Granary House
Rutland Street
Cork

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Ms Sonja Smith
Office of Climate Licensing and Resource,
EPA Regional Inspectorate,
Inniscarra,
County Cork.

24th July 2014

Re; Application for Waste Licence (W082-02) Greenstar, Dock Road, Limerick

Dear Ms Smith,

I refer to the Agency's letter dated the 22nd July 2014 in accordance with Regulation 10(2)(b)(ii) of the EPA (Industrial Emissions)(Licensing) Regulations 2013. The requested information is set out herein.



*1. Under Regulation 9(2)(d) provide a detailed plant showing the installation boundary. Describe in detail the reasons for any proposed amendments to the boundary authorised in license Reg. No. W0082-02. Provide copies of any letters of agreement concerning such boundary changes. Justify any proposal that the installation should be authorised as two non-contiguous areas, as opposed to one area of land encompassing all relevant activities or liabilities.*

It is not currently proposed to amend the boundary authorised in Licence Reg. No. W0082-02. The authorised licence area, which is shown on Drawing B2 in the application (W0082-03 IED) is based on the wording of Condition 1.2 of the Licence Reg. No. W0082-02.

*Condition 1.2 For the purposes of this licence, the facility is the area of land outlined in orange on Drawing No. C98-101-B2-01 Rev 2 of the application and the area outlined in green in Drawing No C98-101-B2-01, until decontaminated as agreed by the Agency. Any reference in this licence to "facility" shall mean the area thus outlined unless otherwise agreed with the Agency.*

On Drawing B2, the red line around the operational area is based on the orange area shown on Drawing No C98-101-B2-01 Rev 2 and the perimeter fencing while the red line around CLIIB Holdings is based on the green area shown on Drawing No C98-101-B2-01. Copies of all of the referenced drawings are in Attachment 1.

Licence Reg. No. W0082-02 authorises two non-contiguous areas and it is not the intention of the IEL application to change the current licence boundary at this time. Greenstar requests that the existing discretion to amend the license boundary at some time in the future, subject to the agreement of the Agency, be retained.

Cont'd

2. *Under Regulation 9(2)(k)(ii) provide specification details of the proposed interceptor serving the 'dirty area' as referred to Condition 4 of the Planning Permission (planning reference 13/300). Include a drawing showing the location of this interceptor. Explain its relevance on an on-going basis given the proposal to divert stormwater from the 'dirty area' to sewer.*

The interceptor will be a Class 2 By-Pass Separator whose design complies with BS EN 858. It will be sized to accommodate the run-off from the 'dirty yard' area (ca 9,000m$^2$). This specification is considered appropriate given the nature of the activities carried out in the 'dirty yard' which will not involve the storage or handling of hydrocarbons.

The proposed location is shown on Drawing No 002-1, which is in Attachment 2. The location is indicative only, as the final position will be determined by the line of the new connection to the foul sewer, which has not yet been constructed.

The operator of the Bunlickey Wastewater Treatment Plant has stipulated that its agreement to a connection to the foul sewer is contingent on the provision of an oil interceptor. As noted in the Agency's letter, the provision of the interceptor is also a requirement of the planning permission and details are to be agreed in advance with the Plant Operator and Council.



*3. As required under Regulation 9(2)(j) provide an updated drawing showing the groundwater monitoring location GW-M3.*

The location of GW-M3 is shown on Drawing No 01 Rev B in Attachment 3.

An updated Non-Technical Summary is in Attachment 4.

Yours Sincerely

Jim O' Callaghan

# Attachment 1

NOTES

GREEN FIELD

WATER COURSE TO BUNLICKEY LAKE

City Co Bdy

BALLINACURRA CREEK

OPEN YARD

Waste Operations Within this Red Line

WASTE LICENCE AREA RED

MATERIALS RECOVERY BUILDING

SITE NOTICE

CLIIB HOLDINGS

ADMIN & WORKSHOP

GREEN FIELD

Plant

10Kv

ACCESS RD

SITE NOTICE

2.6

DOCK ROAD



| REV | DATE | DESCRIPTION | DRN | CHKD | APP |
|---|---|---|---|---|---|
| A | 27/01/13 | PRELIMINARY ISSUE | MW | SM | ** |

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CLIENT

Greenstar E.S Ltd

TITLE

NOTICE LOCATIONS

| SCALE | DRAWING No. | REV. |
|---|---|---|
| 1:1000 A3 | B2 | A |

DOS Filename : **********

licence file - W0082-02

Sk. Nr. B7143-CK05 | File Nr. 7143CK05

Ball...

TRUCKCAR SALES LTD.

X EGL 0.35

Vehicle Compound

EGL 3.24 on concrete

WORKSHOP

APPROX. F.F.L. 2.60m.

TRUCKCAR SALES LTD.

EGL 3.21

Canteen, Toilets & Showers.

SECURITY FENCE

Oil Tanks

Crane & Truck Parking

Cussen & Co. (Crane Hire) Ltd.

Open Drain

EXISTING DRAIN

Bin Repair

CUSSEN & Co. LTD.

APPROX. F.F.L. 2.15m.

AUTO DIESEL SERVICES LTD.

Access Gate in Security Fence

Automatic Gates

Cussen Entranc

Wheel Wash

site boundary

ACCESS ROAD

GATE

FORECOURT

Pallet Storage Area

TRUCK PARKING

SITE OFFICES

WORKSHOP

INDUSTRIAL/WAREHOUSE UNITS

Yard

Yard

Yard

Open Drain

Site Boundary

Existing Boundary Wall

Separation Compound

Transfer, Storage & Recycling Building.

SAND FILTER

VEHICLE WASHING FACILITIES

Open Drain



Drg. No. C98-101-B2-01 Rev.2

Not For Construction Unless Stamped Accordingly | Do Not Scale - If in Doubt Ask | A3

Pettit
Project Design & Management

E.G. Pettit & Company
P.O. Box 893,
Shelbourne Hse.,
Shelbourne Rd.,
Dublin 4, Ireland.

Tel: 353-(0)1-6680111
Fax: 353-(0)1-6680954
email: egp_dub@iol.ie

Other Offices : Cork, Killarney, Waterford and Limerick

Overseas Offices : U.S.A., Poland and Nigeria

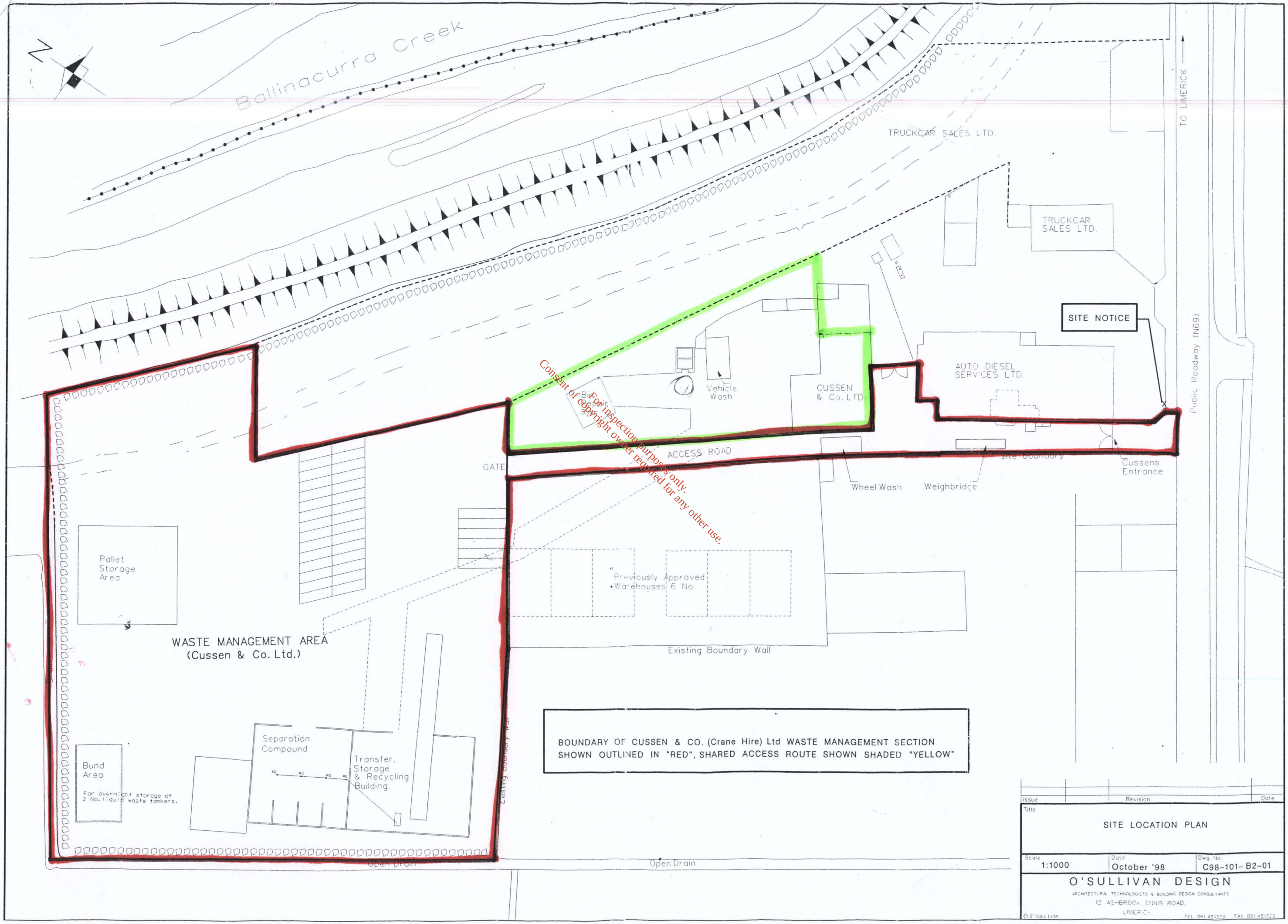
Client: IPODEC LTD.

Project: DOCK ROAD, LIMERICK

Drg. Title: SITE BOUNDARY

| Job Nr. | Drg. Nr. | Scale | File Nr. | E. G. Pettit & Co. |
|---|---|---|---|---|
| B7143 | B7143-CK05 | 1:1000 | 7143CK05 | Copyright 2000 |

Licence file - W0082-02






BOUNDARY OF CUSSEN & CO. (Crane Hire) Ltd WASTE MANAGEMENT SECTION SHOWN OUTLINED IN "RED", SHARED ACCESS ROUTE SHOWN SHADED "YELLOW"

| Issue | Revision | Date |
|---|---|---|

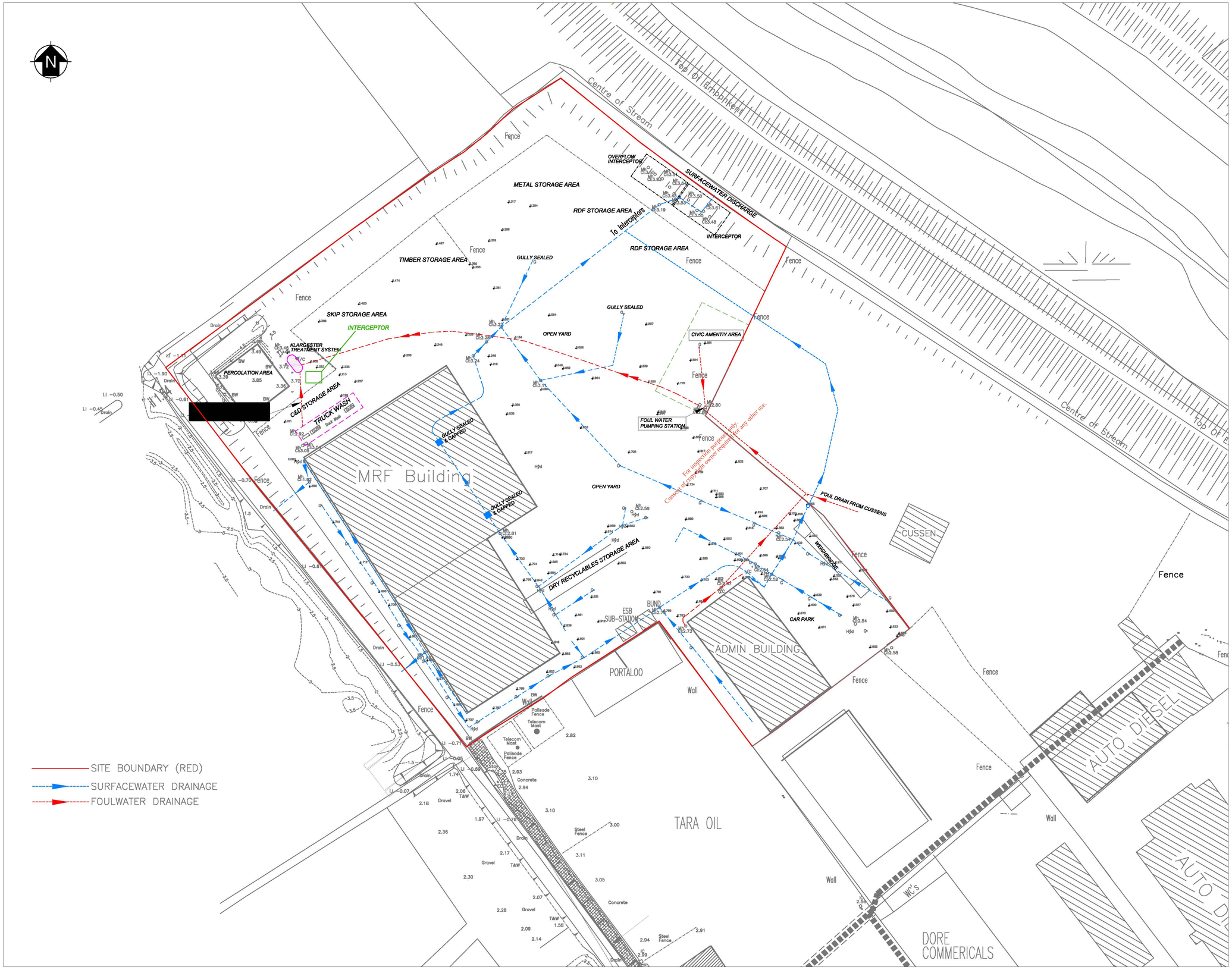
Title: SITE LOCATION PLAN

| Scale | Date | Dwg. No. |
|---|---|---|
| 1:1000 | October '98 | C98-101- B2-01 |

O'SULLIVAN DESIGN
ARCHITECTURAL TECHNOLOGISTS & BUILDING DESIGN CONSULTANTS
12 ASHBROOK, ENNIS ROAD,
LIMERICK.
©O'SULLIVAN
TEL 061451329. FAX 061451323

# Attachment 2

A1






NOTES

| REV | DATE | DESCRIPTION | DRN | CHKD | APP |
|---|---|---|---|---|---|
| A | 23/07/14 | PRELIMINARY ISSUE | KC | JOC | ** |

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CLIENT

GES Limerick

TITLE

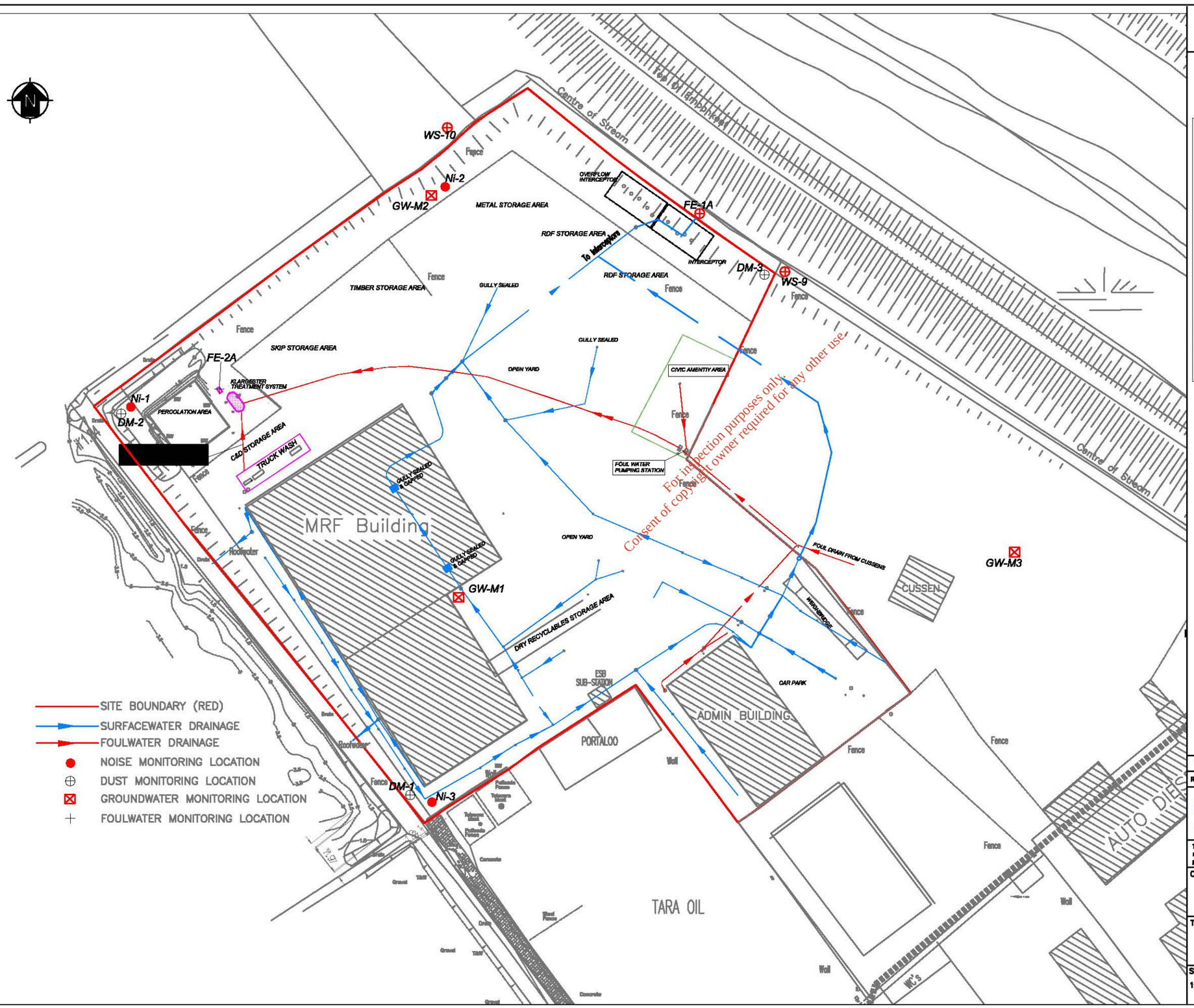
PROPOSED LOCATION OF INTERCEPTOR

| SCALE | DRAWING No. | REV. |
|---|---|---|
| 1:500 A1 | 002-1 | A |

DOS Filename : *********

DXF Export 29-07-2014:23:47:15

# Attachment 3






NOTES

*Monitoring locations*
*Grid references*
*Eastings Northings*

| | |
|---|---|
| DM-1 | 154913, 155617 |
| DM-2 | 154842, 155714 |
| DM-3 | 155003, 155750 |
| Ni-1 | 154840, 155712 |
| Ni-2 | 154920, 155745 |
| Ni-3 | 154910, 155618 |
| FE-1A | 154974, 155769 |
| WS-9 | 155003, 155750 |
| WS-10 | 154922, 155776 |
| FE-2A | 154858, 155720 |
| GW-M1 | 154923, 155667 |
| GW-M2 | 154920, 155770 |
| GW-M3 | 155049, 155684 |

| REV | DATE | DESCRIPTION | DRN | CHKD | APP |
|---|---|---|---|---|---|
| A | 13/07/14 | PRELIMINARY ISSUE | KC | SM | ** |

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CLIENT
Greenstar

TITLE
Emission & Monitoring
LIMERICK

| SCALE | DRAWING No. | REV. |
|---|---|---|
| 1:1000 A3 | 01 | B |

DOS Filename : ********

# Attachment 4

## NON-TECHNICAL SUMMARY

Starrus Eco Holding Ltd trading as Greenstar, Dock Road, Limerick is applying to the Environmental Protection Agency (EPA) for a Licence for its existing Materials Recovery Facility at Dock Road, Limerick. It is intended to increase the amount of waste accepted at the facility from 90,000 tonnes annually to 130,000 tonnes. The classes and nature of the industrial emissions directive activities, in accordance with the First Schedule to the Act of 1992 as amended, are:

11.1 The recovery or disposal of waste in a facility, within the meaning of the Act of 1996, which facility is connected or associated with another activity specified in this Schedule in respect of which a licence or revised licence under Part IV is in force or in respect of which a licence under the said Part is or will be required.

11.4.(b) Recovery, or a mix of recovery and disposal, of non-hazardous waste with a capacity exceeding 75 tonnes per day involving one or more of the following activities, (other than activities to which the Urban Waste Water Treatment Regulations 2001 (S.I. No. 254 of 2001) apply):

(ii) pre-treatment of waste for incineration or co-incineration;



Greenstar had obtain planning permission from Limerick County Council for planning permission for the proposed change and a copy of the Notification to Grant Permission is included in this application. Greenstar prepared an Environmental Impact Statement (EIS) as part of the application and a copy of the EIS is included in the application

The design and method of operation at both the existing facility and proposed development are based on the requirements of the Agency's Final Draft BAT Guidance on Best Available Techniques for the Waste Sector: Materials Recovery and Transfer and of the European Commission's Reference Document on Best Available Techniques for the Waste Treatment Industries 2006 (BREF), which specifies the Best Available Techniques (BAT) for Waste Management Facilities.

The emission limit values were determined by those set in the existing Waste Licence, which comply with BAT, and an assessment of the impacts of the new emission sources, which include odours and noise.

The EC (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2006 do not apply.

### The Installation

The site is located in the townland of Ballykeefe. The current Waste License area encompasses approximately 2.38 hectares (ha) and comprises two discrete parts. The first is controlled by GES and contains the facility (20,000 m²). The second (3,800m²) is controlled by CLIIB, the landowners of the entire licensed area and is not used for waste activities.

CLIIB, who were the original licensee, sold their waste business but retained control of a portion of the licence area for use as part of their crane hire business. There is a fence between the Greenstar and CLIIB controlled areas.

The facility is approximately 120m off the Dock Road and is accessed by a common access road serving the facility and other occupiers of the industrial lands. There are two adjoining waste handling buildings (Building 1 and 2). Building 1 is currently used for sorting and compacting recyclables (paper, cardboard, plastics etc.) recovered from the incoming wastes. Building 2 is currently used for compacting and wrapping the mixed municipal solid wastes.

There is a separate office building and adjoining vehicle and plant maintenance workshop near the site entrance. An electrical substation along the south-western boundary wall is owned by Electric Ireland.

The open yards are paved and are used for external waste storage bays (C&D, glass, metals, timber and baled waste), skip storage, truck parking and a vehicle wash area, which is to the north of Building 1.

Currently approximately 20 full time staff at the facility including a Facility Manager, weighbridge clerk, machine operators and general operatives. The facility obtains water from the municipal water supply system. The electricity power supply is provided by Electric Ireland.



Surface water run-off is generated by rainfall on the roof of the offices and workshop building, the waste handling buildings and the paved open yard areas. The run-off from the paved yards and maintenance building is collected and discharged to a man-made drain at the north eastern site boundary. Run-off from the roofs of Buildings 1 and 2 discharges to a manmade perimeter drain along the western boundary. It is proposed to divert run-off from the yards to the north and east of the waste buildings to a new foul sewer, which will be installed by the landlord and will connect to the Bunlickey Wastewater Treatment Plant.

The only wastewater emission is sanitary wastewater from the toilets/canteen. This is collected and treated in an on-site Kalrgester Biodisc wastewater treatment plant, with the final effluent discharging to an onsite percolation area. Sanitary wastewater from the neighbouring CLIIB yard is also treated in the Klargester. It is proposed to divert the sanitary wastewater to the new foul sewer that will be installed by the landlord. Subsequently the Klargester will be decommissioned. It is also proposed to restart washing vehicles and bins at the facility and discharge the wastewater to the foul sewer.

*Plant & Equipment*

The type and numbers of fixed and mobile plant used to handle and process the waste is shown in Table 1. The proposed increase in the amount of wastes accepted does not require the provision of any additional plant items

**Table 1 Plant**

| No. | Plant | Operational Capacity Tonnes/day | Standby Capacity Tonnes/day |
|---|---|---|---|
| 1 | 360° case Excavator | 300 | 200 |
| 1 | Volvo Loading Shovel | 500 | 350 |
| 2 | Doppstadt shredders | 200 | 150 |
| 1 | Cardboard baler | 100 | 75 |
| 1 | Waste Baler | 350 | 200 |
| 3 | New Holland teleporters | 350 | 200 |
| 1 | Hyster forklift | 100 | 75 |
| 1 | Scarab minor roadsweeper | n/a | n/a |

In addition to the larger plant items, there are welding units and a compressor in the maintenance workshop. The skip lorries and rear end loaders (REL) based at the facility are neither refuelled nor serviced on-site.

Commercial and Industrial (C&I) Waste

The C&I wastes comprises mixed and segregated recyclables (paper, cardboard, glass, metal, green waste and wood). The mixed packaging is processed inside Building 1 to separate out the plastic, card and paper, which are then baled and stored prior to transfer to a suitable permitted/licensed off-site recycling outlet. Biodegradable wastes that are suitable composting are bulked and sent to an offsite composting facility. The remaining non-recyclable material is bulked up and sent to appropriate licensed disposal facilities.



Construction and Demolition (C & D) Waste

The C&D waste comprises mixed wastes (rubble, stone, timber, metal etc) and soil and stone. The material arrives in skips of varying sizes. The loads are inspected, with any plasterboard removed and placed in a dedicated skip located inside the building, and the remainder off loaded into an external C&D bay. The majority of the incoming waste is recovered and sent off-site either for re-use or recycling. The non-recyclable materials are transferred to a licensed landfill.

Municipal Waste

The incoming waste is deposited on the floor of Building 2 and is then either bulked up for removal and disposal at an approved residual landfill facility or directed to the baler where it is compacted into bales and wrapped in plastic sheeting. The wrapped bales are then stored on the paved yard outside the building pending consignment to overseas waste to energy recovery plants. The bales are wrapped in eight layers of plastic sheeting that protects the wastes from rainfall and prevents the infiltration that could generate a leachate. The average storage time for a bale is 1 week.

In the future it is envisaged that further processing of the waste may be required to produce a higher quality product, for example Solid Recovered Fuel (SRF), that is suitable for use as a replacement for non-renewable fossil fuel. This will involve the removal of poorly combustible materials so as to increase the calorific value.

Timber Shredding

Up until 2012, untreated timber pallets and untreated construction timbers were shredded in the northern area of the yard and stored in a dedicated shredded timber bay before

being sent for use as a compost bulking/aeration agent, or as raw material in chipboard/MDF manufacturer. This activity has ceased, but may restart in the future.

External Storage

A large portion of the open yard to the east of Buildings 1 and 2 is used for empty skip storage. There are open metals, glass and timber storage bays at the northeast corner of the yard and along the northern boundary. Bales of compacted mixed municipal solid waste are stored externally in the north east of the site. The bales are wrapped in eight layers of plastic sheeting that protects the wastes from rainfall and prevents the infiltration that could generate a leachate.

The remaining wastes that are stored externally comprise inert construction and demolition wastes in the designated C& D Bay to the north of Building 2 and baled clean cardboard, paper and plastics and scrap metal.

## Raw & Auxiliary Materials and Energy Usage

Facility operations involve the consumption of water, oil and electricity. The estimated quantities used annually at full capacity are given in Table 2

**Table 2 : Resource Consumption**

| Resources | Quantities 2012 |
|---|---|
| Diesel (green) | 60,000 litres |
| Electricity | 113,567 kW |
| Hydraulic Oil | 4500 litres |
| Engine Oil | 1500 litres |
| Mains Water | 8,200 $m^3$ |



## Sources of Emissions

The actual and potential emissions from the site are:

Noise from plant and equipment used to process the wastes and the delivery/collection vehicles.

Dust from waste processing and vehicle movements on yards during dry weather.

Rainwater run-off from the yards and building roofs.

Odours from the MSW

Vehicle exhaust gases from the delivery and collection vehicles.

Treated effluent from the on-site sanitary wastewater treatment plant

## Environmental Conditions

The facility is located in the northern section of an area developed for commercial and industrial uses. The lots to the south of the site are occupied by warehousing units, oil distribution centres, truck sales and repair facilities and Cussen Crane Hire.

The climate in the area is mild and wet, with the prevailing wind direction from the south west. The subsoil comprise 0.0-2.5m – Made Ground (gravely sand containing ash, wood, glass, metals, slates and plastics) underlain by natural approximately 1m of silty clay alluvium with sand and gravel lenses, which in turn is underlain by up to 4m of Silts overlying a minimum of 1.5m of sandy Clay. The bedrock is Visean Undifferentiated Limestone, which is a pure bedded limestone.

The available information on the aquifer indicates that the subsoils at the site are not significantly water bearing. The bedrock is classified as Locally Important Aquifer Generally Moderately Productive (Lm). The aquifer vulnerability rating for the site is Low.

The facility is in the catchment of the Ballinaclough River, which rises to the south east of the site and flows northwest to confluence with the River Shannon via the Ballinacurra Creek. Both the Ballincurra Creek and the Shannon are tidally influenced.

Rainwater run-off from the site goes to perimeter man-made drains that discharge to Bunlickey Lake. The surface water monitoring carried out in accordance with the current licence conditions confirms that the run-off from the site meets the emission limit values set in the licence.

The ambient air quality is good and the routine dust monitoring carried out in accordance with the current licence conditions confirms dust is not an issue. The noise levels in the area are typical of an area zoned for industrial use. The annual noise monitoring confirms the site is not a source of noise nuisance.

Historic activities have caused soil and groundwater contamination at the site and a baseline report has been prepared.



## Nature of the Emissions and Assessment of Impact

### Climate

All new developments that give rise to extra greenhouse gases (GHG) emissions are considered to have a negative effect on climate. While the increase in the amount of waste accepted will result in additional GHG emissions from the handling equipment and transport vehicles the increase will be so small as to mean the development will have an imperceptible negative impact.

### Soils and Geology

The proposed changes do not involve any excavations or ground disturbance. At present sanitary wastewater is treated in an on-site wastewater treatment plant, with the treated effluent discharged to a percolation area. It is proposed to connect to the foul sewer, following which the on-site treatment plant will be decommissioned and the discharge to the percolation area will stop. This will have a positive impact on soils.

### Water

The only emission to surface waters is run-off from the paved yards and building roofs. It is proposed to divert the run-off from the section of the yard that is crossed by transport vehicles and where waste is stored to the foul sewer via an oil interceptor. This will reduce the volume of surface water emissions and reduce the potential for contamination of the run-off and will have a perceptible positive impact.

The development will not have any impact on the rainfall contribution to groundwater and, as there will be no new emissions to ground, there will be no impact on groundwater.

**Ecology**

As the entire site consists of open paved areas, with buildings, there are no sensitive ecological habitats within the site boundaries. Bunlickey Lake, which is 500m to the west of the site and the stretch of the River Shannon, which is 400m to the north are protected sites under the EU Habitats and Birds Directives (Special Protection Area (SPA) and Special Area of Conservation (SAC)).

A screening assessment of the impacts the proposed change would have on the SPA and SAC was carried out. It concluded that as the change does not require the construction of any new buildings, the use of any additional equipment that could be a cause of disturbance, or result in any new or changes to existing emissions from the facility, it will have no impact on either the SPA or the SAC and therefore mitigation measures are not required.

**Air Quality**

The existing emissions to air from the site are dust and vehicle and plant exhaust emissions. The routine dust monitoring carried out as required by the Waste Licence has established that dust emissions are not a cause of nuisance. The proposed change will not result in any new sources of dust and therefore mitigation measures are not needed.

The increase in the amount of waste accepted will result in extra vehicle movements and an associated increase in the exhaust emissions; however these will be very small in the context of the site's location in a well established industrial area. The trucks used to transport the wastes to and from the site are fitted with catalytic converters to reduce the amount of nitrous oxides in the exhaust gas.



**Noise**

The transport and processing of the wastes are sources of noise. However, the routine noise monitoring carried out at the facility has established that the current operations are not having any impacts on the closest noise sensitive locations. The proposed change will not result in any new sources of noise and therefore will have an imperceptible impact on noise and mitigation measures are not needed.

**Proposed technology and other techniques to prevent or eliminate, or where this is not practicable, limit, reduce or abate emissions from the installation**

The design and method of operation of both the existing facility and proposed development are based on the requirements of the European Commission's Reference Document on Best Available Techniques for the Waste Treatment Industries 2006 (BREF), which specifies the Best Available Techniques (BAT) for Waste Management Facilities and the Agency's Final Draft BAT Guidance on Best Available Techniques for the Waste Sector: Materials Recovery and Transfer.

The current waste licence specifies the manner in which the facility must operate so as to ensure that pollution and/or nuisance to neighbours and the general public is prevented. They require the site management team to have the appropriate training and qualifications; identify the types of wastes and processes that can be carried out; specify how wastes and raw materials that have the potential to cause pollution are handled and

stored; the control measures that must be applied to prevent nuisance, for example dust suppression, and require appropriate emergency response procedures to be in place.

**Summary of the Quantity and Nature of the Waste**

The overall amount of waste accepted will increase from 90,000 tonnes to 130,000 tonnes annually. The wastes will be non-hazardous and will be generated by households, commercial and industrial operations and construction & demolition sites.

**Measures to Comply with Waste Management Hierarchy**

The existing facility is designed and operated to maximise the recovery of recyclables from the incoming wastes. The proposed changes are consistent with the Waste Hierarchy as the use of the MSA as a fuel gains the maximum value from the waste.

**BAT**

Condition 2 of the current Waste Licence requires Greenstar to develop and implement an Environmental Management System for the facility which is consistent with the requirements of both Agency's BAT Guidance Note and the BREF. GES has an accredited 14001 EMS in place.

The Licence conditions require the implementation of the control measures specified in the BREF in so far as they apply to non-hazardous solid waste processing and the prevention of soil contamination. The site location and licence conditions also incorporate the relevant control techniques referenced in the Agency's BAT Guidance in particular:

- The location of the facility with regard to sensitive off-site receptors to emissions to air, including odours and noise, and.
- The operational procedures applied to the waste types being accepted and the waste processing activities at the facility, including the wrapping of the baled MSW within 24 hour of receipt at the facility, that minimise the risk of odours.
- Surface water run-off from areas of the site not used for waste storage is directed into the surface water system. The surface water from hardstanding areas passes through a silt trap and oil interceptor before final discharge and only roof water goes directly to the surface water system



The proposed changes take into consideration the requirements of Sections 5.2 and 4.6.22 of the BREF and Section 4.3.3.2 of the Agency's BAT Guidance. In particular;

- Waste handling and storage areas and vehicle washing areas will drain into the foul sewer. The run off from storage areas and vehicle washing areas will pass through a silt trap and oil interceptor prior to discharge to the foul sewer.

**Abnormal Operating Conditions**

Greenstar has prepared a Health & Safety Statement for all waste facilities that requires the completion of hazard identification and risk assessments to minimise the occurrence to accidents. It includes for staff training on actions to be taken in abnormal conditions. Greenstar had prepared and adopted an Emergency Response Procedure (ERP). The ERP identifies all potential hazards at the site that may cause damage to the environment and also specifies roles, responsibilities and actions required to deal quickly and efficiently with all foreseeable major incidents and to minimise environmental impacts. This is currently being amended to update the fire prevention measures and personnel changes.

**Avoidance of the Risk of Environmental Pollution due to Closure of the Facility**

Greenstar has prepared an Environmental Liability Risk Assessment (ELRA) and Decommissioning Management Plan (DMP) for the facility and these, along with a proposal for Financial Provision, have been submitted to and approved by the Agency.

**Environmental Monitoring:**

Environmental monitoring is carried out in accordance with the licence conditions. The monitoring includes noise, dust, surface water, groundwater and odours.

**Measures to Comply with an Environmental Quality Standard**

The emission limit values proposed in the application and those that will be set by the EPA in the new licence are and will be based on achieving compliance with the relevant EQS.

**Measures to comply with Council Directive 80/68/EEC and 2006/118/EC in relation to the protection of groundwater**.

After the decommissioning of the on-site wastewater treatment plant, there will be no discharge to ground. The site is designed to prevent accidental emissions to ground.



**The Main Alternatives to the Proposed Technology, Techniques and Measures**

*Alternative Sites*

The alternative to not increasing amount of wastes accepted would be to develop a new facility at another location. This would involve either the acquisition/leasing of a suitable building, or the construction of a new facility and the provision of new processing equipment. Given the relatively small amount of wastes involved (40,000 tonnes/annum), the development of a new facility by Greenstar at another location is not economically viable.

Site activities are not a source of significant adverse environmental impacts and do not result in the impairment of the amenities in the surrounding area. The proposed changes will not result in any new emissions and will not require the provision of any new or additional emission control and mitigation measures, other than the diversion of surface water run-off to the foul sewer, which was requested by Limerick County Council. Therefore, relocation to an alternative site is not necessary from an environmental viewpoint.

The facility is close to Limerick Docks, which is the shipping point for the municipal solid waste exported to overseas waste to energy recovery facilities. Relocating to another site would result in an increase in emissions from transport vehicles and transport costs. Therefore, continuing to use the Ballykeeffe facility is the best environmental and economic option.

*Alternative Site Layout & Processes*

The existing site layout, buildings, plant and equipment can readily accommodate the proposed increase in waste inputs. Therefore, there is no need for alternative configurations or technologies.