

Unit 15

Melbourne Business Park

Model Farm Road

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Mr Darragh Hearne
Circular Economy Programme
Office of Environmental Sustainability

28th November 2024

Reg. No.: W0183-03

Regulation 10(2)(b)(ii) of the EPA (Industrial Emissions) (Licensing) Regulations 2013, in respect of a licence review from Starrus Eco Holdings Limited for an installation located at Starrus Eco Holdings Limited (Millenium Business Park), Millennium Business Park, Grange, Ballycoolin, Dublin 11, Dublin, D11 PN52

Dear Mr Hearne,

I refer to the Notice in accordance with Regulation 10(2) (b) (ii) dated 6th November 2024. The Agency's queries are set out in italics followed by the Starrus Eco Holdings Ltd (SEHL) responses.

1. Odour Dispersion Model [Regulation 9(2)(k)]

- a. Confirm the individual volumes of MP1 and MP2. If it is proposed to extract air in combination from MP1 and MP2 confirm that the model submitted takes into account the correct building volumes.*

As stated in Section 2.1 of the Katestone Environmental Air Quality Assessment Report, which includes the Odour Dispersion Model, an odour control system will be installed in MP2 to treat air exhausted from MP2 as MSW and brown bin waste are handled in this unit. 'The air from MP1 and MP3 is not required to be treated in the OCU as it is not expected to be odorous because there are no putrescible organic materials expected in the waste streams being handled in these units'.

As noted in Section 5.3 of the Katestone Environmental Report 'The MP2 unit will be maintained under negative air pressure with air being exhausted through an odour control unit and vented through an elevated odour exhaust stack located on the eastern side of the MP2 building'. Therefore the model submitted takes account of the correct building volume.

- b. Submit a cumulative assessment of the impact of industrial installations/waste facilities emissions sources in the region or justify why a cumulative assessment is not required.*

An assessment of the cumulative impact of the industrial installations/waste facilities emissions sources in the region is in Attachment A.

2. Odour Control Unit [Regulation 9(2)(k)]

- a. Provide details on the odour control unit to be installed at the installation.*

The following details of the odour control unit are extracted from Section 3.2 of the Environmental Impact Assessment Report (EIAR) included in the licence review application.

'Prior to the installation of the system the inside of the building will be cleaned and a thick foam spray applied to all cladding joints and other parts of the building fabric that could be susceptible to air leaks. Rapid action doors will be fitted to the vehicle access points. The objective is to achieve an air leakage rate of $< 2\text{m}^3/\text{m}^2/\text{hour}$

Air will be drawn from the building using one extraction fan and a system of internal ceiling mounted ducts provided with grills. The fan will have a flow capacity to achieve 2 air changes per hour. The air will pass through a jet pulse dust filter before entering the carbon filter. A damper will be fitted to the inlet of the unit to allow the air flow to be balanced. The treated air will vent to atmosphere via a single stack. The exhaust odour threshold concentration will be less than 1.5 odour units (OUe/m³).

The proposed design of the odour management system will comply with Best Available Techniques for Waste Management and will be submitted to the EPA for its prior approval. The installation will be the subject of a Quality Assurance Plan to ensure it is installed and commissioned in accordance with the approved design parameters.

The OCU and associated air extraction ducting will be fabricated off-site and assembled on site. The assembly will not involve any concrete break out or excavation works’.

For clarity as the installation and operation of the odour control system is dependent on the revised licence approving its operation and therefore a detailed design of the OCU and associated ducting has not been completed. Details of the design will be submitted to the Office of Environmental Enforcement (OEE) in a Specified Engineering Works, as is required by Schedule B of the current licence, and the system will be installed and commissioned before the annual waste intake exceeds 270,000 tonnes.

- b. *Clarify whether the emission point A2-1 has appropriate access for monitoring.*

As the OCU has not been installed there is, as yet, no emission point A2-1. SEHL confirms that when the OCU is installed appropriate access will be provided for monitoring.

3. *Waste Acceptance [Regulation 9(2)(t)]*

- a. *Provide the list of waste (LoW) code under which you intend to accept “Sterilized Medical Waste”.*

The sterilised medical waste is accepted under LoW 19 02 03 premixed wastes composed only of non-hazardous wastes.

- b. *The submitted waste storage plan provides a bay for material with waste code 19 05 01 – “non-composted fraction of municipal and similar wastes”. Clarify if this waste is being accepted or generated on site.*

As the installation is not authorised to carry out biological treatment the waste is not generated on site, but is accepted.

- c. *Provide the list of waste (LoW) code under which you intend to accept C&I lighting and confirm that material accepted will be non-hazardous.*

It is not clear what type of waste comprises C&I lighting; however SEHL confirms it is not the intention to knowingly accept hazardous wastes and that any hazardous waste identified in incoming wastes is and will continue to be removed to the quarantine area pending removal from the installation to an appropriate licensed waste management facility.

- d. *Provide a precise breakdown of all wastes to be increased and accepted at the installation including list of waste (LoW) codes and confirm that the requested increase in food waste and mixed household waste does not contravene Condition 2(a) of the granted planning permission (ABP-316027-23).*

In general there will be a *pro rata* increase in the types of waste currently accepted, however depending on market conditions in future years there may be variations in the amounts of particular wastes accepted.

Written confirmation from An Bord Pleanála that the increase in food waste and mixed household waste does not contravene Condition 2(a) of the granted planning permission (ABP-31602-23) is in Attachment B.

4. *Groundwater [Regulation 9(2)(j)].*

- a. *Confirm whether groundwater for use at the installation is abstracted from an on-site groundwater well and provide its location.*

As stated in Section 2.14.1 of the EIAR 'Potable water is obtained from the mains supply. Water is also abstracted from an on-site well for use in dust suppression in the paved yards during dry weather'. The water from the well is now also used to top up firewater suppression system. The well is located in the north-west corner of the site.

- b. *Provide details on what the abstracted groundwater is used for at the installation.*

Refer to response above.

- c. *Clarify whether your abstraction is less than 25 cubic meters (25,000 litres) of water per day.*

The abstraction is less than 25,000 litres per day.

5. *Map (Regulation 9(4)(d))*

Provide a map of the installation that clearly identifies all the emission points on-site (e.g. storm water, air and dust monitoring locations).

A drawing showing all of the emission points is in Attachment 7.1.2 Emissions Compliance Report included in the licence review application and for clarity is in Attachment C.

6. Stakeholder Engagement [Regulation 9(2)(g)]

Section 6.1 of the application states that there is a trade effluent discharge to sewer, clarify if an "Effluent Discharge License" is held and supply a copy if applicable.

At an EPA licenced installation the discharge of trade effluent to sewer is regulated by the EPA licence. The discharge to foul sewer is authorised by Condition 5.7 of the current licence and emission limit values are specified in Schedule C3.

7. Best Available Techniques conclusions [Regulation 9(2)(h)].

In relation to the waste treatment (WT) CID 2018/1147 assessment, submitted as part of the licence review application form;

- a. *The Agency notes that an odour control unit is to be installed the installation. The BAT assessment section of your application form states that BAT 10 is not applicable, BAT 10 related to monitoring odour emissions. Clarify why BAT 10 is not applicable or if applicable, provide information on how you will comply with BAT 10.*

The response to BAT 10 is based on current activities, which do not include an odour control system. The response to BAT 12 confirms that an odour control system will be installed and, as the revised licence will require monitoring of the emissions from the OCU, SEHL will be in compliance with BAT 10.


In addition to the above, please also provide an updated non-technical summary (Application Form, and EIAR where applicable) to reflect the information provided in your reply, insofar as that information impinges on the non-technical summary.

The information provided does not impinge on the non-technical summary.

Yours Sincerely,


Jim O' Callaghan

ATTACHMENT A

	MEMORANDUM	
	To	O'Callaghan Moran and Associates
	From	Micheal Fogarty
	Client name	O'Callaghan Moran and Associates
	Deliverable No.	DK21029-5
	Subject	Starrus Eco Millenium Park Materials Recovery Facility (MRF) Licence Application – Response to EPA RFI related to odour
	Date	26 November 2024

Dear Jim,

Katestone Environmental Ireland Ltd (Katestone) completed an odour impact assessment (Katestone OIA) of a proposed development at the Starrus Eco Holdings Limited Materials Recovery Facility (MRF) located at Millennium Business Park, Grange, Ballycoolin, Dublin 11, Dublin. The Millenium MRF operates in accordance with an Industrial Emissions licence issued by EPA (Registration Number W0183-01).

The OIA was submitted as part of a licence review application for the Millenium MRF in 2023. On 06 November 2024, EPA issued a letter requesting additional information including the following item:

Submit a cumulative assessment of the impact of industrial installations/waste facilities emissions sources in the region or justify why a cumulative assessment is not required.

This memo presents a response to this item. To determine the approach to a cumulative odour impact assessment, Katestone conducted a review of waste management facilities in close proximity to the proposed MRF.

The review indicated that there are two permitted waste facilities in close proximity to the Proposed MRF including:

- Blancomet Recycling IE Limited (Licence Register P1115-01)
- Starrus Eco Holdings Limited (Cappagh) (Licence Register W0261-03)

The Starrus Eco Holdings Limited (Cappagh) Facility (referred to in this memo as the Cappagh Road Facility) is the only facility within 500 m that is permitted to accept organic waste materials (O'Callaghan Moran And Associates¹). The Blancomet Recycling IE Limited facility recycles items such as car parts and electronic waste.

Katestone therefore considered the cumulative impact of the Millenium MRF in combination with the Cappagh Road Facility based on the predicted odour concentrations from Katestone OIA and an odour dispersion modelling assessment submitted as part of the Industrial Emissions Licensing application for the Cappagh Road Facility completed by Odour Monitoring Ireland (OMI) (OMI, 2015¹).

Odorous emissions from both the Millenium MRF and the Cappagh Road Facility require a high level of control because of the close proximity of sensitive commercial receptors. Both facilities have sensitive receptors on their respective boundaries. The potential impacts of odour, based on the highest 1-hour 98th percentile concentrations of odour (from 5 modelled years) was below the relevant threshold of 1.5 ou/m³ at all sensitive receptors for each facility in isolation. Predicted levels of odour drop rapidly with distance from each site.

¹ O'Callaghan Moran And Associates, 2023. Reg. No: W0261-03. Regulation 10(2)(b)(ii) of the EPA (Industrial Emissions) (Licensing) Regulations 2013, in respect of a licence review from Starrus Eco Holdings Limited for an installation located at Starrus Eco Holdings Limited (Cappagh), Cappagh Road, Finglas, Dublin 11, D11 NP68. 20 January 2023. https://epawebapp.epa.ie/licences/lic_eDMS/090151b28085fa0f.pdf

The boundary of the Millenium MRF is approximately 400m north of the Cappagh Road Facility. Cumulative impacts are likely to be greatest for receptor locations between the facilities. The OMI Assessment indicates that a number of discrete receptor locations between the two facilities were included in its dispersion modelling assessment. The closest discrete receptors to both the Cappagh Road Facility and the Millenium MRF that are included in the OMI Assessment are R6 and R7, which are both approximately 50 m south of the boundary of the Millenium MRF. Specifically in relation to the Katestone OIA, the following receptors are considered close receptors:

- R6 in the OMI Assessment is approximately 20m south of R5 in the Katestone OIA
- R7 in the OMI Assessment is approximately 40m south of R6 in the Katestone OIA.

The highest ground-level concentrations (1-hour average, 98th percentile) during the five-year period modelled in each assessment:

- For R5 in the Katestone OIA was 1.0 ou/m³:
- For R6 in the OMI Assessment was 0.22 ou/m³
- For R6 in the Katestone OIA was 1.1 ou/m³:
- For R7 in the OMI Assessment was 0.18 ou/m³

The sum of the highest 1-hour 98th percentile concentrations of odour predicted at receptors modelled at similar locations in the Katestone Assessment and the OMI assessment are:

- 1.22 ou/m³ - The sum of maximum 1-hour 98th percentile, from 5 modelled years at R5 in the Katestone OIA and R6 in the OMI Assessment.
- 1.28 ou/m³ - The sum of maximum 1-hour 98th percentile, from 5 modelled years at R6 in the Katestone OIA and R7 in the OMI Assessment.

These predictions are a highly conservative indication of the potential for cumulative impacts because:

- The sum of the 98th percentile concentrations of odour predicted individually for a number of installations will significantly overpredict the 98th percentile concentrations of odour predicted if all installations are modelled cumulatively in a single dispersion modelling assessment.
- Receptors R5 and R6 included in the Katestone OIA are closer to the Millenium MRF than Receptors R6 and R7 included in the OMI Assessment. The predicted level of odour at R5 in the Katestone OIA is therefor greater than the predicted level at R6 from the OMI Assessment because R6 from the OMI Assessment is further from the boundary than R5 from the Katestone. Conversely, R6 from the OMI Assessment is closer to the Cappagh Road Facility than R5 from the Katestone OIA and therefore subject to a higher level of odour than R5 from the Katestone OIA. Summing the odour concentrations at R5 from the Katestone OIA and R6 from the OMI Assessment therefore over estimates the odour concentration at both locations. The same is true for R6 from the Katestone OIA and R7 from the OMI Assessment.

The results of this analysis indicates that predicted concentrations of odour will comply with the odour criterion recommended by EPA for waste facilities of 1.5 ouE/m³ at the worst affected receptors and hence at all receptor locations on the modelling domain.

The results show that operation of the OCU will ensure cumulative levels of odour impact identified in combination with baseline levels of odour will be minimised to levels that are imperceptible, negative and long-term.

If you require any further information, please contact the undersigned

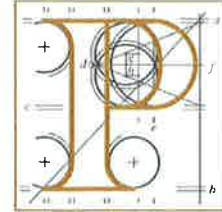
Kind regards,

Dr. Micheal Fogarty PhD – Senior Consultant, Katestone

ATTACHMENT B

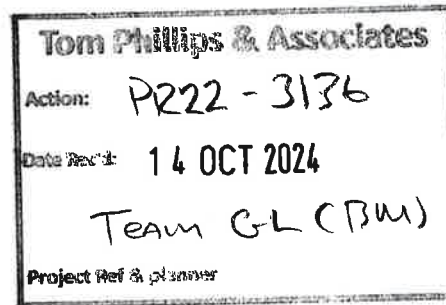
Our Case Number: ABP-316027-23

Your Reference: Starrus Eco Holdings Ltd.



**An
Bord
Pleanála**

Tom Phillips & Associates
80 Harcourt Street
Dublin 2
D02 F449



Date: 11 OCT 2024

Re: Proposed increase of waste intake from 270,000 to 450,000 tonnes per year and associated works at an existing waste facility at Millenium Business Park, Cappagh Road, Dublin 11
Cappagh Road, Dublin 11

Dear Sir / Madam,

I have been asked by An Bord Pleanála to refer further to the above-mentioned application.

An amending Board Order has been made under section 146A of the Planning and Development Act, 2000 as amended, in relation to the above-mentioned development.

Henceforth, the Board's Order should be read in conjunction with the amending Order.

The inconvenience caused is regretted.

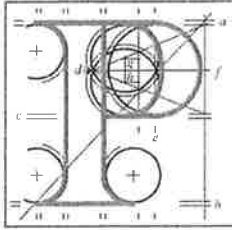
Yours faithfully,

Aisling Reilly
Executive Officer
Direct Line: 01-8737131

Amend(S.146(A))

Teil (01) 858 8100
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An
Bord
Pleanála

Board Order
ABP-316027-23M

Planning and Development Acts 2000 to 2022

Amendment of Board Order

Planning Authority: Fingal County Council

Development Concerned: Proposed increase of waste intake from 270,000 to 450,000 tonnes per year and associated works at an existing waste facility at Millenium Business Park, Cappagh Road, Dublin.

WHEREAS the Board made a decision to grant the proposed development, subject to conditions, in relation to the above-mentioned development by Order dated the 22nd day of August 2024,

AND WHEREAS it has come to the attention of the Board that a request was received from Tom Phillips and Associates, the agent for Starrus Eco Holdings Ltd. by email dated the 30th day of August 2024 requesting clarification regarding the wording to condition number 2(a) of the Order,

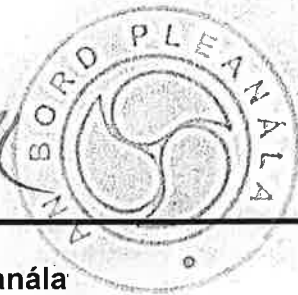
AND WHEREAS the Board considered that the correction of the above-mentioned matter would not result in a material alteration of the terms of the development, the subject of the decision,

fm

AND WHEREAS having regard to the nature of the issue involved, the Board decided not to invite submissions in relation to the matter from persons who had made submissions or observations in relation to the application the subject of this amendment,

NOW THEREFORE in accordance with section 146A(1) of the Planning and Development Act 2000, as amended, the Board hereby amends the above-mentioned decision so that Condition number 2(a) of its Order shall be as follows:

2. (a) The intake of waste material to the site shall not exceed 450,000 tonnes per annum, of which no more than 200,000 tonnes shall consist of food waste and mixed household waste containing putrescible materials only (excludes separately collected mixed household dry recyclables).



Peter Mullan
Member of An Bord Pleanála
duly authorised to authenticate
the seal of the Board.

Dated this *11th* day of *October*, 2024

ATTACHMENT C

EPA Application Form

7.1.2 – Emissions Compliance Report

Organisation Name: *

Starrus Eco Holdings Limited

Application I.D.: *

LA010880

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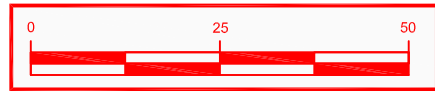
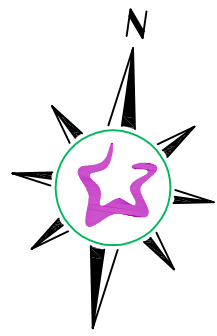
1. Introduction

This attachment summarises the most recent emissions monitoring undertaken at the Millennium Business Park Waste and discusses the emissions compliance with relevant emissions limit values set out the Licence.

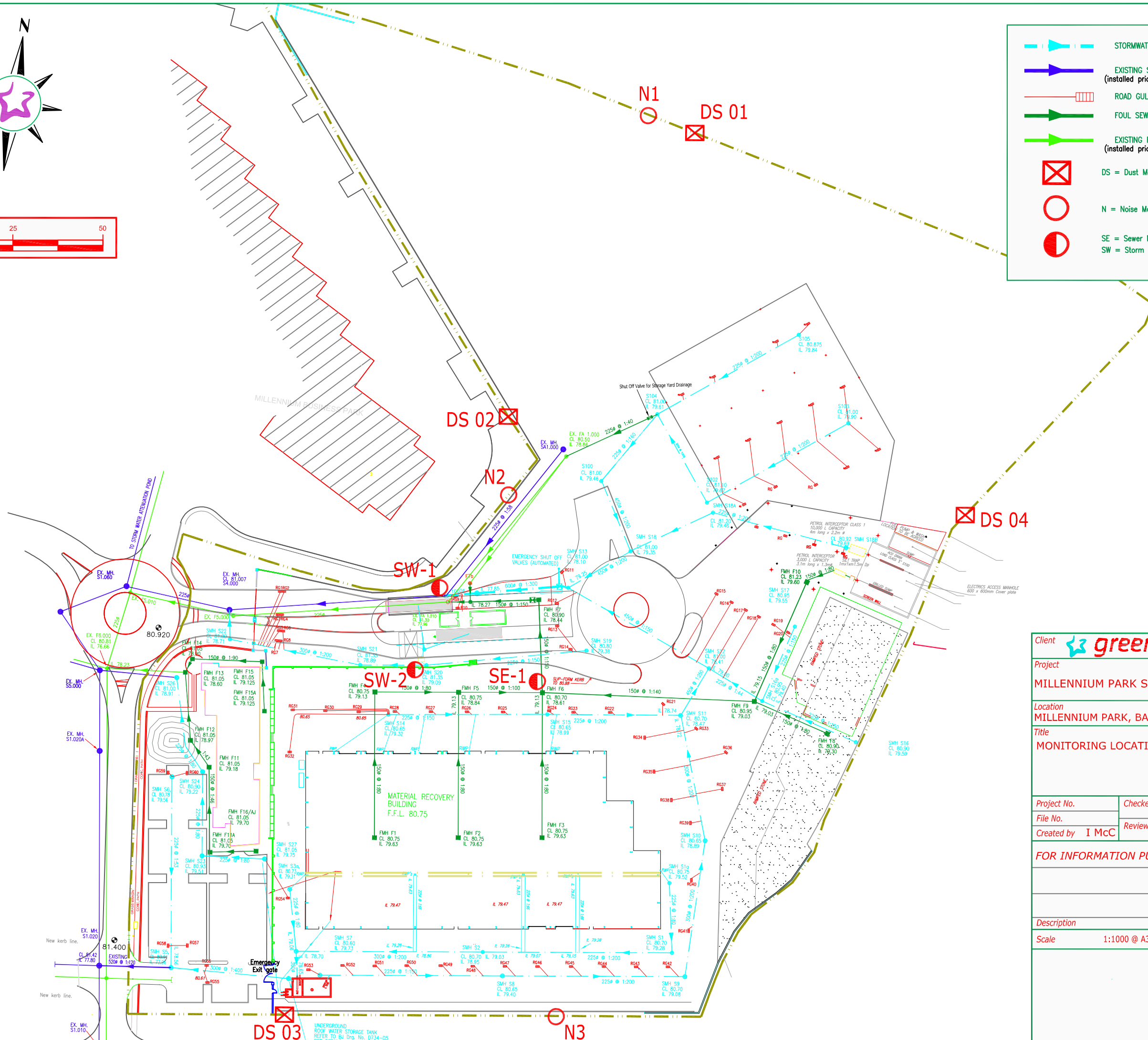
The licence requires monitoring of surface water and foul water emissions, noise emissions, and dust deposition. The monitoring locations are shown on Drawing No 001 and the co-ordinates are in Table 1.1.

Table 1.1 Monitoring Point Locations

Monitoring Point	Easting	Northing
DS01	310467	241131
DS02	310390	241090
DS03	310351	240912
DS04	310520	241075
SE-1	310413	241013
SW-1	310378	241032
SW-2	310374	241009
N1	310421	241168
N2	310394	241057
N3	310428	240923



	STORMWATER DRAINAGE
	EXISTING STORMWATER DRAINAGE (installed prior to facility construction)
	ROAD GULLIES AND CONNECTIONS
	FOUL SEWER DRAINAGE
	EXISTING FOUL SEWER DRAINAGE (installed prior to facility construction)
	DS = Dust Monitoring Point
	N = Noise Monitoring Point
	SE = Sewer Monitoring Point SW = Storm Water Monitoring Point



Client **greenstar**

Project
MILLENNIUM PARK SERVICES AS-BUILT

Location
MILLENNIUM PARK, BALLYCOOLIN, DUBLIN 11

Title
MONITORING LOCATIONS

Project No.	Checked by	Drawing No.
File No.	Reviewed by	001
Created by I MCC		

FOR INFORMATION PURPOSES 23/06/14 A

Description	Date	Version
Scale 1:1000 @ A3	Date	June 2015

CL OF OVERHEAD ESB CABLES
ESB Pylon

2. Noise

The EPA licence requires SEHL to carry out an annual noise survey to assess the impacts associated with its operations. The EPA licence specifies noise limits that must be complied with, which are 55 dB at noise sensitive locations (NSL) during daytime hours (07.00 to 19.00), 50 dBA during evening hours (19.00 to 23.00) and 45 dB during night time hours (23.00 to 07.00).

The monitoring is conducted by Damian Brosnan Acoustics (dBA) and the most recent monitoring event was undertaken in July 2022. The results which are summarised in Table 2.1

As is expected, given their proximity, noise emissions from SEHL operations are predominant at the on-site monitoring locations. Noise from operations at the off-site noise sensitive location is inaudible and compliant with the emission limits set in the EPA licence. The dominant source of noise in the locality is road traffic. SEHL has not received any complaints regarding noise emissions from its activities.

Table 2.1 Noise Monitoring July 2022

Station	N1	N1	N2	N2	N3	N3	NSL1	NSL1
Period	Day	Night	Day	Night	Day	Night	Day	Night
Ambient L_{Aeq T} (dB)	59	48	64	54	68	51	71	61
Facility audible	✓	✓	✓	✓	✓	✓	X	X
Facility specific L_{Aeq T} (dB)	<59	<48	62	49	<66	49	<61	<48
Limit (dB)	-	-	-	-	-	-	55	45
Compliance	N/A	N/A	N/A	N/A	N/A	N/A	Yes	Yes

SEHL noise emissions were inaudible at the offsite station NSL1 during the daytime and night-time surveys, the soundscape was dominated by road traffic.

3 Air

3.1 Dust

Dust deposition monitoring is carried out at four locations (DS-01, DS-02, DS-03 and DS-04) at four locations at the site boundary on three times annually. The licence specifies a deposition limit of 350mg/m²/day.

The results of the monitoring completed in 2022 and to date in 2023 are in Table 3.1. All the results were below the deposition limit

Table 3.1 Dust Deposition Limits

Location	Feb 2022 mg/m ² /day	May 2022 mg/m ² /day	Aug 2022 mg/m ² /day	Feb 2023 mg/m ² /day	Deposition Limit mg/m ² /day
DS 01	101	100	33	25	350
DS 02	222	45	35	59	350
DS 03	53	34	34	53	350
DS 04	98	87	34	137	350

4. Storm Water Monitoring

There is one storm water discharge from the installation. Rainwater run-off from the building roofs, car parks and areas of the yard that were not a risk of contamination used to discharge to the municipal storm water sewer, but this has temporarily been diverted to the foul sewer pending the resolution of drainage issues in the storm sewer system serving the Business Park. Therefore monitoring of the storm water discharge has been temporarily suspended.

5. Foul Water Monitoring

There is one foul water discharge from the installation. Rainwater run-off from areas of open yard that are susceptible to contamination is discharged to the foul sewer via a silt trap and oil interceptor. Rainwater run-off from the building roofs, car parks and areas of the yard that were not a risk of contamination used to discharge to the municipal storm water sewer, but this has temporarily been diverted to the foul sewer.

A sample is taken quarterly and analysed in accordance with Schedule D of the Licence. Emission limits for the discharge are set out in Schedule C of the Licence and are shown here on Table 4.1.

Table 4.1 Foul Sewer Discharge Limits

Parameter	Emission Limit Value		
	Grab Sample (mg/l)	Daily Mean Concentration (mg/l)	Daily Mean Loading (kg/day)
BOD	6,000	5,000	50
COD	12,000	10,000	100
Ammoniacal Nitrogen	100	70	0.7
Suspended solids	2,500	2,000	20
Sulphate as (SO ₄)	1,000	1,000	10
PH	6-10	6-10	-
Temperature	42°C	42°C	-
Detergents	100	100	1.0
Fats, Oils & Greases	100	100	1.0
Phosphates (as P)	100	100	1.0

The results of the monitoring completed in 2022 and to date in 2023 are in Table 4.2. All results are fully compliant with the emission limits set in the current Licence.

Table 4.2 Foul Sewer Results 2022 and 2023

Parameter	Limit	24/02/2022	28/04/2022	02/06/2022	14/08/22	06/10/2022	08/12/2022	16/02/2023	06/04/2023
BOD	6000	176	246	95	30	78	98	65	60
COD	12000	530	1331	247	218	880	779	1078	2355
Ammoniacal Nitrogen (as N)	100	6.45	6.27	13.2	0.06	1.4	0.62	0.67	3.85
Sulphate	1000	137	82	303	66	132	94	59	60
pH	6-10	7.18	7.85	7.38	7.51	7.46	7.15	7.19	7.04
Detergents	100	0.525	1.621	1.028	0.22	0.149	0.429	0.123	0.344
Fats, Oils & Greases	100	33	22	16	3	3	30	23	33
Phosphates	100	0.7	1.66	0.89	0.46	1.95	1.13	1.78	3.58
Suspended Solids	2500							758	2103