed	Loading Shovel	Next Due Date	360 Excavator	Date Completed	Fire Warden	Date Completed
Denis	Gott	Y	09/08/2016	Y	09/08/2019										
Robert	Higgins	Y	13/12/2016	Y	20/06/2019	Y	17/06/2019								
Srecko	Znahor	Y	26/10/2016	Y	19/05/2019										
Mladen	Jonjic	Y	12/12/2016	Y	20/09/2019					Y	25/10/2017				
Andelko	Kapuralic	Y	26/10/2016	Y	26/10/2019										
Mirzo	Malkoc	Y	26/10/2016	Y	26/10/2019										
Rinalds	Berzins	Y	01/09/2015	Y	31/01/2018							Y	01/12/2019	Y	01/07/2017
Edgars	Klagiss	Y	11/09/2015	Y	31/01/2018					Y	25/10/2017	Y	01/12/2019		
Andrejs	Orups	Y	01/09/2015	Y	31/01/2018	Y	11/10/2017								
DJ	Gleeson	Y	09/05/2016	Y	01/12/2017										
Niall	Jordan	Y	07/06/2016												

FRS Staff		Safety Induction	Date Completed	Manual Handling	Next Due Date	Forklift 2500kgs	Next Due Date	Teleporter	Date Completed	Loading Shovel	Next Due Date	360 Excavator	Date Completed	Fire Warden	Date Completed
Aleksejs	Ivanovs	Y	13/12/2016	Y	31/01/2018			N	29/04/2011	Y	25/09/2017	N	03/05/2011		
Ilona	Vaitkiene	Y	29/06/2016	Y	28/01/2020										
Modesta	Daniele	Y	29/06/2016	N											
Ingrida	Danieliene	Y	29/06/2016	N											
Lukas	Danielius	Y	29/06/2016	N											
Mariusz	Malec	Y	01/09/2015	Y	31/01/2018										
Leszek	Szporko	Y	13/12/2016	Y	28/01/2020										
Anna	Szporko	Y	19/01/2017	Y	28/01/2020										
Vanda	Kurakina	Y	08/07/2016	N											
Claudia	Maciuca	Y	13/07/2016	Y	21/03/2019										
Tomasz	Gawron	Y	13/07/2016	Y	28/01/2020							Y	01/12/2019		
Zbignew	Kwinta	Y	12/12/2016	Y	29/05/2018	Y	12/10/2017					Y	01/12/2019		
Valentina	Teleznikovs	Y	13/12/2016	N											
Jurijs	Savicenko	Y	13/12/2016	Y	31/01/2018	Y	11/10/2017	N	11/05/2016	Y	11/10/2017				
Daina	Plata	Y	20/12/2016	Y	28/01/2020										
Aivars	Rumba	Y	20/12/2016	Y	28/01/2020										
Josef	Prawica	Y	13/12/2016	N											
Josef	Rak	Y	13/12/2016	N											
Lucya	Prawica	Y	13/12/2016	N											
Marcin	Scmitke	Y	12/12/2016	Y	29/05/2018	Y	12/10/2017								
Henryk	Dabrinowski	Y	12/12/2016	Y	29/05/2018										
Mikeben	Nwaokolo	Y	23/07/2016	N											
Marek	Ostasz	Y	29/07/2016	N		Y	12/10/2017								

Tadeusz	Jozefczuk	Y	28/06/2016	N											
Hilda	Grace	Y	08/08/2016	Y	01/11/2017										
Dahijel	Sarić	Y	02/08/2016	Y	28/07/2019										
Ionot	Plop	Y	10/08/2016	Y	21/03/2019										
Piotr	Sikorski	Y	13/12/2016	N	28/04/2014										
Kevin	O' Brien	Y	30/09/2016	Y	16/09/2019										
Vedrana	Vrankić	Y	12/12/2016												
Petrs	Kulvinskis	Y	13/10/2016	Y	28/01/2020										
Aleksandar	Velikov	Y	19/10/2016												
David	Nugent	Y	13/12/2016	Y	01/10/2019										
Ridwan	Shariff	Y	14/12/2016												
Christy	O' Leary	Y	13/12/2016	Y	28/01/2020								Y	01/12/2019	
Greg	Twohig	Y	25/07/2017	Y	27/01/2020										
Solvita	Mieze	Y	01/09/2017												
Anna	Gajewskia	Y	31/08/2017												
Beata	Gluszek	Y	19/01/2017												
Pavel	Sikorski	Y	14/02/2017												
Hicham	Bouguerri	Y	13/02/2017												
Alex	Backari	Y	06/03/2017												
Marius	Inta	Y	06/03/2017												
Stephen	Mahon	Y	06/03/2017												
Eric	Warren	Y	06/03/2017												
Cian	Hayes	Y	06/03/2017												
Victor	Ribas Fernendes	Y	06/03/2017												
Bojan	Simek	Y	06/03/2017												
Iwona	Gotwald	Y	01/09/2017												
Adam	Sikorski	Y	01/09/2017											Y	01/07/2017
Edsond	Moteiro	Y	31/08/2017												
Edgars	Jakubovskij	Y	06/03/2017												
Francis	Hennessy	Y	31/08/2017												
Blanka	Sikorska	N													
Aija	Raistere	Y	29/06/2017												
Mateusz	Malec	Y	12/07/2017												
Bernard	Ameyaw	Y	26/06/2017												
Inta	Bulina	Y	19/07/2017												
Alan	Stokes	Y	25/07/2017												
Jonathan	Healy	Y	28/07/2017												
Paulius	Kazlauskas	Y	09/08/2017												
Mitka	Radev	Y	10/08/2017												
Vivian	Felix	Y	19/08/2017												
Afriyie	Opoku	Y	28/08/2017												
Balazs	Mate	Y	22/08/2017												
Charles	Bosomtwe Anwa	Y	30/08/2017												
Aidan	O' Riordan	Y	18/09/2017												
Anthony	Buckley	Y	03/07/2017												
Robert	Wotkowski	Y	05/12/2016	Y	05/11/2017	Y	04/01/2017								

Appendix 5

Fire Drill Records

Forge Hill Recycling

Health & Safety
Safety Forms

FHR FM15 Fire Drill Check Sheet

Date: 21/11/2016

Drill Observer: DJ Gleeson Phone: 021 4311847

PRIOR TO DRILL:	YES	NO
Have Fire wardens been assigned and trained?		✓
Do Fire wardens have vests or caps for identification?		✓
Have persons with disabilities been identified and assigned help to assist in evacuation to a refuge area?	✓	
Have assembly areas been designated and employees trained?	✓	
Are "emergency plans/procedures" posted?		✓

DURING THE DRILL:	YES	NO
Did the occupants evacuate the building immediately after the evacuation was initiated?	✓	
Was evacuation orderly and quick?	✓	
The Office & Yard was evacuated in 4 Minutes?	✓	
Did civil defence respond?		✓
Were instructions given to move to the designated assembly points?	✓	
Were all exits used?		✓
Were all restrooms, conference rooms checked?	✓	
Did fire door operate correctly?	✓	
Was everybody continuously kept informed regarding the situation?	✓	
Was a communication system applied during the evacuation?		✓

Drill Information	
Number of persons who were present at office on drill date?	2.
The time when you reached the assembly point (HH:MM)	11.32.
Number of persons evacuated the office & Yard to the assembly point (Count at assembly point)	17.

FHR FM15 Fire Drill Check Sheet

AFTER THE DRILL:	YES	NO
Were all employees and guests accounted for?	✓	
Did all alarms work properly?	✓	
Was there any significant disruption of services?		✓
Did everyone remain outside the building and wait for further instructions?	✓	
Are staff members familiar with their assigned duties?	✓	

List any problems observed:

- Must train Fire wardens & erect emergency Plans/procedures.

Drill Feedback:

There weren't any trucks delivering or collecting loads when the fire Drill was undertaken so the issue of evacuating the truck drivers if on-site during a fire must be investigated.

Observed By: DJ Gleeson.

Date: 21/11/2016.

Signature: DJ Gleeson

5.0 RECORD OF FIRE SAFETY TRAINING/DRILLS

Note: Copy and attach any certificates issued by training provider for submission to any authorised officer of [redacted] County Fire Service

Date: 21st November 2016.

Duration: 25 Minutes.

Name of Training Provider: In house.

Instructor Name: DJ Gleeson.

Nature of Training: Fire Drill.

List of Attendees:

Modesta Daniele
Lukas Daniclius.
Filipe Alves.
Anna Szporko
Vanda Kurakina
Claudia Maciuca.
Tomasz Gawron
Marcin Szmitke
Mikeben Nwaokolo
Marek Ostasz.
Hilda Grace.
Ionot Plop.
Vedrana Vrantić
Aleksandar Velikov
Ridwan Shariff
Rinalds Berzins (F.W.)

Signed: DJ Gleeson.

Appendix 6

Mobile Plant Service Records

LIEBHERR

SERVICE TIME SHEET

BIGGLESWADE 01767 602100 | BATHGATE 01506 651580 | ABERDEEN 01224 790404 | WIGAN 01942 528500 | BRISTOL 01934 420770 | DUBLIN 01 456 7650 | CANNOCK 01543 495100

61	Customer	20	Job No.	28	Machine Model
62	Site			30	Type / Serial/Work No.
63				10	Hours/Miles
64				10	Hours/Kms

Travelling to and from Job						Working Time						
Day / Date	Depart-from	Time	Arrive at	Time	Hours	From	To	Hours	Waiting Hours	Less Break Hours	Total Hours	Mileage Reading
									Total			

Reason for Visit

Details of work carried out

Work outstanding

Parts Used			Serial no. old unit			Serial no. new unit		
Quantity	Ident. no.	Description	Quantity	Ident. no.	Description			

Fitter's Name: _____

Fitter's Signature: _____

We/I confirm acceptance of work and time as stated above:
Name: _____

Signature: _____

ALWAYS WORK IN ACCORDANCE WITH THE COMPANY HEALTH & SAFETY MANUAL AND SITE SAFETY REGULATIONS

No. 458194

REF: LGB 93/95 YELLOW - LGB SERVICE BLUE - LGB SPARE PINK - CUSTOMER WHITE - LGB ADMIN

LIEBHERR - Great Britain Ltd

JOB SPECIFIC SAFETY ASSESSMENT

Name:	Work Required:	Date:
Customer:	Location / Site:	Job No:

Write in specific Risk Assessment References below applicable to the task:

Before you start work, please consider this task checklist (tick appropriate box)	YES	NO	Not Applicable
Have you signed in to the site office and if necessary been inducted?		✓	
Are you aware of the site safety and environmental rules?	✓		
Do you have access to all the necessary information required to carry out the task in hand?	✓		
Are you aware of the site procedures in case of emergencies such as accidents or fire?	✓		
Can you gain safe access to and from the machine/job?	✓		
Is the machine/job in a suitable & safe area?	✓		
Are you protected from falling objects, overhead power lines and Traffic Movements?	✓		
Is there sufficient lighting to carry out the task safely?	✓		
Do you have the required personnel protective equipment (PPE) for the task, and is it in good condition?	✓		
Are you able to carry out the manual handling aspects of the task?	✓		
Are suitable controls in place to avoid Lone Working situations?	✓		
Is adequate equipment provided for work carried out at heights?			✓
Are you aware of the precautions necessary to protect against personal health risks from hazardous substances?			
Have all other safety issues, not listed above, been identified, and adequately controlled to enable the task to be carried out safely?	✓		
Are you aware of the site rules regarding generating environmental pollution/nuisance from noise, dust, fumes, etc?	✓		
Are you aware of the procedures regarding accidental oil spillage, environmental contamination and Disposal of Controlled Waste?	✓		
If lifting equipment is required, is the equipment and any accessories tested, in good condition and suitable for the task?			✓
Are temporary supports (axle stands/wooden blocks) available and suitable for the task?			✓
Are all power tools tested in date and in good condition? (reduced voltage equipment to be used where possible)			✓

If you are unable to answer YES to any of the above questions, or cannot identify a Risk Assessment to any of the Hazards below, then an attempt should be made to resolve the matter locally. Alternatively, report the matter to your line manager/supervisor before proceeding.

HAZARD IDENTIFICATION: Where a hazard is present in the work area add "Y" to the relevant box. Are the risks associated with the identified hazards addressed in the brief assessments noted above. Yes / No ✓

1	Slips, trips or falls / underfoot conditions	N	8	High pressure / temperature fluids	N
2	Chemicals / harmful substances / hygiene / paint	N	9	Entry into a confined space	N
3	Heat / fire / explosion	N	10	Noise	N
4	Accidental start-up	N	11	Vibration	N
5	Object overturning / collapsing / poorly supported	N	12	Electricity	N
6	Insecure loading / stacking / storage	N	13	Adverse weather	Y
7	Vehicles – moving traffic / pedestrians	N	14	Moving parts / trapping / entanglement / crushing	N

Item	Comment
1	
2	
3	
4	
5	
6	

Other than the Information, Resources and Training that you have, is a specific Method Statement required for the work to be carried out?

If Yes please give details:..... Yes/No.

Name:	Date:	Sign:

Linde Material Handling (Ireland) Limited

Unit 22 Greenhills Industrial Estate, Walkinstown, Dublin 12. Tel: (01) 4566626/7/8 Fax: (01) 4566518

CUSTOMER KWD		DATE 15-9-17	
ADDRESS Cork	FLEET NO. N/A	ORDER NO.	
		SERVICE ENGINEER SDOCAN	
TRUCK H50D SER NO. H42X39405364	HRS 11479	MAST NO.	

REPORT ON FAULT & REPAIR

Truck engine Management Light on full time Check faults on laptop Showing boost pressure fault Checked wiring Wiring broken on Sensor after air filter Still had fault Showing up on truck wiring broken also on Sensor over turbo Wires repaired cleared faults from truck

QTY.	DESCRIPTION	PART NO.	PRICE	TOTAL

ENGINEER REMARKS	BATTERY SG:	TOTAL SPARES

CUSTOMER DAMAGE YES ☐ NO ☐

DATE	START TIME	FINISH TIME			HOURS	RATE	CODE
			FIRST FIX				
15-9-17	12.00	3.30	HOURS WORKED	HRS. X1	3½		
			" "	HRS. X1½			
			" "	HRS. X2			
			TRAVEL HOURS	HRS. X1	1		
			" "	HRS. X1½			
			" "	HRS. X2			

INV. NO.		TOTAL LABOUR	
		MILEAGE	
ACCOUNT CODE	CUSTOMER WANTS COPY ☐	EXPENSES	
		SUB TOTAL	
THE WORK AS STATED ABOVE HAS BEEN CARRIED OUT TO MY SATISFACTION AND THE TIME AND MATERIALS SHOWN ARE CORRECT.		V.A.T.	
		GRAND TOTAL	

CUSTOMER'S SIGNATURE	NO. OF VISITS	W.I.P. NO.
DE Gleeson		

Aerial Platform Hire Ltd
Unit 2B, Clane Business Park
Clane, Co. Kildare

Tel: 045 868 866
Fax: 045 893 782

CONTACT:
SEAN CONNEELY
SERVICE MANAGER

Service Contract

Date: 16th May 2017

Fao: Attn: DJ
Forge Hill Recycling
Forge Hill,
Cork

Email: production@fhr.ie
Tel: 021-431 1847

Proposed Service Dates: May & November 2017
Machine: 450AJ

Ref. P.O..

Total cost per Service: €375.00

Total Cost of Two service visits per annum €750.00 + vat at appropriate rate

NB All prices valid for 12 month period only

I/We the customer have read the Terms and Conditions of this Agreement and we accept the said Terms and Conditions without condition.

Signature: Brian Brayton
Name: BRIAN BRAYTON (BLOCK CAPITALS)
Position: Manager
Date: 22/5/17

Signed on behalf of
Aerial Platform Hire Ltd.
Name: Sean Conneely
Title: SERVICE MANAGER

Appendix 7

Flame Detector Service Records

SERVICE REPORT

Forge Hill Recycling Ltd.

Report No: 111574
Date: 170628

Firefly AB
Phone +46 (0)8 449 25 00, Fax +46 (0)8 449 25 01
Textilgatan 31, SE-120 30 Stockholm, Sweden
www.firefly.se

System Overview

System # 101 - Zon 1-3
FF No9748

System # 102 - Zon 4
FF No9749

System approved.

System failed. Measures shall be taken immediately.

Remark in the system or the function of the system. Shall be corrected according to service report.

Return visit by certified Firefly service engineer is required.

Notes

System # 101 - Zone 1-3

All signals to and from control unit were tested OK.
Relays for stopping the process and indicating fault is not connected to the customs process controller.
System reprogramed there was some minor error and missing equipment.
Detectors tested regarding functions. OK.

The system is approved according to Firefly's system description. With remarks.

System # 102 - Zone 4

All signals to and from control unit were tested OK.
Relays for stopping the process and indicating fault is not connected to the customs process controller.
System reprogramed there was some minor error and missing equipment.
Detectors tested regarding functions. OK.
Eight magnet valves are installed. Extinguish in Tip Area. Come´s later on.

The system is approved according to Firefly's system description. With remarks.

Other to observe

Detector 2-FD-5IR:1 and 4-FD-5IR:1 indicate selftest fail. New one´s are sent from Firefly on warranty.

Christer Ivarsson, Service Engineer

Firefly AB

Firefly AB
Textilgatan 31 | SE-120 30 Stockholm | Sweden
Phone +46 (0)8 449 25 00, Fax +46 (0)8 449 25 01 | info@firefly.se | ww.firefly.se
Reg No 556108-6892 | VAT No SE556108689201 | Registered in Stockholm

Appendix 8

Fire Equipment Certificates

M & K
FIRE DEFENCE LIMITED

Tel: 021 4897745
E-mail: mkfire@eircom.net

Unit 8
H.M.L. Commercial Centre,
Half Moon Lane,
South Douglas Rd,
Cork

CERTIFICATE

Fire Equipment Maintenance

This is to certify that the Hose Reels at:-

Forge Hill Recycling Ltd,
Forge Hill,
Cork.

Have been maintained to the requirements of Irish Standard 291 2015 and conform to Standard E.N.3.

Date of Inspection:- **August 2017**

Work Carried out By:-**MAURICE MORLEY**

The following Extinguishers are not covered by this Certificate (incl. Any that do not bear the Company Service Record Label duly notarised:-)

Signed: Maurice Morley
For and on Behalf of
M & K Fire Defence Ltd

M & K
FIRE DEFENCE LIMITED

Tel: 021 4897745
E-mail: mkfire@eircom.net

Unit 8
H.M.I. Commercial Centre,
Half Moon Lane,
South Douglas Rd,
Cork

CERTIFICATE

Fire Equipment Maintenance

This is to certify that the Fire Extinguishers at:-

Forge Hill Recycling Ltd,
Forge Hill,
Cork.

Have been maintained to the requirements of Irish Standard 291 2015 and conform to Standard E.N.3.

Date of Inspection:- **August 2017**

Work Carried out By:-**MAURICE MORLEY**

The following Extinguishers are not covered by this Certificate (incl. Any that do not bear the Company Service Record Label duly notarised:-)

Signed:-Maurice Morley
For and on Behalf of
M & K Fire Defence Ltd

Appendix 9

Weekly Checklist Records

Date	Parameter	YES	NO	Comments	Signature
	Perimeter Fencing and Gates • Are perimeter fencing and gates in satisfactory condition?	✓		none.	
	Hard Stand • Is there any visible cracks in the hard stand?		✓	none.	
	Storm Water • Is collected sample visually clear? • Is sample free of odour? If NO inform Environmental Manager immediately	✓ ✓		none.	
	Loose Litter • Is there any loose litter arising on the FHR facility or surrounding area? • Do roads need to be swept?	✓		Lower site of shed has litter (small quantity). Was cleaned immediately!	RI Glesner
	Mud • Is there any mud present within the facility?		✓	none	
	Odour • Is there any Odour present within the facility? • Does this warrant mitigation? If so notify the Environmental Manager.		✓ ✓	Odour Control mist is active.	
	Dust • Are dust levels around the facility causing visual obstructions? • Should road surfaces be dampened to reduce these impacts? If so notify the Environmental Manager?		✓ ✓ –	none.	
	Nuisance • Is the presence of vermin, birds, wasps & flies kept under control?	✓		none.	
	Oil Interceptor • Is the interceptor clean? • Is the area around the interceptor free of oil and mud?	✓ ✓		none	
	Drains/Silt Traps • Are Drains/Silt Traps free and undamaged?	✓		none.	
	Bunds • Are all bunds clean and free of liquid?	✓		none	
	Roof water • Is roof water clean and clear (if raining)?	✓		(not-raining)	
	High Level Alarm • Office tank, septic tank, oil separator, main shed tank – in alarm?		✓	none	
	Fire Equipment • Are Fire Pumps testing ok? • Are all Fire Hose reels in working order and accessible? • Are Fire Extinguishers in working order and accessible?	✓ ✓ ✓		none.	

Complete ✓ **Continued**

RI Glesner
03/10/2017.

Date	Parameter	YES	NO	Comments	Signature
	Perimeter Fencing and Gates • Are perimeter fencing and gates in satisfactory condition?	✓		None	
	Hard Stand • Is there any visible cracks in the hard stand?		✓	none	
	Storm Water • Is collected sample visually clear? • Is sample free of odour? If NO inform Environmental Manager immediately	✓ ✓		none	
	Loose Litter • Is there any loose litter arising on the FHR facility or surrounding area? • Do roads need to be swept?		✓ ✓	None	
	Mud • Is there any mud present within the facility?		✓	none	
	Odour • Is there any Odour present within the facility? • Does this warrant mitigation? If so notify the Environmental Manager.		✓ ✓	Mist Odour Control system is in-active	
	Dust • Are dust levels around the facility causing visual obstructions? • Should road surfaces be dampened to reduce these impacts? If so notify the Environmental Manager?		✓ ✓	None	
	Nuisance • Is the presence of vermin, birds, wasps & flies kept under control?	✓		None	
	Oil Interceptor • Is the interceptor clean? • Is the area around the interceptor free of oil and mud?	✓ ✓		None	
	Drains/Silt Traps • Are Drains/Silt Traps free and undamaged?	✓		none	
	Bunds • Are all bunds clean and free of liquid?	✓		None	
	Roof water • Is roof water clean and clear (if raining)?	✓		None	
	High Level Alarm • Office tank, septic tank, oil separator, main shed tank – in alarm?		✓	None	
	Fire Equipment • Are Fire Pumps testing ok? • Are all Fire Hose reels in working order and accessible? • Are Fire Extinguishers in working order and accessible?	✓ ✓ ✓		None.	

Complete ✓ **Continued**

DL Cleaver
28/09/2017.

Date	Parameter	YES	NO	Comments	Signature
	Perimeter Fencing and Gates • Are perimeter fencing and gates in satisfactory condition?	✓		none	
	Hard Stand • Is there any visible cracks in the hard stand?		✓	none.	
	Storm Water • Is collected sample visually clear? • Is sample free of odour? If NO inform Environmental Manager immediately	✓ ✓		none	
	Loose Litter • Is there any loose litter arising on the FHR facility or surrounding area? • Do roads need to be swept?		✓ ✓	none.	
	Mud • Is there any mud present within the facility?		✓	none	
	Odour • Is there any Odour present within the facility? • Does this warrant mitigation? If so notify the Environmental Manager.		✓ ✓	Mist Odour Control System is inactive.	
	Dust • Are dust levels around the facility causing visual obstructions? • Should road surfaces be dampened to reduce these impacts? If so notify the Environmental Manager?		✓ ✓	none.	
	Nuisance • Is the presence of vermin, birds, wasps & flies kept under control?	✓		none	
	Oil Interceptor • Is the interceptor clean? • Is the area around the interceptor free of oil and mud?	✓ ✓		none	
	Drains/Silt Traps • Are Drains/Silt Traps free and undamaged?	✓		none	
	Bunds • Are all bunds clean and free of liquid?	✓		none	
	Roof water • Is roof water clean and clear (if raining)?	✓		none	
	High Level Alarm • Office tank, septic tank, oil separator, main shed tank – in alarm?		✓	none	
	Fire Equipment • Are Fire Pumps testing ok? • Are all Fire Hose reels in working order and accessible? • Are Fire Extinguishers in working order and accessible?	✓ ✓ ✓		none.	

Complete ✓ **Continued**

DI Gleeson
21/09/2017.

Title ER01: Weekly Checklist			
Record No. ER01	Issue Date: 07/01/2017	Rev. No.: 3	Page No.: 2 of 2

Date	Parameter	YES	NO	Comments	Signature
	Perimeter Fencing and Gates • Are perimeter fencing and gates in satisfactory condition?	✓		None	
	Hard Stand • Is there any visible cracks in the hard stand?		✓	None	
	Storm Water • Is collected sample visually clear? • Is sample free of odour? If NO inform Environmental Manager immediately	✓ ✓		None	
	Loose Litter • Is there any loose litter arising on the FHR facility or surrounding area? • Do roads need to be swept?	✓	✓	Small Quantity of Litter outside MDR Tipping area so cleaned up immediately	DJ Gleeson
	Mud • Is there any mud present within the facility?		✓	none	
	Odour • Is there any Odour present within the facility? • Does this warrant mitigation? If so notify the Environmental Manager.		✓ ✓	Mist Odour System active.	
	Dust • Are dust levels around the facility causing visual obstructions? • Should road surfaces be dampened to reduce these impacts? If so notify the Environmental Manager?		✓	None	
	Nuisance • Is the presence of vermin, birds, wasps & flies kept under control?	✓		none	
	Oil Interceptor • Is the interceptor clean? • Is the area around the interceptor free of oil and mud?	✓ ✓		None	
	Drains/Silt Traps • Are Drains/Silt Traps free and undamaged?	✓		None	
	Bunds • Are all bunds clean and free of liquid?	✓		None	
	Roof water • Is roof water clean and clear (if raining)?	✓		None	
	High Level Alarm • Office tank, septic tank, oil separator, main shed tank – in alarm?		✓	None	
	Fire Equipment • Are Fire Pumps testing ok? • Are all Fire Hose reels in working order and accessible? • Are Fire Extinguishers in working order and accessible?	✓ ✓ ✓		None.	

Complete ✓ **Continued**

DJ Gleeson
14/09/2017

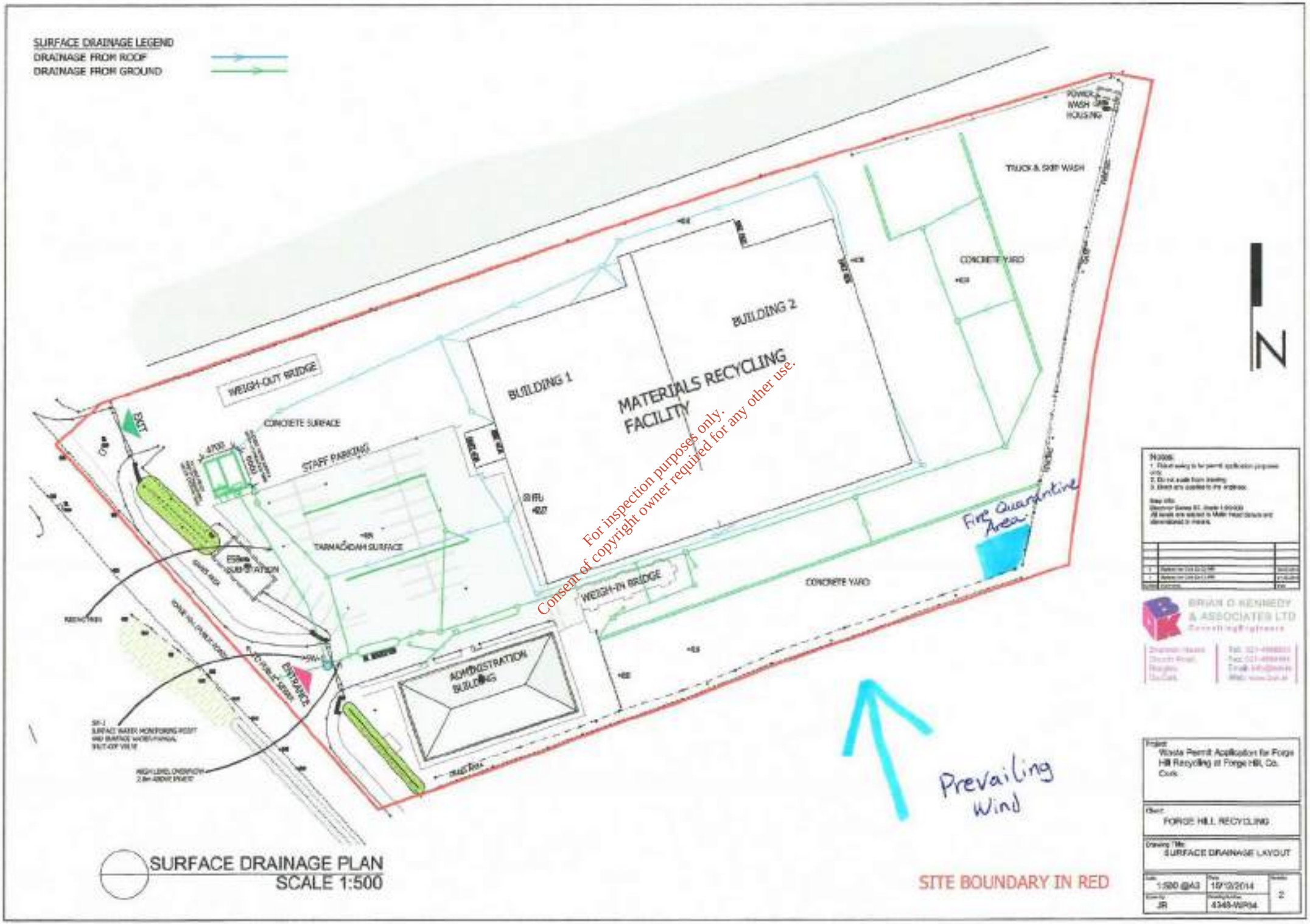
Date	Parameter	YES	NO	Comments	Signature
	Perimeter Fencing and Gates • Are perimeter fencing and gates in satisfactory condition?	✓		None	
	Hard Stand • Is there any visible cracks in the hard stand?		✓	None	
	Storm Water • Is collected sample visually clear? • Is sample free of odour? If NO inform Environmental Manager immediately	✓ ✓		None	
	Loose Litter • Is there any loose litter arising on the FHR facility or surrounding area? • Do roads need to be swept?		✓	None.	
	Mud • Is there any mud present within the facility?		✓	None	
	Odour • Is there any Odour present within the facility? • Does this warrant mitigation? If so notify the Environmental Manager.		✓ ✓	No odour present & dust odour control system inactive.	
	Dust • Are dust levels around the facility causing visual obstructions? • Should road surfaces be dampened to reduce these impacts? If so notify the Environmental Manager?		✓	None	
	Nuisance • Is the presence of vermin, birds, wasps & flies kept under control?	✓		None	
	Oil Interceptor • Is the interceptor clean? • Is the area around the interceptor free of oil and mud?	✓ ✓		None	
	Drains/Silt Traps • Are Drains/Silt Traps free and undamaged?	✓		None	
	Bunds • Are all bunds clean and free of liquid?	✓		None	
	Roof water • Is roof water clean and clear (if raining)?	✓		None	
	High Level Alarm • Office tank, septic tank, oil separator, main shed tank – in alarm?		✓	None	
	Fire Equipment • Are Fire Pumps testing ok? • Are all Fire Hose reels in working order and accessible? • Are Fire Extinguishers in working order and accessible?	✓ ✓ ✓		None	

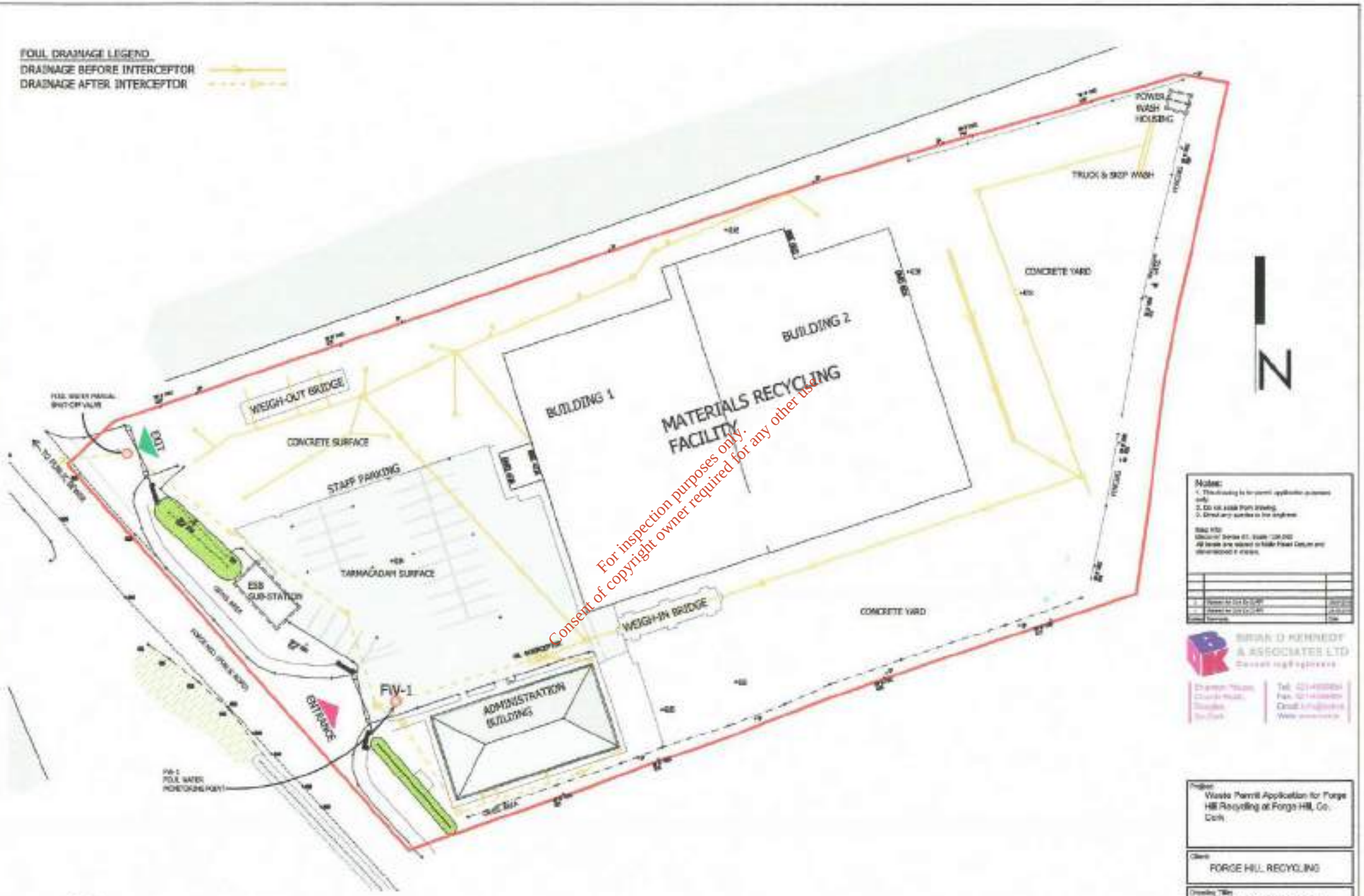
Complete ✓ **Continued**

DL Gleeson
06/04/2017.

Appendix 10

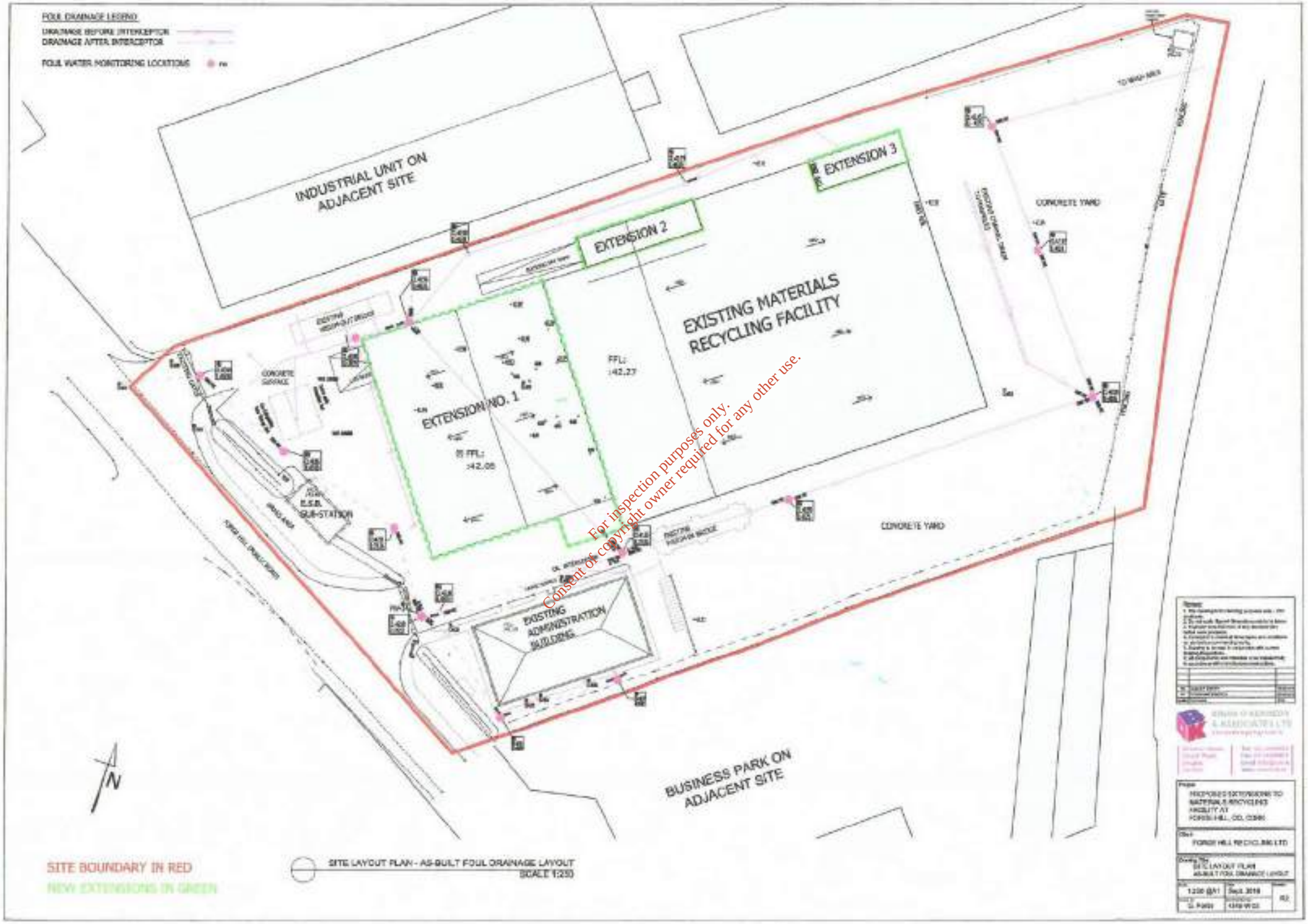
FIRE SERVICE INFORMATION PACKAGE

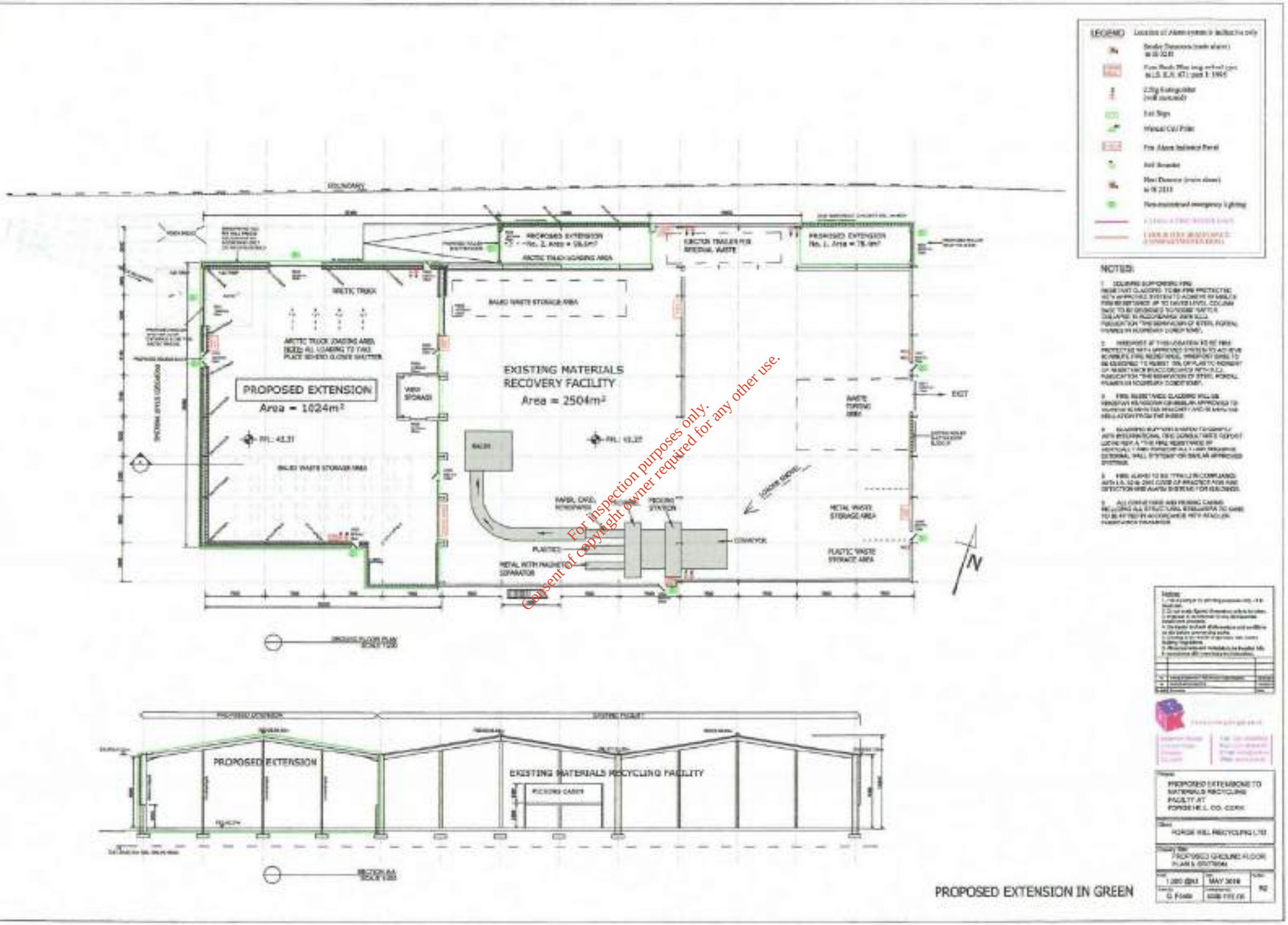


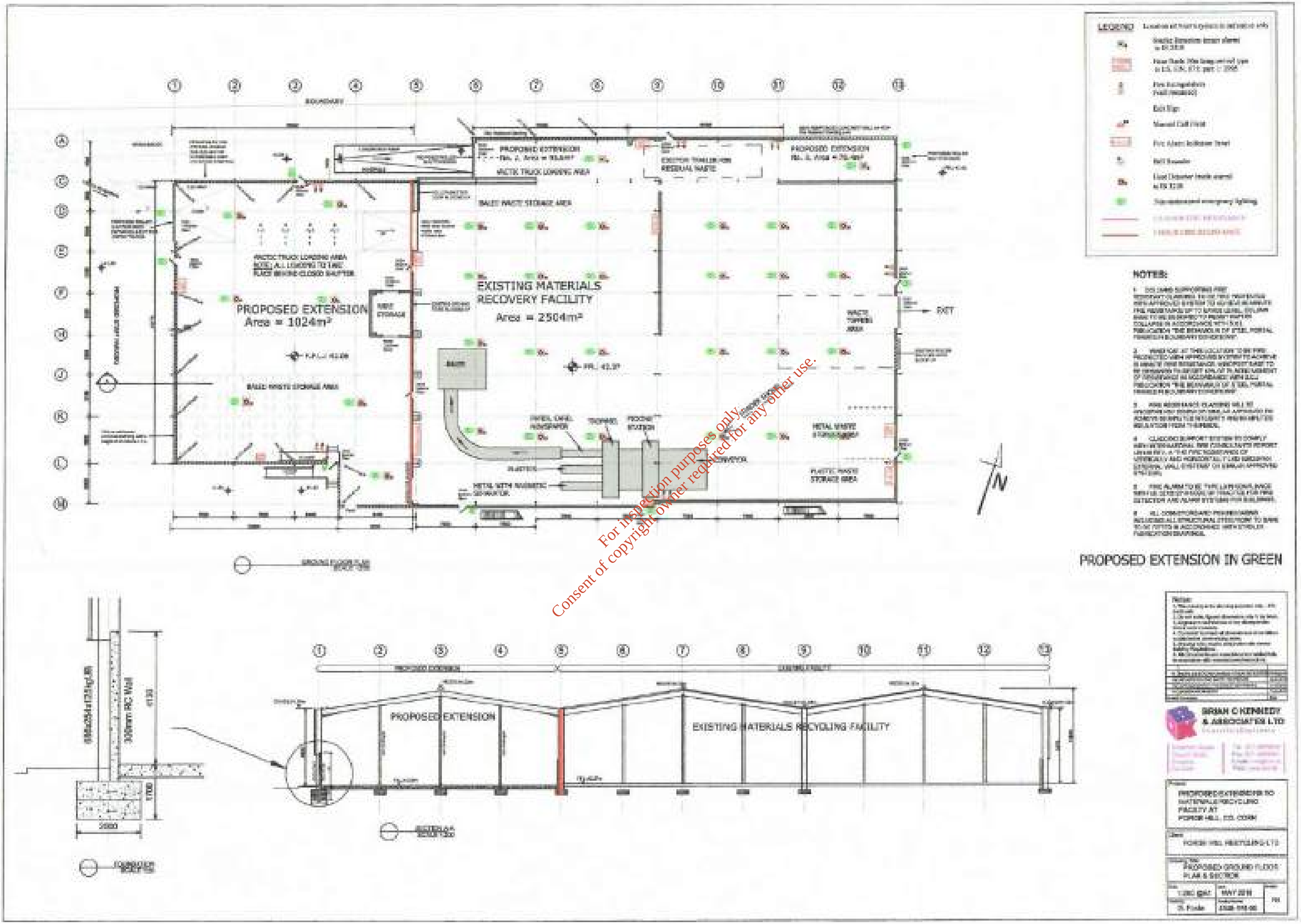


FOUL DRAINAGE PLAN
SCALE 1:500

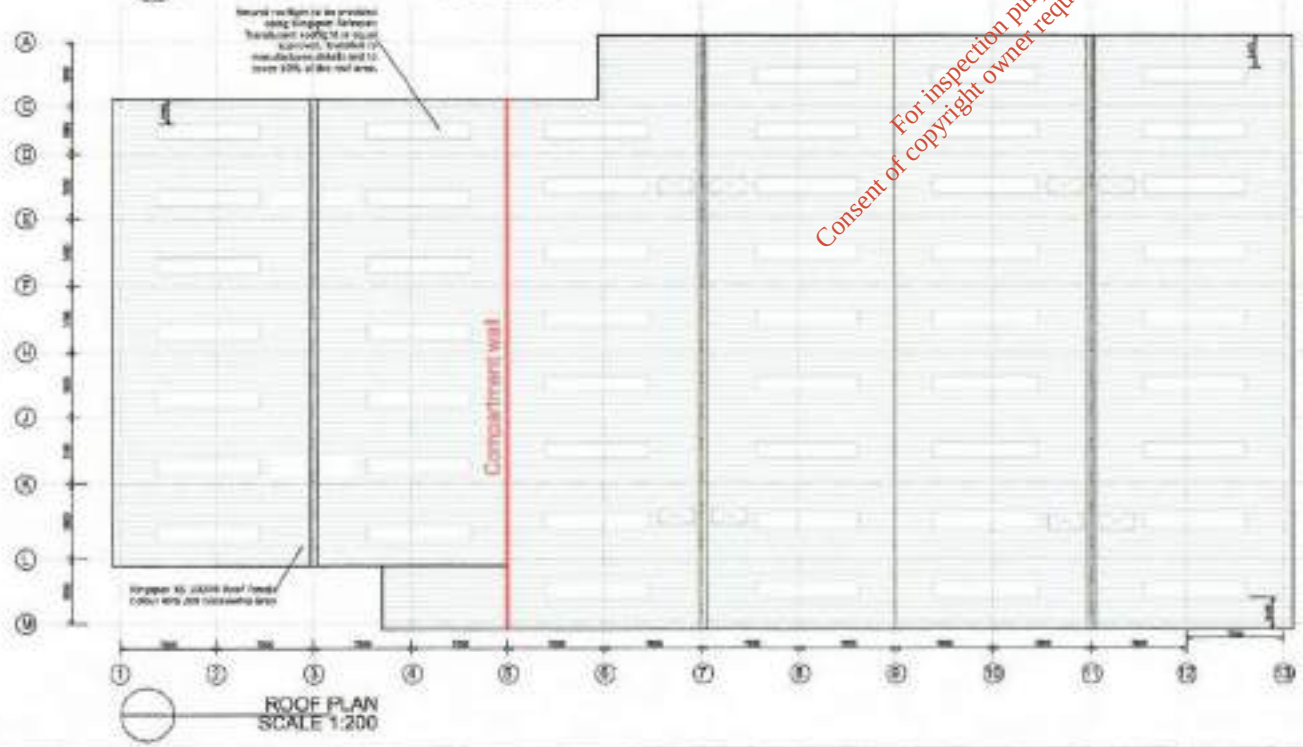
SITE BOUNDARY IN RED







FIRST FLOOR PLAN
SCALE 1:200



ROOF PLAN
SCALE 1:200

LEGEND

Location of Alarm systems is indicative only

- Smoke Detector (mains alarm) to I.S 3218
- Linear Beam (30m long infrared type to I.S. EN 54-12 : part 12 : 2002)
- Sign (to Regulations) (mains operated)
- Exit Sign
- Manual Call Point
- Fire Alarm Isolation Point
- Bell Sounder
- Heat Detector (mains alarm) to IS 3218
- Non-maintained emergency lighting
- [illegible]
- [illegible]

NOTES:

1. [illegible] TO BE FIRE PROTECTED WITH APPROVED SYSTEM TO ACHIEVE MINIMUM FIRE RESISTANCE OF 1½ HOURS UNLESS NOTED OTHERWISE. ALL PENETRATIONS TO BE SEALED IN ACCORDANCE WITH I.S.T. PUBLICATION "THE BEHAVIOUR OF STEEL FRAMED BUILDINGS IN SELDOM CONDITIONS".

2. [illegible] TO BE FIRE PROTECTED WITH APPROVED SYSTEM TO ACHIEVE MINIMUM FIRE RESISTANCE. WHERE NOT TO BE EXPOSED TO RESIST 15% OF PLASTIC MOMENT OF RESISTANCE IN ACCORDANCE WITH I.S.T. PUBLICATION "THE BEHAVIOUR OF STEEL FRAMED BUILDINGS IN SELDOM CONDITIONS".

3. [illegible] TO ACHIEVE 60 MIN. FIRE RESISTANCE OR SIMILAR APPROVED TO ACHIEVE 30 MINUTES RESISTANCE AND MINIMUM INSULATION FROM THE INSIDE.

4. CLADDING SUPPORT SYSTEM TO COMPLY WITH INTERNATIONAL FIRE CONSULTANTS REPORT LISTING REV. 1 "THE FIRE RESISTANCE OF VERTICALLY AND HORIZONTALLY LAID KINGSPAN CLADDING, WALL SYSTEMS" OR SIMILAR APPROVED SYSTEMS.

5. [illegible] TO COMPLY WITH I.S. 10101:2010 CODE OF PRACTICE FOR FIRE DETECTION AND ALARM SYSTEMS FOR BUILDINGS.

6. ALL [illegible] INCLUDING ALL STRUCTURAL STEELWORK TO BE SHOT FIRE TO ACHIEVE 30 MINUTES FIRE RESISTANCE.

FIRE ALARM HEAT DETECTORS

6 No. Heat Detectors in Extension 1

24 No. Heat Detectors in Original Building

2 No. Heat detectors in Picking Cabin 1

1 No. Heat detectors in Picking Cabin 2

1 No. Heat Detector in Power Supply room

Proposed Extension divided Down

El outside fire resistant cladding

Smoke Ventilation
Min size of 1.1m² each
Total free vent capacity of 27.2m²

1. Smoke Vent to be located midway between ridge and adjacent eaves/walls.
2. Vents shall be FIX (sashes by Cert International or equal approved.
3. 12.4m² of free vent capacity to be allowed on the new Extension.
4. Smoke vents to be linked to Fire Alarm and initiated on activation of two detectors.
5. Air Intake to be provided by roller shutter doors automated to open to a level of [illegible] when activated by fire alarm activation. Air Intake to equal free area of smoke vents.

BRIAN O KENNEDY & ASSOCIATES LTD

PROPOSED EXTENSIONS TO MATERIALS RECYCLING FACILITY AT FORGE HILL, CO. CORK.

FORGE HILL RECYCLING LTD.

PROPOSED FIRST FLOOR AND ROOF PLAN

1:200 @A1 | MAY 2018 | PA

FIRST FLOOR PLAN
SCALE 1:200

ROOF PLAN
SCALE 1:200

LEGEND

NOTES

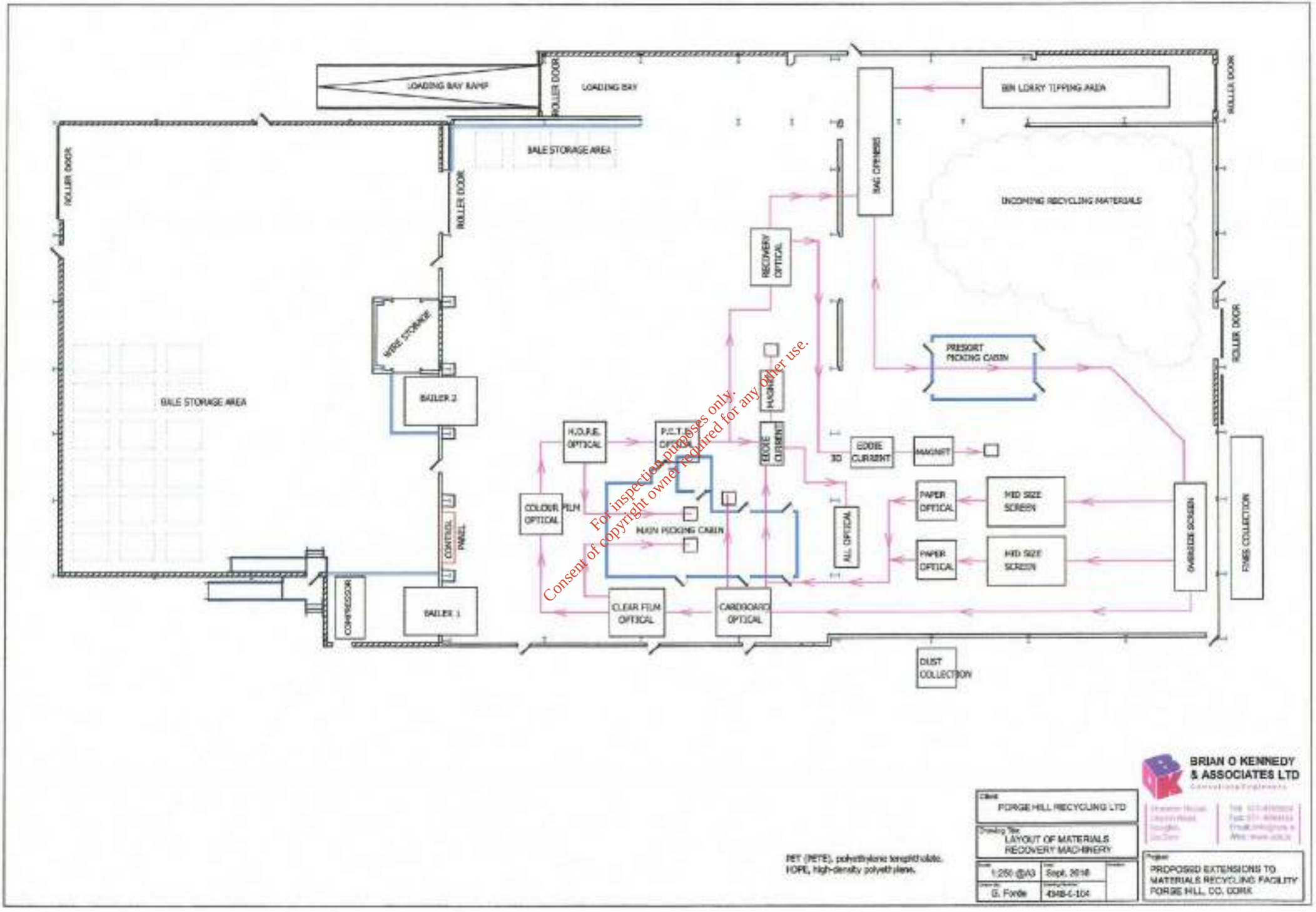
PROPOSED EXTENSIONS IN GREEN

PROPOSED EXTENSIONS TO MATERIALS RECYCLING FACILITY AT FORGE HILL, CO. CORK

FORGE HILL RECYCLING LTD

PROPOSED FIRST FLOOR AND ROOF PLAN

1:200 @ A1 | MAY 2018 | 02



PET (PETE), polyethylene terephthalate.
HDPE, high-density polyethylene.

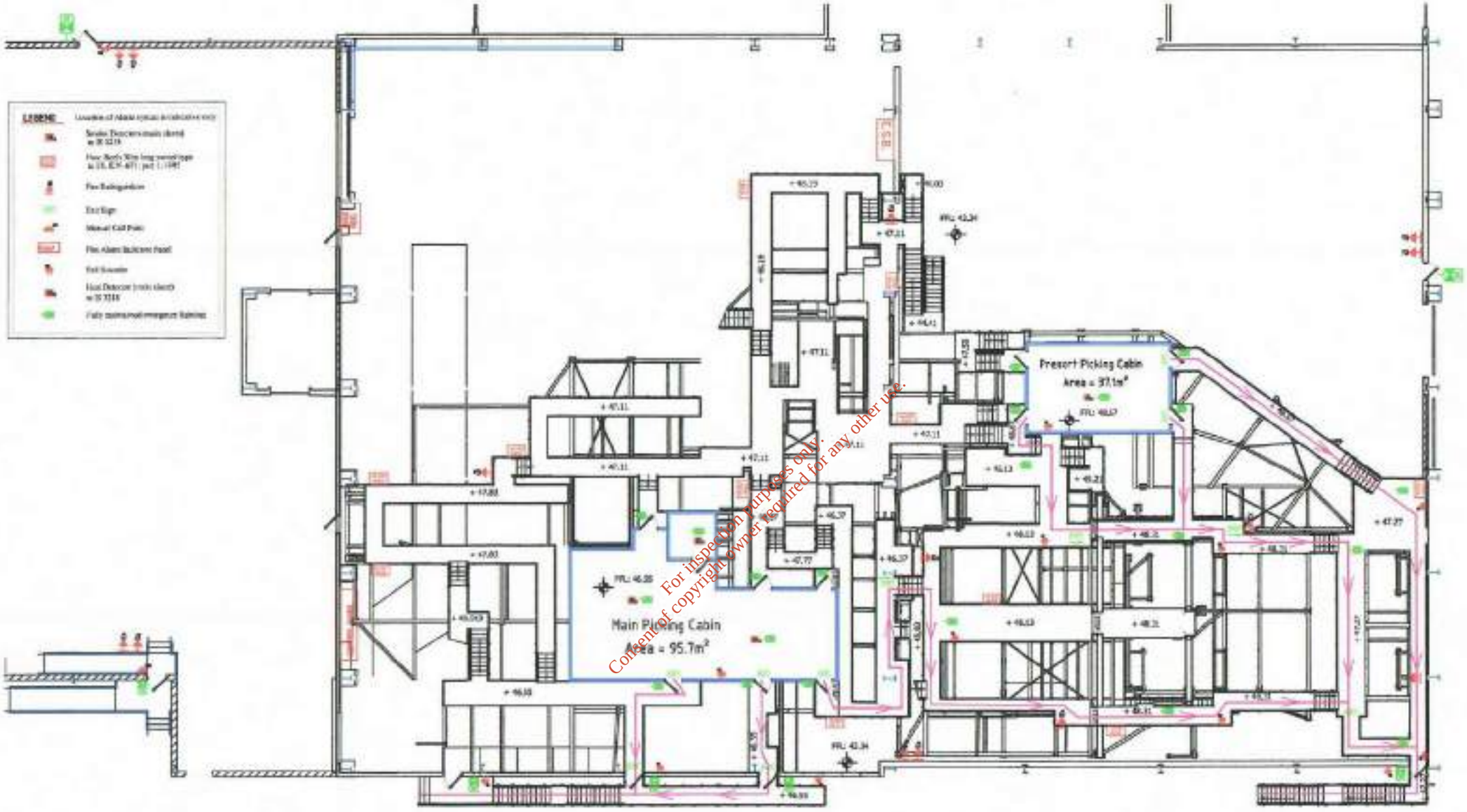
BRIAN O KENNEDY & ASSOCIATES LTD
Consulting Engineers

Client: FORGE HILL RECYCLING LTD

Drawing Title: LAYOUT OF MATERIALS RECOVERY MACHINERY

Scale: 1:250 @A3 | Date: Sept. 2018 | Drawn By: G. Forde | Drawing Number: 4348-C-104

Project: PROPOSED EXTENSIONS TO MATERIALS RECYCLING FACILITY FORGE HILL, CO. CORK



BRIAN O KENNEDY & ASSOCIATES LTD

Client: FORGE HILL RECYCLING LTD

Drawing Title: PROPOSED ESCAPE ROUTES PRESORT PICKING CABIN

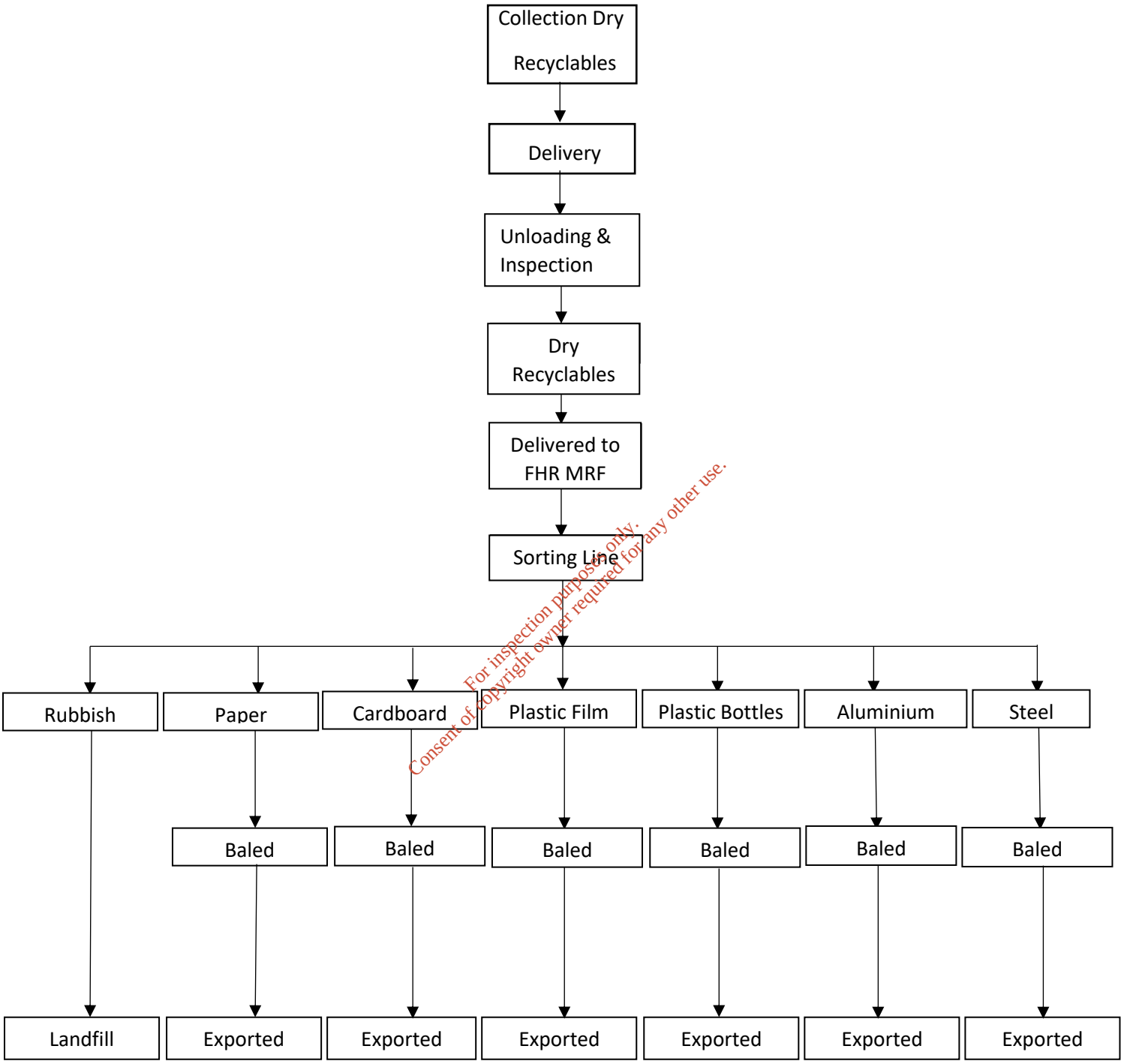
Scale	Date
1:200 @A3	Sept. 2018
Drawn By: G. Forde	Drawing Number: 4348-C-103

Project: PROPOSED EXTENSIONS TO MATERIALS RECYCLING FACILITY FORGE HILL, CO. CORK

Appendix 11

MRF Flow Chart

Forge Hill Recycling MRF Flow Chart



Forge Hill Recycling

Appendix 12

Hot Works Permit

FHR FM10 Hot Work Permit

Note: If the requirements & precautions cannot be met hot works are not permitted.

➢ HOT WORK PERMIT	PERMIT NO:		
SECTION 1. DETAILS OF HOT WORKS			
Location:		***Nature of Work:***	
Name of Hot Work Operator	***Print Name***		***Signature***
	Date		***Contact No.***
Competent Hot Work Supervisor	***Print Name***		***Signature***
	Date		***Contact No.***

I verify the above location has been examined and the precautions checked on the required list. Precautions have been taken to prevent fire, and permission is authorised for work to commence safely.

Permit Start:	***DATE:***	***TIME*** ☐ ***AM*** ☐ ***PM***	***Permit Expiry Date:***	***DATE:***	***TIME*** ☐ ***AM*** ☐ ***PM***
EHS Approval	***Print Name***			***Signature***	
	Date			***Contact No.***	

SECTION 2. WORK PREPARATION

Work Type		**Controls**	
Burning	☐	30 Min Watch	☐
Drilling	☐	Fire Blanket	☐
Grinding	☐	Flash Screens	☐
		Remove Combustibles	☐
Electrical Insolation Required	☐	Fire Alarm/Sprinkler Isolation Required	☐
Mechanical Isolation Required	☐	Fire Suppression Isolation Required	☐
Area to be cordoned off	☐	Fire Watch Appointed	☐

FHR FM10 Hot Work Permit

Generating:

Dust ☐ Fumes ☐

Other Please State:

_____

SECTION 3. HAZARD IDENTIFICATION

Combustible/Flammable Material	☐	Manual Handling/Ergonomics	☐
Compressed air/gases/stored energy	☐	Moving Vehicles	☐
Electricity	☐	Noise/Vibration	☐
Exposure to chemicals	☐	Pressure System	☐
Exposure to/generation of dusts	☐	Sharp objects	☐
Exposure to high temperatures	☐	Slips or Trips	☐
Falls of material from height	☐	Static	☐
Generation of Sparks/Flames	☐	Working at Height	☐
Hot surfaces	☐	Working on equipment with potentially	
Impact/Bump Hazards	☐	moving/ejecting or sharp parts	☐

Other Please State_____.

SECTION 4. PPE REQUIREMENTS: (Protective Clothing & Safety Footwear Are Mandatory)

FHR FM10 Hot Work Permit

SECTION 5. CHECKLIST BEFORE HOT WORKS COMMENCE *Tick once check is complete (✓)*	
☐	Available sprinklers, hose streams, and extinguishers are in service/operable. (*At least 2 suitable portable fire extinguishers should be available for immediate use*).
☐	Hot work equipment in good repair.
☐	All persons carrying out hot work/fire watch should know how to raise the fire alarm & be trained in emergency procedures including use of fire extinguishers.
Requirements within 10 metres of work	
☐	Flammable liquids, dust, lint and oil deposits are removed.
☐	Combustible floors swept clean of combustibles, or wet down, or covered with damp sand or fire resistant sheets.
☐	Remove other combustibles or otherwise protect with fire resistant tarpaulins.
Work on walls or ceilings/enclosed equipment	
☐	Construction in non-combustible and without combustible covering or insulation.
☐	Combustibles on other side of walls are moved away.
☐	No danger exists by conduction of heat into another area.
☐	Enclosed equipment cleaned of all combustibles
☐	Containers purged of flammable liquids.
Fire Watch	
☐	Fire watch will be provided during & continuously checked 30 mins after work.
☐	Fire watch is supplied with suitable extinguishers.

FHR FM10 Hot Work Permit

GENERAL GUIDELINES

THE HOT WORKS PERMIT

Before beginning hot work, a hot works permit should be obtained from the EHS Dept. This should be done on every occasion that hot works of any type is undertaken within or upon the fabric of established buildings or any structures or plant in the open.

A permit should not be issued without considering the significance of any other permits to work in the vicinity, or processes which may involve the use of flammable liquids or gas.

A hot works permit should be issued for a specific task that is to be undertaken in a clearly identified area. It should not be issued for a protracted period. Separate permits should be issued for hot work which extends from morning to afternoon periods.

The hot works permit should be completed in triplicate, one copy being handed to the person responsible for carrying out the work. The second copy should be retained by the issuer who may wish to inspect the site of work or instigate spot checks to ensure that conditions have been met and that work is complete before the hot work permit expires. The third copy should be filed with the EHS Department.

Contractors should ensure that the area in the immediate vicinity of the hot work is fully secure. In particular, you should ensure that:-

- Before starting hot works, an area within at least 10m of the hot works process is cleared.

- Of all loose combustible material and if work is to take place on one side of a wall or partition, the opposite side is examined to ensure no combustible material will be ignited by conducted heat.
- Where combustible materials cannot be removed from the area, they are completely protected by non-combustible screens or blankets. Flammable liquids must always be removed from the area.

- Combustible floors are covered with overlapping sheets of non-combustible material.
- That the floor is swept clean of combustible materials.
- That all wall and floor openings, and all gaps in walls and floors through which sparks could pass, are covered with sheets of non-combustible material.
- Good ventilation is provided in all areas where hot work is being carried out.
- Where work is above floor level, that non-combustible material is suspended beneath the work to collect sparks.

WORK ON WALLS OR CEILINGS

Where work is being carried out on walls or ceilings, the employer should ensure that combustible constructions are protected by non-combustible curtains or sheets. Combustibles should also be moved away from the opposite side of the wall or ceiling and cleared of any metal likely to conduct heat. Remember, where metal beams or pipes are being worked on, and they extend through walls or partitions, precautions must be taken on the far side of the walls or partitions.

WORK ON ENCLOSED EQUIPMENT

Where hot works is being carried out on enclosed equipment such as tanks, containers, ducts or dust collectors, the equipment must be cleaned out of all combustibles and containers checked to ensure they are free of flammable vapours.

SETTING UP FIREWATCH

When hot works is being carried out, a trained employee should be in attendance during and for 30 minutes after the completion of the work. This employee should be provided with fire extinguishers or a small bore hose and should be trained to use this equipment and sound the alarm.

FHR FM10 Hot Work Permit

Both the fire watch employee and the operatives carrying out the hot works should know where the nearest fire alarm and telephone are located and must know what actions to take in the event of a fire.

They should be aware of:-

- Escape Routes – Fire Points – Location of Fire Extinguishers – Alarm Call Points
- Telephones from which the Fire Brigade(s) may be summoned
- Means of raising alarm
- First Aid Facilities
- The employer should ensure that warning notices have been displayed throughout the work place

Following Completion of Hot Works:

When hot works is complete, items such as paint stripping, hot stub ends of welding rods and other waste materials must be removed and disposed of safely. All equipment, including gas cylinders, should be removed to a secure area at the end of the working period or when the task is completed, if this is sooner. Where bitumen / tar boilers are concerned, only the gas cylinders need to be removed. The fire watch should continue for at least 30 minutes after work is completed.

Appendix 13

Emergency Lighting Check Sheet

FHR FM14 Emergency Lighting Check Sheet

Emergency Lighting Check Sheet

Date	
Name	

Location	Details of Inspection	Result of Action Taken	Signature

Appendix 14

Fire Drill Check Sheet

FHR FM15 Fire Drill Check Sheet

Date: _____

Drill Observer:_____ Phone:_____

PRIOR TO DRILL:	YES	NO
Have Fire wardens been assigned and trained?		
Do Fire wardens have vests or caps for identification?		
Have persons with disabilities been identified and assigned help to assist in evacuation to a refuge area?		
Have assembly areas been designated and employees trained?		
Are "emergency plans/procedures" posted?		

DURING THE DRILL:	YES	NO
Did the occupants evacuate the building immediately after the evacuation was initiated?		
Was evacuation orderly and quick?		
The Office & Yard was evacuated in___Minutes?		
Did civil defence respond?		
Were instructions given to move to the designated assembly points?		
Were all exits used?		
Were all restrooms, conference rooms checked?		
Did fire door operate correctly?		
Was everybody continuously kept informed regarding the situation?		
Was a communication system applied during the evacuation?		

Drill Information	
Number of persons who were present at office on drill date?	
The time when you reached the assembly point (HH:MM)	
Number of persons evacuated the office & Yard to the assembly point (Count at assembly point)	

FHR FM15 Fire Drill Check Sheet

AFTER THE DRILL:	YES	NO
Were all employees and guests accounted for?		
Did all alarms work properly?		
Was there any significant disruption of services?		
Did everyone remain outside the building and wait for further instructions?		
Are staff members familiar with their assigned duties?		

List any problems observed:

Drill Feedback:

Observed By:_____

Date:_____ *Signature*:_____

Appendix 15

Fire Equipment Inspection Log Sheet

FHR FM16 Fire Equipment Inspection Log Sheet

(A) FIRE EXTINGUISHERS: MONTHLY INSPECTION ROUTINE

IS 291: 2002 requires that fire extinguishers should be checked monthly by the user to ensure that each extinguisher is immediately available for effective use and to take corrective action if necessary. The monthly inspection procedure for fire extinguishers shall determine that:

1. The extinguisher is in its designated place.

2. Access to or visibility of the extinguisher is not obstructed.

3. Any seals or indicator tabs are not broken.

4. Pressure indicators, where fitted, show the correct pressure.

5. The extinguisher has not been damaged.

6. The extinguisher does not have obvious defects such as a clogged nozzle, corrosion, leakage or a loose or damaged hose.

7. In the case of all carbon dioxide gas extinguishers the discharge horn or hose/horn is properly secured.

8. The maintenance record label is properly attached to the extinguisher and is up to date and the Register is entered up to date.

More frequent inspection may be necessary in the following cases:

a) High frequency of outbreaks of fires.

b) Severe hazard.

c) Susceptibility to tampering, damage, vandalism or malicious mischief.

d) Locations which make extinguishers susceptible to mechanical injury such as exposure to abnormal temperatures, to corrosive atmospheres or to physical obstructions.

Where an inspection reveals that (c) or (d) has occurred then the extinguisher shall be immediately withdrawn from service and arrangements shall be made for the extinguisher to undergo maintenance.

(B) HOSE REELS: MONTHLY INSPECTION ROUTINE

BS EN 671-3:2009 requires that the frequency of the routine inspection of the hose reels should essentially be determined by risk assessment. The monthly inspection procedure shall determine that the hose reel is:

a) Located in the designated place.

b) Unobstructed, visible and has legible operating instructions.

c) Is not obviously defective, corroded or leaking.

(C) FIRE BLANKETS: MONTHLY INSPECTION ROUTINE

The monthly inspection procedure for fire blankets should determine that:

1. The fire blanket is in its designated place.

2. Access to or visibility of the fire blanket is not obstructed.

FHR FM16 Fire Equipment Inspection Log Sheet

3. The pull tabs/hand-holding devices are in their proper place.

4. The fire blanket has not been used or damaged.

5. The blanket container is secure, clean, no damage, and legible instructions.

6. The maintenance record label is properly attached to the blanket and is up to date and the Register is entered up to date.

Record of Monthly Inspection of Fire Fighting Equipment By FHR					
Inspected By:					
Date	**A**	**B**	**C**	**Location of Equipment**	**Faults Found and Action Taken**
Date	**A**	**B**	**C**	**Location of Equipment**	**Faults Found and Action Taken**

FHR FM16 Fire Equipment Inspection Log Sheet

Signed: ______________________________ **Date:** __________________________

Appendix 16

Fire Incident Report Form

FHR RECYCLING

FM 28 FIRE INCIDENT REPORT FORM

Every section to be completed in detail and signed off.
Take picture and attach where possible and secure CCTV
Witness statements to be take on all incidents

Indicate exact location of the incident (be specific, eg conveyor numbers etc.)	**Description of the fire and how the fire/incident occurred:** **(Use additional pages if required) {Continued}**
Day/Evening Shift:	
Date & Time of Incident	
Date & Time Incident reported	
Reported to Supervisor Yes/No **Name of Supervisor:**	
Indicate exact location of the incident (be specific, eg if fall on stairs indicate which step, take pictures)	
Description of the fire and how the fire/incident occurred: **(Use additional pages if required)**	**How was the fire detected?**
	Name/s of first responder/s:

Fire equipment used:

Fire Hose Reel ☐

Fire Extinguisher (Yes/No)

Carbon Dioxide ☐

Dry Powder ☐

Foam ☐

_____

Was the fire alarm activated (Yes/ No)

Was the building evacuated (Yes/No)

Fire brigade required (Yes/No)

Did all fire alarms work correctly (Yes/No)
If "No" please explain

Did all fire equipment work correctly (Yes/No)
If "No" please detail issues

Was anyone injured during the fire/incident?

(YES) (NO)
If yes, explain

Referred to a doctor (YES/NO)

Name and address of Doctors:

_____

Sent to hospital (YES/NO)

Name of hospital:

_____

Ambulance required (YES/NO)

Detained overnight (YES/NO)

Details of immediate medical attention provided and by whom:

Improvements to be made to prevent reoccurrence:	**Any additional information:**
When was the incident reported to Operations/ Fire Manager:	**Completed by:** **Print name: _____** **Date:_____** **Signature:**

Appendix 17

Fire Alarm Service Records

No.:B060617B

KELTRON safety systems
Unit 2 Carrigeen, Headford,
Killarney, Co. Kerry.
Tel: 064-7750469 / E-mail: keltronsafetysystems@gmail.com

I.S.3218 : 2013

Certificate of servicing/testing of fire alarm system

Protected area: Forge Hill Recycling Centre

Address of premises: Forge Hill, Cork

System Category (circle as appropriate)

M **L4** **L3** **L2/L4** **L2/L3** **L1**

The Servicing and Testing work covered by this Certificate is as set out below:

☑ Quarterly Servicing and Testing as in 9.2.2.5

☐ Annual Servicing and Testing as in 9.2.2.6 (including dates of interim certificates as below)

Date Tested	
Quarter 1	17-02-2017
Quarter 2	06-06-2017
Quarter 3	
Quarter 4	

☐ Special Servicing following a fire (the work set out in 9.2.3.2 has been completed.)

☐ Special Servicing following a false alarm (the work set out in 9.2.3.3 has been completed)

☐ Special Servicing following excessive false alarms (the work set out in 9.2.3.3 has been completed and the User has been advised of the requirements of 73.5, 7.3.6, 7.5.2 and 7.5.4)

☐ Special Servicing following a fault (the work set out in 9.2.3.4 has been completed.)

☐ Special Servicing following a pre-alarm (the work set out in 9.2.3.5 has been completed)

☐ Other non-routine attention (specify as 9.2.3.7 or detail other works). First test and commissioning of a new system.

I/We confirm my/our competence to undertake this work and certify that the following items have been checked during the works indicated on Page 1 of this Certificate, and that consequently the system is operational and compliant in relation to these works

- ☑ Entries in the Logbook have been checked (as 9.2.2.5)
- ☑ Alarm Functions and controls have been checked (as 9.2.2.5)
- ☑ A visual inspection of any structural or occupational changes has been made (as 9.2.2.5) and the system has been modified accordingly as per I.S. 3218:2013.
- ☑ A clear space of at least 500mm is preserved in all directions below and around every detector (as 9.2.2.5.1(5)).
- ☑ Detectors are sited and spaced in accordance with 6.10.3 and 6.10.4
- ☑ All Manual call points have been checked and remain unobstructed and conspicuous (as per 9.2.2.5 or 9.2.2.6 c)

- ☑ Sounders and any link to an ARC have been tested and are operational (as 9.2.2.5, and as 9.2.2.6 a and 9.2.2.6 e)
- ☑ Wiring, cables and cable fitting have been visually checked (as 9.2.2.6. d) and they remain secure, undamaged and adequately protected.
- ☑ Any defects have been recorded in the logbook and reported to the Responsible Person for appropriate action (as in 9.2.2.5)
- ☑ A Schedule of Service (as annex D 2) has been completed and affixed adjacent to the Fire Alarm Control Panel.

Signature of Authorised Person responsible for servicing/testing of the system

Name: *Bart O'Leary*	**Position:** Systems Engineer
Signed: Bart O Leary	**Date:06-06-2017**
For and on behalf of: Keltron Safety Systems	
Validity Period: 3 months	**Expiry Date:** 06-09-2017

MATERIALS USED	QTY
XP95 Breakglass Unit	1

Time on site	Time off site		
12.45	14.45		

CERT E-MAILED TO:

(1) brian.bruton@kwd.ie
(2)
(3)
(4)

ADDITIONAL NOTES:

(*) These items have been checked and inspected as far as reasonably practically possible on a maintenance visit:
This is the closest category to the installed system, but may not comply fully with this category.

Replaced broken break glass unit in storage shed city side exit.

System Aux. Equipment

		I/O number	Tested	Working	See note
A	Link to alarm receiving centre		✓	✓	
B	Smoke vents interface (Old panel)		✓	✓	
C	Plant shutdown interface		✓	✓	
D					
E					

ISSUES THAT NEED FURTHER ATTENTION:

N/A

Appendix 18

Acetylene MSDS

Acetylene

IRISH OXYGEN

SAFETY DATA SHEET

Issued: 30/11/2010 | Version 0

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Acetylene
Chemical Formula	$C_2 H_2$
Recommended Use	Welding
REACH Registration No.	05-2115731001-69-0000
Company Name	Irish Oxygen Co Ltd, Waterfall Road, Cork
Email	sds@irishoxygen.com
Emergency Phone	021-4541821 (office hours only)

2. HAZARDS IDENTIFICATION

Dissolved gas
Extremely flammable

GHS Hazard Pictograms

3. COMPOSITION INFORMATION

Substance/Preparation	Substance
Composition	No other components
CAS No	00074-86-2
EINECS No	200-816-9

4. FIRST AID MEASURES

Inhalation

In high concentrations, may cause asphyxiation. Symptoms may include loss of mobility/consciousness. Victim may not be aware of asphyxiation.

In low concentrations may cause narcotic effects. Symptoms may include dizziness, headache, nausea and loss of co-ordination.

Remove victim to uncontaminated area wearing self breathing apparatus. Keep victim warm and rested. Call a doctor.

Apply artificial respiration if breathing stopped.

Ingestion

Not considered a potential route of exposure

Skin contact

Not considered a potential route of exposure

Eye contact

Not considered a potential route of exposure

5. FIRE FIGHTING MEASURES

Specific hazard

Exposure to fire may cause containers to rupture or explode which may release asbestos. Inform Fire Brigade

Hazardous combustion products

Incomplete combustion may form carbon monoxide.

Suitable extinguishing media

All known extinguishers can be used.

Specific methods

If possible, stop flow of product.
Continue water spray from protected position until container stays cool.
Move container away or cool with water from protected position.
Do not extinguish a leaking gas flame unless absolutely necessary.
Spontaneous/explosive re-ignition may occur.
Extinguish any other fire.

Special protective equipment for fire fighters

In confined space use self contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Evacuate area. Ensure adequate air ventilation. Eliminate ignition sources.

Environmental precautions

Try to stop release.

Clean up methods

Ventilate area.

Special procedures for leaking acetylene cylinder:

Leak not ignited – cylinder NOT hot

Extinguish all ignition sources
Check to make sure cylinder is not getting hot (use back of bare hand)
Check the valve is properly closed using moderate force (hand tight)
DO NOT try to tighten cylinder valve in the body of the cylinder or tamper with safety devices

If the leak persists

Evacuate personnel from the area
Ensure maximum ventilation by opening all doors and windows
Take cylinder outside to a ventilated area
Warn everyone in the area of a gas leak especially those downwind
Inform Irish Oxygen

If the cylinder shows signs of heating

DO NOT move the cylinder or open the valve
Evacuate personnel to safe area
Call the fire brigade
Inform Irish Oxygen

Leak ignited (cylinder not getting hot)

Extinguish all ignition sources
Extinguish the flame with a dry powder extinguisher or wet rag if safe to do so
Wear leather gauntlets and keep hands clear of any fusible plugs
Close cylinder valve
Check the cylinder for signs of heating (using the back of your bare hand

Fire external to cylinder

Evacuate the area minimum 200 metres around cylinder
Call the fire brigade
Advise neighbours within 200 metres of hazard
Inform Irish Oxygen

7. HANDLING AND STORAGE

Close cylinder valve when not in use to prevent contamination of cylinder. Open valve slowly to avoid pressure shock. Purge air from system before introducing gas. Do not allow back feed into cylinder. Use only properly specified equipment that is suitable for Acetylene, its supply pressure and temperature. Keep cylinder below 50°C in a well ventilated place. Store and use acetylene cylinders upright. If a cylinder has been left or transported horizontally leave upright for one hour before use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ensure adequate ventilation.
Do not smoke while handling acetylene cylinder or equipment.
Wear suitable hand, body and head protection.
Wear goggles with suitable filter lenses when use in cutting or welding.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Colour/Odour	Colourless gas with a slight garlic like odour
Molecular Weight	26
Melting Point	-80.8°C
Boiling Point	-84°C
Critical Temperature	35°C
Relative Density - Gas	0.9 (Air=1)
Relative Density - Liquid	Not applicable
Vapour Pressure 20°C	44 bar
Solubility mg/l water	1185 mg/l
Auto ignition temperature	325°C
Flammability Range	2.4%-88% volume in air
Other Data	Poor warning properties at low concentrations.

10. STABILITY AND REACTIVITY

Can form explosive mixture with air.
May decompose violently at high temperature and/or high pressure or in the presence of a catalyst.
Forms explosive acetylides with copper, silver and mercury.
Do not use alloys containing more than 65% copper or 43% silver.
Dissolved in solvent contained in a porous mass.
May react violently with oxidants.

11. TOXICOLOGICAL INFORMATION

No toxicological effects from this product.

12. ECOLOGICAL INFORMATION

No ecological damage caused by this product.

13. DISPOSAL CONSIDERATIONS

Do not discharge into areas where there is a risk of forming an explosive mixture with air.
Waste gas should be flared through a suitable burner with flash back arrester.
Do not discharge into any place where its accumulation could be dangerous
Some acetylene cylinders may contain asbestos, specialist disposal required

14. TRANSPORT INFORMATION

UN Number:	1001
Class/Div:	2.1
ADR/RID Classification code:	4F
ADR/RID Hazard Number:	239
Labelling ADR:	2.1:flammable gas

Avoid transport on vehicles where the load space is not separated from the driver's compartment. Ensure vehicle driver is aware of the potential hazards of the load and knows what to do in the event of an accident or emergency. Before transporting product cylinders, ensure that they are firmly secured, that cylinder valve is closed and not leaking, that there is adequate ventilation and that applicable regulations are complied with

15. REGULATORY INFORMATION

Number in Annex 1 of Dir 67/548	601-015-00-0
EC Classification	R5/R6/R12/F+
Risk Phrases	F+ Extremely flammable R5 Heating may cause an explosion R6 Explosive with or without contact with air R12 Extremely flammable
Safety Phrases	S9 Keep cylinder in a well ventilated place S16 Keep cylinder away from ignition sources S33A Keep cylinder away from possible static discharge

16. OTHER INFORMATION

The information given here is based on the present state of knowledge and describes the product under the aspects of safety. It should not therefore be construed as guaranteeing specific properties. Whilst proper care has been taken in the preparation of this document, no liability for injury or damage resulting from its use can be accepted.

CYLINDER DETAILS

Cylinder Type	Nominal Capacity M³	Approx Dimensions (mm)	Approx gross Cylinder weight (Kg)
AC12	12	1224 x Ø305	90
AC8.5	8.5	980 x Ø305	70
AC7	7.0	1036 x Ø254	56
ACMW	1.5	648 x Ø152	12
ACMCP	100	1250x630x1300	950

Outlet Connection: BS341 No 4: Left hand 5/8" BSP female cone recessed.

Appendix 19

Environmental Health and Safety Induction

Safety Induction

Zasady bezpieczeństwa

Инструктаж по технике безопасности

Signed: _____

Print Name: _____

Date: _____

Pages 1 to 49

Site Safety Philosophy

FHR is committed to providing and maintaining a safe and healthy working environment for all its team members and contractors.

- The site has embraced Safety management and aims for the highest performance in order to provide and maintain a safe and healthy environment.
- We will comply with Legal obligations under the Health and Safety Act.
- We will include Employees and contractors in continuous improvement of health and safety practices.
- Maintain a high standard of Environmental care.

Zasady bezpieczeństwa w miejscu pracy

FHR podejmuje starania na rzecz zapewniania bezpiecznego środowiska pracy wszystkim swoim pracownikom i kontrahentom.

- Dzięki nowemu systemowi zarządzania bezpieczeństwem chcemy zapewnić jak najbezpieczniejsze warunki pracy, zgodne z zasadami BHP.
- Spełnimy wszelkie wymogi ustawy dotyczącej bezpieczeństwa i higieny pracy (Health and Safety Act).
- Chcemy, aby pracownicy i kontrahenci również uczestniczyli w procesie poprawy bezpieczeństwa i higieny pracy.
- Będziemy dbać o utrzymanie wysokiego poziomu ochrony środowiska.

Принципы безопасности на рабочей площадке

Компания FHR стремится обеспечить и поддерживать безопасную и здоровую рабочую среду для всех членов своей команды и подрядчиков.

- На рабочей площадке применяется система управления техникой безопасности, целью которой является максимальная производительность для обеспечения и поддержания безопасной и здоровой окружающей среды.
- Мы будем соблюдать правовые обязательства в рамках Закона об охране здоровья и обеспечении безопасности.
- Мы будем привлекать сотрудников и подрядчиков к деятельности по охране здоровья и обеспечению безопасности с целью непрерывного совершенствования.
- Мы будем поддерживать охрану окружающей среды на высоком уровне.

Employer Responsibility

FHR are responsible for creating and maintaining a safe and healthy workplace.

Managing and conducting all work activities so as to ensure the safety, health and welfare of people at work:

- Designing, providing and maintaining a safe place of work
- Safe access and egress
- Safe plant and machinery
- Safe and Risk free systems of work
- Provide and maintain welfare facilities
- Provision of information, instruction, training and supervision
- Employ competent workforce

Odpowiedzialność pracodawcy

Firma FHR jest odpowiedzialna za zapewnianie i utrzymywanie warunków pracy zgodnych z zasadami BHP.

Praca i zarządzanie nią w sposób zapewniający pracownikom bezpieczeństwo, zdrowie i dobre samopoczucie:

- Tworzenie, zapewnianie i utrzymywanie bezpiecznego miejsca pracy
- Bezpieczne wejście i wyjście z zakładu pracy
- Urządzenia i maszyny niestanowiące zagrożenia.
- System pracy gwarantujący bezpieczeństwo i minimalizację ryzyka
- Zapewnianie i utrzymanie pomieszczeń socjalnych
- Zapewnianie informacji i instrukcji oraz szkolenia i nadzór pracowników
- Zatrudnianie kompetentnych pracowników

Ответственность работодателя

Компания FHR несет ответственность за создание рабочих мест и за поддержание техники безопасности и охраны здоровья на них.

Управление и проведение всех видов работ для обеспечения безопасности, здоровья и благополучия людей на рабочем месте:

- проектирование, создание и поддержание безопасного рабочего места;
- безопасный доступ и выход;
- безопасные машины и оборудование;
- безопасные системы работы, не представляющие рисков;
- обеспечение и поддержание социально-бытовых объектов;
- предоставление информации, проведение обучения, подготовки и надзора;
- наем квалифицированного персонала.

Why is Safety Important?

Safety is important because:-

- It helps us to look after staff and service users.
- It improves the quality of the service we provide.
- It helps to stop people from being injured in accidents at work. Less accidents means less people get injuries or illnesses.
- It is the Law. Employers can be prosecuted by Inspectors for accidents.

Dlaczego bezpieczeństwo jest ważne?

Bezpieczeństwo jest ważne, ponieważ:

- Pomaga nam dbać o zdrowie pracowników i klientów.
- Poprawia jakość świadczonych przez nas usług.
- Zapobiega urazom na skutek wypadków w miejscu pracy. Mniejsza liczba wypadków oznacza mniejszą liczbę urazów i zachorowań.
- Przestrzegania jego zasad wymaga prawo. Pracodawca może zostać pociągnięty do odpowiedzialności za wszelkie wypadki w miejscu pracy.

Почему важна безопасность?

Безопасность важна, потому что:

- она помогает нам заботиться о персонале и потребителях услуг;
- она улучшает качество предоставляемых нами услуг;
- она помогает предотвратить травмирование людей в результате несчастных случаев на работе. Чем меньше несчастных случаев, тем меньше травм или заболеваний получают люди;
- это закон. Инспекторы также могут привлечь работодателей к ответственности за несчастные случаи.

Site Rules

- Smoking only permitted in the designated area (outside canteen).

- PPE must be worn.

- Always Wash hands before eating.

Zasady obowiązujące w miejscu pracy

- Palenie dozwolone jest tylko w wyznaczonej strefie (poza stołówką).
- Należy zawsze stosować środki ochrony osobistej.
- Należy zawsze myć ręce przed jedzeniem.

Правила на рабочей площадке

- Курение разрешено только в специально отведенном месте (за пределами столовой).
- Необходимо использовать СИЗ.
- Перед едой всегда необходимо мыть руки.

Site Rules

- Smoking is only allowed in designated areas.
- Do not interfere with safety devices or deface safety signs on equipment.
- Do not obstruct general safety signs throughout the site.
- Don’t horse play; avoid distracting others
- Use handrails when walking up/down stairs

Zasady obowiązujące w miejscu pracy

- Palenie dozwolone jest wyłącznie w wyznaczonych strefach.
- Zabrania się zakłócania pracy urządzeń zabezpieczających i niszczenia znaków ostrzegawczych na urządzeniach.
- Zabrania się zasłaniania ogólnych znaków ostrzegawczych na terenie zakładu.
- Należy unikać nieodpowiedzialnych zachowań podczas pracy i odwracania uwagi innych pracowników.
- Użyj poręcze podczas chodzenia po schodach góra / dół

Правила на рабочей площадке

- Курение разрешено только в специально отведенных местах.
- Не препятствуйте работе защитных устройств и не портите знаки безопасности на оборудовании.
- Не закрывайте знаки общей безопасности на рабочей площадке.
- Не шумите; не отвлекайте других.
- Используйте поручни при ходьбе вверх / вниз по лестнице

Site Rules

- Follow instructions;
- Don’t take chances.
- If you don’t know, ask.
- Being under the influence of an intoxicant will not be tolerated.
- Obey all rules, signs, and instructions.
- Keep all walkways and exits clear.
- Do not run, always walk.

Zasady obowiązujące w miejscu pracy

- Należy postępować zgodnie z zasadami.
- Nie należy podejmować niepotrzebnego ryzyka.
- Należy dążyć do wyjaśnienia wszelkich wątpliwości.
- Praca pod wpływem środków odurzających jest zabroniona.
- Należy przestrzegać wszystkich zasad, oznaczeń i instrukcji.
- Zabronione jest blokowanie przejść i wyjść.
- Bieganie jest zabronione.

Правила на рабочей площадке

- Следуйте инструкциям.
- Не рискуйте.
- Если не знаете, спросите.
- Запрещено находиться в состоянии алкогольного опьянения.
- Соблюдайте все правила, знаки и инструкции.
- Все проходы и выходы должны быть свободны от препятствий.
- Не бегайте, всегда ходите.

Risk Assessment

- All work must be risk assessed in advance
- Controls put in place
- Injury / ill health not an option

- **FHR Safety Statement**
- Forge Hill Recycling's Safety Statement is available to all Employees and it is requested that Employees read the Safety Statement at least once a year to ensure they are aware of any new legislation or changes to the workplace safety.

Ocena ryzyka

- Każda praca musi zostać wcześniej oceniona pod kątem ryzyka.
- Należy zastosować odpowiednie środki kontroli.
- Zabrania się pracy osobom chorym lub kontuzjowanym.
- **Oświadczenie Bezpieczeństwa FHR**
- Oświadczenie o bezpieczeństwie Forge Hill Recycling jest dostępny dla wszystkich pracowników i jest to wniosek , że pracownicy przeczytać Oświadczenie o bezpieczeństwie co najmniej raz w roku , aby upewnić się, że są świadomi wszelkich nowych przepisów lub zmian do bezpieczeństwa w miejscu pracy.

Оценка рисков

- Необходимо заранее оценивать все работы на предмет рисков.
- Необходимо предпринять все меры безопасности.
- Не допускается получение травм/причинение вреда здоровью.
- **Заявление ФХР безопасности**
- Заявление безопасности Forge Hill Recycling доступен для всех сотрудников , и это запрос , что сотрудники прочитать заявление по безопасности не реже одного раза в год, чтобы убедиться, что они знают о новом законодательстве или изменения безопасности на рабочем месте .

Risk Assessment- Site Hazards

- Slips, trips and falls.
- Cuts from the conveyor line.
- Moving Machinery.
- Electricity.
- Manual handling.
- Biological Hazards.
- Noise from machinery.
- Exposure to chemicals at the premises.

Ocena ryzyka – zagrożenia w miejscu pracy

- Poślizgnięcia, potknięcia i upadki.
- Przecięcia podczas pracy przy linii przenośnikowej.
- Ruchome elementy urządzeń.
- Prąd elektryczny.
- Przenoszenie ręczne.
- Zagrożenia biologiczne.
- Hałas generowany przez urządzenia.
- Narażenie na działanie substancji chemicznych na terenie zakładu.

Оценка рисков. Опасности на рабочей площадке

- Риск поскользнуться, споткнуться и упасть.
- Риск получить порезы от конвейерной линии.
- Риск получить травму от движущихся деталей станков.
- Риск электротравмы.
- Риск во время выполнения ручных погрузочно-разгрузочных работ.
- Биологические опасности.
- Шум от станков.
- Воздействие химических веществ в помещениях.

Risks-Controls

SLIPS TRIPS AND FALLS

- USE OF SAFETY FOOWEAR
- DO NOT RUN
- WALK WITH CARE
- ENSURE GOOD HOUSEKEEPING
- KEEP WORKPLACE TIDY AT ALL TIMES
- REPORT SPILLS IMMEDIATELY

COMPRESSED AIR

- NOT FOR USE ON BODY / SKIN AT ANY TIME

CHEMICALS

- ONLY TRAINED PERSONNEL MAY HANDLE.
- FAMILIAR WITH SDS AND LOCATION.
- USE S.O.P AND CORRECT P.P.E.

Zapobieganie ryzyku

POŚLIZGNIĘCIA, POTKNIĘCIA I UPADKI

- NALEŻY STOSOWAĆ OBUWIE OCHRONNE
- NIE BIEGAĆ
- ZACHOWAĆ OSTROŻNOŚĆ PODCZAS PRZEMIESZCZANIA SIĘ
- DBAĆ O UTRZYMANIE PORZĄDKU
- ZAWSZE UTRZYMYWAĆ MIEJSCE PRACY W CZYSTOŚCI
- NIEZWŁOCZNIE ZGŁASZAĆ WSZELKIE WYCIEKI

SPRĘŻONE POWIETRZE

- NIE STOSOWAĆ NA CIELE/SKÓRZE

CHEMIKALIA

- DOSTĘP DO CHEMIKALIÓW POSIADA JEDYNIE PRZESZKOLONY PERSONEL.
- NALEŻY ZAPOZNAĆ SIĘ Z KARTĄ CHARAKTERYSTYKI I JEJ LOKALIZACJĄ.
- NALEŻY PRZESTRZEGAĆ STANDARDOWEJ PROCEDURY DZIAŁANIA I STOSOWAĆ ODPOWIEDNIE ŚRODKI OCHRONY OSOBISTEJ.

Меры защиты от рисков

РИСК ПОСКОЛЬЗНУТЬСЯ, СПОТКНУТЬСЯ И УПАСТЬ

- ИСПОЛЬЗУЙТЕ БЕЗОПАСНУЮ ОБУВЬ
- НЕ БЕГАЙТЕ
- ХОДИТЕ ОСТОРОЖНО
- ПРОВОДИТЕ НАДЛЕЖАЩУЮ УБОРКУ
- СОБЛЮДАЙТЕ ЧИСТОТУ И ПОРЯДОК НА РАБОЧЕМ МЕСТЕ
- НЕМЕДЛЕННО СООБЩАЙТЕ ОБ УТЕЧКАХ

СЖАТЫЙ ВОЗДУХ

- НЕ ПОДВЕРГАЙТЕ ВОЗДЕЙСТВИЮ ТЕЛО/КОЖУ

ХИМИЧЕСКИЕ ВЕЩЕСТВА

- РАЗРЕШЕНО ОБРАЩАТЬСЯ ТОЛЬКО ОБУЧЕННОМУ ПЕРСОНАЛУ.
- ОЗНАКОМЬТЕСЬ С ПАСПОРТОМ БЕЗОПАСНОСТИ ВЕЩЕСТВА (SDS) И МЕСТОПОЛОЖЕНИЕМ.
- ИСПОЛЬЗУЙТЕ СТАНДАРТНЫЕ ОПЕРАЦИОННЫЕ ПРОЦЕДУРЫ И НАДЛЕЖАЩИЕ СИЗ.

Machine Guarding

Never work on unguarded machine

Always replace guards

Report damaged or missing guards

Zabezpieczanie maszyn

Nie należy pracować na maszynie bez zamocowanych osłon.

W razie potrzeby należy wymienić osłony.

Należy zgłosić uszkodzone lub brakujące osłony.

Защитные устройства для оборудования

Никогда не работайте на оборудовании без применения защитных устройств.

Всегда устанавливайте защитные ограждения.

Сообщайте о поврежденных или отсутствующих защитных ограждениях.

Tools & Equipment

Never operate a machine you have not been trained and authorised to use.

- Report any faults or defects to safety guards or machinery immediately to a member of management
- All tools in good condition & regular checks carried out.
- Certification & training as required by law
- ***Never*** attempt to make repairs or to free caught product/materials
- ***Never*** use machinery or equipment unless you have been trained to do so

Narzędzia i urządzenia

Nie należy korzystać z maszyny bez odpowiedniego przeszkolenia i pozwolenia.

- Wszelkie uszkodzenia maszyn lub ich osłon należy niezwłocznie zgłosić przełożonym.
- Należy utrzymywać narzędzia w odpowiednim stanie i przeprowadzać regularne kontrole.
- Należy zadbać o uzyskanie certyfikatów i przeprowadzenie szkoleń wymaganych przez prawo.
- ***Nigdy*** nie podejmować prób przeprowadzania napraw ani nie wyciągać zablokowanych produktów/materiałów.
- ***Nigdy*** nie przystępować do obsługi maszyn bez odpowiedniego przeszkolenia.

Инструменты и оборудование

Никогда не работайте на оборудовании без прохождения обучения и без специального разрешения.

- Немедленно сообщайте руководству о любых неисправностях или дефектах защитных ограждений или оборудования.
- Все инструменты должны находиться в хорошем состоянии и должны регулярно проверяться.
- Сертификация и обучение в соответствии с требованиями закона.
- **Никогда** не пытайтесь осуществлять ремонт или извлекать застрявший продукт/материалы.
- **Никогда** не используйте машины или оборудование без предварительного обучения.

Tools & Equipment

- ***Do not*** under any circumstance remove or bypass safeguards
- ***Do not*** leave a machine which is switched on unattended
- ***Do not*** use equipment with frayed wires.
- ***Do not*** tamper with any equipment labeled with a **“Lock Out Tag”.**
- Use appropriate **Personal Protective Equipment (PPE)** as required

Narzędzia i urządzenia

- ***Nie należy***, pod żadnym pozorem, zdejmować lub omijać osłon.
- ***Nie należy*** pozostawiać włączonej maszyny bez nadzoru.
- ***Nie należy*** używać urządzeń, jeśli podłączone przewody są uszkodzone.
- ***Nie należy*** podejmować prób obsługi urządzeń z oznaczeniami procedury **LOTO.**
- Należy stosować wymagane **środki ochrony osobistej**.

Инструменты и оборудование

- ***Не*** удаляйте или не обходите предохранительные устройства ни при каких обстоятельствах.
- ***Не*** оставляйте включенную машину без присмотра.
- ***Не*** используйте оборудование с изношенными проводами.
- ***Не*** вскрывайте оборудование с маркировкой «**Заблокировано**».
- Используйте надлежащие ***Средства индивидуальной защиты (СИЗ)*** в соответствии с требованиями.

Noise

The Safety Health and Welfare at Work (Control of Noise at Work) Regulations 2007 state:

- Where noise levels exceed 80dB(A), hearing protection will be made available to all employees
- Training will be given on the use of hearing protection
- Hearing protection is available to all employees

- **The Noise Survey conducted on this site highlighted certain areas that were over 80dB(A). Safety signs are posted up in these areas.**

Hałas

Zgodnie z rozporządzeniem The Safety Health and Welfare at Work (Control of Noise at Work) w sprawie bezpieczeństwa i zdrowia w pracy (ograniczania hałasu w pracy) z 2007 roku:

- Jeśli poziom hałasu przekracza 80 dB(A), wszystkim pracownikom należy zapewnić środki ochrony słuchu.
- Stosowanie środków ochrony słuchu jest poprzedzone odpowiednim szkoleniem.
- Należy udostępnić i umożliwić korzystanie ze środków ochrony słuchu wszystkim pracownikom.

- **Badania hałasu przeprowadzone na terenie zakładu wykazały, że w niektórych obszarach poziom hałasu przekracza 80 dB(A). W tych miejscach umieszczono tablice ostrzegawcze.**

Шум

Правила охраны труда и техники безопасности на рабочем месте (контроль уровня шума на рабочем месте), принятые в 2007 г., указывают:

- при превышении допустимого уровня шума 80 дБ (А) всем работникам должны быть предоставлены средства защиты органов слуха;
- необходимо проводить обучение по использованию средств защиты органов слуха;
- средства защиты органов слуха выдаются всем работникам.

- **Съемка карты шумов, проведенная на данной рабочей площадке, выявила некоторые зоны, звук на которых превышает 80 дБ (А). В этих зонах установлены знаки безопасности.**

Personal Protection

Equipment-Hearing Protection

- Hearing Protection zones are located on the ground and Upper floors as indicated by signs.
- You **must** wear Hearing protection if you are working in these zones**.**
- **Contact you supervisor if you need this PPE!**

Środki ochrony osobistej

Środki ochrony słuchu

- Strefy, w których wymagane jest stosowanie środków ochrony słuchu znajdują się na parterze oraz na wyższych piętrach i są odpowiednio oznakowane.
- Stosowanie środków ochrony słuchu podczas pracy w tych strefach jest **obowiązkowe.**
- **W przypadku braku tych środków należy skontaktować się z przełożonym!**

Средства индивидуальной защиты органов слуха

- Зоны, в которых необходима защита слуха, расположены на первом и верхних этажах и отмечены знаками.
- **Обязательно** надевайте средства защиты органов слуха во время работы в этих зонах.
- **Свяжитесь со своим руководителем при необходимости такого СИЗ!**

Risks

ELECTRICITY

- Overhead power lines
- Underground cables
- Control Rooms
- Electrical Control Panels

Arm with third degree burn from high-voltage line.

Electricity ranges from
110v to 11,000v

Ryzyko

PRĄD ELEKTRYCZNY

- Napowietrzne linie energetyczne
- Kable podziemne
- Sterownie
- Elektryczne panele sterowania

Napięcie prądu wynosi od
110 V do 11 000 V

Риски

ЭЛЕКТРИЧЕСТВО

- Воздушные линии электропередач.
- Подземные кабели.
- Аппаратные помещения.
- Электрические панели управления.

Номинальное напряжение
110–11 000 В

Controls

ELECTRICITY

- Avoid long trailing leads.
- Only certified electrical personnel allowed to work with electricity on this site with prior FHR authorisation.
- All tools---110volt only
- Report electrical defects immediately
- Report any electrical Hazard immediately.
- Do not interfere in any way with electricity
- Always call electrician

Środki zapobiegawcze

PRĄD ELEKTRYCZNY

- Nie stosować długich, ciągnących się po podłożu przewodów.
- Wszelkie naprawy układów elektrycznych na terenie zakładu mogą przeprowadzać wyłącznie elektrycy posiadający odpowiednie uprawnienia i upoważnienie FHR.
- Należy używać jedynie urządzeń zasilanych napięciem 110 V
- Należy niezwłocznie zgłosić wszelkie uszkodzenia układu zasilania elektrycznego.
- Należy niezwłocznie zgłosić zagrożenie porażeniem prądem elektrycznym.
- Nie ingerować w układy elektryczne.
- W razie potrzeby należy skontaktować się z elektrykiem.

Меры защиты

ЭЛЕКТРИЧЕСТВО

- Избегайте длинных тянущихся проводов.
- Только дипломированным электрикам разрешено работать с электричеством на этой рабочей площадке после получения предварительного разрешения компании FHR.
- Все инструменты — только 110 В.
- Немедленно сообщайте о неисправностях электрооборудования.
- Немедленно сообщайте о любой опасности поражения электрическим током.
- Не прикасайтесь к электрооборудованию.
- Всегда обращайтесь к электрику.

RISK-DUST

- Asthma, allergies, biological hazards
- Do not breathe in dust
- Wear correct P.P.E.

RISK – Using Knives

- Always face the knife blade away from the body during cutting.
- Keep limbs and fingers well away from the blade during cutting to prevent injury.

RYZYKO – PYŁ

- Astma, alergie, zagrożenia biologiczne
- Należy unikać oddychania zapylonym powietrzem.
- Należy stosować odpowiednie środki ochrony osobistej.

RYZYKO - Korzystanie Noże

- Zawsze wychodzą na ostrze noża od ciała podczas cięcia.
- Trzymać kończyny i palce z dala od ostrza podczas cięcia, aby uniknąć obrażeń.

РИСК ОТ ПЫЛИ

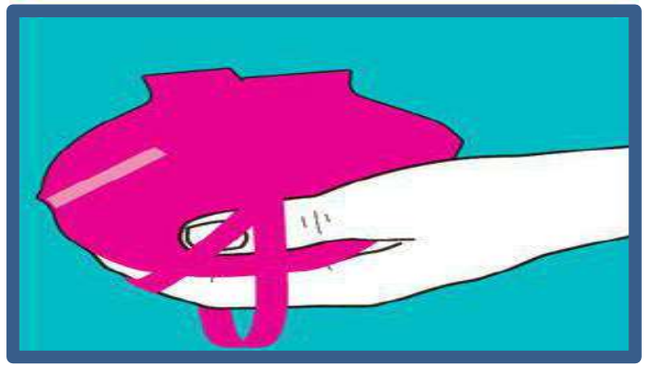
- Вызывает астму, аллергию, является биологически опасным фактором.
- Не вдыхайте пыль.
- Надевайте надлежащие СИЗ.

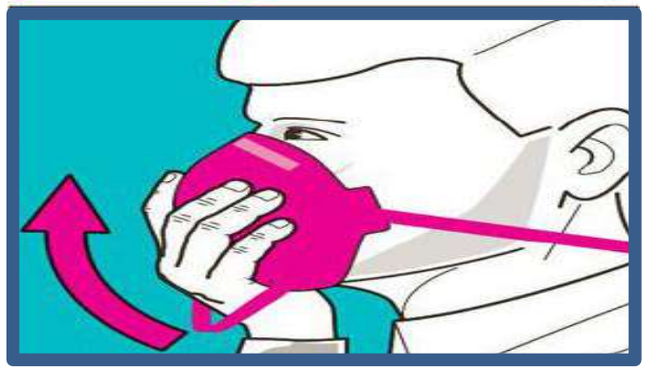
РИСК - Использование ножей

- Всегда сталкиваются с лезвием ножа в сторону от тела во время резки
- Держите конечности и пальцы подальше от лезвия во время резки, чтобы избежать травм.

Wear your Dust Mask - Stay Healthy
Maska przeciwpyłowa – ochrona zdrowia
Носите пылезащитную маску — оставайтесь здоровым

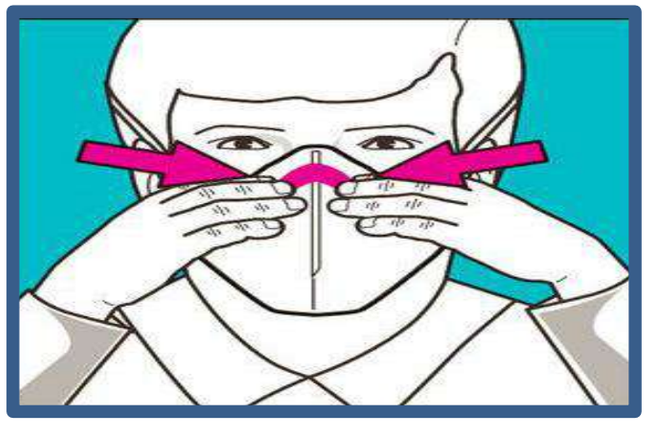
Dust masks prevent dust from entering the lungs. When you inhale, air passes through the dust mask, trapping dust particles on the surface of the mask.
Maski przeciwpyłowe zapobiegają dostawaniu się pyłu do płuc. Podczas wdechu powietrze przenika przez maskę, a pył zatrzymuje się na jej powierzchni.
Пылезащитные маски предотвращают попадание пыли в легкие. При вдыхании воздух проходит через пылезащитную маску, которая задерживает частицы пыли на своей поверхности.

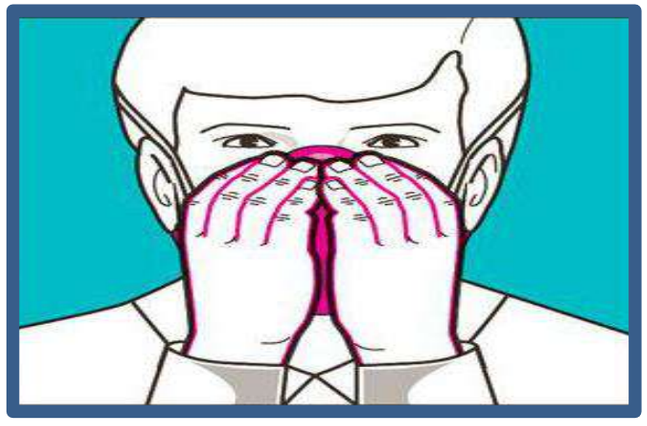




Place the mask over your face and make sure it covers your mouth and nose.
Nałożyć maskę na twarz tak, aby zakrywała usta i nos.
Наденьте маску на лицо и убедитесь в том, что она закрывает рот и нос.

Place the lower strap behind your ears, and the upper strap above your forehead.
Umieścić dolny pasek za uszami, a górny powyżej czoła.
Поместите нижний ремешок за ушами, а верхний ремешок выше лба.





Using both hands press the nose clip over the lower part of nose.
Obiema dłońmi docisnąć zacisk na dolnej części nosa.
Двумя руками нажмите на носовой зажим над нижней частью носа.

Make sure there is a tight seal against your face in order to provide full protection.
Należy upewnić się, czy maska przylega szczelnie do twarzy i zapewnia pełną ochronę.
Убедитесь, что маска плотно прилегает к лицу для обеспечения полной защиты.

Test: Cover your hands over the respirator and exhale strongly. If air flows around your nose then tighten the nose piece and if air escapes at the edges then adjust the straps.
Test: Zakryć maskę dłońmi i mocno wypuścić powietrze. Jeśli powietrze ucieka w pobliżu nosa lub na krawędziach, należy docisnąć odpowiedni obszar maski za pomocą pasków.
Проверка. Возьмите респиратор в руки и сделайте сильный выдох. Если воздух проходит возле носа, затяните носовую часть маски, а если воздух выходит по краям, отрегулируйте ремешки.
Change your dust mask every 8 hours and wash hands and face after removing./ Maskę należy wymieniać co 8 godzin, a po każdej wymianie należy myć ręce i twarz. / Меняйте пылезащитную маску каждые 8 часов. После снятия вымойте руки и лицо.
If your mask doesn't fit correct contact the Safety department./ Jeśli maska nie pasuje, należy skontaktować się z działem bezpieczeństwa. / Если ваша маска не подходит, свяжитесь с отделом по технике безопасности.

RISK- Biological

- Hepatitis
- Weils disease
- Legionnaires
- Tetanus
- **Always follow Good Hygiene Practices**
- Sign up for vaccines

RYZYKO – biologiczne

- Żółtaczka
- Choroba Weila
- Choroba legionistów
- Tężec
- **Należy zawsze przestrzegać zasad higieny osobistej**
- Należy poddawać się szczepieniom

БИОЛОГИЧЕСКИЙ РИСК

- Гепатит
- Лептоспироз
- Болезнь легионеров
- Столбняк
- **Обязательное соблюдение необходимых правил гигиены**
- Вакцинация

Signs

Signs are displayed to bring your attention to hazards and safety features throughout the factory

RED:
Prohibition/Fire/Serious Danger alert

YELLOW:Hazard warning

BLUE: Behaviour or Action, e.g. PPE

GREEN:Emergency/First Aid/No Danger area

Znaki

Znaki zwracają uwagę na zagrożenia i środki ostrożności obowiązujące na terenie zakładu.

KOLOR CZERWONY:
Zakaz/pożar/poważne zagrożenie

KOLOR ŻÓŁTY:
ostrzeżenie o zagrożeniu

KOLOR NIEBIESKI:
sposób zachowania lub działanie, np. stosowanie środków ochrony osobistej

KOLOR ZIELONY:
wyjścia ewakuacyjne/pierwsza pomoc/bezpieczna strefa

Знаки

Знаки устанавливаются для обращения внимания на опасности и на средства безопасности по всему предприятию.

КРАСНЫЕ:
запрет/пожар/ оповещение о серьезной опасности.

ЖЕЛТЫЕ:
оповещение об опасности.

СИНИЕ: поведение или действие, например СИЗ.

ЗЕЛЕНЫЕ:
скорая помощь/первая помощь/безопасная зона.

Personal Protection Equipment

- Long Sleeve Shirts and Pants
- High Visibility Vests
- Steel Toe Cap Boots
- Gloves
- Hard Hat

Safety Equipment as Required

- Dust Mask
- Face Mask
- Safety Glasses/ Goggles
- Hearing protection

Personal Hygiene

- Wash hands &face before eating
- Change work clothes every day
- Shower and washing hair after work

Środki ochrony osobistej

- Koszule z długim rękawem i spodnie
- Kamizelki odblaskowe
- Obuwie ochronne z metalowymi noskami
- Rękawice
- Kask

Środki ochrony, jeśli wymagane

- Maska przeciwpyłowa
- Maska ochronna
- Okulary ochronne/gogle
- Środki ochrony słuchu

Higiena osobista

- Przed jedzeniem należy myć ręce i twarz
- Należy codziennie zmieniać ubranie robocze
- Po pracy należy wziąć prysznic i umyć włosy

Средства индивидуальной защиты

- Рубашки с длинным рукавом и брюки
- Светоотражающие жилеты
- Обувь со стальным носком
- Перчатки
- каска

Средства защиты при необходимости

- Пылезащитная маска
- Маска для защиты лица
- Защитные очки
- Средства защиты органов слуха

Личная гигиена

- Мойте руки и лицо перед едой
- Меняйте рабочую одежду каждый день
- Принимайте душ и мойте голову после работы

Emergency & Other Contacts

Sean Murphy (M.D.)
0876673839

Brian Bruton (Process Mgr)
0866036309

Hospital (CUH) -
(021) 492 2000

Fire/Ambulance/Police:
999 or **112**

Environmental Protection Agency:
(021) 487 5540

Cork County Council:
(021) 427 6891

These numbers are posted in the Materials Recovery Facility

Numery awaryjne i inne

lek. med. Sean Murphy
0876673839

Brian Bruton
0866036309

Hospital (CUH)
(021) 492 2000

Straż pożarna/pogotowie/policja:
999 lub **112**

Agencja Ochrony Środowiska
(021) 487 5540

Rada hrabstwa Cork:
(021) 427 6891

Numery te wywieszone są w zakładzie odzyskiwania materiałów

Контактные лица при чрезвычайных ситуациях и другие контактные лица

Шон Мерфи (доктор медицины)
0876673839

Брайан Брутон
0866036309

Больница (CUH)
(021) 492 2000

Пожарная охрана/скорая помощь/полиция
999 или **112**

Агентство по охране окружающей среды США
(021) 487 5540

пробка Совет графства
(021) 427 6891

Эти телефоны указаны возле установки для переработки материалов

Manual Handling

- Assess the load you are about to lift- including weight, shape, centre of gravity.
- Split the load if possible.
- Avoid Stretching.
- Get help, from another person if you need it.
- Get close with feet apart. Bend you knees and lift with your legs.
- Secure grip and use gloves if possible.

Przenoszenie ręczne

- Należy ocenić ładunek do podniesienia, biorąc pod uwagę jego masę, kształt i środek ciężkości.
- Jeśli to możliwe, podzielić ładunek.
- Unikać naciągania mięśni i kręgosłupa.
- W razie potrzeby poprosić o pomoc drugą osobę.
- Zbliżyć się do przedmiotu i szeroko rozstawić stopy. Ugiąć kolana. Podczas podnoszenia przedmiotu oprzeć ciężar ciała na nogach.
- Zadbać o prawidłowy chwyt – jeśli to możliwe, używać rękawic.

Ручные погрузочно-разгрузочные работы

- Оцените груз для подъема, включая вес, форму, центр тяжести.
- По возможности, разделите нагрузку.
- Избегайте растяжения.
- При необходимости привлеките другое лицо для помощи.
- Станьте ближе, при этом ноги должны быть расставлены на ширине плеч. Согните колени и поднимите груз, перенося центр тяжести на ноги.
- Крепко удерживайте груз, по возможности используйте перчатки.

Manual Handling

- Never twist your back.
- Keep your back in a neutral position (Not Straight).
- Move Smoothly-don’t jerk.
- Take care when putting down a heavy load.

Przenoszenie ręczne

- Unikać skręcania pleców.
- Plecy utrzymywać w pozycji neutralnej (niewyprostowane).
- Poruszać się powoli – nie szarpać.
- Uważnie kłaść ciężki ładunek.

Ручные погрузочно-разгрузочные работы

- Держите спину ровно.
- Держите спину в нейтральном положении (не прямо).
- Перемещайтесь плавно, не рывками.
- Будьте осторожны при опускании тяжелого груза.

Manual Handling

- Manual handling training must be provided to all employees.

- It is your responsibility to notify your Manager if you have any medical condition that could affect your ability too handle loads:
  e.g. pregnancy
  illness or injury

Przenoszenie ręczne

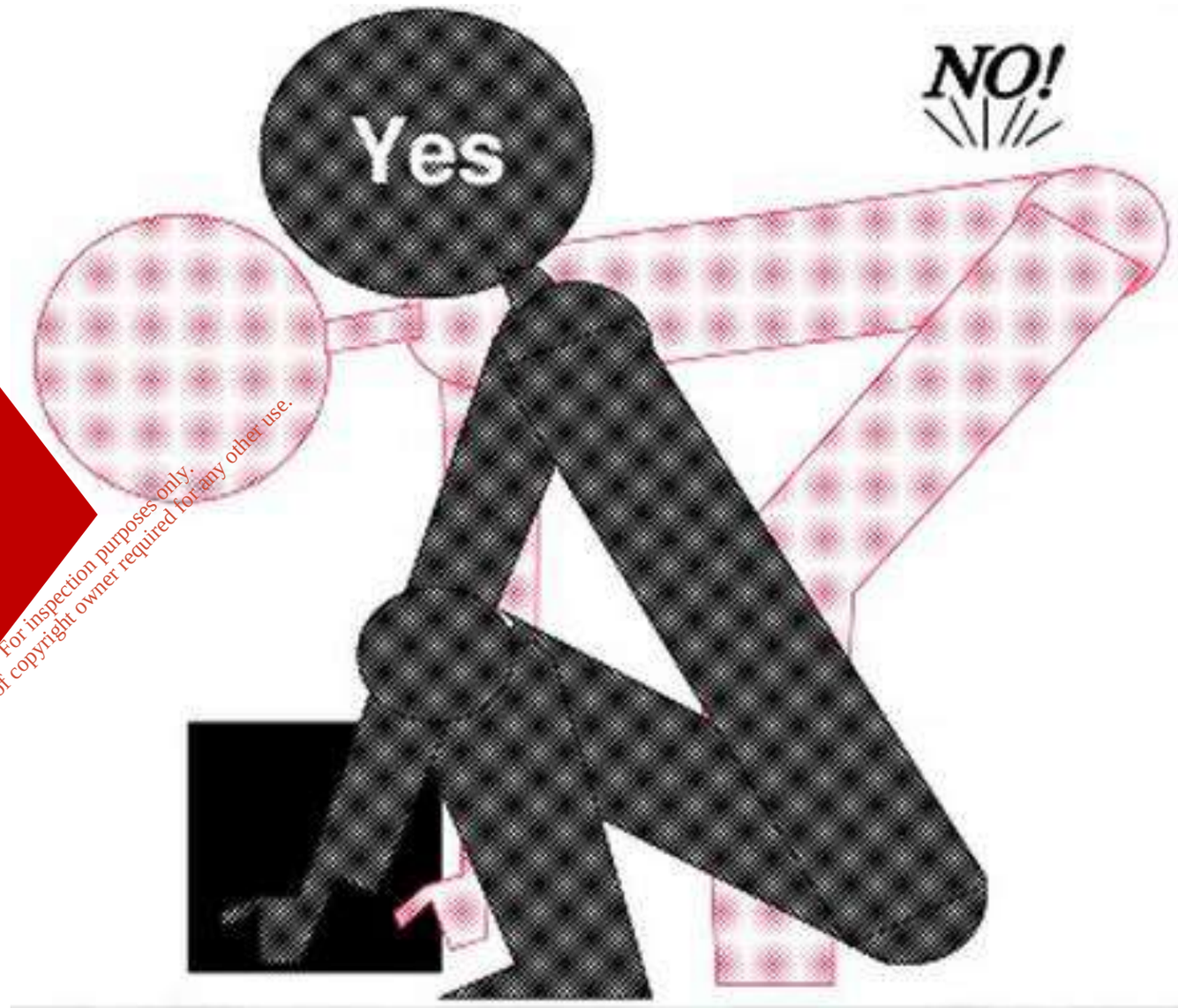
- Każdy z pracowników powinien odbyć szkolenie z zakresu procedur ręcznego przenoszenia przedmiotów.

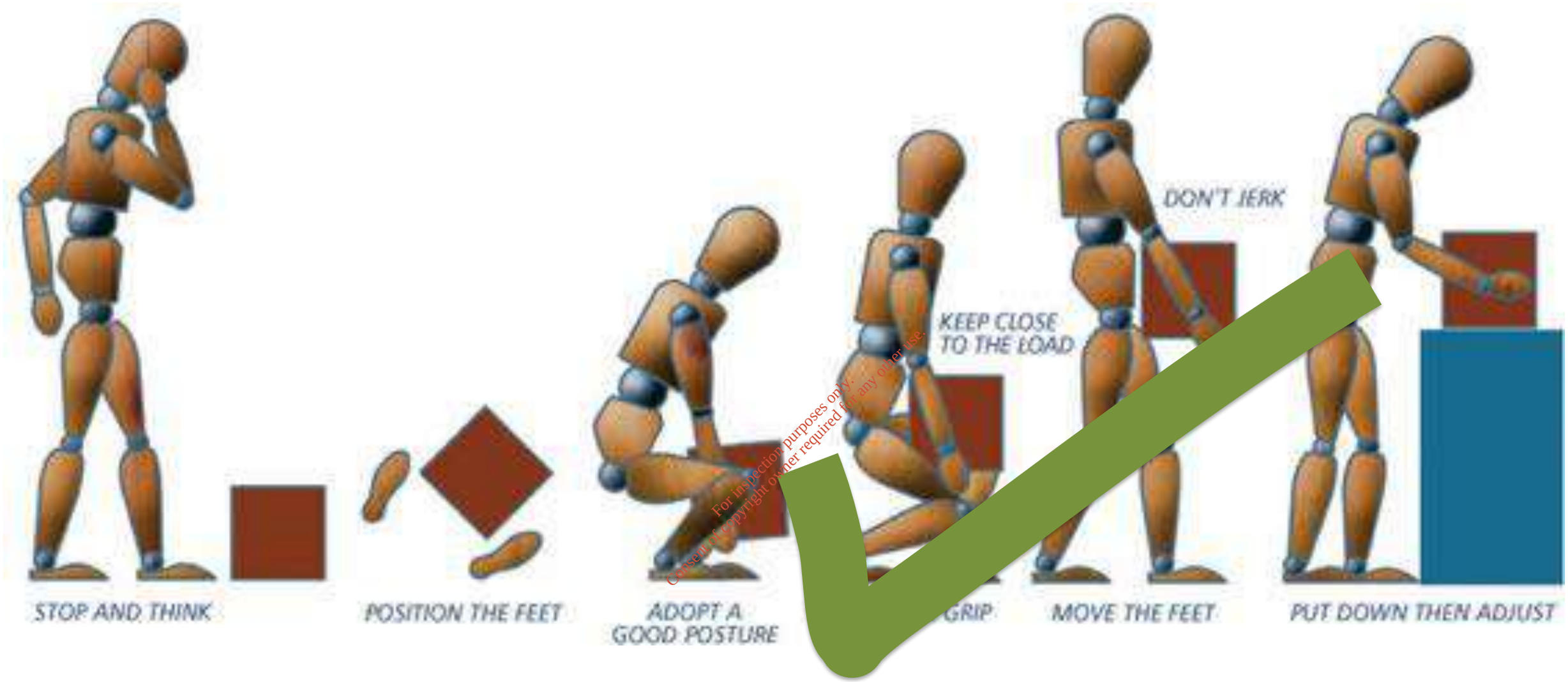
- Obowiązkiem pracownika jest poinformowanie przełożonego o stanie zdrowia ograniczającym możliwości ręcznego przenoszenia, jak np.:
  ciąża,
  choroba lub uraz.

Ручные погрузочно-разгрузочные работы

- Все работники должны пройти обучение по выполнению ручных погрузочно-разгрузочных работ.

- Вы несете ответственность за предоставление вашему руководителю информации о состоянии вашего здоровья, которое может повлиять на вашу способность по перемещению грузов:
  например, беременность,
  болезнь или травма.





REPETITIVE MOVEMENTS	POWTARZAJĄCE SIĘ RUCHY	ПОВТОРЯЮЩИЕСЯ ДВИЖЕНИЯ
• Exercise or stretch joints every so often during the employee's shift.	- Ćwiczenia lub wycinka stawy tak często podczas pracownika przesunięcie.	- Упражнение или растянуть суставы каждый так часто во время смены работника.
• Take additional 5 min rest breaks when needed without leaving the picking line.	- Podjąć dodatkowe 5 min przerwy na odpoczynek , gdy są potrzebne bez opuszczania kompletacji linia.	- Возьмите еще 5 мин перерывы для отдыха , когда это необходимо , не покидая захватывающего линию.
• Maintain proper posture when working.	- Utrzymanie prawidłowej postawy podczas pracy.	- Поддержание правильной осанки при работе.
• Rinse hands with hot water, followed by cold water, followed by hot water again whenever needed to help with stiffness of repetitive movements.	- Spłucz dłonie ciepłą wodą, następnie zimną wodą, następnie ciepłą wodą ponownie jeśli zajdzie taka potrzeba , aby pomóc ze sztywnością powtarzalne ruchy.	- Ополосните руки горячей водой, а затем холодной водой, а затем горячей водой снова всякий раз, когда необходимо, чтобы помочь движений.

Standing Periods

- Walk around every so often to help with stiffness.
- Rubber mats are available for fitting, upon request from employee, to help prevent leg tiredness/ stiffness during shift.
- Take additional 5 min seated rest breaks when needed without leaving the picking line area.

Okresy stojące

- Spacer po co tak często, aby pomóc w sztywności.

- Dywaniki gumowe są dostępne dla montażu, na wniosek pracownik pracownik, aby pomóc zapobiec zmęczenie nóg / Sztywność trakcie zmiany.
- Podjąć dodatkowe 5 min przerwy w pozycji siedzącej na odpoczynek, gdy są potrzebne , bez konieczności opuszczania obszaru linii zrywania.

Постоянные Периоды

- Прогулка вокруг каждого каждого так часто, чтобы помочь с жесткость.
- Резиновые коврики доступен для установки, по запросу работник чтобы помочь предотвращения ног усталость/жесткость во время смены.
- Возьмите еще 5 мин сидеть перерывы для отдыха, когда это необходимо, не покидая зону комплектования линии.

SAFETY STOPS

- Safety pull chords and emergency stops are present throughout the lines.
- Pull the chord in the case of an emergency in order to stop it from moving.
- If the line has been stopped to clear a blockage and is due to restart a siren will sound to alert staff.

ZATRZYMANIE AWARYJNE

- Wyłączniki linkowe oraz przyciski zatrzymania awaryjnego rozmieszczone są wzdłuż linii.
- W sytuacji awaryjnej należy pociągnąć linkę, aby zatrzymać ruch linii.
- Po zatrzymaniu linii w celu usunięcia blokady i przed ponownym uruchomieniem wyemitowany zostanie sygnał syreny.

АВАРИЙНЫЕ ОГРАНИЧИТЕЛИ

- Тросы аварийного отключения и аварийные ограничители установлены на линиях.
- Потяните трос аварийного отключения в случае возникновения чрезвычайной ситуации для остановки движения.
- Если линия была остановлена для удаления блокировки и подлежит повторному включению, будет звучать сирена для предупреждения персонала.

RISK

SITE VEHICLE HAZARDS

- Beware of traffic hazard especially during projects e.g. Forklift trucks, teleporters, loaders.
- Over 20 deliveries per day
- Vehicles moving continuously on the floor of the recycling building.
- Follow pedestrian routes.

RYZYKO

ZAGROŻENIE ZE STRONY POJAZDÓW

- Należy zachować ostrożność podczas pracy w pobliżu m.in. wózków widłowych, przenośników i ładowarek.
- Codziennie na terenie zakładu realizowanych jest ponad 20 dostaw.
- Pojazdy stale poruszają się po terenie zakładu.
- Należy poruszać się po wyznaczonych ścieżkach dla pieszych.

РИСК

ОПАСНОСТИ, СВЯЗАННЫЕ С ПЕРЕМЕЩЕНИЕМ АВТОМОБИЛЬНОГО ТРАНСПОРТА НА РАБОЧЕЙ ПЛОЩАДКЕ

- Остерегайтесь опасностей, связанных с перемещением автомобильного транспорта, особенно во время реализации проектов, например, вилочные погрузчики, телескопические погрузчики, автопогрузчики.
- Производится более 20 поставок в сутки.
- Автомобильный транспорт непрерывно движется в здании переработки.
- Следуйте пешеходным маршрутам.

Site Rules-
Traffic &Pedestrians

- Beware of moving vehicles – listen for reverse beacon and watch for flashing lights.
- Always wear you High-Visibility Vest.
- Pedestrians &Traffic must obey the signs.
- Stick to designated walkways around the site.
- Always make eye contact with the driver and make sure he is aware of your presence.
- Never Assume that the Driver can see you.

Zasady obowiązujące w miejscu pracy –
ruch pojazdów i pieszych

- Należy zachować ostrożność w pobliżu poruszających się pojazdów – zwracać uwagę na sygnał cofania oraz światła ostrzegawcze.
- Należy zawsze nosić kamizelkę odblaskową.
- Pojazdy oraz piesi muszą przestrzegać znaków.
- Należy poruszać się po wyznaczonych ścieżkach dla pieszych.
- Należy nawiązać kontakt wzrokowy z kierowcą i upewnić się, że jest się widocznym.
- Nigdy nie należy zakładać, że jest się widocznym dla kierowcy.

Правила на рабочей площадке для
автотранспорта и пешеходов

- Остерегайтесь движущихся транспортных средств, слушайте сигналы и наблюдайте за мигалками.
- Всегда носите светоотражающий жилет.
- Движение пешеходов и автомобильного транспорта должно осуществляться в соответствии со знаками.
- Придерживайтесь указанных дорожек на рабочей площадке.
- Всегда поддерживайте зрительный контакт с водителем и убедитесь в том, что он знает о вашем присутствии.
- Никогда не думайте, что водитель видит вас.

Site Rules-
Traffic &Pedestrians

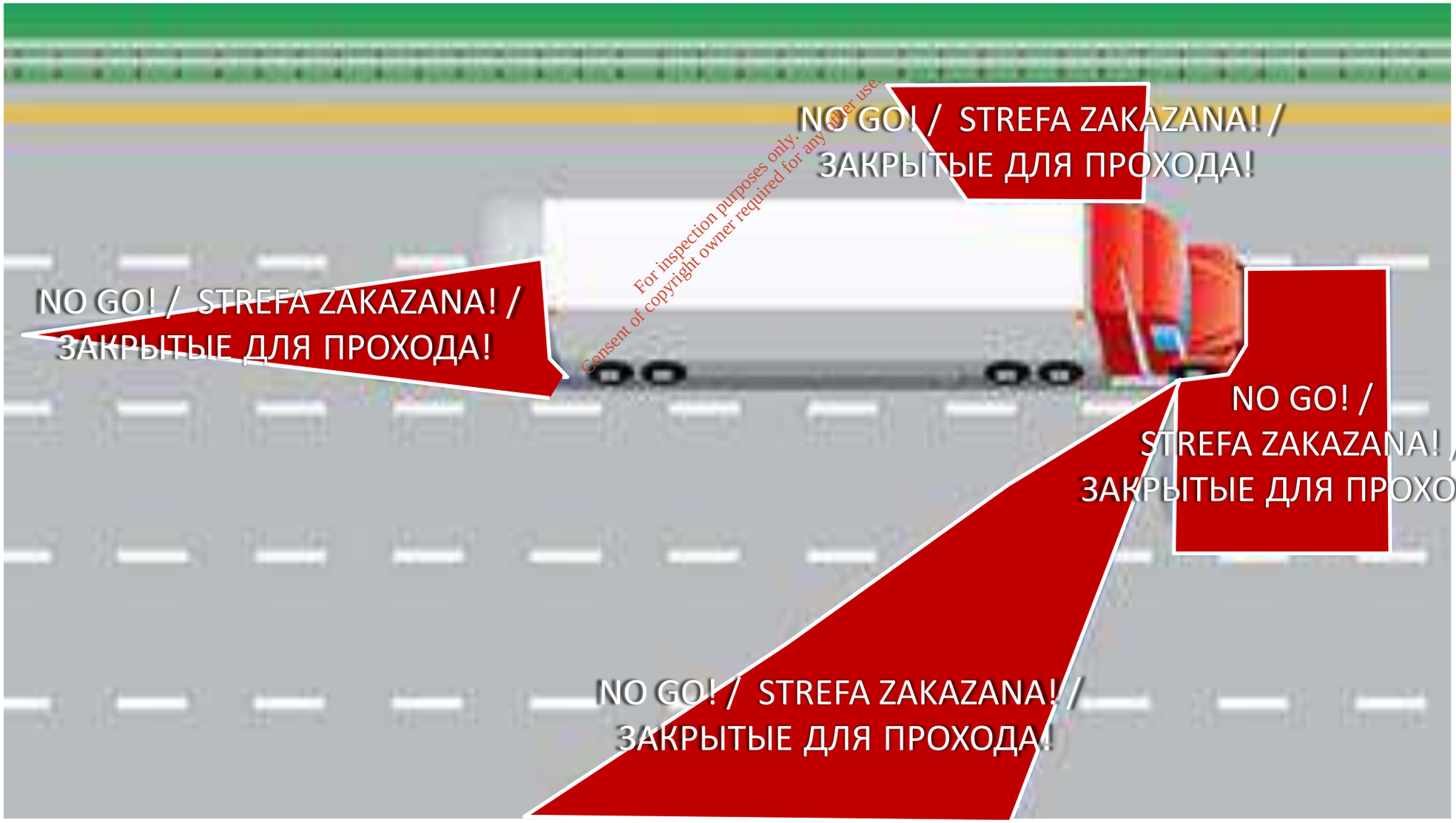
Beware of Driver Blind Spots and DO not Stand in these locations. The drawing below shows the **“NO GO” Zones**.

Zasady obowiązujące w miejscu pracy – *ruch pojazdów i pieszych*

Należy pamiętać o istnieniu tzw. „martwych pól” kierowcy i NIE stać w nich. Na rysunku poniżej przedstawiono **„zakazane strefy”**.

Правила на рабочей площадке для *автотранспорта и пешеходов*

Остерегайтесь «слепых зон» водителя и не стойте в этих местах. На рисунке ниже показаны зоны **«ЗАКРЫТЫЕ ДЛЯ ПРОХОДА»**.



Hazard Spotting

A hazard is something that may cause an accident to you, or anybody else, if it is not reported.

- If you notice anything in your workplace which you think may be a hazard, you need to tell your supervisor/ manager about it immediately.

- **Examples of Hazards:-**
- working alone,
- fire hazards
- trailing cables or leads which people could trip or fall over
- wet floors or liquid spillages.

Identyfikacja zagrożeń

Zagrożeniem jest wszystko, co w przypadku braku zgłoszenia może prowadzić do wypadku.

- W razie jakichkolwiek podejrzeń dotyczących potencjalnego zagrożenia należy niezwłocznie skontaktować się z przełożonym lub kierownikiem.

- **Przykłady zagrożeń:**
- praca w odosobnieniu,
- zagrożenie pożarowe,
- kable, o które pracownicy mogą się potknąć lub przewrócić,
- mokre podłogi lub wycieki płynów.

Маркировка опасностей

Опасность — это то, что может стать причиной несчастного случая с вами или с каким-либо иным лицом, если о ней не было сообщено.

- Если вы заметили что-либо на вашем рабочем месте, что, по вашему мнению, может представлять собой опасность, вы должны немедленно сообщить об этом своему руководителю/диспетчеру.

- **Примеры опасностей:**
- работа в одиночку;
- опасности возникновения пожара;
- свисающие кабели или провода, которые могут стать причиной поскальзывания или падения;
- мокрый пол или разлитая жидкость.

Fire Prevention

IF YOU DISCOVER A FIRE

- Shout '**FIRE**'.
- Tackle the fire using the extinguishers / fire blanket / hose reels only IF TRAINED TO DO SO.
- Do not use the hoses near electrical equipment or flammable liquids.
- If you put the fire out watch for re-ignition.

IF YOU CANNOT CONTROL THE FIRE

- Sound the alarm at the nearest break glass point.
- Proceed to your designated "Fire Assembly Point" and await further instructions.
- Do **Not** go back into the building.

Zapobieganie pożarom

W RAZIE POŻARU

- Krzyknąć „**PALI SIĘ!**"
- Przystąpić do gaszenia ognia za pomocą gaśnicy/koca gaśniczego/węża jedynie, gdy jest się odpowiednio PRZESZKOLONYM.
- Nie gasić ognia za pomocą węża w pobliżu urządzeń elektrycznych lub płynów łatwopalnych.
- Po ugaszeniu ognia należy uważać na ponowny zapłon.

JEŚLI OGNIA NIE DA SIĘ UGASIĆ

- Należy uruchomić alarm najbliższym przyciskiem alarmowym.
- Udać się do miejsca zbiórki w razie pożaru i oczekiwać na dalsze instrukcje.
- **Nie** wracać do budynku.

Противопожарные мероприятия

ПРИ ОБНАРУЖЕНИИ ПОЖАРА

- Крикните **«ПОЖАР!»**.
- Постарайтесь потушить пожар при помощи огнетушителей/противопожарного одеяла/шлангов только ПРИ НАЛИЧИИ СООТВЕТСТВУЮЩЕЙ ПОДГОТОВКИ.
- Не используйте шланги вблизи электрооборудования или горючих жидкостей.
- Если вы потушите огонь, осмотрите место пожара на предмет повторного возгорания.

ПРИ НЕВОЗМОЖНОСТИ КОНТРОЛИРОВАТЬ ОГОНЬ

- Запустите звуковую сигнализацию в ближайшей точке с разбиваемым стеклом.
- Перейдите к обозначенному «Пункту сбора в случае пожара» и ждите дальнейших указаний.
- **Не** возвращайтесь в здание.

Fire Prevention

ON HEARING AN ALARM

- Leave the building by the nearest available fire escape route.
- DO NOT delay your escape.
- Go to the assembly area at the front Gate and await instruction.
- Do not delay to collect belongings.
- If smoke is present then keep low to the floor to aid your escape.
- Visitors must be escorted by their host to the Fire Assembly Point and be accounted for.

Zapobieganie pożarom

PO USŁYSZENIU ALARMU

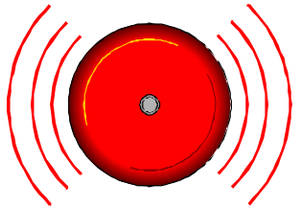
- Należy opuścić budynek najbliższym wyjściem ewakuacyjnym.
- NIE opóźniać ewakuacji.
- Udać się na miejsce zbiórki przy bramie głównej i czekać na dalsze instrukcje.
- Nie zabierać ze sobą niepotrzebnych przedmiotów.
- W przypadku występowania dymu należy poruszać się nisko przy ziemi, co ułatwi ewakuację.
- Osoby odwiedzające zakład muszą być odprowadzone na miejsce zbiórki przez osoby je oprowadzające.

Противопожарные мероприятия

ЕСЛИ ВЫ УСЛЫШАЛИ СИГНАЛ ТРЕВОГИ

- Покиньте здание по ближайшему маршруту эвакуации при пожаре.
- НЕМЕДЛЕННО покиньте помещение.
- Перейдите к монтажной площадке у передних ворот и ждите дальнейших указаний.
- Не тратьте время на сбор вещей.
- При наличии дыма низко наклонитесь к полу при покидании площадки.
- Посетители должны покидать площадку в сопровождении ответственного лица к Пункту сбора в случае пожара.

Fire Prevention



Evacuation

- You are responsible for your own safety and the safety of others.
- Two tone fire alarm

  -The first tone is a warning (Pulse tone, Duration 5 min). There is no need to evacuate

  -On hearing the second tone (Continuous). Evacuate.
- When the Evacuation Alarm is activated, employees must safely stop work, shut off their machines and evacuate the building.

Zapobieganie pożarom

Ewakuacja

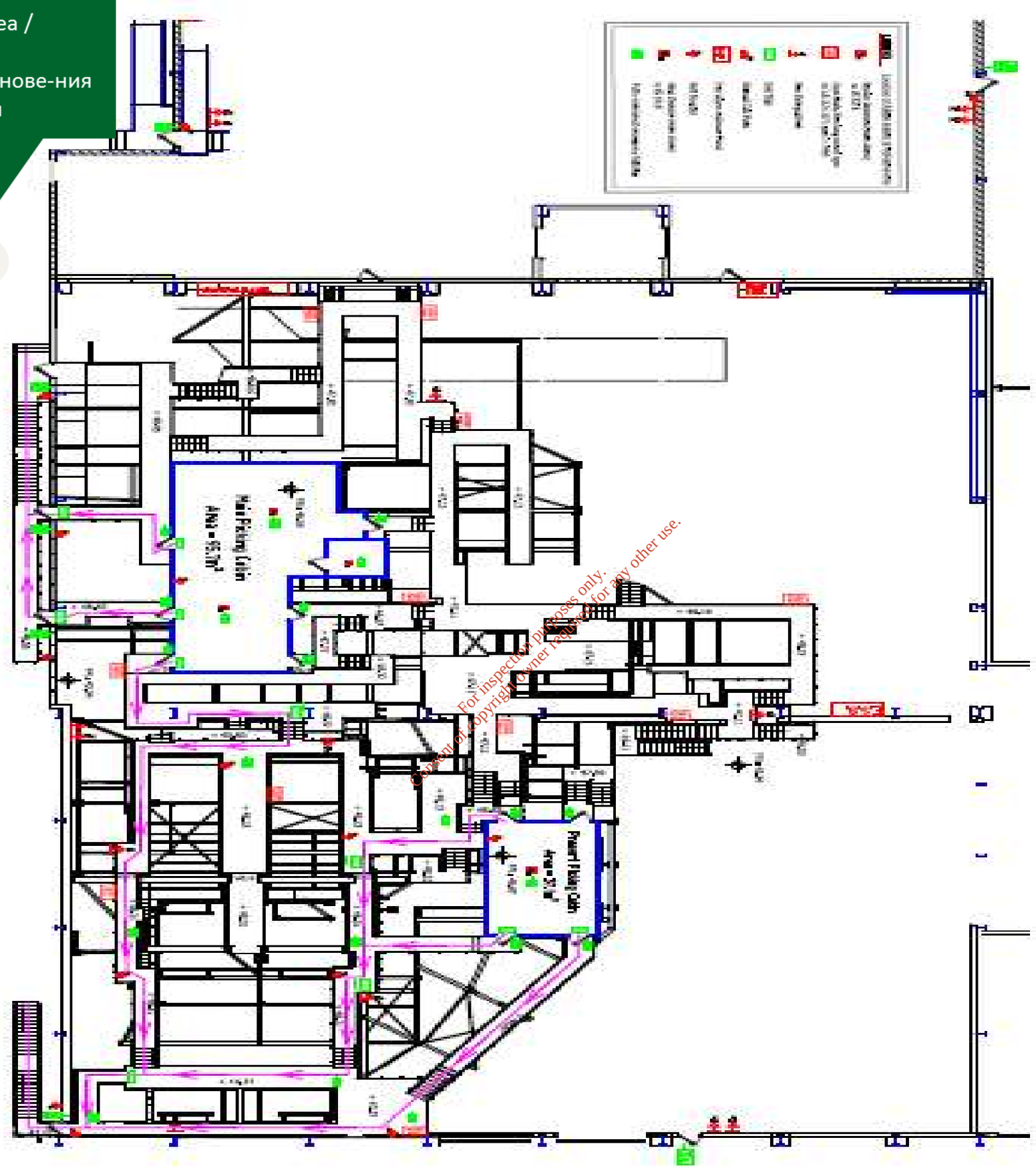
- Każdy jest odpowiedzialny za bezpieczeństwo swoje, jak i innych.
- Dwa sygnały alarmowe
  - Pierwszy sygnał ma charakter ostrzegawczy (sygnał przerywany, czas trwania: 5 minut) Nie istnieje potrzeba ewakuacji.
  - Po usłyszeniu drugiego sygnału (ciągłego) należy się ewakuować.
- Po usłyszeniu alarmu ewakuacyjnego należy zakończyć pracę w bezpieczny sposób, wyłączyć urządzenia i opuścić budynek.

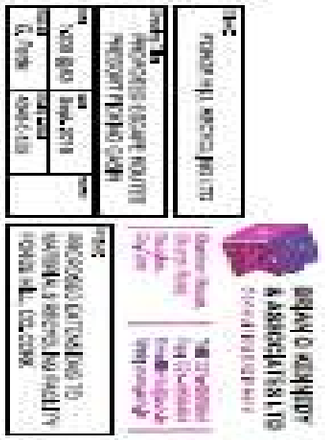
Противопожарные мероприятия

Эвакуация

- Вы несете ответственность за собственную безопасность и безопасность других людей.
- Два сигнала пожарной сигнализации:
  - первый сигнал — предупредительный (импульсный сигнал, продолжительность 5 мин). При этом необходимость эвакуации отсутствует;
  - при появлении второго сигнала (продолжительного) произведите эвакуацию.
- При сигнале тревоги для эвакуации сотрудники должны безопасно остановить работу, выключить станки и эвакуироваться из здания.

Emergency Assembly Area /
Miejsce zbiórki /
Место сбора в случае возникнове-ния аварийной ситуации





Legend / Legenda / Надпись

- Fire Exit / Wyjście ewakuacyjne / Пожарный выход
- Emergency Assembly Area / Miejsce zbiórki / Место сбора в случае возник Пожарный новения аварийной ситуации
- Walkways / Ścieżki dla pieszych / Пешеходные дорожки

Fire Prevention

Once you have reached the Assembly Area

- Report any missing colleagues to your Fire Warden.
- Report any disabled persons.
- Remain at assembly point until advised otherwise.
- Do not leave the Fire Assembly Point or re-enter the building unless you have been instructed to do so by the Fire Warden.

Zapobieganie pożarom

Po dotarciu do miejsca zbiórki

- Należy zgłosić nieobecność współpracowników osobie odpowiedzialnej za ewakuację.
- Należy zgłosić osoby z urazami.
- Należy pozostać na miejscu zbiórki, chyba że otrzymano inne instrukcje.
- Nie należy opuszczać miejsca zbiórki ani nie wracać do budynku, chyba że otrzymano inne instrukcje od osoby odpowiedzialnej za ewakuację.

Противопожарные мероприятия

После прибытия на место сбора

- Сообщите о любых отсутствующих коллегах лицу, ответственному за противопожарное состояние.
- Сообщайте о любых лицах с ограниченными возможностями.
- Оставайтесь в пункте сбора до получения иных указаний.
- Не оставляйте пункт сбора или повторно не входите в здание без получения специальных указаний от лица, ответственного за противопожарную безопасность.

Fire Prevention

Do **NOT** use unless trained. Using the wrong extinguisher is Dangerous.

WATER

Paper, wood, etc.

Not electrical, liquids or gases

FOAM

Solids (Wood, Paper, Textiles) Flammable liquids. ***Not*** electrical or gases.

POWDER

Solids (Wood, Paper, Textiles), Flammable liquids, gases & electrical

CARBON DIOXIDE (CO_2)

Electrical, safe on most small fires. Do **Not** Touch the Nozzle when operating

Remember:
Always point at the base of the fire.

Zapobieganie pożarom

NIE używać bez uprzedniego przeszkolenia.
Użycie nieodpowiedniej gaśnicy jest niebezpieczne.

GAŚNICA WODNA

Papier, drewno itp.
Nie: urządzenia elektryczne, płyny lub gazy.

GAŚNICA PIANOWA

Ciała stałe (drewno, papier, tkaniny), łatwopalne płyny.
Nie: urządzenia elektryczne lub gazy.

GAŚNICA PROSZKOWA

Ciała stałe (drewno, papier, tkaniny), łatwopalne płyny, gazy i urządzenia elektryczne

GAŚNICA NA DWUTLENEK WĘGLA (CO_2)

Urządzenia elektryczne, bezpieczne w wypadku niewielkich pożarów.
Nie dotykać dyszy gaśnicy podczas jej używania.

Uwaga:
Należy kierować gaśnicę na źródło ognia.

Противопожарные мероприятия

НЕ используйте без подготовки.
Использование ненадлежащего огнетушителя опасно.

ВОДА

Бумага, дерево и т. д.
Не использовать для электрических устройств, жидкостей или газов.

ПЕНА

Твердые вещества (дерево, бумага, текстиль), легковоспламеняющиеся жидкости.
Не использовать для электрических устройств или газов.

ПОРОШОК

Твердые вещества (дерево, бумага, текстиль), легковоспламеняющиеся жидкости, газы и электрические устройства.

ДИОКСИД УГЛЕРОДА (CO_2)

Электрические устройства, безопасны для большого количества небольших возгораний.
Не касайтесь раструба при применении огнетушителя.

Помните!
Всегда направляйте огнетушитель на очаг возгорания.

Fire Prevention

- A Fire Blanket is very effective at smothering a local fire.
- And wrapping someone who's clothing has caught fire.

Zapobieganie pożarom

- Koc gaśniczy bardzo łatwo dławi niewielki ogień.
- Należy nim również owinąć osobę, której ubranie zapaliło się.

Противопожарные мероприятия

- Противопожарное одеяло очень эффективно при тушении очагового возгорания.
- В него необходимо завернуть человека, чья одежда загорелась.

Electrical Safety

- Treat electricity with respect.
- All Electrical Equipment used at FHR must have a current test label attached to it indicating it has passes the PAT test.
- Please report untested or out of date equipment to your supervisor.
- Check constantly that cables are not damaged or worn.
- Keep trailing cables off the ground and away from water.
- Never overload or use makeshift plugs and fuses.

Bezpieczeństwo elektryczne

- Należy zachować ostrożność podczas pracy z urządzeniami elektrycznymi.
- Wszystkie urządzenia elektryczne używane w FHR muszą posiadać aktualne etykiety oznaczające zgodność z wymogami testu PAT.
- Wszelkie urządzenia nieposiadające atestu lub posiadające nieaktualną etykietę należy zgłosić przełożonemu.
- Należy zawsze sprawdzać, czy kable nie są zniszczone lub przetarte.
- Należy umieszczać kable nad ziemią i z dala od wody.
- Nie doprowadzać do przeciążenia urządzeń i nie używać własnoręcznie wykonanych wtyczek i bezpieczników.

Электробезопасность

- Аккуратно обращайтесь с электричеством.
- Все электрооборудование, используемое компанией FHR, должно иметь ярлык о последнем прохождении испытания PAT.
- Пожалуйста, сообщите вашему руководителю о непроверенном оборудовании или оборудовании с истекшим сроком.
- Всегда проверяйте кабели на предмет их повреждения или износа.
- Поднимите свободно тянущиеся кабели и держите их подальше от воды.
- Никогда не перегружайте или используйте самодельные вилки и предохранители.

Lock Out Tag Out (LOTO)

- Lock out tag out can only be performed by trained personnel.
- All energy sources e.g. motors, conveyors, will be isolated and locked.
- Primary isolation consists of a yellow danger Tag & Lock.
- Do not interfere with locked equipment.
- Tags must be removed when the work is complete or at the end of the shift which ever is earlier.

Odłączanie napięcia i wywieszanie tablic ostrzegawczych (LOTO)

- Czynności mogą być wykonywane jedynie przez przeszkolony personel.
- Procedura obejmuje odłączenie i zablokowanie wszystkich źródeł energii, np. silników czy przenośników.
- Zasadnicza procedura polega na zablokowaniu i oznaczeniu urządzeń żółtymi znakami ostrzegawczymi.
- Nie należy ingerować w odłączone urządzenia.
- Oznaczenia należy usunąć po zakończeniu prac naprawczych lub na koniec zmiany – w zależności od tego, co nastąpi wcześniej.

Система производственной безопасности, предотвращающая несанкционированное включение оборудования на время проведения технического обслуживания или ремонта (LOTO)

- Блокировка оборудования для предотвращения несанкционированного включения должна выполняться только квалифицированным персоналом.
- Все источники электроэнергии, например, электромоторы, конвейеры, должны быть изолированы и заблокированы.
- Первичная изоляция включает в себя желтый ярлык об опасности для маркировки и блокировки.
- Не прикасайтесь к заблокированному оборудованию.
- Ярлыки необходимо удалить после завершения работы или в конце рабочей смены в зависимости от того, что наступит ранее.

Lock Out Tag Out (LOTO)

- The DANGER Tag:

Identifies the person placing the tag and the date and time.

Odłączanie napięcia i wywieszanie tablic ostrzegawczych (LOTO)

- Oznaczenie NIEBEZPIECZEŃSTWO:

Zawiera informacje o osobie umieszczającej oznaczenie oraz datę i czas oznaczenia.

Система производственной безопасности, предотвращающая несанкционированное включение оборудования на время проведения технического обслуживания или ремонта (LOTO)

- Ярлык «ОПАСНО»:

указывает лицо, которое установило ярлык, дату и время.

Personal Protective Equipment (PPE)

Minimum Requirement

- Long Sleeve Shirts and Pants
- High Visibility Vests
- Steel Toe Cap Boots
- Gloves
- Hard Hat

Safety Equipment as Required

- Face Mask
- Safety Glasses/ Goggles
- Hearing protection

Personal Hygiene

- Wash hands &face before eating
- Change work clothes every day
- Shower and washing hair after work

Środki ochrony osobistej (ŚOO)

Minimalne wymagania

- Koszule z długim rękawem i spodnie
- Kamizelki odblaskowe
- Obuwie ochronne z metalowymi noskami
- Rękawice
- Kask

Środki ochrony, jeśli wymagane

- Maska ochronna
- Okulary ochronne/gogle
- Środki ochrony słuchu

Higiena osobista

- Przed jedzeniem należy myć ręce i twarz
- Należy codziennie zmieniać ubranie robocze
- Po pracy należy wziąć prysznic i umyć włosy

Средства индивидуальной защиты (СИЗ)

Минимальные требования

- Рубашки с длинным рукавом и брюки
- Светоотражающие жилеты
- Обувь со стальным носком
- Перчатки
- каска

Средства защиты при необходимости

- Маска для защиты лица
- Защитные очки
- Средства защиты органов слуха

Личная гигиена

- Мойте руки и лицо перед едой
- Меняйте рабочую одежду каждый день
- Принимайте душ и мойте голову после работы

Accidents-
Non Employees

- If a non-employee has an accident or incident you should report this to your manager immediately.
- Non-employees means members of the public, pupils, service users, residents, customers etc.
- You should do the same as you would for your accidents or accidents to staff.
- All accidents/incidents must be reported to Area Supervisor, Production Manager/H&S Officer & Operations Manager immediately with a full accident/incident report produced to the Operations Manager/H&S Officer before end of shift.

Wypadki
Osoby niebędące pracownikami

- Jeśli osoba niebędąca pracownikiem ulegnie wypadkowi, należy zgłosić ten fakt przełożonemu.
- Osoby niebędące pracownikami to: osoby prywatne, uczniowie, użytkownicy usług, osoby mieszkające w pobliżu zakładu, klienci itp.
- Należy przestrzegać procedur dotyczących pracowników, którzy ulegli wypadkom.
- Wszystkich wypadków / incydentów muszą być zgłaszane do obszaru inspektora, Kierownik Produkcji / H & S Officer & Operations Manager natychmiast raporcie pełnym wypadków / incydentów produkowanej z Operations Manager / H & S urzędnika przed końcem zmiany.

Несчастные случаи с *лицами, которые не являются работниками*

- Если лицо, не являющееся работником, попало в аварию или с ним произошел несчастный случай, вы должны сообщить об этом своему руководителю.
- К лицам, не являющимся работниками, относятся представители общественности, ученики, пользователи услуг, жители, заказчики и т. д.
- Ваши действия должны быть аналогичны действиям в ситуациях, когда авария или несчастный случай произошел с кем-либо из работников.
- Все несчастные случаи / происшествия должны быть сообщены Area Руководитель, менеджер по производству / H & S сотрудник & Operations Manager немедленно с полной аварии / инцидента докладе, подготовленном к менеджеру / H & S сотрудника операций до конца смены.

First Aid

- A first aid Kit is available in the Canteen.
- If you have an accident contact the safety representative/Manager.
- You must do this as soon as you possibly can. An Accident Report Form Must be filled in.

Pierwsza pomoc

- Zestaw pierwszej pomocy znajduje się w stołówce.
- Osoba, która uległa wypadkowi powinna skontaktować się z osobą odpowiedzialną za bezpieczeństwo/przełożonym.
- Należy to uczynić tak szybko, jak to możliwe. Należy wypełnić formularz zgłoszenia wypadku.

Первая помощь

- Аптечка первой помощи находится в столовой.
- Если вы попали в аварию или с вами произошел несчастный случай, свяжитесь с представителем по технике безопасности/менеджеру.
- Вы должны сделать это как можно быстрей. Необходимо заполнить форму отчета о несчастном случае.

Sickness/Illness

- If you become ill while at work you must report this to your supervisor/Manager.
- If you have an accident contact the safety representative/Manager immediately.
- You are not permitted to leave the site without approval from your supervisor.

Choroba

- Należy zgłosić przełożonemu lub kierownikowi wszelkie dolegliwości, które wystąpiły podczas pracy.
- Osoba, która uległa wypadkowi powinna skontaktować się z osobą odpowiedzialną za bezpieczeństwo/przełożonym.
- Zabronione jest opuszczanie zakładu bez zgody przełożonego.

Недомогание/болезнь

- Если вы заболели во время работы, сообщите об этом своему руководителю/менеджеру.
- Если вы попали в аварию или с вами произошел несчастный случай, свяжитесь с представителем по технике безопасности/менеджеру.
- Вам не разрешено покидать рабочую площадку без разрешения от руководителя.

Final Thoughts

- "Duty of Care" is a two way street.
- There is responsibility on both Employer & Employee to contribute to a healthy safe workplace.
- Think about what you are doing!
- Develop good safety& housekeeping habits.
- Report hazards so that they can be fixed.
- When unsure please ask!

Uwagi końcowe

- Zachowanie należytej staranności dotyczy obu stron.
- Zarówno Pracodawca, jak i Pracownik są odpowiedzialni za utrzymanie bezpieczeństwa w miejscu pracy.
- Należy działać z rozwagą!
- Należy rozwijać nawyki dotyczące bezpieczeństwa i utrzymania porządku.
- Zgłaszać zagrożenia, aby można je było zlikwidować.
- W razie wątpliwości zadawać pytania!

Выводы

- Обязанность соблюдать осторожность лежит как на работодателе, так и на работниках.
- Работодатель и работник несут ответственность за создание здорового безопасного рабочего места.
- Думайте о том, что вы делаете!
- Развивайте навыки техники безопасности и организации работы.
- Сообщайте об опасностях для их устранения.
- Если вы в чем-то сомневаетесь, спросите!

Standard Operating Procedure	**Environmental Health & Safety Induction FHR**		
Date:	16/08/2017	**Revision No.**	2.2

Reasons for Revision

10/11/2016	Inserted a “FHR Safety Statement” section stating that the Safety Statement is available to all employees and is requested to be read at least once a year to ensure employees are up to date on all new legislation and revisions.
06/12/2016	Updated the “Accidents” section of this induction file.
19/12/2016	Input a section on “RISK – Using Knives” to describe the safe use of knives onsite.
16/08/2017	Put in slide on escape routes from picking cabins