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OPERATIONAL REPORT

STARRUS ECO HOLDINGS LIMITED

SARSFIELDCOURT INDUSTRIAL ESTATE

GLANMIRE

COUNTY CORK

Prepared For: -

Starrus Eco Holdings Limited
Sarsfieldcourt
Glanmire
Co. Cork

Prepared By: -

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January 2023

Project	Operational Report			
Client	Starrus Eco Holdings Ltd.			
Report No	Date	Status	Prepared By	Reviewed By
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		Final		

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1. INTRODUCTION

Starrus Eco Holdings Ltd (SEHL) is part of Beauparc Group Ireland's leading integrated waste management company. It operates its waste management facility in Sarsfieldcourt Industrial Estate at Glanmire under an Industrial Emissions (IE) Licence granted by the Environmental Protection Agency (EPA).

SEHL's sister company, Starrus Property Holdings Ltd (SPHL), also part of the Beauparc Group, operates a second waste facility on an adjoining site, referred to as Glyntown, under a Waste Permit issued by Cork City Council. It is proposed to extend SEHL's IE licence boundary to incorporate the SPHL site and this requires a review of the IE Licence.

This Operational Report has been prepared in support of the IE review application. It describes the site location, layout, plant, methods, processes, ancillary processes, abatement, recovery and treatment systems, and operating procedures for the installation.

2. OPERATIONS

2.1 Site Location

The installation is located in the Sarsfieldcourt Industrial Estate, approximately 5km north of Glanmire Village (Figure 2.1). The Industrial Estate is accessed off the R616, which connects with the N8 and the M8, approximately 2km north east of the site. There are approximately sixteen lots of varying sizes in the estate including haulage contractor's yards and associated warehouses, vehicle repair shop and distribution depots.

2.2 Surrounding Land Use

The surrounding land use is primarily agricultural, with some low density residences. The nearest sensitive location (private residence) is a house at Buck Leary's Cross Roads, approximately 170m to the north-west of the site. This is the first of a row of eight detached residences that extends northwards on both sides of the public road. The last residence is approximately 300m from the facility boundary. There are two residences approximately 350m south of the facility boundary and St. Stephen's Hospital is approximately 1 km to the south. The closest residences to the north are 300m away, along the R616 towards the N8/M8.

2.3 Site Layout

The site layout is shown on Figure 2.2. It covers 22,921m^2 and is made up of two operational areas. The northern area occupies 15,600 m^2. The entrance is off an internal access road within the Industrial Estate and there is one main processing handling building, office, weighbridges, an odour control unit, vehicle wash, bin wash, paved open yards, civic amenity area, parking spaces and a firewater storage tank.

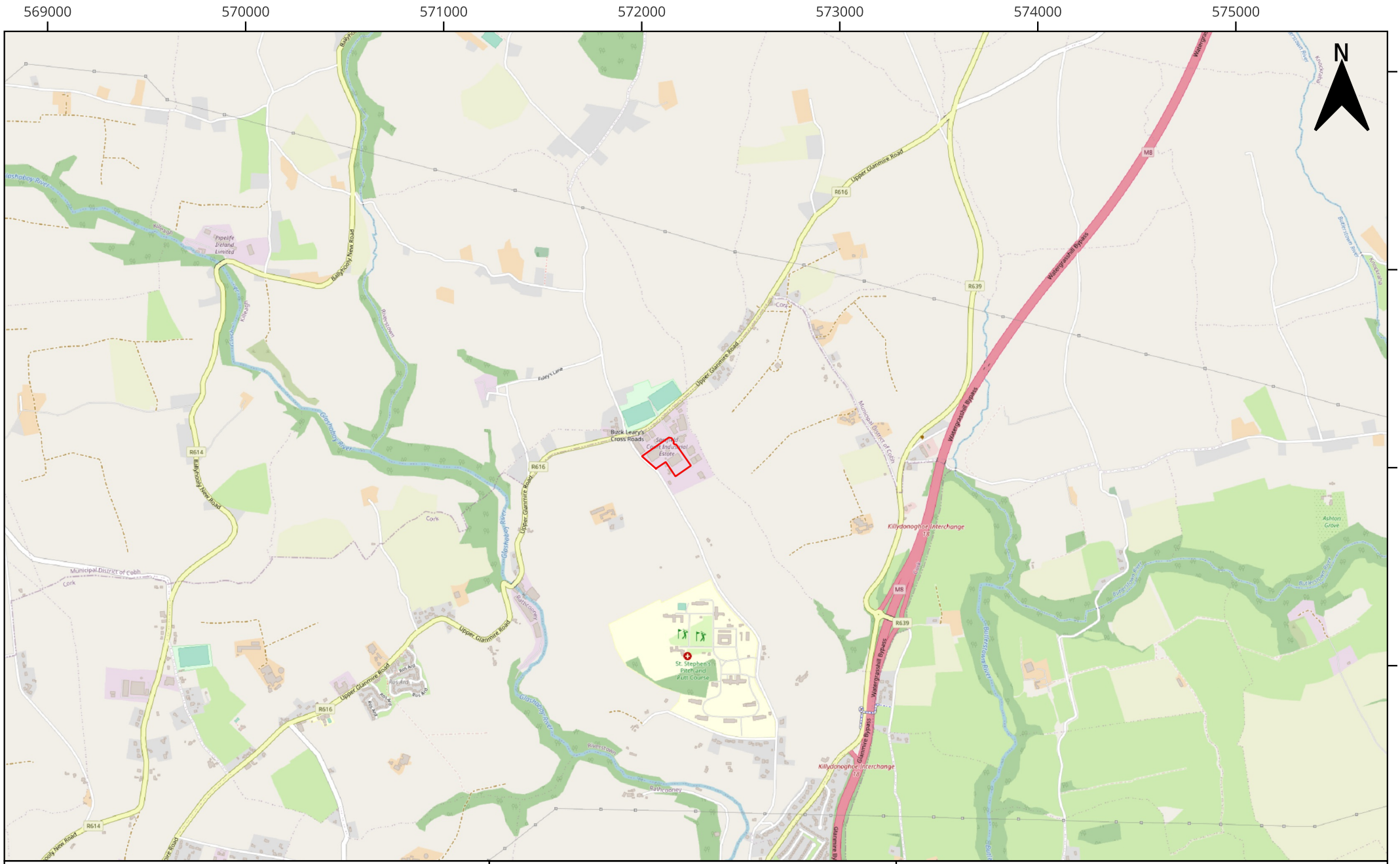
The civic amenity area has its own dedicated entrance for members of the public. There are a number of dedicated closed skips for mixed municipal waste, dry recyclables (cardboard, plastics, metals, papers) and waste electrical and electronic equipment.

The southern area is accessed via the Sarsfieldcourt facility and covers 7,800m^2. There is a recycling building, generator, firewater storage tank and paved open yards.

2.4 Services

2.4.1 *Power*

There is mains electricity power supply, with a three phase supply to the main processing building. Prior to the provision of a three phase supply, the processing equipment in the building had been powered by two diesel fuelled generators and one of these has been retained as emergency back-up supplies.



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Environmental Management for Business

CLIENT

SEHL

TITLE

Site Location

DETAILS

0 500 m

Site Location

FIGURE 2.1

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Environmental Management for Business

CLIENT

SEHL

TITLE

Site Layout

DETAILS

Site Boundary

0 50 m

FIGURE 2.2

A diesel fuelled generator provides power to the baling unit in the Recycling Building. This is a temporary measure pending the provision of three phase supply to the building, after which the generator will be removed.

2.4.2 *Water Supply*

Water for use in the toilets, dust suppression and to top up the firewater storage tanks is obtained from an on-site well. Drinking water is provided by a bottled water company. There is a 300m^3 water tank and associated pump house located at the northern boundary, which is automatically topped up from the well as required.

2.4.3 *Foul Water*

There is no connection to a sanitary sewer or septic tank/onsite waste water treatment plant. Sanitary wastewater discharges to an underground holding tank, with the contents sent to an Uisce Eireann Waste Water Treatment Plant

2.4.4 *Surface Water Drainage*

There are separate surface water drainage systems serving the northern and southern areas and it is not proposed to combine them. The system serving the northern area is shown on Drawing No. IE539-001, while Drawing 3DA-101 shows the one serving the southern area (Drawings are in Appendix 1).

The licence authorises the discharge of run-off from the building roofs and areas of the yard where wastes are not stored in the northern area to discharge to the storm sewer serving the Industrial Estate. However due to quality issues the storm water is currently diverted to the wastewater holding tanks.

In the southern area run-off from the building roof discharges directly to the storm sewer serving the Industrial Estate. Run-off from the paved yards where recyclable materials are stored is directed to an underground holding tank in the south-east of the yard, from where it passes to an internal storm sewer along the eastern boundary via an oil separator and then discharges to the storm sewer serving the Industrial Estate.

2.4.5 *Interceptors*

The interceptors are subject to regular inspection and cleaning to ensure they continue to function properly.

2.5 Installation Management

There are 30 full time staff including management, operatives and office staff. In addition 60 waste collection vehicle drivers and operatives are based at the site. The Facility Manager is responsible for day-to-day facility operations, with compliance support provided Environmental Officer. Appropriately trained and experienced staff are present all times when the facility is open to supervise waste acceptance, processing and transfer. SEHL has in place accredited an Integrated Management Systems incorporating Environmental (ISO 14001:2004), Health & Safety (OHSAS 18001) and Quality (ISO9001:2015).

2.6 Operational Hours

The operational hours are 24 hour a day, 7 days a week.

2.7 Waste Types & Quantities

SEHL and SPHL accept wastes on a commercial basis (Merchant Facility). The waste types include mixed residual municipal household (black bin), segregated food waste (brown bin), mixed commercial and industrial (C&I), construction and demolition (C&D), industrial non-hazardous waste and source segregated and mixed dry recyclables. A small amount (10 tonnes/year) of household hazardous waste is authorised for acceptance at the civic amenity area. Animal By-Products are not accepted. The maximum annual waste intake will be 200,000 tonnes and quantities of each waste type accepted in any given year will vary, based on market conditions.

2.8 Waste Acceptance Procedures

With the exception of materials dropped off at the civic amenity area by members of the public, wastes are delivered by waste collectors that have up to date Waste Collection Permits or are deemed exempt. The bulk deliveries are subject to a documented waste acceptance procedure. They arrive in fully enclosed vehicles that are weighed in at the weighbridge road and the accompanying documentation is checked. The driver is then directed to the waste intake areas in the appropriate building.

2.9 Waste Processes

All wastes are off-loaded and processed inside the buildings. Wastes with the potential to generate odours, for example mixed residual wastes are only handled in the main processing building which is provided with an odour control unit.

The mixed residual wastes are processed to remove organic fines, metal and wood, which are sent of site for further treatment. The remaining non-recyclable material is suitable for the manufacture of refuse derived fuel (RDF) and are baled, wrapped and stored in the open paved yards before being shipped overseas to energy recovery facilities.

The mixed commercial, industrial and construction & demolition waste are off loaded inside the main processing building where recyclables are segregated and sent off-site for further treatment, with the remaining non-recyclable materials, depending on the nature either baled as RDF or sent to licensed landfills.

The source separated dry recyclables arrive either already baled or loose. The bales are off-loaded and stored in the yard. The loose materials are off loaded inside the recycling building and then baled. The mixed dry recyclables are processed to remove non-suitable materials and separate then baled and stored.

2.10 Plant & Equipment

The plant and equipment used include; trommels, conveyor lines, balers, articulated grab, static grab, loading shovels, wheel wash, telescopic handlers, weighbridge, fork lifts, shredder/bag openers. The equipment essential to operations have the processing capacities required by the licence.

2.11 Oil & Chemical Storage

The materials/products used on site include diesel, hydraulic and engine oils, engine additive (Ad-Blue), anti-freeze, detergents and disinfectants and carbon. All fuel and oils are stored internally in a bunded area in a dedicated shed located on the northern boundary.
The bunded area was constructed and is maintained in accordance with the licence conditions. The bund, which has a capacity of 32,000 litres, contains a 19,000 litres vehicle refuelling diesel tank, a 2,300 litre waste oil tank and a 2,500 plant refuelling diesel tank. Ad-Blue is stored separately in a 1,000 litre double skinned tank.

2.12 Materials & Waste Storage Plan

SEHL has prepared a Waste Storage Plan for all waste and other materials stored and held at the installation. This is a dynamic document that is subject to regular revision. A copy of the current Plan is maintained on site for inspection by the OEE.

2.13 Nuisance Control

SEHL implements the nuisance control measures specified in the Licence to mitigate the impacts of noise, dust, litter and odours and minimise the risk of site activities being a source of nuisance to neighbours and members of the general public. Site staff carry out daily nuisance and litter inspections and daily litter picks.

2.14 Waste Generation

The welfare facilities and office generate small amounts of food waste, plastic and paper.

2.15 Integrity Testing

All storage bunds, underground tanks and pipework are subject to regular inspection and integrity testing and the results retained on site for inspection by the OEE. The paved areas are inspected for damage and repaired as required.

2.16 Emissions

Potential emissions associated with the waste activities include, rainwater run-off, contaminated run-off, dust, noise and odours.

2.16.1 *Air*

The only point emission source to air is the odour control unit (OCU) at the main processing building. Potential fugitive emissions include odours, dust and vehicle exhausts. Vehicle exhausts contain a range of compounds that affect air quality, for example nitrous oxide, carbon monoxide, methane, carbon dioxide, benzene and particulates.

2.16.2 *Storm Water*

The only permitted emission to storm water is run-off from the building roofs and paved yards which discharges to storm sewer serving the Industrial Estate. This is weather dependent and periodic. Although monitoring conducted by SEHL established and that the discharge from the storm sewer to the stream was not having any discernible impact on the quality of the stream, in May 2018 the OEE instructed SEHL to cease the discharge of storm water from the northern area to the storm sewer. The run-off is now diverted to a wastewater holding tank. Currently the only storm water emission is from the southern area.

2.16.3 *Ground / Groundwater*

There are and will not be any direct or indirect emissions to ground and groundwater.

2.16.4 *Noise*

The waste transport vehicles, the fixed and mobile waste transport plant and the OCU are sources of noise emissions.

2.17 Emission Controls

2.17.1 *Surface Water*

There are oil interceptors on the storm water drainage system serving the northern and southern areas. There are shut off valves on both systems that can be closed in the event of an incident, for example a fire or fuel spill that has the potential to contaminate the rainwater run-off.

2.17.2 *Noise*

SEHL implements the control measures specified in the licence that are designed to ensure waste activities do not give rise to noise emissions that will be a cause of nuisance or impairment outside the facility boundary.

2.17.3 *Air*

Waste processing is and will continue to be located inside the buildings. The building floors and open yards are regularly cleaned using a road sweeper and the yards are damped down using hoses in dry periods.

The diesel fuelled heavy goods vehicles based at the facility are fitted with Selective Catalytic Reduction (SCR) systems. A diesel fuel additive (AdBlue) is used in the SCR to reduce the nitrous oxide levels in the exhaust gases.

The only wastes accepted at the facility that are a significant source of malodours are the mixed solid waste and brown bin waste and these are only handled in a building provided with a negative air pressure and odour control unit (OCU). The OCU comprises two active carbon filters with a dust pre filter and an automated self-clean system, fed by a negative air pressure system powered by a backwards inclined aerofoil fan.

2.18 Environmental Monitoring

The environmental monitoring programmes comply with the requirements of the IE licence. They include air emissions, surface water, wastewater, groundwater, noise and dust monitoring. The monitoring locations are shown on Figure 2.3.

2.19 Safety and Hazard Control

SEHL has adopted an Accident Prevention Policy 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 operations. A copy of the APP is in Appendix 2. All site staff receive the appropriate training for their particular roles including the use of appropriate personal protective equipment (PPE).

2.20 Emergencies

An emergency is an accident/incident that has the potential to result in environmental pollution and harm to human health & safety. SEHL has an Emergency Response Procedure is in place that addresses any emergency situation that may originate on-site. This procedure includes provision for minimising the effects of any emergency on the environment. A copy of the Procedure is in Appendix 3.

In the event of a breakdown of equipment or any other occurrence which results in the closure of the facility, any waste arriving at or already present will be transferred directly to an appropriate alternative waste management facility until such time as the facility is returned to a fully operational status.

2.20.1 *Environmental Liability Risk Assessment*

SEHL has completed an assessment of the environmental effects of any accidents that may occur. Based on the types of waste that are and will be accepted and the activities carried out, the only accidents that present a significant risk of environmental pollution are a fire and an accidental spill of diesel while refuelling.

2.21 Fire Prevention, Detection and Suppression Measures

2.21.1 *Fire Prevention Measures*

<u>Storage of Combustible and Flammable Materials</u>

The amount of combustible solid material on site at any one time is kept to a minimum. This comprises the baled wastes stored externally in a designated areas.

The following principles are applied to the storage of combustible materials and flammable liquids.

- Good housekeeping and prompt transfer of wastes to prevent the build-up of combustible materials.

- The method of storage is generally consistent with the recommendations in 'Reducing Fire Risk at Waste Management Sites' (Waste Industry Safety and Health Forum 2014) and is based on

the site characteristics, and the Guidance on Fire Risk Assessment for Non-Hazardous Waste Facilities (2016)

- Regular inspection of plant and equipment for leaks and damage to prevent spillage of flammable liquids.

Control of Sources of Ignition

The potential sources of ignition include:

- arson/vandalism;
- naked flames/smoking;
- incidents related to welding and cutting;
- electrical faults/heating faults/equipment failures;
- self-heating of waste that has been stockpiled for too long.

The controls measures applied to minimise ignition sources include:

- Security fencing to prevent unauthorised entry.
- No smoking policy.
- All welding carried out inside the maintenance workshop or by means of hot works permits.
- A preventative inspection and maintenance schedule is in place for all plant and equipment including all electrical plant.
- The Process building is provided internal and external thermal cameras which are monitored 24 hours a day, seven days a week.
- Only authorised personnel are permitted within the processing areas, and
- Minimising the amount of combustible waste stockpiled at the facility.

Safety Audits

Internal safety audits are carried out weekly.

2.21.2 *Fire Detection*

The buildings are provided with fire detection systems linked to a fire alarm. Break glass units can also be used to manually raise the alarm by anyone discovering fire.

2.21.3 *Fire Response*

The responsibilities are detailed in the Emergency Response Plan, which covers all potential emergencies and describes the response actions in the event of a fire. All employees are provided relevant training in:

- Fire control, including the proper use of suppression equipment
- Fire protection equipment handling
- First aid
- Evacuation control
- Closure of the shut off valve on the surface water drainage system to prevent firewater discharging from site.

2.21.4 *Fire Suppression*

The on-site fire abatement equipment includes:

- Portable fire extinguishers located at strategic points around the facility,
- Mobile (50 kg) fire extinguishers,
- Fire hose reels.

In the event of an emergency call out Cork Fire Service tenders will bring additional water to the site. If additional water is required it can be obtained from the on-site well or from a hydrant point which is located at the Sarsfieldcourt Hospital entrance.

Environmental Management for Business

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CLIENT

SEHL

TITLE

Monitoring Locations

DETAILS

Monitoring Locations:

- Air
- Waste Water
- Surface Water
- Noise
- Dust
- Groundwater
- Site Boundary

0 50 m

FIGURE 2.3

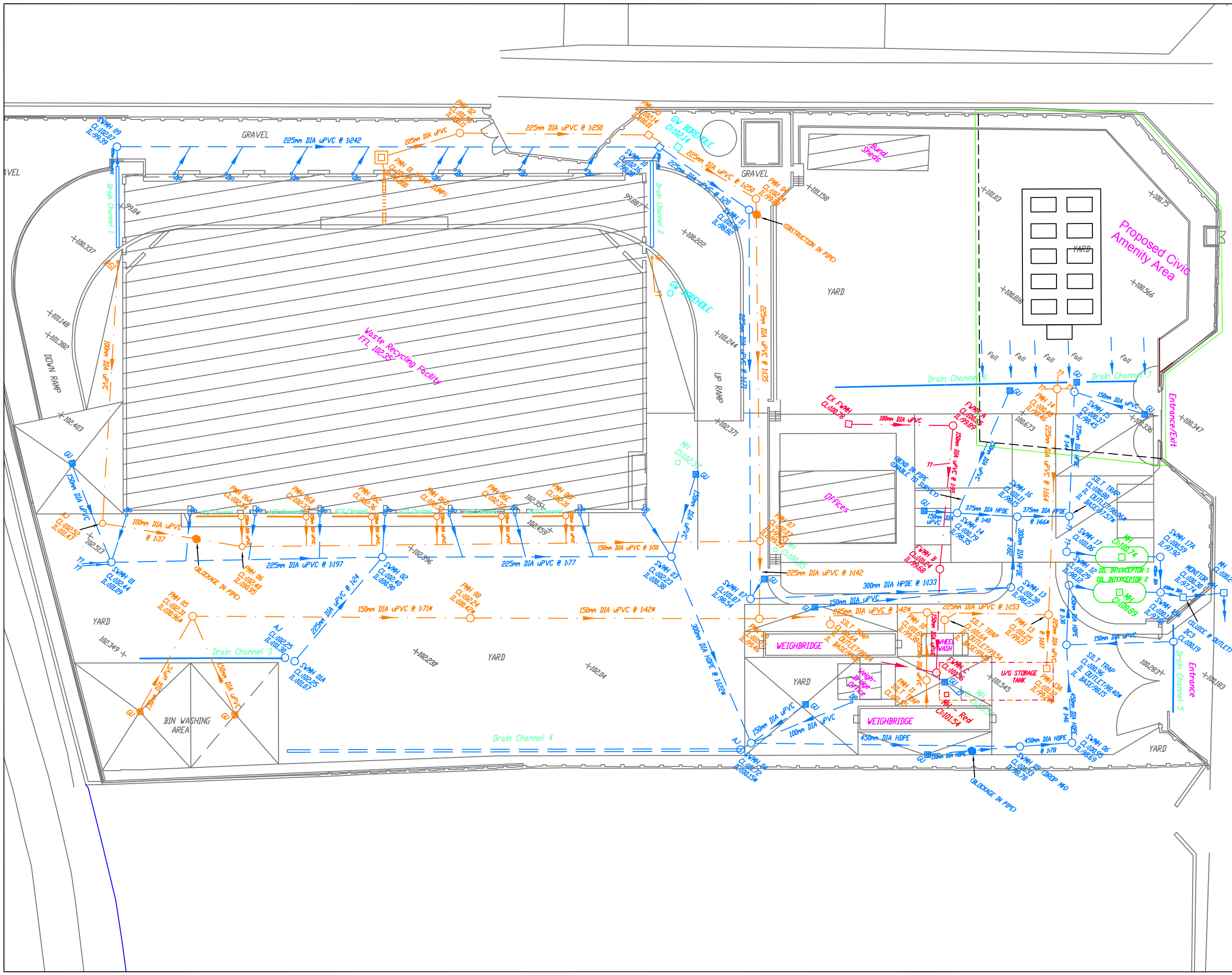
APPENDIX 1

DRAWINGS
SURFACE WATER DRAINAGE SYSTEMS

SURFACE WATER DRAINAGE SYSTEM

SERVING NORTHERN AREA

NOTES



REV	DATE	DESCRIPTION	DRN	CHKD	APP
A	16/06/2010	PRELIMINARY ISSUE	MW	SM	**

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CLIENT

GREENSTAR

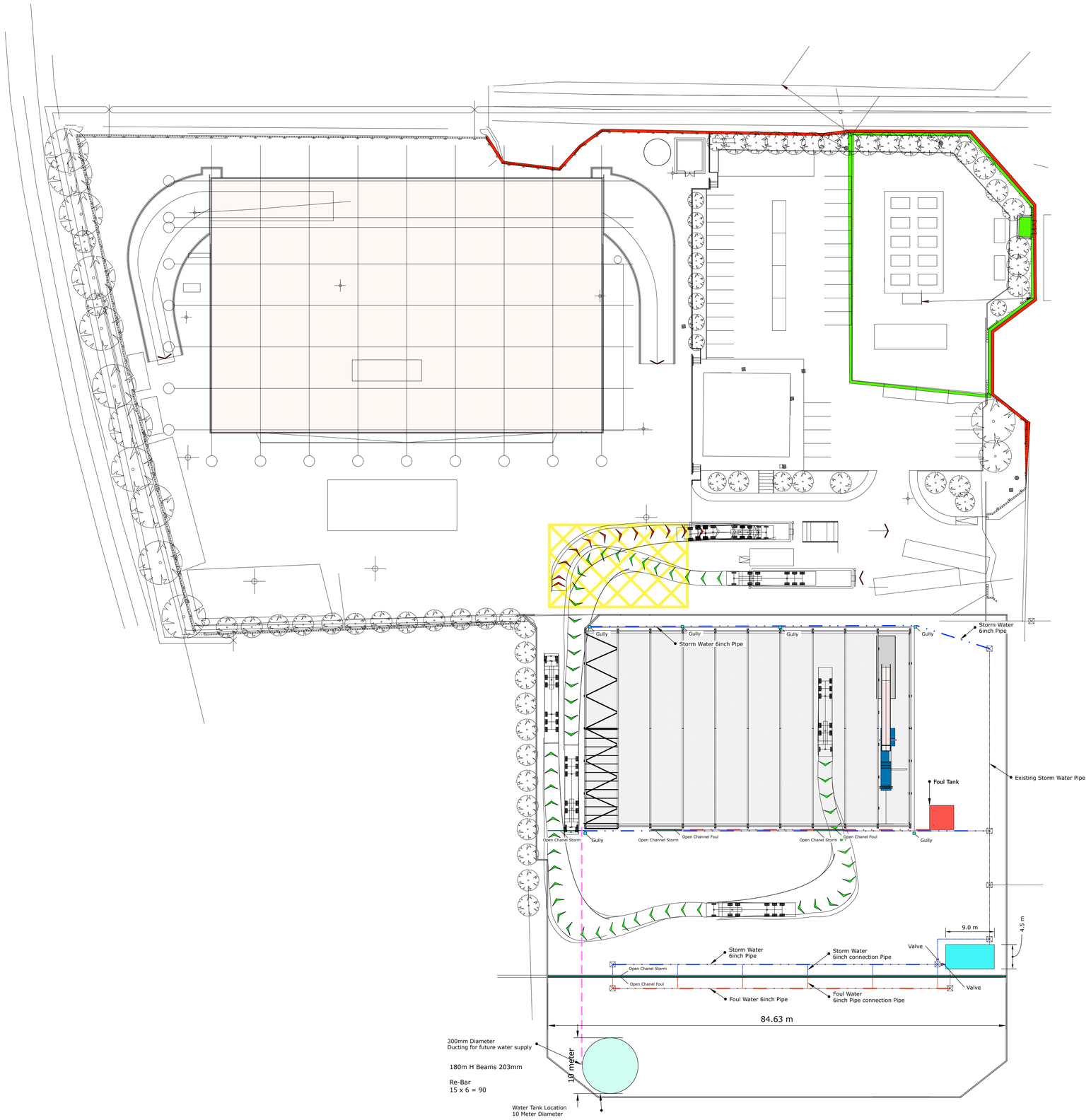
TITLE

DRAINAGE
LAYOUT
SARSFIELDCOURT

SCALE	DRAWING No.	REV.
1:500 A3	IE539	A

SURFACE WATER DRAINAGE SYSTEM

SERVING SOUTHERN AREA



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Notes:
For Information and Illustration Purpose only. All Dimensions to be formally Confirmed by Cathal McDonnell

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Title: Glyntown / Glanmire
Client: Panda Group
Dwg. No. 3DA-101
Job No. 3DA-101

APPENDIX 2

ACCIDENT PREVENTION PROCEDURE

IP-18 Accident Prevention Procedure

1. Purpose

The purpose of this document is to outline the process of identifying environmental, health and safety hazards, assessing the associated risks and identifying subsequent control measures in a systematic controlled manner to prevent accidents. This SOP was devised following release of the 2013 EPA Guidance Note: "Fire Safety at Non Hazardous Waste Transfer Stations".

2. Scope

This procedure applies to:

- All routine and non-routine activities,
- Activities of personnel with access to the workplace/site,
- Facilities at the workplace
- All operations which Greenstar can be expected to control.

3. Responsibility

The **Operations / Facility Manager** is responsible for identification of EHS issues (Internal & External) and Non Conformances/Non Compliances and logging them on IF-07A Communications Database and initiating appropriate corrective and preventive action depending on the nature of the problem. Assistance will be provided by the EHS teams as required. They are also responsible for the reporting of all accidents & incidents to the EHS Team.

The **EHS team** are responsible for evaluating the information on IF-07A Communications Database and advising the Operations/Facility Manager accordingly. The EHS team are also responsible for assisting the Operations / Facility Manager with the resolution of non-conformances/non compliances and regulatory issues logged on the Communication Database (IF-07A) in their own areas of expertise.

- The EHS team will identify all potential safety and environmental hazards which will be developed from knowledge of the site and operations, review of site audit reports, legal, regulatory requirements and observation of the operatives carrying out their tasks.
- This will include documentation of the issue, communicating with the relevant regulatory bodies as applicable, and determining the necessary corrective/preventive action depending on the nature of the problem.

4. References

Documents

IP-01	Document and record control procedure
IP-02	Health & Safety risk assessment procedure
IP-03	Aspects and Impacts procedure
IP-04	Legal and regulatory requirements procedure
IP-05	Objectives, Targets & Management programmes procedure
IP-06	Competence, awareness & training
IP-07	Communication and consultation procedure
IP-08	Monitoring & measurement procedure
IP-09	Evaluation of compliance procedure
IP-11	Internal audit procedure

IP-12 Management review procedure
IP-13 Control of Contractors and visitors procedure
IP-14 Health, Safety and Environmental Monitoring Procedure
IP-15 Emergency prepared response procedure
IP-16 Fire prevention procedure
IP-17 Bin washing procedure
IP-18 Accident prevention procedure
IP-19 Fuel procedure for tanks and mobile plant
IMS policy manual
Safety data sheets
Site Emergency Response Plan (ERP)
Risk assessments (Enviro Manager software)

Forms

SP-021 Non-Conformance incident report
IF-10A Management review
IF-11A EHS internal audit schedule
IF-11B IMS audit internal form
IF-12A Management review form
IF-07A Communications Database

5. Procedure

General

The identification and risk assessment of safety/environmental hazards is a methodology to improve safety & environmental performance in the workplace by:

- An analysis of each work place to identify all the different hazards. Past activities, normal/current activities and abnormal/emergency events are considered.
- An assessment of the risk from these hazards.
- Implementation of control measures to eliminate or reduce the risk to an acceptable level, as far is as reasonably practicable.
- Implementation of control measures completed as per the timescale outlined in the risk assessment method.
- Responsible persons are assigned to all control measures identified by the Risk assessment.

In the event of an accident or incident the investigation and reporting should be carried out as per IP-07.

Review

The risk assessments will be reviewed:

- On an annual basis at least,
- As a result of the introduction of new operations, equipment &/or personnel,
- As a result of accidents, incidents or non-conformances,
- Changes in legislation, codes of practice or best practices.

6. EHS Management System

The Site EHS Management System specifies the objectives and targets regarding improvement of the site's Health & Safety and Environmental performance. It includes Standard Operating Procedures that are designed to minimise the risk of accident or incidents occurring during site operations and where these do occur to minimise the associated impacts.
The below listed Procedures were devised following examining EHS risks at the facility.

Risk	S.O.P. Title	SOP No.	Objective
N/a	Document Control	IP-01	Recording keeping
Loss of control	Risk Assessment	IP-02	Ensure controls are in place to minimise risk
Pollution	Environmental Aspects & Impacts	IP-03	Identify Env aspects and ensure controls are in place to minimise associated impacts
N/a	Legal & Regulatory Requirements	IP-04	To ensure all legal & regulatory reqs are applicable to activities conducted by Greenstar are identified and communicated to all staff.
N/a	Targets and Objectives	IP-05	Provide for a better environment
Incompetency, unsafe work practices	Training	IP-06	To identify training needs and ensure appropriate training is carried out.
N/a	Communication & Consultation	IP-07	Provide information re the EHS performance of the facility
Non-compliance	Monitoring & measurement	IP-08	To illustrate how EHS performance is monitored and measured in order to demonstrate a level of continual improvement.
Non-compliance	Evaluation of Compliance	IP-09	To outline how Greenstar ensures compliance with licence conditions, legal & regulatory requirements and standards.
Non-conformance	Non-conformance, corrective/ preventive action	IP-10	To outline how non-compliances are identified and dealt with depending on their level of significance.
System failure	Internal audit	IP-11	Outline the method of auditing the IMS.
System failure	Management Review	IP-12	Method for management to regularly review appropriateness and effectiveness of the IMS and decide on any changes to the system.
Accidents/ incidents	Control of contractors & visitors	IP-13	Outline EHS controls in place on Greenstar sites for contractors and visitors
Non-compliance	EHS monitoring	IP-14	Ensure EHS monitoring and reporting at each facility meets all statutory and regulatory requirements
Fire, explosion,	Emergency Response	IP-15	Identify measures to control

spillages, Equipment Breakdown, Incidents, Other emergency's			emergency's as they arise at the facility to ensure environmental impacts are as controlled as possible.
Fire	Fire prevention	IP-16	Identify fire prevention measures to reduce fire risk
Contaminated surface water system	Bin washing	IP-17	Outline steps for washing of bins, using on site power washer in a safe and environmentally compliant and responsible manner
Accidents/ incidents	Accident Prevention	IP-18	Outline process of identifying EHS hazards, assessing associated risks and control measures in a systematic controlled manner to prevent accidents.
Spills, contaminated water systems, fire.	Fuel procedure for tanks and mobile plant	IP-19	Ensure that no spills occur while refuelling tanks and mobile plant.

7. Emergency Response Procedure

An Emergency Response Procedure has been prepared that identifies the responsibilities and immediate and subsequent actions to be taken in event of specified emergency or accident. Incidents that will trigger the application of the Emergency Response Procedures include:

- Fire/Explosion
- Spillage/Release of Oils or Hazardous Waste
- Anything that might result in environmental pollution

8. Incident Reporting

IP-10 requires all accidents/incidents to be recorded and reported. Details of incident are recorded and provides to the Site Management. In accordance with the licence, all environmental incidents are reported to the Environmental Protection Agency and/or other relevant bodies.

9. Training

IP-06 requires the training programme to be implemented with records maintained in the Training File.

10. Communication

Information on hazards are communicated during induction training, as part of other communication activities, H&S notice boards, tool box talks and at operational meetings.

APPENDIX 3

EMERGENCY RESPONSE PLAN

Emergency Response Plan
for

Starrus Eco Holdings Ltd
Site Licence No. W0136-03 &
Starrus Property Holdings Ltd
Waste Permit No. WFP-CC-38-2020

Sarsfield Court Industrial Estate,
Glanmire,
Co. Cork.

Section 1.0 INTRODUCTION

This document is a site specific Emergency Plan for the SEHL and SPHL facilities at Sarsfield Court Industrial Estate, Glanmire, Co. Cork. It outlines the procedure to be followed in the event of an Emergency. It contains information on the site facilities, equipment, emergency systems, documents and procedures.

This Emergency Response Plan has been developed having regard for the Environmental Protection Agency's guidance note "Fire Safety at Non-Hazardous Waste Transfer Stations" which is included as Appendix 5 of this document.

Section 2.0 SITE INFORMATION

2.1 Description of Premises

The sites are located in an Industrial Estate and encompasses approximately 3600 m^2 comprising two lot. The northern and eastern boundaries are formed by blockwork walls separating the lots from the adjoining lots in the Industrial Estate. The eastern boundary is formed by the Estate access road. The western site boundary comprises a concrete retaining wall and chain link fencing. The sites are operated in accordance with EPA licence W0136-03 and Waste Permit No WFP-CK-10-0047-03 issued by Cork County Council.

Refer to the site plan in Appendix 1 for site layout Plan and location of emergency systems.

2.1.1 Buildings

Sarsfield Court (SEHL)

a) Main Process Buildings

There are two buildings on-site, which house the main waste processing and transfer building and the site offices. The main building, which houses waste activities, encompasses approximately 12,000 m^2. This building has a canopy area on the western side which encompasses approximately 200 m^2. The site offices encompass approximately 44 m^2.

b) Surrounding Infrastructure

There is a fire water storage tank located in the north-west corner of the site. The entire open yard area of the site is paved with concrete. A weighbridge is located to the north of the main building.

Glyntown (SPHL)
There is one building on site, 1200m^2, which houses the recyclables processing and baling operation.

2.2 Access and Egress

Access and egress to the site is facilitated by security gates located to the front.

Section 3.0: RISK ASSESSMENT METHODOLOGY

3.1 Analysis of the work area
An identification of safety hazards is developed from knowledge of the site, direct observation of site operations, review of audit reports, legal and regulatory requirements. The analysis is as realistic as possible.

All hazards identified are subject to the Risk Assessment process, which involves the following steps:

1. Identification of the hazard,
2. Identification of who may be harmed,
3. Identification of current control measures,
4. Assessment of risk (in terms of severity),

5. Identification of additional control measures,
6. Implementation of control measures and reduction of risk.

* The following scoring system is applied:

Risk Calculation: PE x FE x NP x MPL = Risk Category

Probability of Exposure (PE)		***Frequency of Exposure (FE)***		***Number of Persons Exposed (NP)***		***Maximum Probable Loss (MPL)***		***Risk Category***	
Very unlikely	0.5	Infrequently	0.1	1-2 persons	1	Fatality	15	Low Risk	000 – 010
Unlikely	1	Annually	0.2	3-7 persons	2	2Limbs/ eyes/ serious condition	08		
Possible	2	Monthly	1.0	8-15 persons	4	1Limb/ eye/ serious condition	04		
Even chance	5	Weekly	1.5	16-50 persons	8	Major Break/ minor illness	02	Medium Risk	011 -50
Probable	08	Daily	2.5	>50 persons	12	Minor Break/ minor illness	01		
Likely	10	Hourly	4.0			Laceration/ Mild ill health	0.5	High Risk	>50
Certain	15	Constantly	5.0			Scratch/ Bruise	0.1		

With the Hazard Risk Number (HRN) and the category of the risk, we can evaluate which hazard is the most critical. Dependent on the severity, appropriate mitigation will be applied in order to decrease the level of risk and decrease the HRN.

3.2 Review

The risk assessment will be reviewed:

- On an annual basis at least,
- As a result of the introduction of new operations, equipment &/or personnel,
- As a result of accidents, incidents or non-conformances,
- Changes in legislation, codes of practice or best practices.

3.3 Risks identified

All risk identified are stored in the Enviromanager ® risk assessment web based software.

3.4 Fire Risk Assessment

A Fire Risk Assessment Report was completed on behalf of Greenstar by Cantwell Keogh & Associates Ltd at the request of the EPA. The purpose of the document is to review the site and its associated operations in order to identify the level of site compliance to pertinent regulations, codes and guidance and also to propose suitable risk reduction measures where deficiencies are identified. All recommendations were assessed and where possible these were implemented on site.

Section 4.0 RESPONSIBILITIES

An organogram is presented in Appendix 3 identifying key roles and responsibilities on this site.

4.1 Facility Manager

His/her main responsibilities include:

- To assess the suitability of the fire equipment in accordance with site requirements and activities.
- Review the suitability of the fire equipment annually.
- To ensure all new buildings have a valid fire certificate and take the necessary steps to revise and update this document when required.
- To ensure that necessary resources (material and time) are made available for the implementation of the Emergency Response Plan and the related training.

1. Risk assessment:
   - Ensure a Risk Assessment of the premises is carried out in relation to fire or other emergencies.
   - Update this document as required, but annually as a minimum.

2. Nominate persons with particular responsibilities (e.g. Fire Officers) to be taken in emergency situations. Ensure that there is a fire officer responsible for all areas of the site.

3. Ensure that the required Fire Safety Training is carried out and that the Fire Officers fully understand their duties.

4. Report to relevant Department (i.e. H&S and or Environment emergency situations) as soon as possible.

5. Together with the Fire officers, prepare an Emergency Evacuation Procedure (see section 6.0 of this document).

6. Ensure that all employees are fully aware of the Emergency Evacuation Procedure and that they can evacuate as quickly as possible in the event of an emergency.

7. Organise six monthly fire evacuation drills.

8. Keep a full record of:
   - All evacuation drills,
   - All responsible persons,
   - Fire safety training,
   - Records of fire equipment maintenance.

9. Receive reports from Fire Officers on particular fire hazards and arrange for the removal of all fire hazards reported.

10. Keep Fire Officers up to date on all matters affecting fire safety.

11. Select a more suitable assembly point in consultation with the Fire Officers, if different than the one proposed in this document.

12. Ensure that fire evacuation notices and maps are complete and posted prominently throughout the building.

13. Ensure there is a sufficient number of Fire Officers appointed.

14. Ensure that there is an effective audible means of raising the alarm in the event of an emergency.

15. Ensure that all fire-fighting equipment meets the required standards and that it is maintained and certified as required.

16. Ensure all emergency lighting meets the appropriate standard and that it is certified at the required intervals by a competent person.

17. Liaise with the local Emergency Services on an annual basis, notifying them of details of the Emergency Plan.

18. Coordinate Emergency Response and liaise with the Emergency Services Fire Officer on their arrival.

19. Ensure all Hazards (i.e. Gas, Chemicals etc.) which may pose a threat to the safety of the Emergency Services are identified.

20. Prepare the "Emergency Pack" for the Emergency Services (see section 5.0 of this document).

Following any emergency, there may be a requirement for further specialist assistance as recommended by the Emergency Service.

4.2 Fire Officer

1. Ensure all emergency signs are in position.

2. Ensure all corridors, passageways; fire escapes, escape routes and exits are unobstructed.

3. On a daily basis, ensure all fire doors are operable and emergency exit doors are unlocked.

4. Do a weekly check of all fire appliances to insure they are in the correct place and un-discharged.

5. On a daily basis be aware of the number of people within her/his area of control.

6. On hearing the fire alarm, ensure that all persons in her/his area are safely evacuated to their designated assembly point.

7. Conduct a roll call at the assembly point and report to the Facility Manager.

8. Inform the Facility Manager of any missing persons and give if possible an indication of their last location.

Section 5.0 EMERGENCY SERVICE SUPPORT

5.1 Emergency Pack

The **Fire Officer** will prepare an **Emergency Information Pack** and store it in the weighbridge for the Emergency Services. This pack contains:

1) An outline drawing of the premises showing exits and fire precautions.

2) Information on any special hazards (e.g. Flammable liquids, Chemicals, Gas etc.) and their location.

3) Location of dead man switch.

4) Location of fire hydrants.

5) Location of fire assembly points.

6) Location of shut-off valves

All this information is on the map in Appendix 1 of this document.

5.2 Escape Route Plan

A plan of the overall premises is displayed inside the main entrance(s) where it is visible to persons entering the building.

The plan clearly indicates the location escape routes, fire-fighting equipment, gas, electricity, the control panel for any fire detection or alarm system, installations such as fuel tanks, boiler houses and other areas of high fire risk.

A floor plan is displayed in a prominent position in each area indicating the nearest escape routes from where the plan is displayed. The location point is identified on the plan by the words “YOU ARE HERE”.

A copy of the Plan is included in the Emergency Pack for the Officer in charge of the Emergency Services.

All plans are displayed on durable material, easily legible and of a suitable scale.

It is the responsibility of the Fire Officer to ensure that this plan is up-to-date, displayed in the appropriate locations and that revisions are communicated to the appropriate staff.

Section 6.0 EMERGENCY PROCEDURE

It is stipulated in the site waste licence (W0136-03) conditions, that if an emergency arises, measures should be taken to address the hazard and notify appropriate Authority (ies) and / or Agency (ies). To that extent, the EHS department should make contact ASAP but no later than 24H after the emergency arose.

6.1 Emergency definition

An emergency may constitute a fire, an explosion, a spillage, an unexpected hazardous or clinical waste or some of the above that would pose as a risk to human health and safety or to the environment. The previous sentence is not an exhaustive list.

6.2 Incident Investigation

1) Arrange to inspect the area where the incident occurred.
2) Inform the relevant department (Environment and / or HS) and seek advice for any other external communication.
3) Take statements from persons witnessing the incident.
4) Compile all the witness statements in a report.
5) Write a non-conformance report, if applicable.
6) Record the incident in an incident report form.

If applicable, the relevant Authorities will be informed of the incident and/or site closure as well as the reasons for it and corrective/preventive actions to be taken/required to resume normal business.

6.3 Scenario one: Fire

Follow the procedure below. The person discovering the fire should:

1) Immediately raise the alarm by giving verbal warning to those nearby or by operating the nearest break glass unit or using an air horn or using the internal radio system.

2) Contact your direct senior person who will escalate the information ASAP to the Fire Officer / Operations Manager or his/her deputy. At that stage, the Fire Officer will decide if the fire brigade should be summoned or not. If the fire brigade should be summoned, the Fire Officer might delegate the call to whoever is deemed competent to do so. This person will immediately contact the Emergency Services by dialling 112 or 999, requesting the fire brigade. He/she will provide the fire brigade with:
   - the address
   - the location of the premises
   - The phone number of the premises
   - And any other relevant information to hand as regards the fire and state of evacuation.

3) On hearing the warning of fire or the fire alarm, all the people in the concerned building should immediately leave by the nearest exit.
Where possible close (but do not lock) doors and windows on your way out.
Any Fire Officer should immediately commence their designated duties.
The Fire Officer will retrieve the fire register and the emergency pack and proceed to the designated assembly point from where he will coordinate the emergency response plan.

4) The site administrative staff and the Operations Manager, if different, will join the Fire Officer to help coordinate the Emergency Response.

5) The Fire Officers will evacuate their respective areas, do a roll call by team at the assembly point and report to the Site Operations Manager.
The assembly point is at the top of the hill, on the grass near the entry gate. If necessary, an intermediate assembly will be designated by the Fire Officer.

6) Fire Officers must inform the Site Operations Manager of any missing persons and if possible their last known whereabouts.

7) The Fire Officer liaise with the Emergency Services on arrival and, using the Emergency Pack, advise the Emergency Services Senior Fire Officer of any additional hazards (i.e. gas bottles, electricity, toxic chemicals, paints etc.)

8) When fire is out and cold, treats residual liquid contaminants as a spillage by using appropriate precautions as toxic/hazardous substances may be present. Appropriate measures are taken to dispose of substances as waste material in a safe and environmentally responsible manner.

No one can re-enter the building until the Fire Officer gives the all clear.

6.4 Scenario Two: Spillage Procedure

1. Raise the alarm and inform the Site Management as soon as possible.

2. If there is release of odour, fumes, smoke, gas or dust, evacuate to a safe distance. Stay upwind in such cases. Keep others away.

3. **If safe to do so**, use appropriate PPE and contain the spillage using spill containment material (Spill kits, absorbent material, drain covers etc). Place containment booms around the spillage if appropriate.

4. **Immediate priority is to prevent contamination of watercourses, surface water drains, and sensitive areas.**

5. Clean up the spillage into a suitable container. Arrange storage in a safe bunded location until appropriate disposal can be organised in accordance with current legal and regulatory requirements. This may involve the use of specialist licensed contractors to bring the material to a licensed facility.

6. Report the incident to the EHS department and relevant Authority (ies) and / or Agency (ies).

For small spills, (i.e. with diesel spills):

1. Use site absorbent material.
2. Collect up such absorbent material after use and store in a labelled container in designated bunded area to await disposal.
3. Dispose of it in accordance with the current waste Regulations.

6.5 Scenario Three: Handling hazardous and chemical waste

Different actions are taken depending on when the waste is discovered and the ease with which it can be identified.

1. If waste is identified whilst still in the lorry at the weighbridge, the lorry will be turned away at the weighbridge and sent to location of origin. The Waste Rejection Form (EF-06A) shall be completed.

2. If waste is discovered during tipping, the unacceptable waste should be re-loaded into the lorry that delivered it and the waste removed from site and sent back to location of origin. The Waste Rejection Form (EF-06A) shall be completed.

3. If a load of drums or containers with liquid within it is deposited on site:

    a. Machinery will remove as much of the contaminated material as is necessary.
    b. waste will be moved to the quarantine area (bunded or unbunded) depending on the nature of the material and dealt with appropriately.

6.6 Scenario Four: Waste rejection at final destination

1. Contact your dispatch depot. Give details of waste origin, reason for rejection, facility from which the waste was rejected.
2. Operations will arrange an alternative appropriate facility to accept the waste.
3. Obtain a rejection note from the facility.
4. Transfer waste to appropriate facility.

6.7 Scenario Five: *Incident resulting in first aid requirements*

1) Contact first aiders ASAP; See Emergency Contact Numbers IF-15A.

2) Inform management (if not done via first aider himself or other colleague (witness of the Incident.

6.8 Containment plan for waste water after a fire event

1. Raise the alarm: inform the site management as soon as possible.

2. The majority of the firewater will be contained in an underground waste water storage tank located to the east of the weighbridge office. This system has no connection to the surface water system which discharges from the site. However as a precaution to guard against a situation where water may back up in the system and overflow to the system serving the building the shut off valve at the discharge point would be closed to contain all water within the site.

3. Our Tankering specialists, McBreen Environmental will be contacted and the firewater will be tankered off site to the nearest WWTP. McBreen Environmental have been contacted and have agreed to take firewater in the event of an emergency.

4. **Immediate priority is to prevent contamination of watercourses and sensitive areas.**

5. Report the incident to the EHS department and relevant Authority (ies) and / or Agency (ies).

Section 7.0 FIRE FIGHTING EQUIPMENT

7.1 Fire Extinguishers

Area Fire Officer checks fire extinguishers monthly.
Site management records the results of these monthly checks.
A competent person must inspect Fire Extinguishers annually, according to I.S. 291.
Site management records the results of these annual inspections.

7.2 Fire Hydrants

Fire hydrants must be tested annually to ensure the static pressure, the flow rate and the residual pressure are adequate according to BD 9999:2008.
These monitoring are recorded like any other inspection of the fire-fighting equipment.
See location on the site map in Appendix 1.

7.3 Fire Fighting

Life safety is the first priority in the event of a fire.
Fire-fighting is of lower priority until the life safety from fire of the occupants is assured.
A fire should be attacked immediately after the alarm is raised **only if it is safe to do so.**
Only a trained member of staff will attempt to tackle a fire. Such action should always be done with a buddy system in place.

Always keep your escape route clear; never let the fire get between you and your escape route.

If attempts to extinguish the fire cannot be continued without danger or if they are clearly failing to keep the fire in check, the fire fighter should **withdraw immediately**.

Small fires in SRF, timber, cardboard C&I or C&D may be tackled but only if it is safe to do so and then only by trained, experienced personnel.

Section 8.0 EMERGENCY PLAN REVIEW AND TESTING

8.1 Review

The Fire Officer and a member of the EHS Department will review the Emergency Plan annually for adequacy.
The Emergency Plan is revised and updated as required.

8.2 Testing

An annual test is carried. Improvement opportunities and deficiencies arising from these tests are recorded and integrated into the Emergency Response Plan.

Evacuation drills will form part of the recorded testing process as detailed below:

- Evacuation times
- Operation and effectiveness of emergency systems
- Access and availability of equipment
- Emergency Contacts accuracy
- Training issues
- Communications
- Signage
- Site visitors response/control

Documented results of the test, together with improvement actions and the proposed timetable, will be communicated to the EHS Department for support and approval.

The emergency pack is stored in the weighbridge for communication with emergency services (Cork Fire Brigade).

The Emergency Response Plan is communicated at each revision to the local Fire Brigade.

Section 9.0 POST FIRE ACTIONS

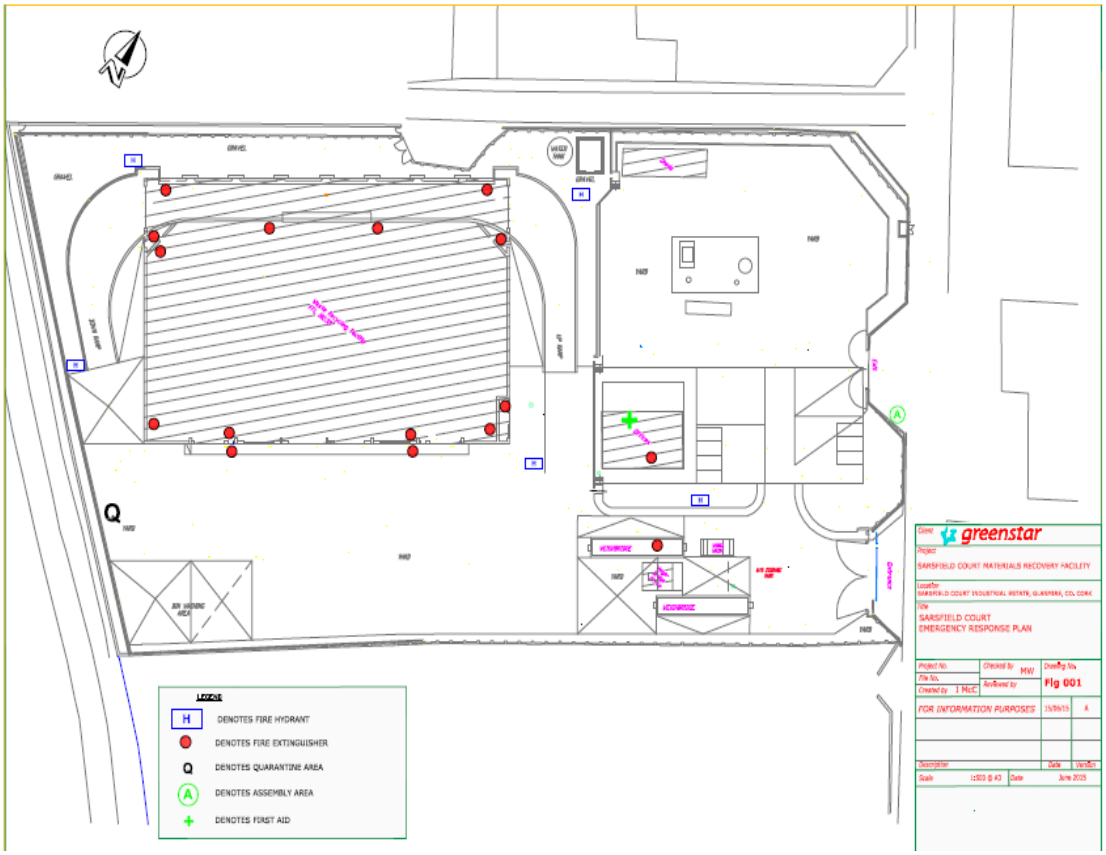
The site will remain evacuated until the fire has been fully extinguished and there is no risk of further fire development. This may take more than a day to achieve for a major fire.
All necessary measures will be taken to ensure that his building is safe to enter before staff may access any part of the site.

All fire-damaged waste will need to be characterised in order to determine suitable facilities for the recovery or disposal of the waste. Depending on the type of waste that was burnt and how badly damaged the waste is, characterisation may include the following:

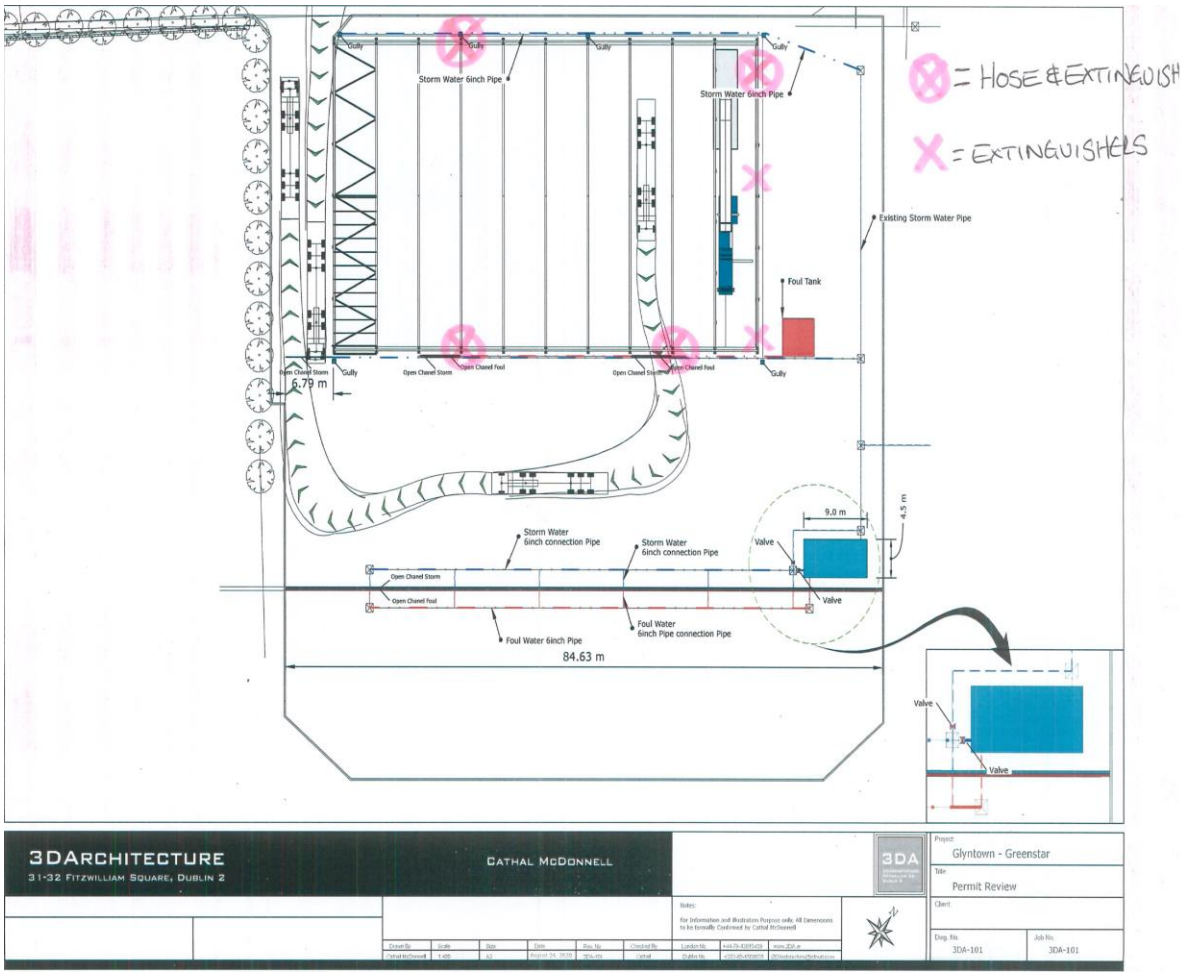
- compositional analysis of the waste material;
- waste acceptance criteria testing for landfill;
- waste characterisation by visual sorting.

Appendix 1: Site map with emergency equipment

Sarsfield Court (W0136)



Glyntown site (WFP-CK-10-0047-03)



Appendix 2: Emergency contact numbers

External contacts

External Contracts – Please Refer to IF15-A – Emergency Contact List

Internal Contacts

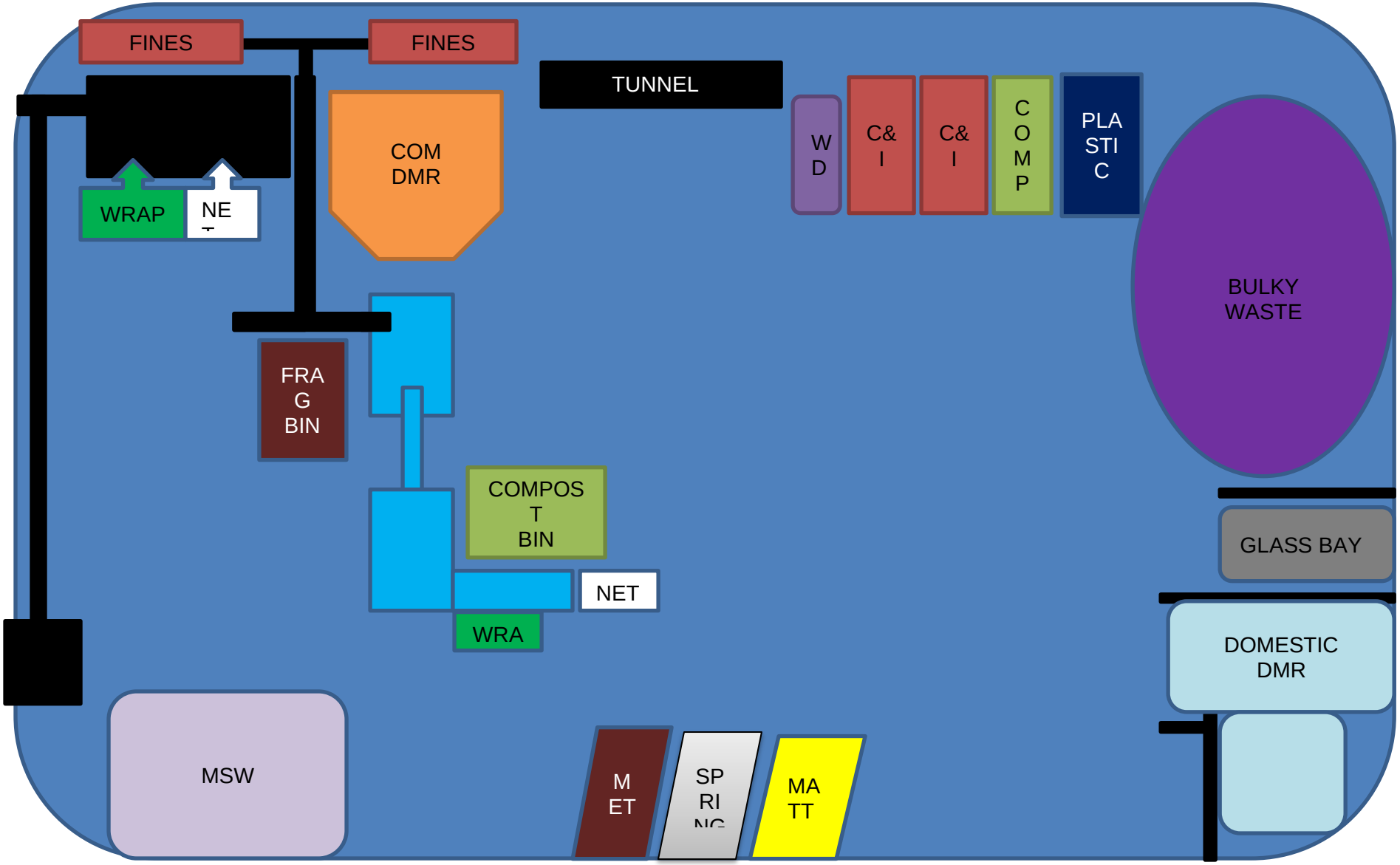
Title	Name	Int.	Ext.	Mobile	Location
Facility Manager	Ray Deegan	-	-	087 1133811	Cork
Yard Supervisor	Leonard Kirby	-	-	086 0102040	Cork
Facility EHS Manager	Louise Demir	-	-	087 9054639	Cork
Group H&S Manager	Joe Nicholson	-	-	086 0226109	Millennium Park
Head of Environmental affairs	David Naughton	-	-	086 6045904	Millennium Park
Group Environmental Engineer	Sara Smyth	6236	01 27462 36	086 8569414	Fassaroe
Group EHS Officer	Paul O'Reilly	-	-	083 8179940	Millennium Park

Appendix 3: Company organogram

Refer to IF 06C – **SEHL** Cork Organogram

Appendix 4: Waste Storage Plan – Sarsfield Court (W0136)

INTERNAL SITE STORAGE PLAN



BAY CAPACITIES

MSW – Municipal Solid Waste – BAY CAPACITY 500 TONNES

MET – Metal – 35CU SKIP

WD – Wood – UPTO 1 X 40FT TRAILER LOAD

MATT – Mattress' – MATTRESS' TO BE STRIPPED

SPRING – Mattress springs – 35CU SKIP

C&D – Bulky Construction and Demolition – BAY CAPACITY 85 TONNES

DOMESTIC DMR – Domestic Recycling – BAY CAPACITY 120 TONNES

GLASS BAY– Glass – BAY CAPACITY 80 TONNES

BULKY WASTE– Bulky waste to be picked and separated – BAY CAPACITY 100 TONNES

COMP – Compost – BAY CAPACITY 80 TONNES

PLASTIC – Plastic – Plastic picked from bulky waste – BAY CAPACITY 5 TONNES

C&I – Commercial &Industrial Dry Lights – BAY CAPACITY 120 TONNES

C & D – Mixed Construction and Demolition fines – BAY CAPACITY 70 TONNES

COMPOST BIN – 35CU SKIP

COM DMR – Commercial Recycling - BAY CAPACITY 50 TONNES

FRAG BIN – Metal extracted from waste stream – 35CU SKIP

FINES – Organic Fines extracted from waste stream – 2 X TIPPING TRAILERS @ 25 TONNES EACH

WRAP – Baling wrap – 1 PALLET BY BALER AND 5 PALLETS STORAGE

NET – Baling Net – 1 PALLET BY BALER AND 1 PALLET IN STOCK

EXTERNAL SITE STORAGE PLAN – Sarsfield Court (W0136)

1 – EMPTY SKIPS AND ROLL-ON BINS

2 – SKIPS AND ROLL-ON BINS FOR REPAIR

3 – RDF BALES

9 – **DIESEL BUND AREA FOR TRUCK AND PLANT REFUELING**

10 – WATER STORAGE TANK

11 – TEMPORARY CARDBOARD BALES AND PLASTICS AREA

4 – **QUARANTINE / GAS BOTTLES, SPARE TYRE AND ELECTRICAL (WEEE)**

5 – **BUNDED OILS CONTAINER**

6 – TYRES SKIP AND SKIPS TO BE TIPPED IN EVENING

7 – LOADING / UNLOADING AREA

8 – BUNDED AD-BLUE

MAXIMUM QUANTITYS FOR EACH EXTERNAL STORAGE AREA

AREA #3 – MAX 1110 BALES (1000 TONNES) IN EACH BAY WITH A BREAK OF 2M BETWEEN BOTTOM BALES AND 5M BETWEEN TOP BALES AND 3M HIGH CONCRETE WALL IN PLACE

STACKED AT A MAX OF 4 BALES HIGH

AREA #4 - MAX OF 1 X 40FT TRAILER OF WEEE, 5 CAGES OF BOTTLES

AREA #5 – MAX OF 4 X 1000L IBC CONTAINERS

AREA #6 - MAX OF 1 X 14CY SKIP OF TYRES

AREA #8 – MAX OF 3X 1000L IBC ADDBLU CONTAINERS

AREA #9 – MAX OF 17,830 LITRES OF DIESEL **(2 TANKS1X ROAD DIESEL 15,000LTS 1 X PLANT DIESEL 2830LTS)**

AREA #10 – MAX OF 60,000 LITRES OF WATER STORED

AREA #11 – MAX OF 3X 40FT TRAILERS OF CARDBOARD BALES STACKED AT MAX OF 3 BALES HIGH AND 1X 40FT TRAILER OF PLASTICS IN BOXES OR BALES AT MAX OF 3 BALES IN HEIGHT

Appendix 5: EPA Guidance Fire at Non Hazardous Waste Transfer Stations.

Fire Safety at Non Hazardous Waste Trar