Attachment F Control & Monitoring

Contingency Arrangements

The waste processing systems that are and will be employed at the facility are relatively simple and robust. A preventative maintenance programme is implemented and critical spares kept on site in case of plant and equipment breakdown.

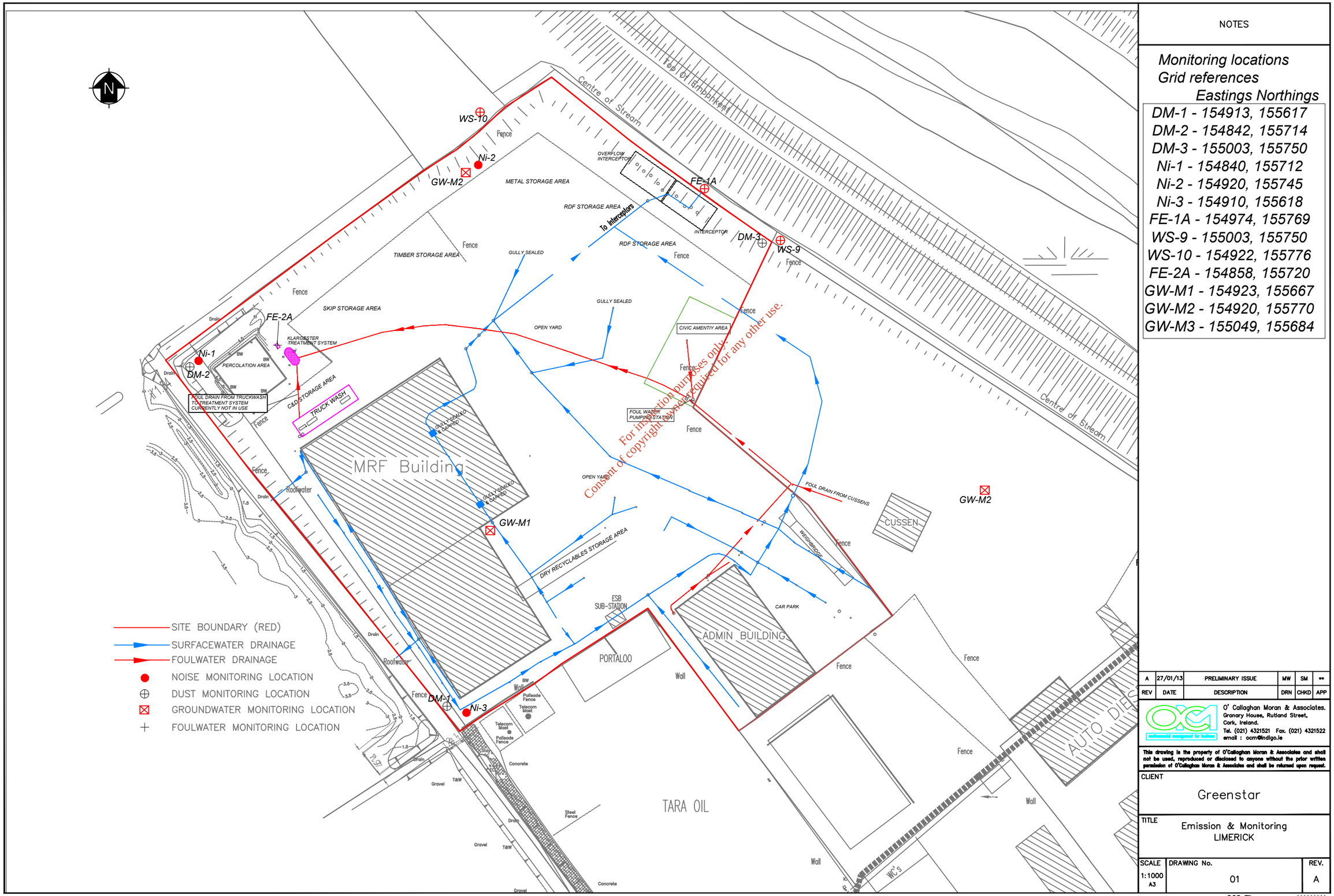
Greenstar has prepared a Health and Safety and Emergency Response Procedure (ERP) for the facility that identify all potential hazards at the site that may cause damage to the environment and also specifies roles, responsibilities and actions required to deal quickly and efficiently with all foreseeable major incidents and to minimise environmental impacts.

Greenstar has prepared documented procedure on the handling and storage of potentially polluting substances used at the facility, e.g. oils. The procedure describes how filling the fuel storage tanks and refuelling/servicing the mobile plant should be carried out to minimise the risk of accidental spills and ensure that if these occur there is a rapid and effective response.

All site personnel and visitors to the site are obliged to comply with Greenstar safety guidelines. The guidelines regulate access to and from the site and traffic movement on the site. All site personnel are provided with and are obliged to wear the requisite personal protective equipment (PPE). PPE may include face masks, gloves, safety glasses, steel-toed footwear, overalls, reflective jackets and helmets.

Prevention and Elimination of Emissions

Given the nature of waste operations there are limited opportunities to prevent or eliminate emissions from the processes. The diversion of the run-off from the 'dirty' yard to the foul sewer will reduce the volume of surface water emissions.



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	27/01/13	PRELIMINARY ISSUE	MW	SM	**

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CLIENT
Greenstar

TITLE
Emission & Monitoring
LIMERICK

SCALE	DRAWING No.	REV.
1:1000 A3	01	A

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

Attachment F .1 Treatment, Abatement and Control Systems.

Odour Control System

All potentially odorous wastes, primarily the mixed municipal solid waste, are off loaded inside Building 1 and immediately loaded into the baler. The doors of the Building are kept shut as far as is practicable. The processing is limited to compaction of the wastes, which minimises the potential for the release of odours. The bales are wrapped in eight layers of polyethylene sheeting, which effectively control any fugitive odours from the waste. The bales are then moved outside the building and stored on the paved yard pending transport to Limerick Docks. Typically, the bales are removed from the site weekly.

Greenstar conducts weekly odour surveys at the site to confirm that the facility is not a source of odour nuisance and records of the surveys are maintained. Greenstar has never received any complaints about odours from either members of the public or neighbouring commercial operators.

Dust Controls

All waste processing is carried out indoors, which minimises the risk of dusts escaping the site boundaries. Following the cessation of timber shredding at the facility, the primary source of dust emissions are vehicle movements on the paved yards during dry periods. Greestar regularly damps down the yards during such dry periods to prevent windblown dust being generated.

Vehicle Exhaust

The heavy goods vehicles accessing the facility are fitted with Selective Catalytic Reduction (SCR) systems. A diesel exhaust fuel (AdBlue) is used in the SCR to reduce the nitrous oxide levels in the exhaust gases. Site management ensure that truck idling is not permitted.

Surface Water Controls

The run-off from the paved yards is collected and discharged to a man-made drain at the north eastern site boundary via a three chamber oil interceptor (40m^3 capacity). Run-off from the main buildings discharges to man-made perimeter drain along the western boundary.

The perimeter drains discharge to Bunlickey Lake. There is a shut off valve at the outlet from the interceptor that can be closed in the event of an incident that has the potential to impact on surface water quality and contain the surface water within the site boundary. Following any such incident, the water that accumulates in the drainage system will be tested to identify the appropriate management option.

Greenstar carries out regular cleaning of the paved open yards using a road sweeper and check and empties the silt trap and oil interceptor.

Greenstar carries out regular inspection and integrity testing of all spill containment infrastructure and drains. In 2012, an extensive CCTV survey of the surface water drains

identified a number of defects in the lines, some small cracks in the first chamber of the interceptor and further cracks in the pipeline between the interceptors and discharge point. These defects were repaired in May 2012.

Bales of compacted mixed municipal solid waste are stored externally in the north east of the site, as agreed with the EPA. The bales are wrapped in eight layers of plastic sheeting that protects the wastes from rainfall and prevents infiltration that could generate a leachate. The bales are subject to routine inspection by facility staff to ensure the plastic sheeting is intact. Where damage to the sheeting is noted, the bale is brought back into the building and rewrapped.

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

Noise

The facility 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. There are no Noise Sensitive Locations (NSLs), which are defined as a dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other facility or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels within 250m of the facility

Wastewater

Sanitary wastewater is treated in the on-site wastewater treatment plant, with the treated effluent discharged to a percolation area. In 2012 Greenstar commissioned a detailed assessment of the operation of the treatment plant, which established that it was operating satisfactorily.

Originally wastewater from the vehicle wash and the bin wash area also discharged to the on-site Klargester Biodisc wastewater treatment plant, with the treated effluent discharging to an onsite percolation area. The wash water from the vehicle wash passed through a grit trap and oil interceptor before entering the unit. However, the use of the vehicle wash and bin wash has been suspended. These will restart when the connection to the foul sewer is completed.

F.2 Emission Monitoring and Sampling Points

Locations

The current licence identifies noise, dust, surface water and groundwater monitoring points and these are considered suitable monitoring locations. The emission and monitoring locations are shown on Drawing No 01. This will be amended following the connection to the foul sewer to show the location of the foul water monitoring point.

Monitoring Methodologies

Noise

The monitoring will be carried out in accordance with the Agency's *Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities (NG4)* (2012). The monitoring will be carried out annually.

Dust

The dust deposition monitoring will be conducted in accordance with VDI 2119 '*Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method)'*, German Engineering Institute. The monitoring will be carried out bi-annually and one event will be between May and September.

Surface Water

Grab samples will be collected at the outfall from the Oil Interceptor. Samples will be collected biannually and will be monitored for the parameters specified in Table D.4.1 of the current licence.

Odour

Facility staff will carry out daily odour patrols along the site boundary and will record the findings in a daily log.

Wastewater

The wastewater discharge to the foul sewer will be monitored in accordance with the requirement specified in the IED Licence.

Table F3 - GES Limerick

Point Code	Point Type	Easting	Northing	Verified	Pollutant
Provide label ID's assigned in section F3	M=Monitoring S=Sampling	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used	e.g. SO_2, HCl, NH_3
DM-1	M=Monitoring	154913	155617	N = GPS not used	Ambient Dust
DM-2	M=Monitoring	154842	155714	N = GPS not used	Ambient Dust
DM-3	M=Monitoring	155003	155750	N = GPS not used	Ambient Dust
NI-1	M=Monitoring	154840	155712	N = GPS not used	Ambient Noise
NI-2	M=Monitoring	154920	155745	N = GPS not used	Ambient Noise
NI-3	M=Monitoring	154910	155618	N = GPS not used	Ambient Noise
FE1-A	S=Sampling	154974	155769	N = GPS not used	Yard Runoff-Hydrocarbons, TSS, BOD
WS-9	S=Sampling	155003	155750	N = GPS not used	Upstream SW
WS-10	S=Sampling	154922	155776	N = GPS not used	Downstream SW
FE2-A	S=Sampling	154858	155720	N = GPS not used	WWTP Discharge
GW-M1	M=Monitoring	154923	155667	N = GPS not used	Ambient Groundwater
GW-M2	M=Monitoring	154920	155770	N = GPS not used	Ambient Groundwater
GW-M3	M=Monitoring	155049	155684	N = GPS not used	Ambient Groundwater

Normal EPA Nomenclature not used as these are existing locations with historical monitoring data