Draft
Fire Prevention Plan

Document Reference:	SCU/FPP/002
Plan Version:	3.4
Date of Plan:	February 2023
Site Name:	Scunthorpe
Site Address:	Winterton Road Scunthorpe North Lincolnshire DN15 0DH
Operator Name:	Ellgia Ltd

Who is this plan for

This Fire Prevention Plan sets out the measures in place to reduce the risk of a fire breaking out on site. It identifies all the possible causes of a fire and sets out the plans in place to address those fire risks. This plan must be kept on site at the Scunthorpe Facility in hard copy and electronically and must be read fully and understood by **the site management team**.

The management team shall be responsible for ensuring that the FPP or any appropriate section of the FPP are read and understood by **staff members, fire officers, contractors working on site or any other person as necessary and appropriate.**

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1 Introduction

1.1 Site Location and Description

The Ellgia Scunthorpe site occupies approximately 7.8 hectares to the East of Winterton Road, Scunthorpe.

Postcode: DN15 0DH
NGR: SE9013512207

The site operates as a materials recycling and waste processing facility and produces RDF and SRF. The site has a total permitted waste processing capacity of 237,000 tonnes per year.

The site location and boundary information are shown in Appendix A.

2 Types of Combustible material

2.1 Combustible Waste

Some of the waste types to be received at the Facility will be combustible. The FPP guidance states that "if non-combustible waste is contaminated with combustible waste the pile shall be generally regarded as combustible".

The site does not process hazardous waste.

The primary combustible non-hazardous waste types to be treated at the Facility, which may comprise municipal or commercial and industrial waste, are presented in Table 1.

Table 1 Type of Combustible Waste

Code	Waste description
02	**Wastes from Agriculture, Horticulture, Aquaculture, Forestry, Hunting and Fishing, Food Preparation and Processing**
02 01	**Wastes from agriculture, horticulture, aquaculture, forestry, hunting and fishing**
02 01 03	Plant tissue waste
02 01 04	Waste plastics (except packaging)
02 01 07	Waste from forestry
02 02	**Wastes from the preparation and processing of meat, fish and other foods of animal origin**
02 02 03	Materials unsuitable for consumption or processing
02 03	**Wastes from fruit, vegetables, cereals, edible oils, cocoa, coffee, tea, and tobacco preparation and processing; converse production, yeast and yeast extract production, molasses preparation and fermentation**
02 03 04	Materials unsuitable for consumption or processing
02 05	**Wastes from the dairy products industry**
02 05 01	Materials unsuitable for consumption or processing
02 06	**Wastes from the baking and confectionery industry**
02 06 01	Materials unsuitable for consumption or processing
02 07	**Wastes from the production of alcoholic and non-alcoholic beverages (except coffee, tea and cocoa)**
02 07 04	Materials unsuitable for consumption or processing
03	**Wastes from Wood Processing and the Production of Panels and Furniture, Pulp, paper and Cardboard**
03 01	**Wastes from wood processing and the production of panels and furniture**
03 01 01	Waste bark and cork
03 01 05	Sawdust, shavings, cuttings, wood, particle board and veneer other than those mentioned in 03 01 04

Code	Waste description
03 03	**Wastes from pulp, paper and cardboard production and processing**
03 03 01	Waste bark and wood
03 01 08	Wastes from sorting of paper and cardboard destined for recycling
04	**Wastes from the Leather, Fur and Textile Industries**
04 02	**Wastes from the textile industry**
04 02 21	Wastes from unprocessed textile fibres
04 02 22	Wastes from processed textile fibres
15	**Waste Packaging; Absorbents, Wiping Cloths, Filter Materials and Protective Clothing not otherwise specified**
15 01	**Packaging (including separately collected municipal packaging waste)**
15 01 01	Paper and cardboard packaging
15 01 02	Plastic packaging
15 01 03	Wooden packaging
15 01 05	Composite packaging
15 01 06	Mixed packaging
15 01 09	Textile packaging
15 02	**Absorbents, filter materials, wiping cloths and protective clothing**
15 02 03	Absorbents, filter materials, wiping cloths and protective clothing other than those mentioned in 15 02 02
16	**Wastes not otherwise specified in the list**
16 01	**End-of-life vehicles from different means of transport (including off-road machinery) and wastes from dismantling of end-of-life vehicles and vehicle maintenance (except 13, 14, 16 06 and 16 08)**
16 01 19	Plastic
16 02	**Wastes from electrical and electronic equipment**
16 02 16	Components removed from discarded equipment other than those mentioned in 16 02 15
16 03	**Off-specification batches and unused products**
16 03 04	Inorganic wastes other than those mentioned in 16 03 03
16 03 06	Organic wastes other than those mentioned in 16 03 05
17	**Construction and Demolition Wastes (including excavated soil from contaminated sites**
17 02	**Wood, glass and plastic**
17 02 01	Wood
17 02 03	Plastic
19	**Wastes from Waste Management Facilities, Off-site Waste Water Treatment Plants and the Preparation of Water Intended for Human Consumption and Water for Industrial Use**
19 05	**Wastes from aerobic treatment of solid wastes**
19 05 01	Non-composted fraction of municipal and similar wastes

Code	Waste description
19 05 02	Non-composted fraction of animal and vegetable waste
19 05 03	Off-specification compost
19 06	**Wastes from anaerobic treatment of waste**
19 06 04	Digestate from anaerobic treatment of municipal waste
19 06 06	Digestate from anaerobic treatment of animal and vegetable waste
	Wastes from the mechanical treatment of waste (for example sorting, crushing, compacting, pelletising) not otherwise specified
19 12 01	Paper and cardboard
19 12 04	Plastic and rubber
19 12 07	Wood other than that mentioned in 19 12 06
19 12 08	Textiles
19 12 10	Combustible waste (refuse derived fuel)
19 12 12	Other wastes (including mixtures of materials) from mechanical treatment of wastes other than those mentioned in 19 12 11
20	**Municipal Wastes (Household waste and similar commercial, industrial and institutional wastes) Including separately collected fractions**
20 01	**Separately collected fractions (except 15 01)**
20 01 01	Paper and cardboard
20 01 08	Biodegradable kitchen and canteen waste
20 01 10	Clothes
20 01 11	Textiles
20 01 25	Edible oil and fat
20 01 32	Medicines other than those mentioned in 20 01 31
20 01 36	Discarded electrical and electronic equipment other than those mentioned in 20 01 21, 20 01 23 and 20 01 35
20 01 38	Wood other than that mentioned in 20 01 37
20 01 39	Plastics
20 01 41	Wastes from chimney sweeping
20 01 99	Other fractions not otherwise specified
20 02	**Garden and park wastes (including cemetery waste)**
20 02 01	biodegradable waste
20 02 03	Other non-biodegradable wastes
20 03	**Other municipal wastes**
20 03 01	Mixed municipal waste
20 03 02	Waste from markets
20 03 03	Street-cleaning residues
20 03 07	Bulky waste

It is not anticipated that any of the wastes received will be contaminated with persistent organic pollutants (POPs), therefore the requirement to segregate POPs waste does not apply to the Facility

2.2 Other Combustible Materials

In additional to the waste listed above, other combustible materials are stored and consumed on site. These include oils, greases and lubricants used in plant maintenance; diesel for vehicles, mobile plant, and electrical generators; and gas cylinders for welding.

The storage of non-waste combustible materials shall form part of this Fire Prevention Plan. Combustible materials shall be stored in appropriate, secure locations and away from ignition sources. Gas cylinders are kept in lockable facilities and are inspected regularly.

The location of non-waste combustible materials is shown in the storage plan in Appendix A (Drawings) Ell/SC/FPP/011, this plan will form part of the site's Environmental Management System (EMS).

3 Using this Fire Prevention Plan

3.1 General

This Fire Prevention Plan sets out the measures in place to reduce the risk of a fire breaking out on site. It identifies all the possible causes of a fire and sets out the plans in place to address those fire risks. This plan must be kept on site at the Scunthorpe Facility in hard copy and electronically and must be read fully and understood by the site management team.

The management team shall be responsible for ensuring that the FPP or any appropriate section of the FPP are read and understood by staff members, fire officers, contractors working on site or any other person as necessary and appropriate.

The FPP has been compiled using the Guidance published by the Environment Agency; "*Fire prevention plans: environmental permits",* updated 11 January 2021

3.2 Where the plan is kept and how staff know how to use it

This FPP will form part of the environmental management systems (EMS) for the Facility. The FPP will be linked with the site Fire Risk Assessment. The FPP will be available in both electronic and hard copies at easily accessible locations. Staff induction programmes will be location and job role specific; however, they will include EMS awareness training as a minimum. All staff will be able to easily access the documented management systems, including this FPP.

Visitors and contractors will be informed about fire prevention measures adopted at the Facility as part of site induction procedures and will be able to access the FPP if required. The FPP will also be made available to local Fire Officers. A premises box or similar will be made available to the fire and rescue service which will contain a copy of the FPP, contact numbers and also information on control features such as shut-off valves, hydrants control etc.

3.3 Testing the plan and staff training

All site staff (and contractors) will be trained in emergency response procedures and in the use of firefighting equipment such as fire extinguishers. Training records will be maintained in accordance with the documented management systems for the Facility, with fire response procedures will be incorporated in the site's management systems. It is expected that fire drills (including procedures for emergency evacuation of the site) will be exercised at least twice per year.

This FPP will be subject to regular review and at least every 4 years or immediately following any major fire incidents or site modification. Fire prevention messages will be reinforced around the site using signs.

Visitors to theFacility will be informed of the correct safety and fire prevention procedures – information will be provided at the site entrance and by appropriate located signage on-site.

Testing of the emergency procedures will be undertaken to verify that all staff and contractors are aware of the emergency procedures. Followingall tests, the implementation of the procedures will be

reviewed. If appropriate, the procedures willbe amended, or additional training provided to all staff and contractors.

The effectiveness of the emergency response procedures will be reviewed following any emergency incidents on-site. Where appropriate the procedures will be updated, and staff trained in the updated procedures.

3.4 Roles and responsibilities

In addition to all staff having an awareness of fire safety and emergency response procedures, a Fire Safety Manager (FSM) will be assigned. The FSM will take overall responsibility for establishing and maintaining a safe working environment in which fires are prevented or if they do, from developing beyond a minor event. The FSM will be responsible with overseeing the production of any fire risk assessments at the site and ensuring that findings are addressed, or mitigation measures are implemented. Risk assessments will be reviewed on an annual basis. The assigned FSM would also be responsible to ensure that the FPP is reviewed regularly and remains appropriate to the site.

In addition to the FSM, a number of fire wardens will be assigned to ensure a safe and timely evacuation in the event of a fire. The fire wardens will be suitably trained and competent to carry out the role, with any training recorded as part of the documented management systems. The fire wardens will undertake fire watch site inspections and raise alarm/activate call points if smoke, odour or flame indicates a potential fire source. They will be responsible for investigating the location of the fire if safe to do so and utilising fire suppression equipment such as fire extinguishers and fire appliances if safe to do so. They will liaise with the FSM if they are not already present on the site.

All other employees at the Facility will have basic responsibilities in relation to fire safety, including but limited to:

- Keeping corridors, stairways, exits and escape routes clear of obstructions at all times;
- Ensuring fires doors are kept shut at all times unless need for escape
- Never interfering with any fire detection or suppression equipment
- Reporting any damage to fire detection or suppression equipment.
- Maintaining safe working practices with electrical equipment.
- Only smoking in designated areas
- Familiarising themselves with fire emergency procedures
- Booking into and out of site using the approved systems

4 Fire Prevention Plan Contents

4.1 Activities at the site

The main activities at the site are materials recycling and the preparation of RDF and SRF. Associated activities include drying waste prior to processing in the SRF using a biomass boiler and hot air dying floor and the processing of grade A wood for use as biomass fuel. The site activities as defined in the Waste Framework Directive are set out in Table 2:

4.1.1 Preparation of RDF

The RDF building receives mainly municipal and commercial waste. Material is tipped in the reception area where it undergoes a pre-pick to remove recyclable and bulky material. It is then shredded, and metals removed by magnets. Processed material is loaded onto bulk haulage vehicles for transport to energy recovery facilities. See drawing: Ell/SC/FPP/010.

WFD Annex I and II operations	**R4**: Recycling / reclamation of metals and metal compounds. **R5**: Recycling / reclamation of other inorganic materials. **D9**: Physico-chemical treatment resulting in final compounds or mixtures which are discarded by any of the operations numbered D1 to D12.
Equipment used	Lindner Jupiter Shredder Eriez magnet Loading shovel 360 grab
Location	RDF Building South Site

4.1.2 Preparation of SRF

The SRF building receives selected commercial waste. Material is tipped in the reception area where it undergoes a pre-pick, inspection and mixing to remove recyclable material and provide suitably blended material for processing. It is then fed into the SRF production line with the following stages: primary shredding to reduce fraction size to sub 300mm; magnet 1 and magnet 2 to remove ferrous metals, eddy current separator to remove nonferrous metals; air density separator to remove any remaining heavy material; secondary shredding to sub 30mm; magnet 3 to remove any reaming ferrous metal. The processed SRF is then baled in a Dicom vertical baler and moved to the SRF storage area outside the building or loaded into bulk haulage vehicle for transport to energy recovery facilities or cement kilns. See drawing reference See drawing: Ell/SC/FPP/010.

WFD Annex I and II operations	**R4**: Recycling / reclamation of metals and metal compounds. **R5**: Recycling / reclamation of other inorganic materials. **D9**: Physico-chemical treatment resulting in final compounds or mixtures which are discarded by any of the operations numbered D1 to D12
Equipment used	Lindner Jupiter Shredder 3 x magnets Eddy current separator ADSS Air Density Separator Lindner Komet shredder Dicom vertical baler CrossWrap bale wrapping machine Loading shovel 360 grab Telehandler Clamp truck 2 x 550 KVa diesel generators
Location	SRF Building North Site

4.1.3 Drying SRF feedstock material

Material suitable for SRF production but with high moisture content can be dried on the air heated drying floor prior to be transferred to the SRF line. Specifically identified incoming loads are tipped directly on the drying floor for periods of 12-24 hours to reduce moisture levels to within those specified in the SRF supply agreement. When the material is sufficiently dried it is transferred in 40-yard containers to the SRF reception area or subject to operational requirements stored temporarily in the store building adjacent to the drying floor. See drawing: EII/SC/FPP/011.

WFD Annex I and II operations	**D9**: Physico-chemical treatment resulting in final compounds or mixtures which are discarded by any of the operations numbered D1 to D12 **D15:** Storage of non-hazardous waste prior to treatment **R13**: Storage of waste pending any of the operations numbered R1 to R12
Equipment used	1MW Ariterm Biomass Boiler Drying Floor Loading shovel
Location	Drying Floor North Site Post Drying Store North Site

4.1.4 Processing of Construction and Demolition Waste (C&D)

The C&D line receives construction and demolition waste primarily in skips and roll-on-off containers Material is tipped at the material pre-sort area where it undergoes a pre-pick to remove bulky recyclable material. The material then passes through a trommel to remove soil and fines and then on to a picking line with a Dual action Blower and Suction system to remove light material such as plastic, paper, foam, and cardboard. Wood, hard plastic and nonferrous metals are removed on the picking section and an over-band magnet removes ferrous metal. Heavy material consisting of mainly inert material passes through the line and is collected for further processing or recycling. See drawing: EII/SC/FPP/010.

WFD Annex I and II operations	**R3**: Recycling / reclamation of organic substances which are not used as solvents. **R4**: Recycling / reclamation of metals and metal compounds. **R5**: Recycling / reclamation of other inorganic materials. **R12** Sorting of wastes before any recovery operation R1 to R10 (other than R3 to R5 **D9**: Physio-chemical treatment not specified elsewhere which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12. **D15**: Temporary Storage pending any of the operations numbered D1 to D14
Equipment used	Loading shovels 360 grabs Picking line Vacuum / fan density separator Magnet
Location	South Site

4.1.5 Processing Commercial and industrial Waste

The C&I line receives commercial and industrial waste that is not suitable for direct feed to the SRF line. Material is shredded to reduce particle size to sub 300mm and then passes through a trommel to remove fines (<20mm). It then passes over a 6-bay picking line to remove recyclable materials and inert / heavy materials. Ferrous metals are removed by an overbend magnet, and the residual material is moved to the SRF line for further processing.
See drawing: EII/SC/FPP/010.

WFD Annex I and II operations	**R3**: Recycling / reclamation of organic substances which are not used as solvents. **R4**: Recycling / reclamation of metals and metal compounds.

	R5: Recycling / reclamation of other inorganic materials. **D9**: Physio-chemical treatment not specified elsewhere which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12. **D15**: Temporary Storage pending any of the operations numbered D1 to D14
Equipment used	Loading shovel 360 grab Tana mobile shedder Tana mobile trommel Magnet Picking line
Location	South Site

4.1.6 Inert Material Processing

The inert yard receives direct loads of incoming waste which consist entirely of soil, stones, rubble, sand, or other inert material. It also receives inert material from the C&D processing line. The material is screened using a

WFD Annex I and II operations	**R5**: Recycling / reclamation of other inorganic materials. R12 (excluding temporary storage, pending collection, on the site where the waste is produced). **D9**: Physio-chemical treatment not specified elsewhere which results in final compounds or mixtures which are discarded by means of any of the operations numbered D1 to D12. **D15**: Temporary Storage pending any of the operations numbered D1 to D14
Equipment used	Loading shovels Excavator Power Screen Warrior 3-way screener
Location	South Site

4.1.7 Storage of non-hazardous waste prior to treatment

Wherever possible storage of combustible material on site is minimised, however for operational and processing reasons it is necessary store material temporarily prior to processing in in one of the 4 process line on the site.

Waste is processed in a manner to ensure prompt turnaround to reduce any possible emissions to air and / or heat build-up. Waste is normally be processed in the order delivered, unless wastes have

been delivered with a higher odour potential which need to be processed first. Shovel and grab operators manage the input and output areas and bays so that waste can be treated on a first in first out basis.

Where municipal wastes have been received that have been assessed as containing higher levels of potentially odorous materials, consideration will be given to prioritising the processing of these wastes where necessary.

Any incorrectly declared deliveries will be quarantined immediately and dealt with in line with local procedures and guidance as detailed in the permit and management system.

Pre-acceptance and waste acceptance procedures are in place for all waste accepted at the site to ensure that incompatible or reactive wastes are not accepted at the site.

WFD Annex I and II operations	**R13**: Storage of waste pending any of the operations numbered R1 to R12 **D15**: Storage pending any of the operations numbered D1 to D14
Equipment used	Loading shovels 360 grabs Telehandler Clamp truck
Location	SRF Building North Site RDF Building South Site Post-Drying Store North Site C&D line input area South Site C&I line input area South Site

4.1.8 Storage of non-hazardous waste following treatment

As with storage prior to treatment (4.1.5) wherever possible storage of combustible material on site is minimised and the primary objective is to remove all processed material from site as soon as possible. However, for operational and logistical reasons it is sometimes necessary store processed material temporarily prior to removal from site or transfer to another activity on site. Particularly baled SRF which forms part of bulk shipping consignments. Supervisors manage process output areas and bays so minimise storage time and pile sizes.

WFD Annex I and II operations	**R13**: Storage of waste pending any of the operations numbered R1 to R12 **D15**: Storage pending any of the operations numbered D1 to D14

Equipment used	Loading shovels 360 grabs Telehandler Clamp truck
Location	SRF Building North Site RDF Building South Site Post-Drying Store North Site C&I line output area South Site

4.2 Site plans and Drawings

The following plans and drawings are included in Appendix A of this FPP.

Some of the information contained in these drawings and within this plan is provisional and subject to approval of this plan and the associated application for permit consolidation for the site. Where information or plans are provisional this is indicated in the text and on drawings.

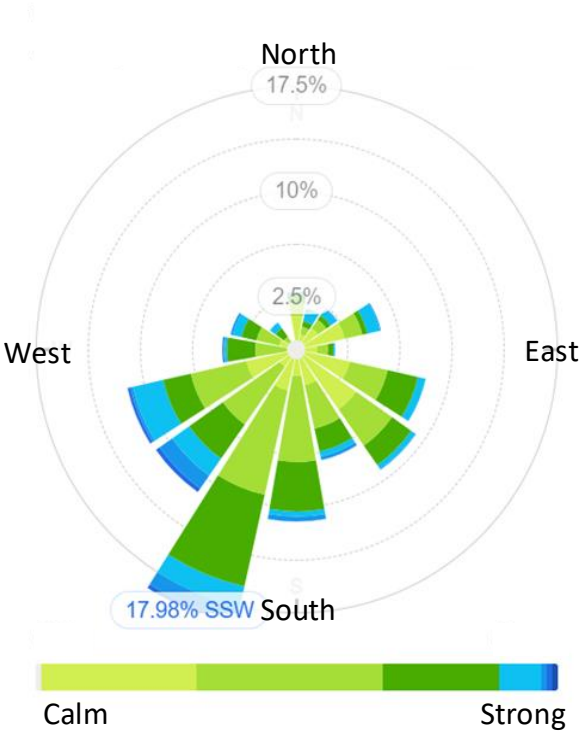
Table 2 List of Drawings

	Document	Drawing No
1	Location Plan	EII/SCU/FPP/001
2	Site Plan	EII/SCU/FPP/002
3	Site Layout & Storage Plan	EII/SCU/FPP/010
4	Oils, Fuels and Combustible Goods	EII/SCU/FPP/011
5	Fire Equipment and Water Supply	EII/SCU/FPP/012
6	Surface Water Drainage Flows	EII/SCU/FPP/013
7	Site Drainage Scheme	EII/SCU/FPP/014
8	Sensitive Receptors	EII/SCU/FPP/020

4.3 Sensitive Receptors

4.3.1 Site Location and Prevailing Wind

The site is located at grid reference SE 90219 12125 (Lat 53.597943, Lon -0.638229). The prevailing wind at the site is South South West. This is indicated on the plan of receptors.



4.3.2 Plan of sensitive receptors near the site

Annex B includes a list of sensitive receptors and key contact instructions and within 1km of the site. Drawing Ell/SCU/FPP/020 shows the site and location of sensitive receptors.

5 Managing common causes of fire

5.1 Introduction

The most likely causes of fire at the site have been identified below. Table 3 providesa summary of the management controls for restricting the possibility of a fire outbreak;

- Arson or vandalism
- Plant or equipment failure
- Electrical faults including damaged or exposed electrical cables
- Discarded smoking materials (matches, lighters, etc.)
- Hot works
- Industrial heaters
- Hot exhausts
- Ignition sources (naked flames, space heaters, incinerators, etc.)
- Batteries in ELV's
- Leaks and spillages of oils and fuels
- Build-up of loose combustible waste, dust and fluff
- Reactions between wastes
- Deposited hot loads

5.2 Arson and Vandalism

The site is bounded by a combination of security fences and deep dykes. Out of hours gates are locked and access is control by security personnel.

The site is equipped with a 32 channel 24-hour CCTV system, which provides coverage of the whole site. Cameras can be controlled remotely to pan and zoom in or out to investigate anything suspicious or unusual. The system is monitored during working hours by office and operations staff and can be reviewed remotely by phone, tablet, or PC.

Outside operating hours, the site is manned continuously by security personnel who carry out regular patrols of the whole site and monitor CCTV and fire alarm panels installed in the security cabin.

5.3 Plant and Equipment

5.3.1 Inventory

The site currently utilises the following key plant and equipment items:

Table 3 Schedule of plant and equipment

Serial number Registration	Description / Model Type	Make	Category	Year of Manufacture
30507	Baler	DICOM	Baler	2014
1103600	Bale Wrapper	Cross Wrap	Baler	2014
170585/11	Generator	Bruno	Generator	2017
WC00795	Generator	FG Wilson	Generator	2011
WC00791	Generator	FG Wilson	Generator	2011
OLY00000MPNO1656	Generator	Caterpillar	Generator	2012
02586/16	Generator	Yorpower	Generator	2016
2313161	Shovel Loader	JCB	Mechanical Handling	2015
4933	Dump Truck	Volvo	Mechanical Handling	1998
2252569	Telehandler	JCB	Mechanical Handling	2013
1541046	Telehandler	JCB	Mechanical Handling	2012
237883	Telehandler	Manitou	Mechanical Handling	2007
2136151	Excavator (Tracked)	JCB	Mechanical Handling	2015
VATZ0434CZB016950	Shovel Loader	Liebherr	Mechanical Handling	2006
2424764	Excavator (Tracked)	JCB	Mechanical Handling	2017
1701879	Excavator (Tracked)	JCB	Mechanical Handling	2007
42859	Shovel Loader	Liebherr	Mechanical Handling	2016
Y1D2A25Q	Forklift	NISSAN	Mechanical Handling	2012
JCBJW16DE01451667	Excavator (Wheeled)	JCB	Mechanical Handling	2012
071030990	Forklift	Samuk	Mechanical Handling	2020
VCEL120FK00026190	Loading Shovel	Volvo	Mechanical Handling	2011
JCB085Z1V02249298	JCB Mini Excavator	JCB	Mechanical Handling	2015
36096	Excavator (Tracked)	JCB	Mechanical Handling	2015
BT0248	Shredder	Tana	Shredders/Mobile shredder	2017
YK97E2XXOF4009005	Mobile Trommel	Tana	Screening Equipment	2017
T901410685	Lighting Tower	(mobile)	Lighting Tower	2014
7329	Shredder	Lindner Jupiter 3200	Shredders/Static Shredders	2020
5015	Shredder	Lindner Komet 1800	Shredders/Static Shredders	2020
N/A	Loading Ramp	Thorworld	Loading Ramp	N/A
7451	Shredder	Lindner Jupiter 3200	Shredders/Static Shredders	2021
W-00015	Shredder	Wellmac	Shredders/Static Shredders	2017
N/A	Powerscreen	Warrior 1400	Screening Equipment	2014

5.3.2 Inspection and Maintenance

The site employs a fulltime engineering and maintenance team lead by a senior qualified engineer. A planned preventive maintenance programme (PPM) is operated on site and all site equipment is checked and maintained in accordance with the manufacturer's guidelines and a strict inspection programme, all breakdowns or faults are recorded.

All site vehicles, mobile and static plant will be fitted with suitable fire extinguishers and drivers cab dust filters. Static shredders are fitted with fire detection and deluge systems and mobile shredders are fitted with an inbuilt suppression system.

An exclusion zone of 6m will be maintained between combustible waste and plant machinery and equipment when not in use.

5.4 Electrical faults including damaged or exposed electrical cables

All electrical and light fittings will be fully certified by a qualified electrician.

All electrical equipment will be routinely checked and maintained by an appropriately qualified individual.

5.5 Discarded smoking materials

The site operates a strict no smoking policy in all areas otherthan the designated and clearly marked smoking area.

Regular housekeeping will be maintained throughout the site and all staff and visitors are made aware of the site smoking policy as part of the site induction.

5.6 Hot works safe working practices

Safe Systems of Work instructions are in operation throughout the site and Permits to Work are issued for hot works including any activity or work that requires using open flames, applying heat or friction, or may generate sparks or heat.

A dedicated fire watch is implemented as and when required for hot works.

The hot works permit is included in Annex C

5.7 Industrial heaters

Industrial heaters are not used on site

5.8 Hot exhausts and engine parts

Operational staff are trained to remain vigilant when using plant and equipment for signs of fire caused by dust or any flammable material settling on hot exhaust or engine parts.

There will be a minimum of 1 Fire Watch per shift carried out by trained operational staff and site security personnel are trained to perform fire watch outside of operational hours.

Plant and equipment are subject to daily inspections and checks at the start and end of each shift and where required cleaned down before use.

5.9 Ignition sources

Open burning or naked flames are not permitted anywhere on the site other than as part of hot works and in accordance with the permit to work procedure.

Space heaters are not permitted on site

The site has a biomass boiler. This is contained in a specifically design boiler house and is fitted with and automatic fire suppression system to prevent burn back.

5.10 Batteries

Incorrect disposal of batteries creates a fire risk where batteries can be ruptured in processing equipment or by mobile plant movements.

The risk from incorrectly disposed batteries is minimised through the following:

1. Continuous interaction with customers to highlight the need to exclude / remove batteries from waste streams
2. All operators are trained to be vigilant for batteries in waste to be processed.
3. All processing lines are equipped with one or more magnets
4. All shredders are equipped with automatic spark/flame detection and suppression systems
5. Staff are trained in procedures for removing and quarantining material where battery rupture is identified or suspected.

5.11 Batteries in end-of-life vehicles (ELVs)

The site does not accept ELVs

5.12 Leaks and spillages of oils and fuels

Spill kits are be stored onsite for use in the event of an incident.

A regular site inspection and maintenance programme is in place and all spillages are cleaned up immediately upon detection. Spillages dealt with in accordance with the '**Spillage Procedure EL EM 02-007**.

Oils and fuels will be stored in appropriate secured containers, away from operational areas see Annex D.

5.13 Build-up of loose combustible waste, dust and fluff

Regular housekeeping and inspection of the site will be carried out in accordance with site inspection schedule **EL EM05-005**, inspections are carried out regularly and documented in daily site inspection form **EL EM 03-006**, and weekly site inspection form **EL EM 03-007**.

All equipment (plant and vehicles) is checked prior to use and inspected as part of the daily site inspection routine. All process lines have a daily clean down routine at the end of shifts and plant is also cleaned thoroughly during weekly planned preventative maintenance sessions.

5.14 Reactions between wastes

Non-permitted wastes are rejected during inspection and acceptance.

Site staff trained in waste acceptance criteria '**Waste Acceptance Procedure EL EM 03-003.**

Site inspections are carried out daily in accordance with **EL EM 03-006.**

All incoming loads of recyclable materials are initially deposited in the designated tipping area marked on the Site Plan where it is inspected and separated if required to prevent any reaction between incompatible wastes. Unstable wastes are not accepted at site but in the unlikely event of a receipt this would be removed to the external quarantine areas (see drawing XXXXX) via shovel loader for observation and assessment. The Site Manager would be informed and depending upon the nature of the load, a decision on a treatment/disposal route would be taken. Such waste shall be disposed of by an appropriately qualified contractor to a suitably licenced facility.

5.15 Deposited hot loads

All loads are checked prior to acceptance in accordance with **Waste Acceptance Procedure EL EM 03-003.**

Hot loads are not accepted at the site. In the unlikely event of a hot load being deposited in the tipping area it would be immediately removed by shovel loader to the external quarantine areas pending inspection and disposal decision by the Site Manager.

(Note: To access the external quarantine area the shovel loaders **do not** pass through the areas where combustible finished product is stored)

5.16 Hot and dry weather

Incoming and outgoing waste piles are kept in buildings in shaded areas, externally stored baled and wrapped material is located in shaded areas whenever possible.

Buildings are fitted multiple entrances with roller shutter doors which can be opened to allow natural through draft cooling.

During hot dry periods more temperature monitoring frequency will be increased

Storage times are minimised as a general operating principle, but particular attention shall be paid, and storage times reduced where possible, during hot periods.

6 Prevent self-combustion

6.1 General self-combustion measures

Self-combustion can occur when biological decomposition or chemical oxidation generates an increase in temperature creating an exothermic reaction which cannot be dissipated at the rate it is being generated. This can lead to what is known as a thermal runaway with the result being auto-ignition and self-combustion. In general, the risk self-combustion is minimised by employing several operating principles:

- Avoid mixing waste types as far as possible
- Maintain pile separation distances
- Store waste in largest fraction size
- Minimising storage times
- Keep piles and storage areas as cool as possible
- Site inspections are carried out routinely each day with a formal 'End of Day' carried out to check for fire risks and signs of self-heating

Regular housekeeping and inspection of the site are carried out in accordance with site inspection schedule **EL EM05-005**, inspections are carried out regularly and documented in daily site inspection form **EL EM 03-006**, which includes checking any signs of self-heating

6.2 Managing storage time

In general storage times are minimised as much as possible.

Table 4 Summary of Storage Times and Control Measures

CONTROL MEASURES						Operating Conditions
Storage Duration	**FIFO Principle**	**Fire Watch**	**Routine Inspections**	**Sub-Surface Monitoring**	**Diversion of Waste to Alternative Facility**	
24 hours	✓	✓	✓			**Normal**
72 hours	✓	✓	✓			
1 week	✓	✓	✓			
4 weeks	✓	✓	✓			
3 months	✓	✓	✓	✓		**Abnormal**
>3 months	✓	✓	✓	✓	✓	
6 months	Waste will not be stored for 6 months or longer therefore extra measures areNOT required.					

6.3 Method used to record and manage the storage of all waste on site

Baled SRF and RDF is stored for a maximum of one month. Bales are labelled with the date of production, contents, and destination (offtake) and the date and time of placement is noted on a layout map of the storage area by the relevant supervisor, the order despatch of material is prioritised by date processed, with the oldest bales being loaded first.

Lose material incoming and outgoing is stored for a maximum of 7 days

6.4 Stock rotation policy

All stock is managed on the general principle of First in First Out (FIFO). In the event of a slower than normal rotation of combustible waste additional monitoring shall be done. All staff are trained in the importance and implementation of the FIFO process and stock rotation is a standing item on daily briefing meetings for operational staff.

6.5 Monitor and control temperature

During normal working conditions, stockpiles will be visually monitored by operational staff throughout the day. Formal inspections will be carried each day in accordance with the company's Site Inspection Procedure (Document Ref: EL EM 03-006) to identify any potential fire risks. Informal checks will also be carried out at the end of each day to ensure all prevention controls are in place for non-operational hours.

Security Staff are also trained carry out fire watch during regular patrols which take place throughout non-operational hours.

Relevant members of staff are trained in how to monitor stockpiles for signs of hot spots and what actions to take to mitigate any potential fire risks e.g., isolating material and cooling it in the quarantine areas.

Where it is deemed necessary due to extreme weather conditions, stockpiles will be dampened down to reduce potential fire risks resulting from external heating.

Material piles from shredders is routinely turned and mixed to ensure homogenous outputs and dissipate heat generated in the shredding process. Other waste piles are routinely turned to make sure the waste remains cold and any localised warming is dissipated.

Table xx below summarises both visual and temperature action triggers and the actions that will be taken to mitigate any associated fire risk.

Due to the rapid turnaround of waste within the RDF and SRF buildings, and stock rotation procedures described above it is not considered necessary to measure the temperature of the waste within the building as heat build-up will be highly unlikely given the short timescales. Waste piles will be visually monitored throughout the working day for signs of heat build-up and signs of combustion. However, temperature monitoring will

be undertaken on any waste piles or bales which have been stored for a period of 3 months or longer.

VISUAL & TEMPERATURE ACTION (TRIGGER) LEVEL	
STEAM	On cool mornings steam emitting from the surface of the stockpile may bean indication of increased sub-surface temperatures. Where steam is observed in significant volume extends across the pile, investigations should be implemented immediately. Actions to be taken in the event of significant volumes of steam being observed include, isolating areas of the pile and spreading across the storage area floor to allow material to cool.
SMOKE	If smoke is observed immediate action should be taken. Actions include: • Isolate the area of the stockpile where the smoke is observed. • If material is smouldering either remove to the quarantine area andextinguish or isolate from all combustible materials and extinguish.
TEMPERATURE ACTION TRIGGERS BELOW ARE ONLY FOR WASTES STORED FOR >3 MONTHS	
<30°C	No actions required
30°c to 50°C	Stockpiles will be turned to dissipate any heat not being lost to thesurrounding environment. Where temperatures are seen to be rising or at the higher end of the range potential hot spots will be isolated moved to the quarantine areaand spread out and allowed to cool.
>50°C	Where sub-surfaces exceed 50°C in wastes which have been stored for longer than 3 months action should be taken as soon as is reasonably possible. Areas with hotspots of 50°C or more should be isolated from the stockpile and moved to the quarantine area where they can then be turned and spread out in order to dissipated the heat and allow the waste to be cooled. Waste should be checked to ensure no smouldering material is present.

6.6 Reduce the exposed metal content and proportion of 'fines'

All processes include metal extraction using over-band magnets, eddy current separators. No fines are produced in the RDF and SRF processes.

Inert fines are produced in the construction and demolition process line, but metal content in these fine sis negligible.

6.7 Waste bale storage

Bale storage is minimised as much as possible. Where bales need to be stored on site for logistical reasons such as bulk vessel scheduled require stock build up, bale storage shall not exceed 3 months. All stored bales shall be regularly inspected and in the unlikely event that bales are stored for more than three months temperature monitoring shall be implemented using intrusive temperature probes.

7 Managing waste piles

7.1 General

The following types of waste are routinely stored in piles on the site:

Table 5 Pile Types on Site

Description	Fire Prevention Designation	Fraction size mm
RDF Feedstock material (pre-processing)	RDF	>300
RDF - processed	RDF	<300
SRF - Feedstock material (pre-processing)	SRF	>300
SRF – processed loose	SRF	30-40
SRF – processed baled	SRF	baled
Grade A wood	wood	>150
Grade C wood	wood	>150
Chipped wood Biomass fuel	wood	50-120
Green waste	Compost and green waste	>150
Mattresses	Textiles	>150
Metal	Metal other than WEE	>10
Cardboard loose	Paper and cardboard	>150
Cardboard baled	Paper and cardboard	baled
Plastic loose	Plastic	>150
Plastic baled	Plastic	baled
Soils and Stones	N/A	

All other waste is stored in open or sealed containers in line with the EMS, Hazardous Waste Storage Procedure (**EL EM 02 009)** and Waste Storage and Dispatch Procedure **(EL EM 04 004)**

7.2 Maximum pile sizes

The maximum pile sizes are given in section 9.2 of the EA guidance. All waste piles shall be maintained within the maximum sizes given in the current EA Guidance. For all waste piles,

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

When measuring height, you must use the longest measurement between the base of the pile and the top. This is to allow for any uneven ground beneath the waste.

If waste piles contain a mixture of combustible wastes, the maximum limit shall be based on the type of waste that makes up most of a mixed pile. Waste piles are managed and located to allow adequate access for fire detection and extinguishing.

Table 6 below shows the maximum volume of each type of waste pile, the maximum square dimension for a pile 4m high and the maximum width of a pile 4m high and 30m long.

Table 6 Maximum Pile Sizes

Maximum volume m^3			
Waste type	**Loose and more than 150mm**	**30 to 150mm or baled**	**Less than 30mm**
Tyres and rubber	450	300	300
Wood	750	450	300
Compost and green waste	750	450	450
RDF and SRF	450	450	450
Plastics	750	450	300
Paper and cardboard	750	750	450
Textiles	750	750	450
WEEE containing plastics, including fridges, computers, and televisions	450	450	450
Metals other than WEEE	750	450	450
Fragmentiser fluff	450	450	450
Maximum square dimensions (m) if 4m high			
Waste type	**Loose and more than 150mm**	**30 to 150mm or baled**	**Less than 30mm**
Tyres and rubber	10.61	8.66	8.66
Wood	13.69	10.61	8.66
Compost and green waste	13.69	10.61	10.61
RDF and SRF	10.61	10.61	10.61
Plastics	13.69	10.61	8.66
Paper and cardboard	13.69	13.69	10.61
Textiles	13.69	13.69	10.61
WEEE containing plastics, including fridges, computers, and televisions	10.61	10.61	10.61
Metals other than WEEE	13.69	10.61	10.61
Fragmentiser fluff	10.61	10.61	10.61
Maximum width if 4m high and 20m long (m)			
Waste type	**Loose and more than 150mm**	**30 to 150mm or baled**	**Less than 30mm**
Tyres and rubber	5.63	3.75	3.75
Wood	9.38	5.63	3.75
Compost and green waste	9.38	5.63	5.63
RDF and SRF	5.63	5.63	5.63
Plastics	9.38	5.63	3.75
Paper and cardboard	9.38	9.38	5.63
Textiles	9.38	9.38	5.63
WEEE containing plastics, including fridges, computers, and televisions	5.63	5.63	5.63
Metals other than WEEE	9.38	5.63	5.63
Fragmentiser fluff	5.63	5.63	5.63

7.3 Storing waste materials in their largest form

Waste is stored in its largest form wherever possible. RDF is only shredded prior to being removed from site. SRF is only shredded prior to being removed from site for loose offtake contracts or is immediately baled and stored according to the maximum storage limits for sea freight contracts.

7.3.1 Maximum Pile Sizes Ellgia Scunthorpe

Table 7 Maximum Pile Sizes and locations *(see Drawing ELL/SCU/FPP/011)*

Waste Type	Location	Storage Type	Max. length m	Max. width m	Max. height m	Max Volume m^3	Max. time it will be stored
RDF Feedstock material	17	pile	10.6	10.6	4	450	72 hours
RDF - processed	18	pile	10.6	10.6	4	450	72 hours
SRF - Feedstock material	1	pile	10.6	10.6	4	450	72 hours
SRF – processed loose	2	pile	10.6	10.6	4	450	72 hours
SRF – processed baled	3,7,8	bales	10.6	10.6	4	450	4-6 weeks
Grade A wood	10	concrete bay	13.7	13.7	4	750	4 weeks
Grade C wood	11	concrete bay	13.7	13.7	4	750	4 weeks
Chipped wood Biomass fuel	5	concrete bay	10.6	10.6	4	450	72 hours
Green waste	19	skips	6	2.4	3	160	1 week
Mattresses	16	pile	13.7	13.7	4	750	2-3 weeks
Metal	9	pile	13.7	13.7	4	750	1 week
Cardboard loose	4	concrete bay	13.7	13.7	4	750	2 weeks
Cardboard baled	3,7,8	bales	13.7	13.7	4	750	2 weeks
Plastic loose	4	pile	13.7	13.7	4	750	2 weeks
Plastic baled	8	bales	10.6	10.6	4	450	2 weeks
CA Waste	20	skips	6	2.4	4	160	72 hours

7.4 Waste Stored in Containers

7.4.1 Types of containers

In addition to the waste piles detailed in section 7.3, small amounts of green waste and CA waste are stored temporarily in skips and or roll-on roll-off skips with the following dimensions:

Table 8 Waste Stored in Containers

Waste	Container Type	Size
CA - Green Waste	Skip	
CA - general	Skip	
CA - Metal	Skip	
CA Cardboard	Skip	

7.4.2 Accessibility of containers

Containers are all readily accessible from at least two sides so a fire can be extinguished easily. The locations of the containers are shown on the Drawing Ell/SCU/FPP/010.

They shall be maintained in positions that allow them to be easily moved as soon as is reasonably practicable to prevent the fire spreading.

7.4.3 Moving containers in a fire

The site shall maintain an operational yard truck which is available at all times in the event that a container has to be moved quickly.

8 Prevent fire spreading

The containment of fires will be achieved either by maintaining the minimum separation distance of 6m between piles of combustible material or by storing material in containers or bays constructed of fire resistant material (fire walls)

8.1 Separation distances

All waste piles are 6m from any other waste pile, site perimeter, other buildings or other combustible or flammable materials as shown on the drawing above, unless separated by2 hour retardant fire walls.

8.2 Fire walls and Bays

Push walls and internal bay division walls have all been designed to resist fire (both radiative heat and flames and provide a minimum of 120 mins fire resistance.

8.3 Storing waste in bays

The majority of waste on site will generally be stored in piles with a minimum separation distance of 6m. Where bays are used the following design and operational parameters shall be applied:

- Frequent stock rotation, ensuring the overall site first in, first out policy, is applied. Daily operations sheets shall be used to monitor and record this stock movements.
- Temperatures of all the waste within the bays for more 48 hours, taken at a minimum of 4 locations within the bay
- Bay design and waste stored will take into account the calculation of flame height of the waste concerned and radiation levels to prevent the spread of fire between piles.
- Bay design will minimize the likelihood of lighted material moving outside the bay walls and igniting other wastes
- A 'freeboard' space of 1m minimum at the top and sides of the walls will be maintained at all times to prevent fire spreading over and around the walls.
- Mobile plant is maintained at all times and available to quickly remove wastes at risk of ignition to the quarantine area to isolate any bays with burning waste during an incident.

8.4 Quarantine area

Quarantine areas shall be maintained at all time, these are shown on drawing XXXX. All quarantine area are capable of containing half the largest stockpile of waste (225m^3 unprocessed, processed or baled waste) each.

The quarantine areas have in excess of 6m of permanently clear area all around for ease of access for fire control. The quarantine areas are located on impermeable paving and would be isolated from the site drainage system using a penstockvalve which would be closed in the event that the quarantine area is used.

Any material moved to a quarantine area will be monitored closely to ensure there is no further risk of fire and shall be removed from site as soon as possible to an appropriately licensed facility.

8.5 Fire Detection

8.5.1 General

All loads are checked for signs of smoke or high temperatures prior to acceptance in accordance with **Waste Acceptance Procedure EL EM 03-003.**

All staff are trained to be on constant look out for signs of smoke, fire or elevated temperatures, as part of their normal duties regardless of the area of operation.

Regular visual inspections of all waste piles are carried out through the day by operatives and supervisors and outside working hours by security personnel.

In the event of a fire being detected by site personnel the alarm is raised by activating an alarm call point, sounding an air siren or by shouting “Fire” until such time as the nearest audible fire alarm has been activated.

The site is equipped with a 32 channel 24-hour CCTV system, which provides coverage of the whole site. Cameras can be controlled remotely to pan and zoom in or out to investigate anything suspicious or unusual. The system is monitored during working hours by office and operations staff and can be reviewed remotely by phone, tablet, or PC.

Outside operating hours, the site is manned continuously by security personnel who carry out regular patrols of the whole site and monitor CCTV and fire alarm panels installed in the security office.

8.5.2 Detection Systems

The site is occupied 24/7 either by operational staff and or security personnel. CCTV and alarm panels are continuously monitored.

A number of independent fire detection systems are / will be installed in different locations. Each system activates a local audible and visual alarm as well as an alarm at the central control panel located in the security office.

Table 9 Fire Detection Systems

Area	Detection System	Alarm
Biomass Boiler House	Flame Detectors	Local fire panel, siren, lamps, link to security office repeater panel
Drying Floor	VESDA Aspirating smoke detector	Local fire panel, siren, lamps, link to security office repeater panel
Dry Material Store	VESDA Aspirating smoke detector	Local fire panel, siren, lamps, link to security office repeater panel
SRF Building	Helios Flamescan automatic video fire detection system	Local fire panel, siren, lamps, link to security office repeater panel
SRF Process Line	Local spark / flame detectors (GreCon) and Helios Flamescan automatic video fire detection system	Local fire panel, siren, lamps, triggers automatic drench system
RDF Building	Helios Flamescan automatic video fire detection system	Local fire panel, siren, lamps, link to security office repeater panel
RDF Shredder	Atexon Spark detection and suppression systems	Sounder and beacon, activation of automatic drench system

**planned*

In the event of a fire being detected, site management would be contacted and would attend site. A rota system will be in place ensuring that the out of hours monitoring service will always have a minimum of two contacts available on a 24/7 basis 365 days a year.

Operatives are also be available out of hours in the event of the need for plant and machinery to be used to assist the Fire Service.

An emergency contact procedure shall be maintained at all times with the names and contact numbers for site managers and operators.

8.5.3 Certification for the systems

All systems are designed and installed and maintained in line with a UKAS accredited scheme. All systems shall be covered by a contract covering maintenance as per manufacturer's recommendations and a UKAS accredited scheme.

8.6 Suppressing fires

8.6.1 Suppression systems in use

Table 10 Fire Suppression Systems

Area	Suppression System	Specification
All Areas	Fire Extinguishers	Water, Powder, Foam and CO_2 fire extinguishers are located on site a shown in EII/SCU/FPP/012, these can be used in the event of small / local fires.
All Areas	Volvo Fire Engine	1800 litre water tank, foam tank with foam proportioning system, multi pressure alloy centrifugal water pump, driven by PTO Two powered rewind high pressure hose reals, Three 2 ½ normal pressure deliver outlets for fire hoses, reinforced suction line for connection to hydrant or water storage tank, reinforced suction line and strainer for pumping from drainage pond.
SRF Building	FireRover automatic foam cannon system	The Fire-MIST ® system includes duty pump skid, 3 directional valves connected galvanised steel pipe run to each pf the 3 zones, electrically actuated directional zone valves installed into each zone, and "2V Fire-MIST ®" pipework installed at high level to cover the entire area of building. System type: Open deluge single activation largest risk; Flow rate 1000 l/min per zone; Run time Approx. 30 mins

		The system is activated by Flamescan video detection cameras. In the systems' standby state, the pipe work from the zone valves will be dry and water will be directed to the normally closed directional valves installed within the building. Upon activation of Flamescan video analytic detection cameras - or manual call point - a signal is sent to the analogue addressable control panel which switches open the appropriate directional valve and activates the onsite pump system to start flow to the required risk zone. The system includes audible and visual alarms in the event of the system activating. (See Annex E)
RDF Building	Hellios: Fire-MIST® water mist fire suppression system.	The Fire-MIST ® system includes duty pump skid, 6 directional valves connected galvanised steel pipe run to each of the 6 zones, electrically actuated directional zone valves installed into each zone, and "2V Fire-MIST ®" pipework installed at high level to cover the entire area of building. System type : Open deluge single activation largest risk; Flow rate 1000 l/min per zone; Run time Approx. 30 mins The system is activated by Flamescan video detection cameras. In the systems' standby state, the pipe work from the zone valves will be dry and water will be directed to the normally closed directional valves installed within the building. Upon activation of Flamescan video analytic detection cameras - or manual call point - a signal is sent to the analogue addressable control panel which switches open the appropriate directional valve and activates the onsite pump system to start flow to the required risk zone. The system includes audible and visual alarms in the event of the system activating. (See Annex E)
SRF Process Line	Local spark / flame detectors (GreCon)	Local fire panel, siren, lamps, triggers automatic drench system
RDF Shredder	Atexon Spark detection and suppression systems	Sounder and beacon, activation of automatic drench system

8.6.2 Certification for the systems

The Automatic fire suppression systems design, installation and maintenance contracts shall be covered by UKAS accreditation.

8.7 Firefighting techniques

The key firefighting techniques to be used in the event of a fire are the following

- applying water to cool unburned material and other hazards
- separating unburned material from the fire using heavy plant
- separating burning material from the fire to quench it with hoses
- suffocating the fire using soil, sand, ort other suitable inert material

The site is in close proximity to the Scunthorpe Fire Station and the response time of the Fire and Rescue Service is 8-12 minutes.

The firefighting strategy applied on site is to deal with any minor incidents as quickly as possible and avoid any escalation, using onsite equipment and personnel.

If it is technically feasible and safe to do so, material shall be removed from the RDF or SRF buildings tipped in one of the quarantine areas shown on drawing Ell/SCU/FPP/011, where it shall be doused with water or inert material.

If a serious or unquantifiable fire is detected or an incident cannot be dealt with, site based resources will be employed to contain the fire where it is safe to do so until the Fire Service arrives on site.

Once the Fire Service is on site, a senior manager will liaise with incident commander to provide assistance to the Fire Service by means of heavy plant and trained operators.

A roster of suitability trained personnel shall be maintained at all times, this shall include:

- Fire wardens
- Fire engine operators (for minor incidents and initial containment)
- Heavy plant operators

9 Water supplies

9.1 Minor incidents and initial containment

The site fire engine has an inbuilt supply of 1,800 litres and additional foam tank, there is also a 45,000 litre water tank with manifold for refilling or direct pumping using rigid suction lines connected to the fire engine.

The site also has drainage pond with a volume in excess of 3 million liters which can be used for refilling or direct pumping via the Fire Engine suction line and strainer. See EII/SCU/FPP/012.

9.2 Major incidents

A fire hydrant is located with 20 m of the site entrance, this has been tested and used by Humberside Fire and Rescue and is shown on drawing EII/SCU/FPP/012.

9.3 Water Supply Calculations

Sufficient water should be available for firefighting in the worst case scenario. For this site the worst case scenario would be a pile of SRF or RDF with a maximum volume of 450m^3.

Maximum pile volume	Water supply needed in litres per minute	Overall water supply needed over 3 hours in litres	Total water available on site in litres
450m^3	3,000 l/min	540,000	>3,000,000

9.4 Alternative Measures – Fire Suffocation Soil

A stock of 200 tonnes of suitable inert material (soil, sand, stone etc) shall be maintained for the purposes of suffocating fires in situ to prevent escalation and or material tipped on a quarantine area.

10 Managing fire water

10.1 Receptors

The nearest ground water protection zone (SPZ) is 4.6 km away north of Roxby and there are no drinking water abstraction within at 1km of the site drainage pond.

10.2 Containing the run-off from fire water

Firewater will be directed to one of the site interceptors in the same way as surface water. In the event of an incident the outlet valves of the interceptor/s in question shall be closed to contain firewater. See EII/SCU/FPP/013.

A stock of Polly Booms shall be kept on site at all times. These will be deployed where necessary to guide firewater runoff for example as indicated in EII/SCU/FPP/013.

An emergency call out service agreement for emptying interceptors shall be maintained with 24/7 1 hour call out. The contents of interceptors shall be disposed of at a suitably

licensed facility and the tanker shall return to site to repeat the cycle until such time as the firewater runoff has ceased.

Should the volume flow rate at any time exceed the containment and emptying capacity of an interceptor then the main site drainage valve shall be closed and runoff will be contained in the main drainage pond (see drawing ELL/SCU/FPP/020).

The surface area of the pond is 2890 m^2, therefore a 3 hour water supply of 540,000 litres would represent 186 mm rise in water level. The pond level has never risen above a height less than 1400mm below the containment level, therefore this is considered more than adequate containment.

10.3 During and after an incident

10.3.1 Dealing with issues during a fire

In the event of a fire any incoming waste will be diverted to another part of the site, or to an alternative facility.

The Site Manager will liaise with the Emergency Services, Environment Agency and all other receptors throughout the incident, senior management will also be available to provide guidance both during and after the incident.

10.3.2 Notifying residents and businesses

Due to the direction of the prevailing winds and the site layout it is unlikely that any receptors will be directly affected by fire. However a contact sheet shall be maintained with telephone contacts for all immediately adjacent receptors and these shall be contacted in the even of a major incident.

If emissions of smoke are seen to affect other receptors or if asked to do so by the FRS, the site manager will contact receptors wherever possible.

10.3.3 Clearing and decontamination after a fire

10.3.4 Making the site operational after a fire

In the event of a fire a range of measures will be undertaken to allow the site to become fully operational again. The site manager will continue to liaise with the Environment Agency as appropriate.

All 'Duty of Care' obligations will be complied with at all stages of the clean- up. The site will not become operational again until approval is signed off by the site manager and the Managing Director.

Firewater will be pumped into tankers for off-site disposal to a suitable permitted facility.

Used absorbents and flood containment media will be analysed by a third party contractor and disposed of at an appropriate site. All absorbents and flood containment media will be replenished and replaced.

Solid wastes will be sent off-site for disposal at a suitable permitted facility.

Any fire damaged waste will be characterised to enable determination of a suitable facility for recovery or disposal of the affected waste, which may include the following:

- Waste characterisation by visual sorting
- Compositional analysis of the waste material
- Waste acceptance criteria testing for landfill

If the drainage pond has been used to capture firewater runoff, sampling will be carried out to establish if the water has been contaminated to the extent that the normal drainage flow cannot be re-opened. If this is the case appropriate remediation will be carried out.

A structural engineer will carry out a structural survey to determine any building has been structurally damaged The Insurers will also be invited to site if there has been severe damage that will need to be highlighted to them.

Once all reports have been completed the site manager will establish if and when the site is safe to re-open. If major repairs are needed an assessment will be made into the length of time this will take and the continuing of the use of alternative outlets in the short or long term.

If the fire was limited to only part of the site, operations at the site will be restricted to the unaffected area, providing that (i) it is safe to do so and (ii) that the site can comply in full with the permit conditions.

No site operations will commence in the affected area until all inspections and necessary repairs have been carried out and advice is given by the Environment Agency.

The Environment Agency will be notified of the inspections and repairs undertaken within 5 working days and recommencement of full site operations.

List of Annexes

Annex	Contents
A	Drawings
B	Sensitive Receptors
C	Hot Works Permit
D	Oils, Fuels, and Combustible Goods
E	Fire Detection and Suppression System Specifications
F	Depot Maintenance Schedule
G	Daily and Weekly Inspection sheets
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Annex A

Drawings

	Document	Drawing No
1	Location Plan	Ell/SCU/FPP/001
2	Site Plan	Ell/SCU/FPP/002
3	Site Layout & Storage Plan	Ell/SCU/FPP/010
4	Non-waste Combustible Materials Storage	Ell/SCU/FPP/011
5	Fire Equipment and Water Supply	Ell/SCU/FPP/012
6	Surface Water Drainage Flows	Ell/SCU/FPP/013
7	Site Drainage Scheme	Ell/SCU/FPP/014
8	Sensitive Receptors	Ell/SCU/FPP/020

Annex B

Sensitive Receptors

Annex C

Hot Works Permit

Annex D

Oils, Fuels and Combustible Goods

Annex E

Flamescan / Fire-MIST®
water mist fire suppression systems

System Design, Conformity and Capability

The fire suppression systems are supplied by Helios Fire Systems

All equipment and installations are covered by UKAS accreditation and the system and extinguishing components are tested and manufactured to the following standards:

Standard	**Coverage**
FM Class 3265	*Approvals Standard for Spark Detection and Extinguishing systems.*
FM Class 2021, 2025	*Approvals Standard for Automatic and Open Water Spray Nozzles*
FM Class 3260	*Radiant Energy-Sensing Fire Detectors for Automatic Fire Alarm Signalling*
NFPA 15	Standard for Water Spray Fixed Systems for Fire Protection
BS 8489	Fixed Fire Protection Systems – Industrial and Commercial Watermist Systems
NFPA 750	Standard for Watermist Fire Protection Systems

Technology

By atomising the water into a fine mist the droplets immediately convert to steam and absorb the energy, quickly controlling the fire and cooling the surrounding areas. Once the fire has been extinguished the droplets being discharged continue the effect by removing heat from the fuel source thus preventing re-ignition. Additionally, this leads to a localised reduction in oxygen from the flame front, which creates a local inert atmosphere as it starves the combusting fuel of Oxygen.

Annex F

Maintenance Schedule

Preliminary Planning for the SRF-Building at Ellgia Waste Management, UK.

HELIOS
FIRE SYSTEMS

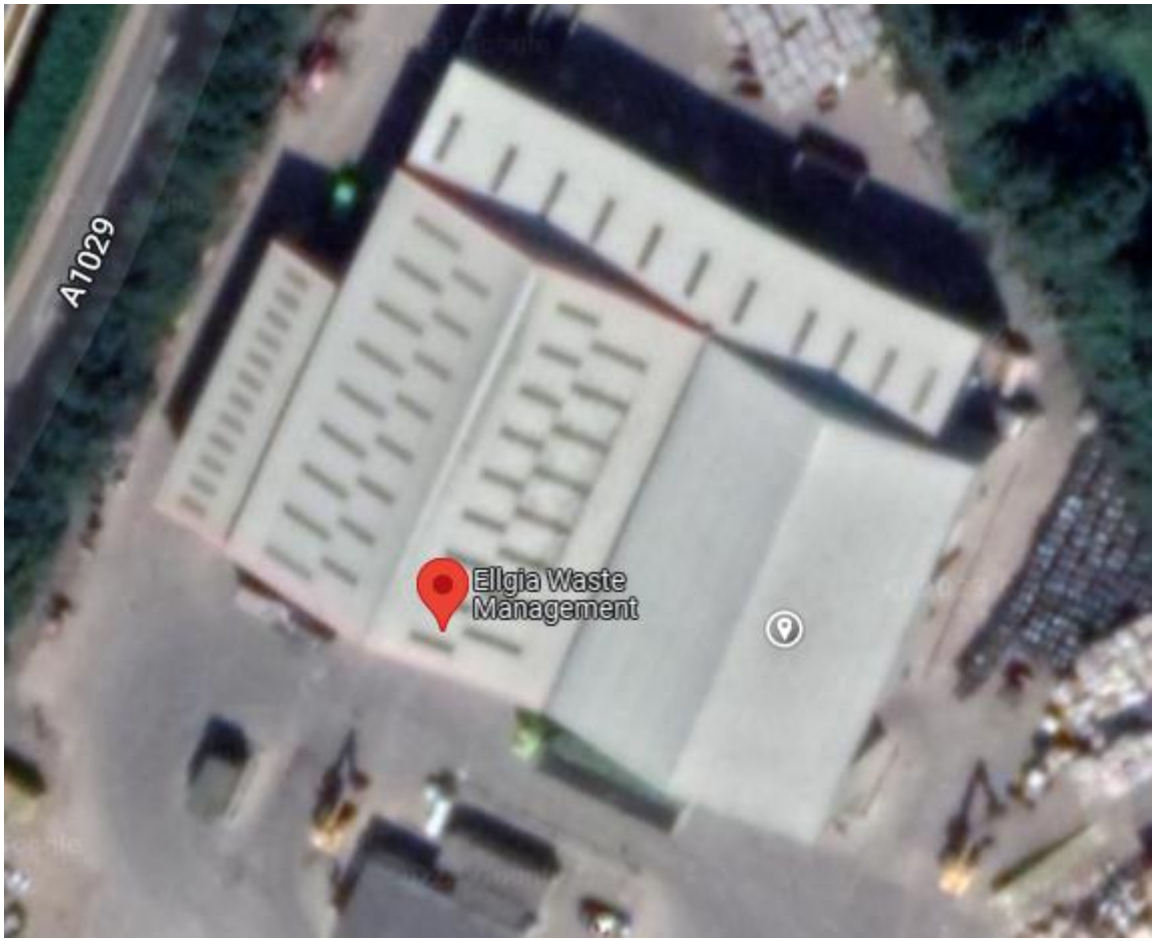
ELLGIA
Waste Management • Recycling Solutions • Skip Hire

by Andy Doran
Version 1:1 17th January 2023

Helios Fire Systems Ltd
Suite 2.09
Blackbox
Beech Lane
Wilmslow
SK9 5ER

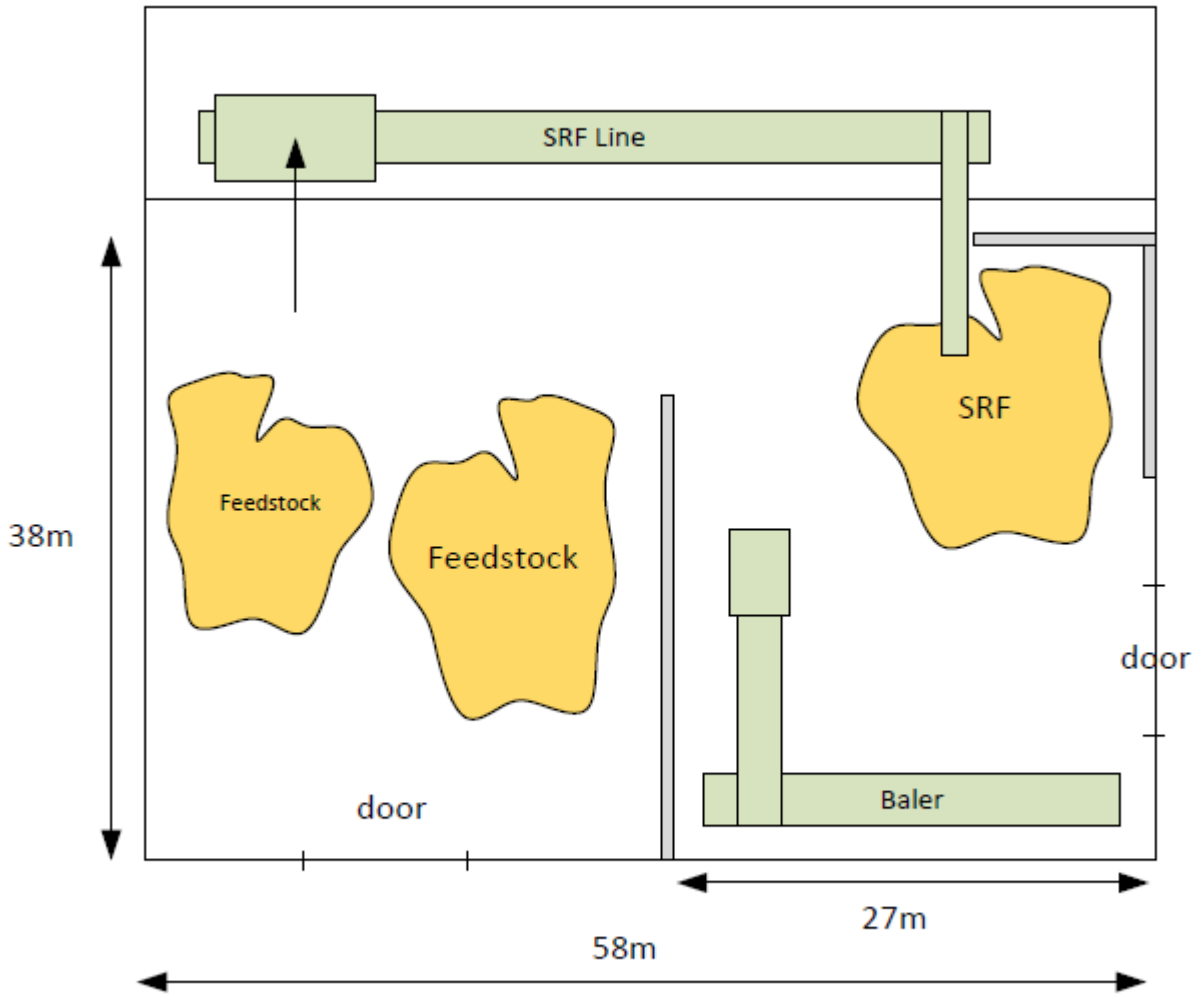
Ellgia Waste Management (Scunthorpe)

Site plan layout



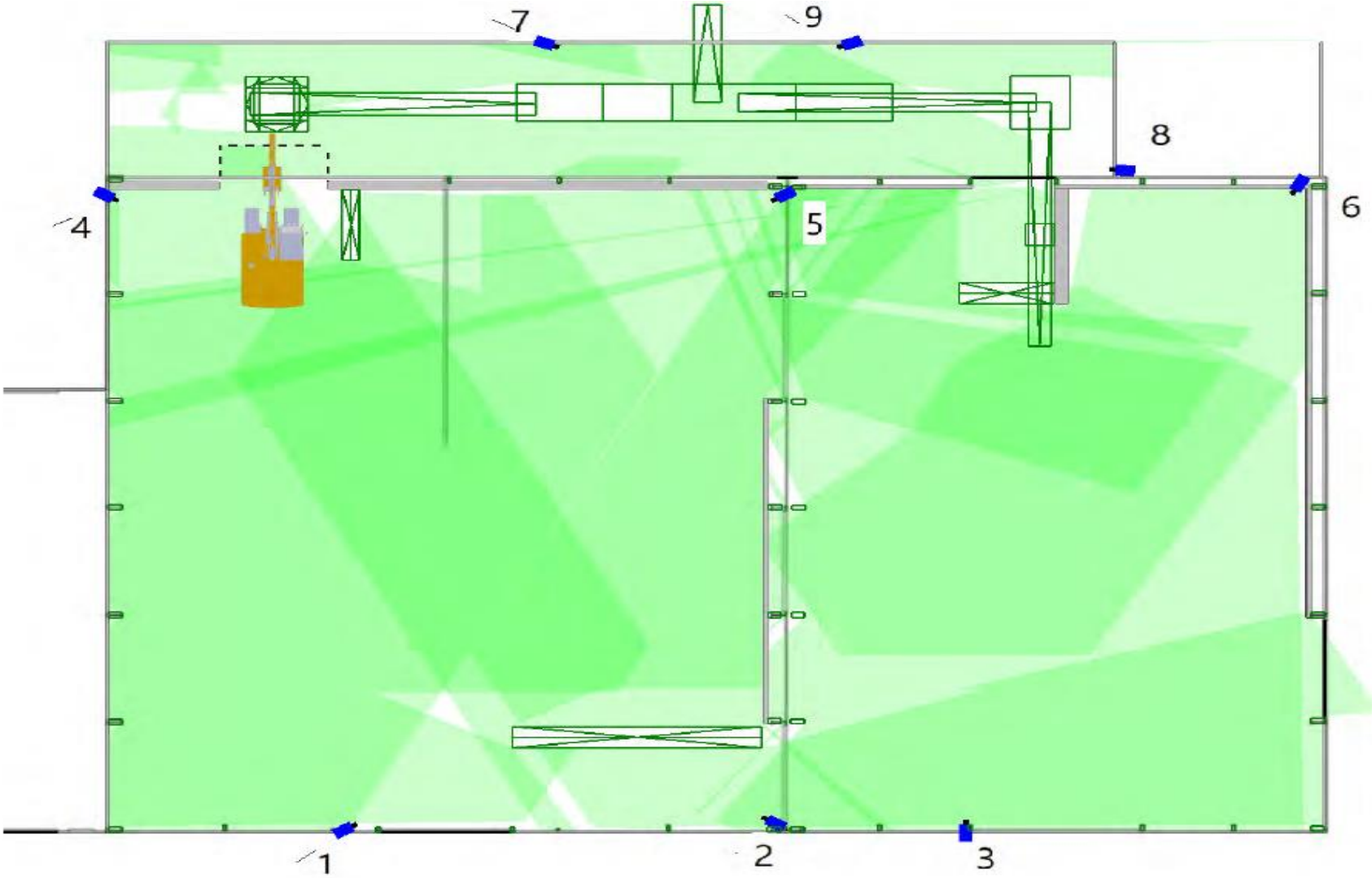
Ellgia Waste Management (Scunthorpe)

Building operational layout



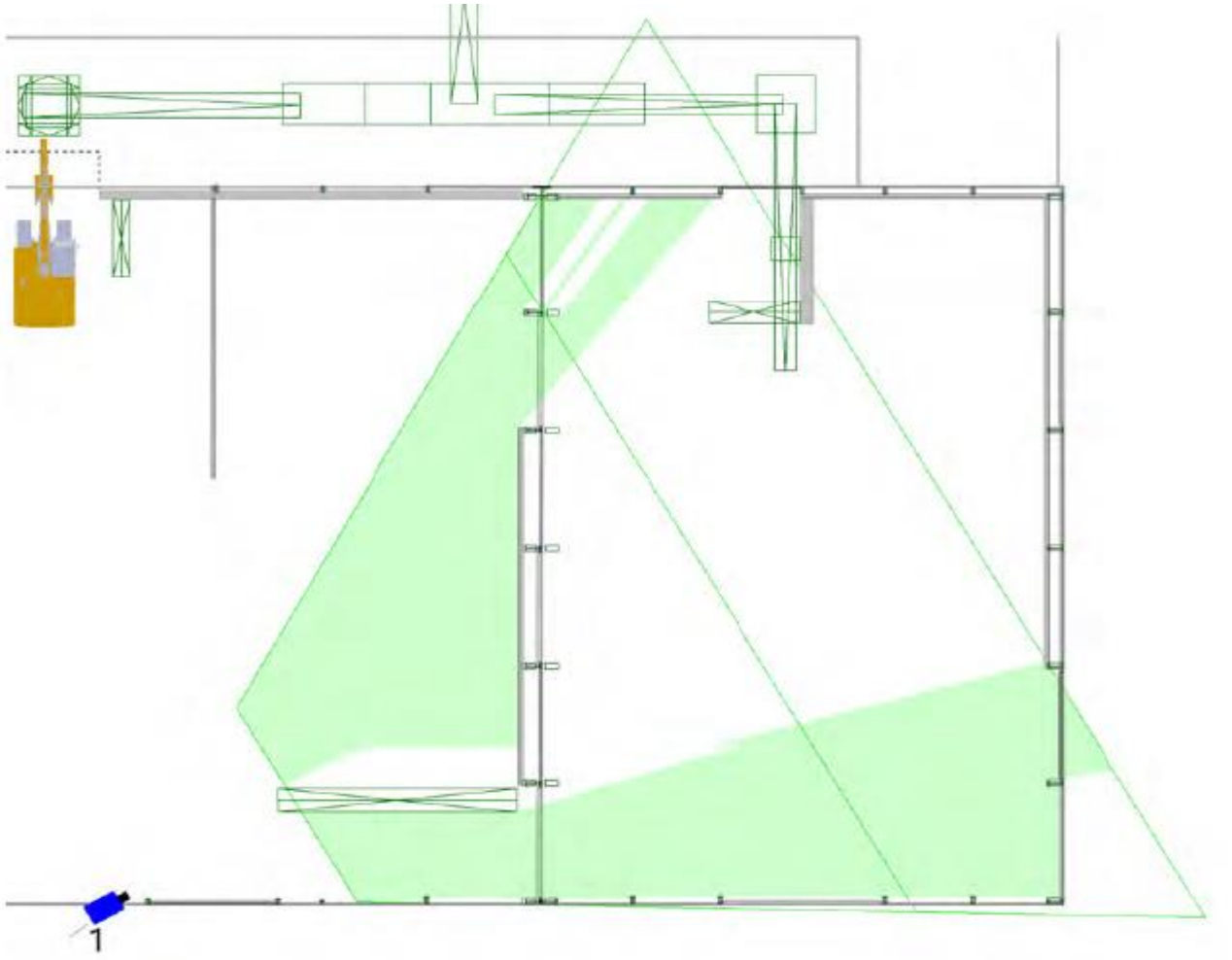
Ellgia Waste Management (Scunthorpe)

Camera layout (Plan Elevation)



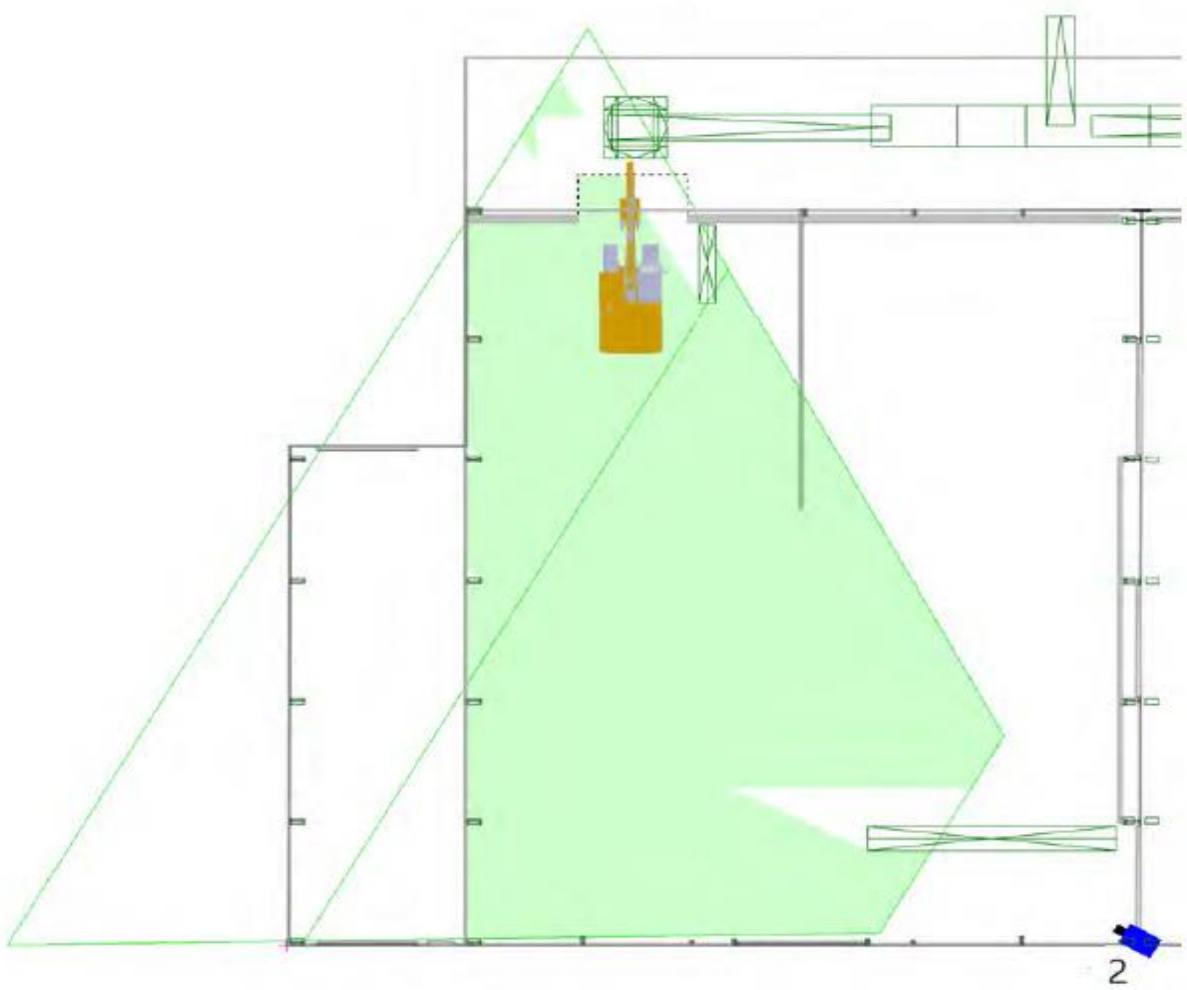
Ellgia Waste Management (Scunthorpe)

Camera 1 Field of view



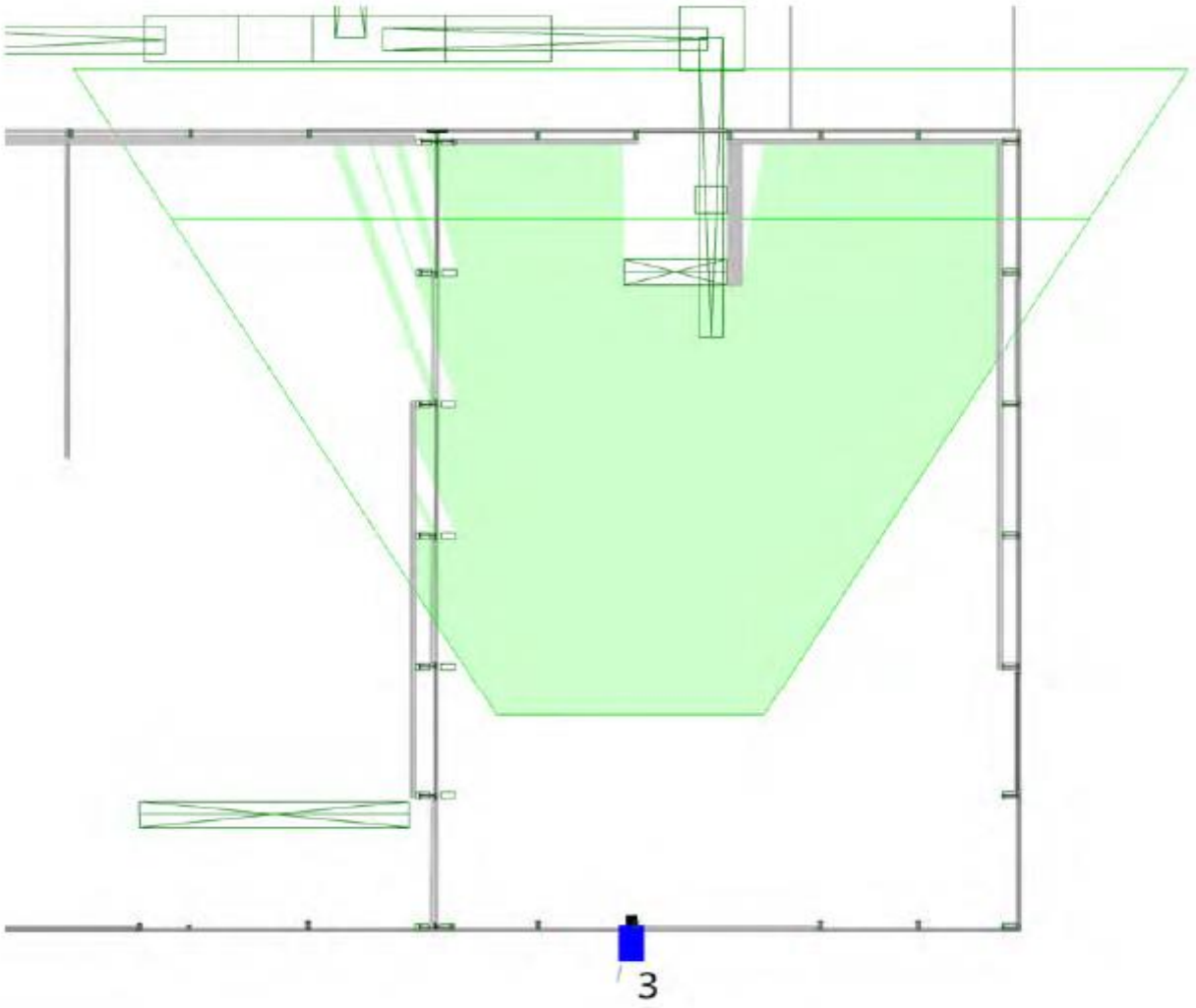
Ellgia Waste Management (Scunthorpe)

Camera 2 Field of view



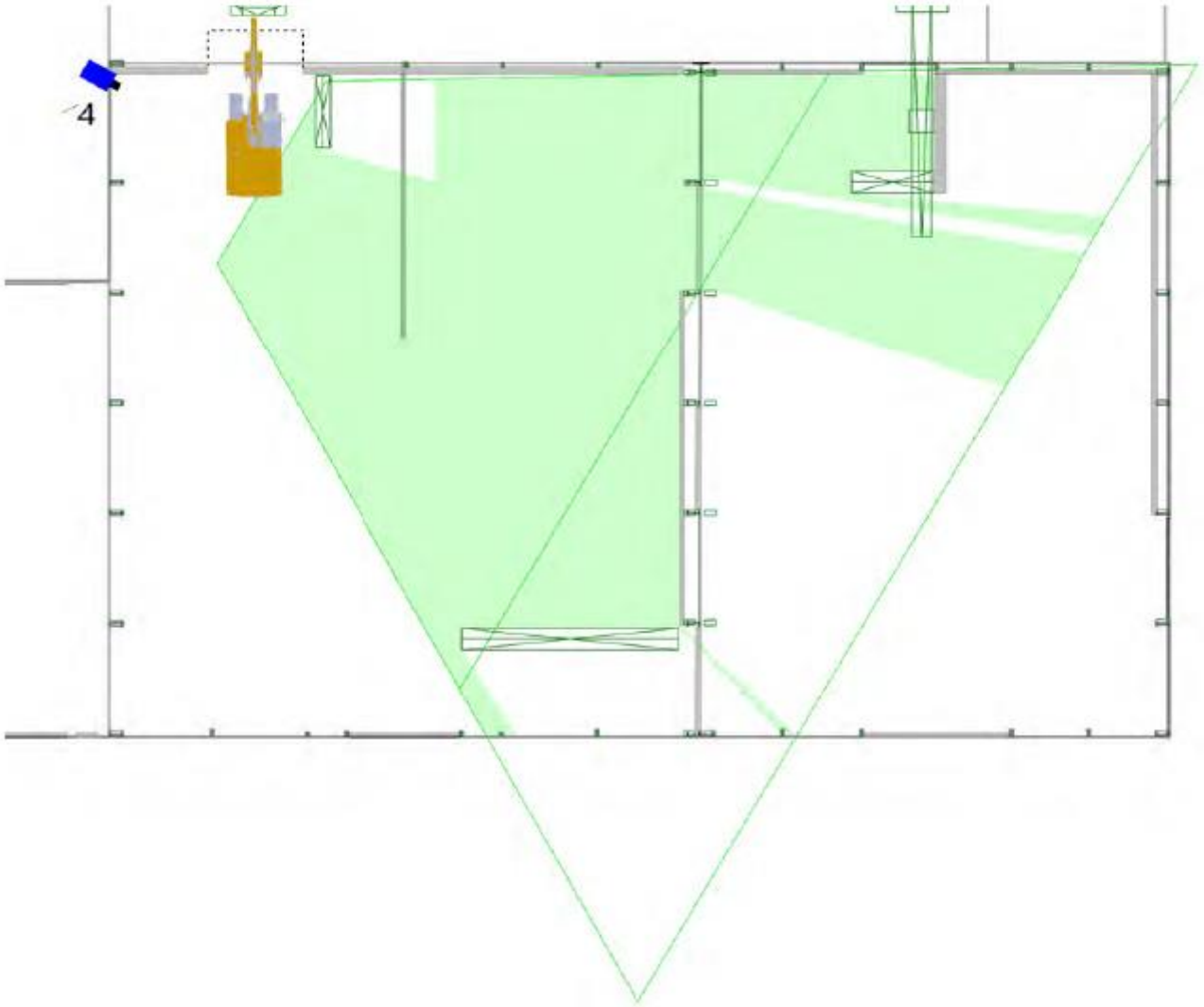
Ellgia Waste Management (Scunthorpe)

Camera 3 Field of view



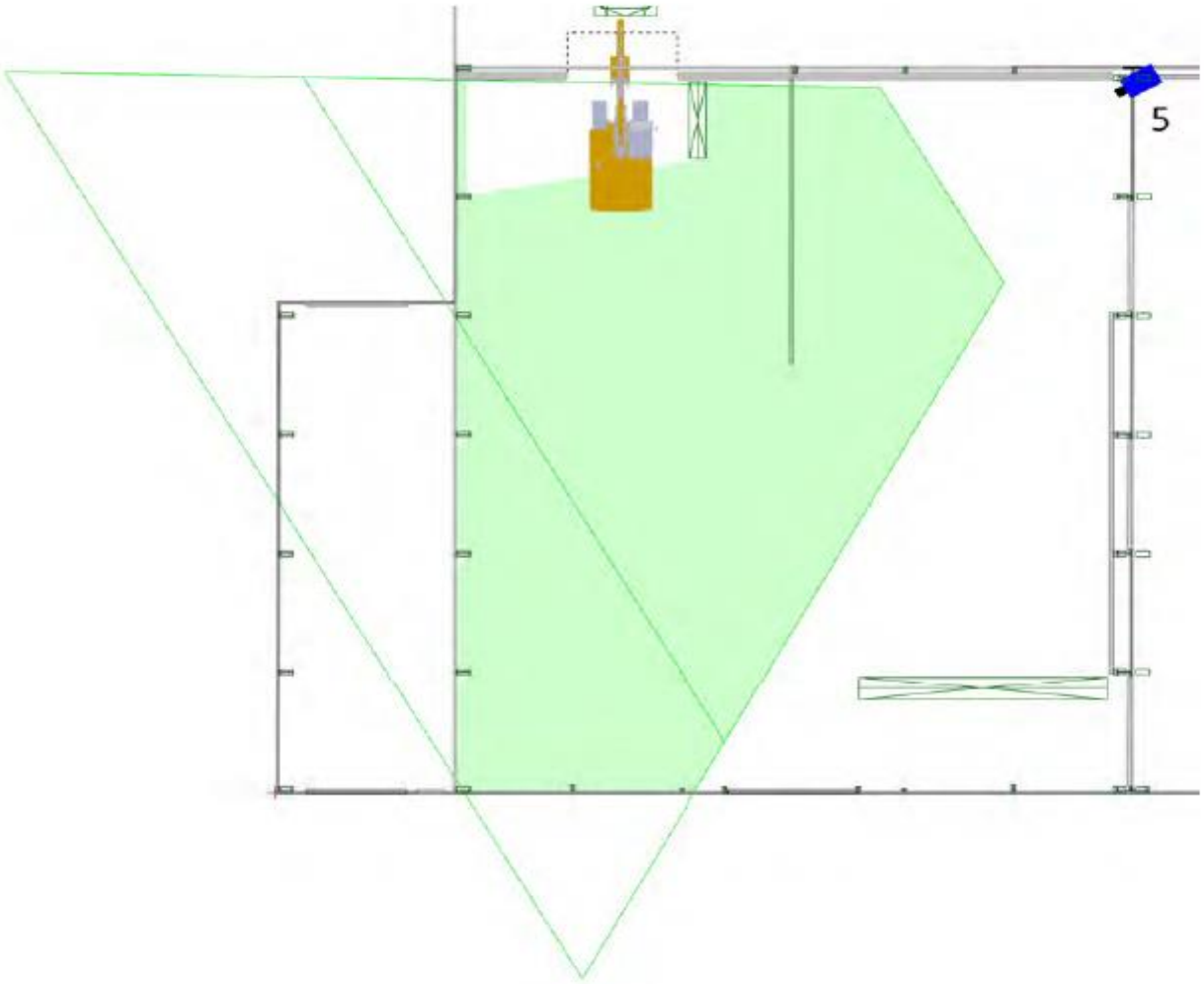
Ellgia Waste Management (Scunthorpe)

Camera 4 Field of view



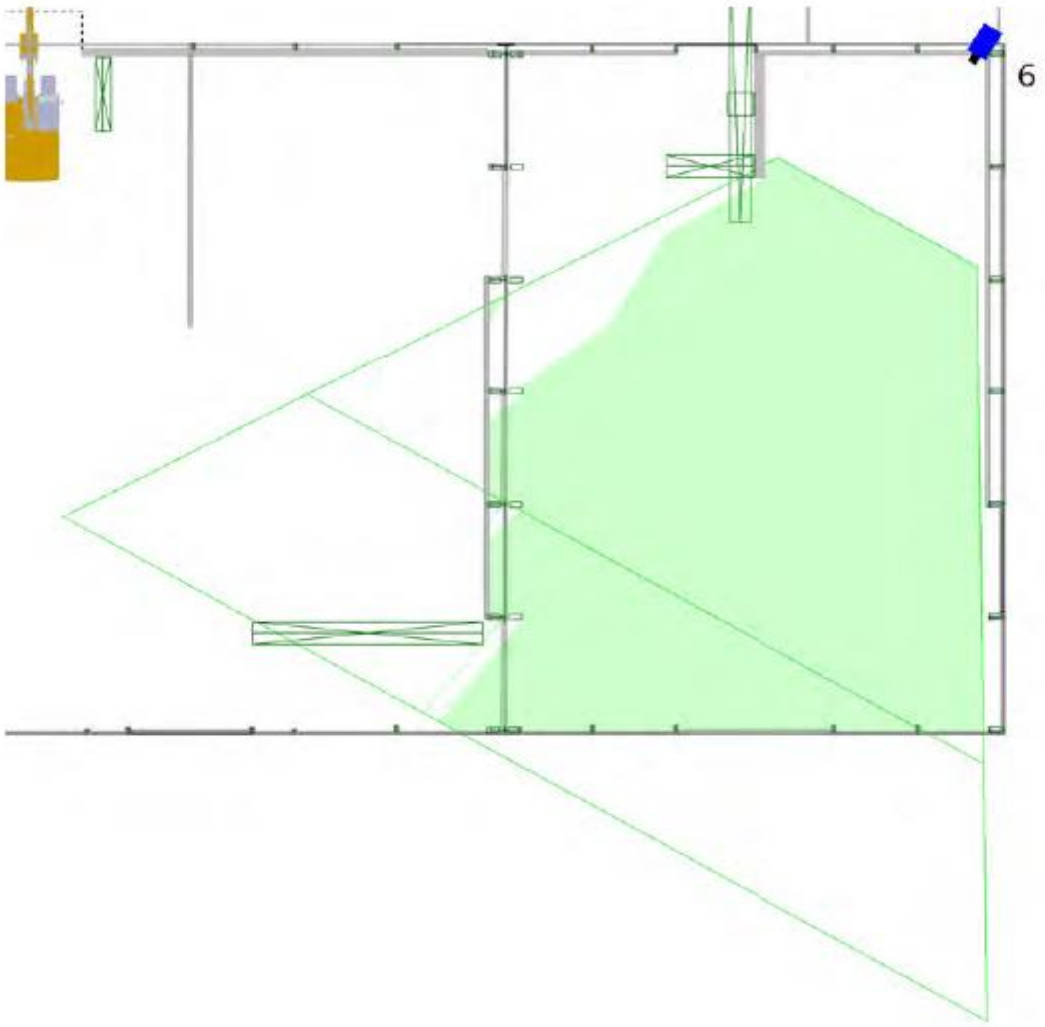
Ellgia Waste Management (Scunthorpe)

Camera 5 Field of view



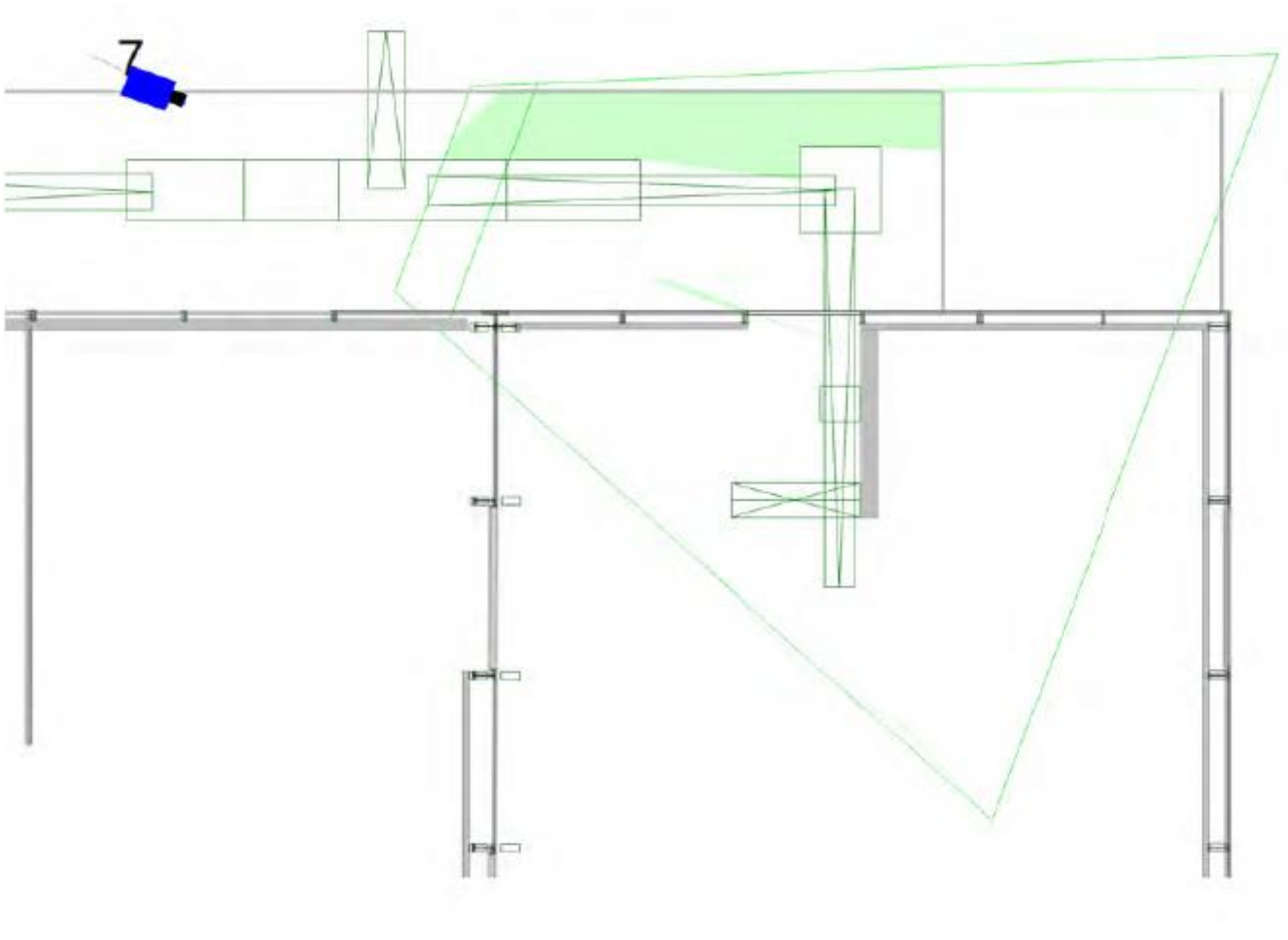
Ellgia Waste Management (Scunthorpe)

Camera 6 Field of view



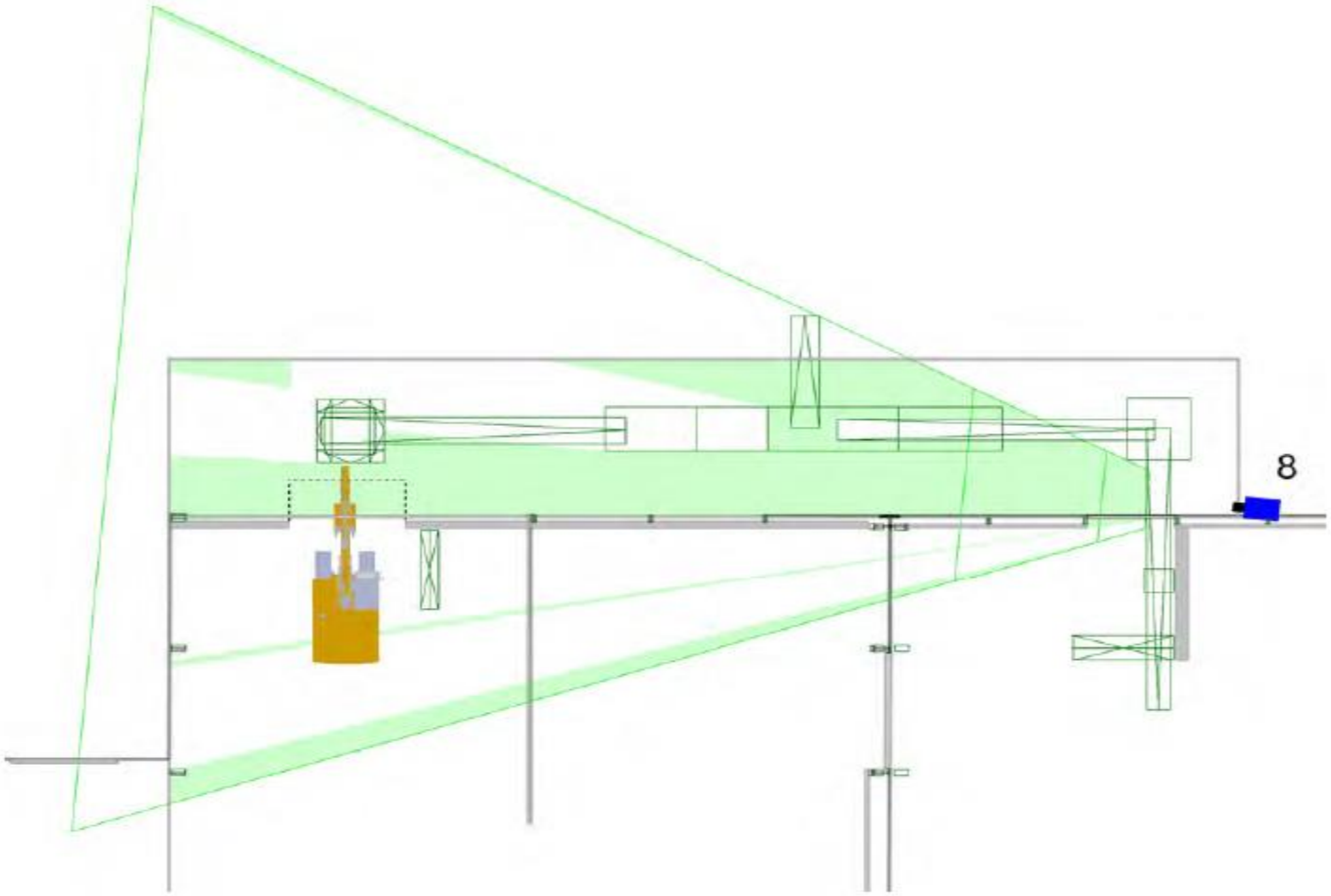
Ellgia Waste Management (Scunthorpe)

Camera 7 Field of view



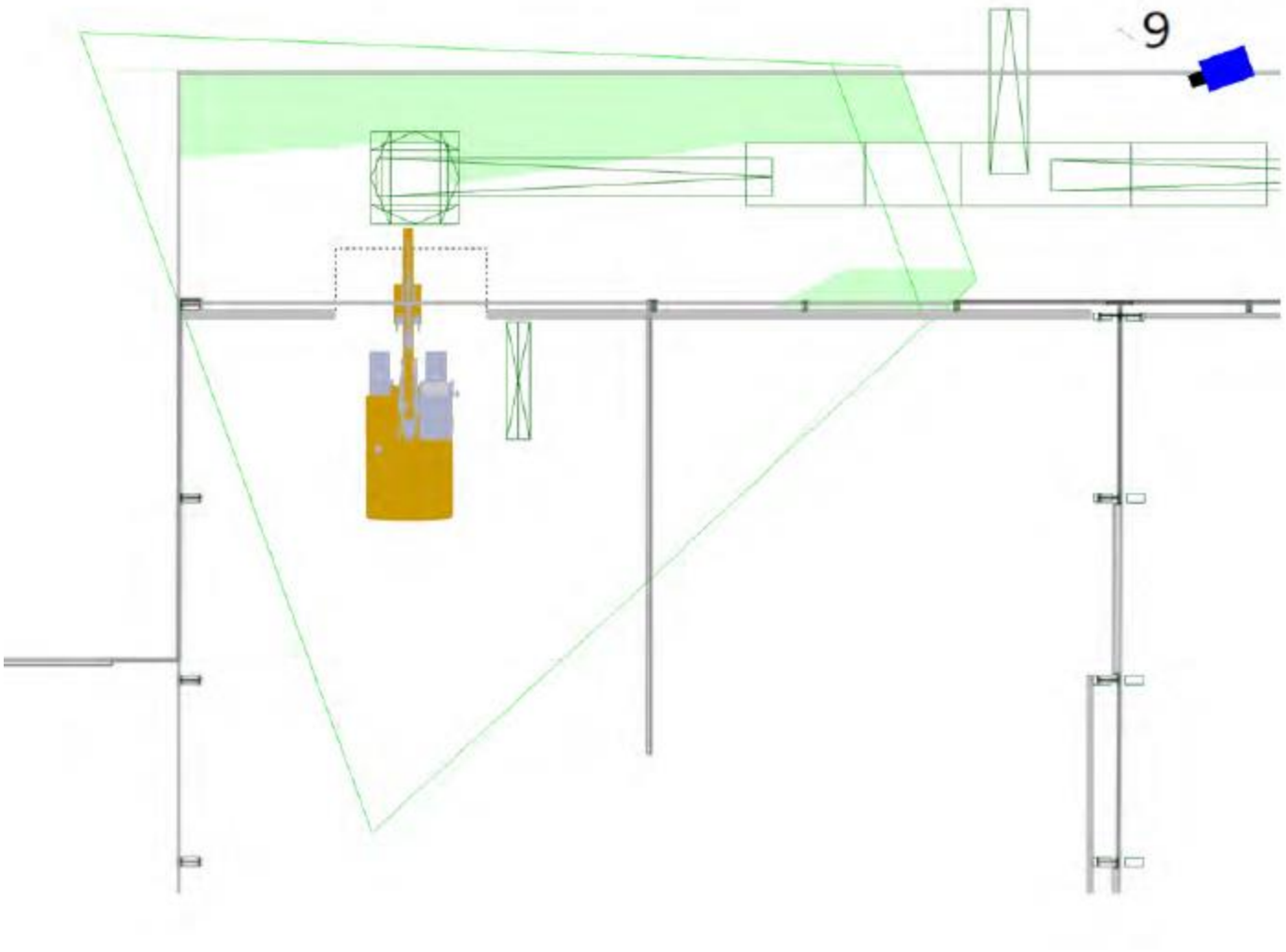
Ellgia Waste Management (Scunthorpe)

Camera 8 Field of view



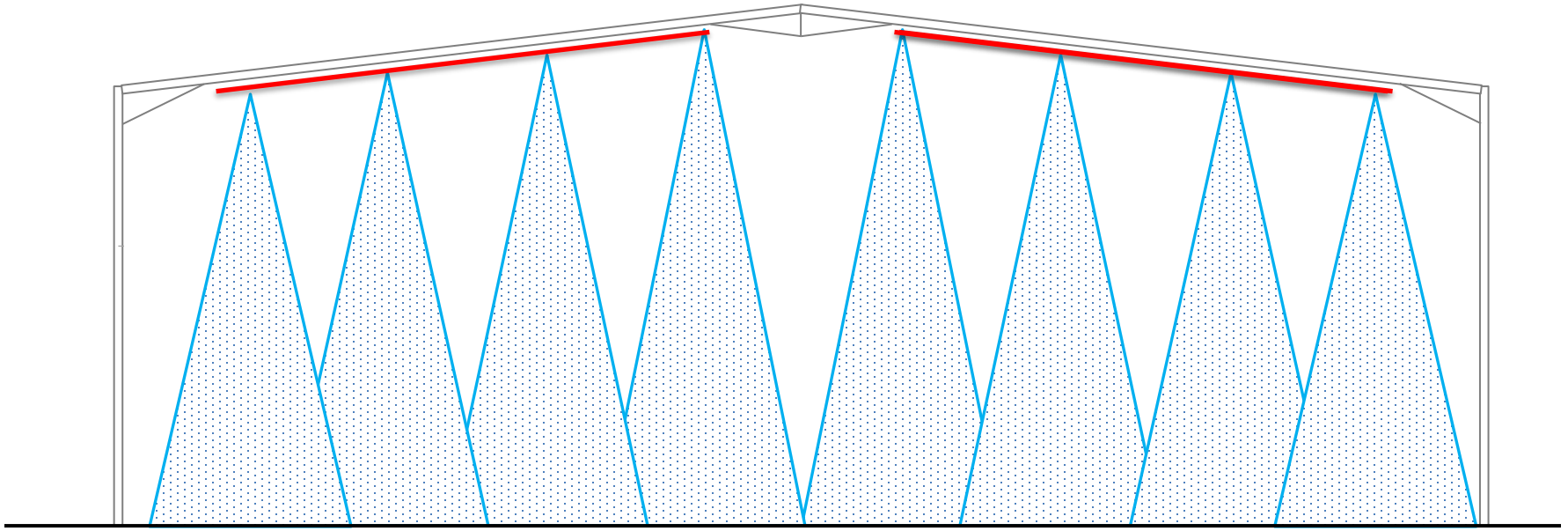
Ellgia Waste Management (Scunthorpe)

Camera 9 Field of view



Ellgia Waste Management (Scunthorpe)

Fire-MIST® Suppression area 80 nozzles, building seperated into 3 zones



Annex G

Daily and weekly inspection Sheets

Annex H

Safety Data Sheets