

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 will be implemented and critical spares kept on site in case of plant and equipment breakdown.

PANDA has prepared and adopted an Accident Prevention Policy (APP) and Emergency Response Procedure (ERP) for the facility. The APP addresses all potential hazards, with particular reference to the prevention of accidents that may cause damage to the environment. 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.

PANDA 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 PANDA's 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 acceptance of the household residual and food waste at the facility will significantly reduce the exhaust gas emissions from the household waste collection vehicles. The use of rainwater to supplement the groundwater supply will reduce the volume of the emissions to surface water.

Attachment F .1 Treatment, Abatement and Control Systems.

Odour Control System

An odour control system will be installed in Building A1 before any residual waste and food waste are accepted. The system will comprise an upgrade to the building fabric and the provision of an Odour Control Unit (OCU). The detailed design of the system will be agreed with the Agency before it is installed and commissioned. It will maintain the building under negative air pressure, with a minimum of two full air changes every hour and achieve an exhaust odour threshold concentration of less than 460 odour units OuE/m³ from the OCU.

The odour exhaust threshold value is designed to comply with the Agency's Final Draft BAT Guidance Note on Best Available Techniques for the Waste Sector: Waste Transfer and Materials Recovery (2011). In terms of odours it is BAT to ensure that activities at a MRF are carried out in a manner such that emissions of odours do not result in significant impairment of, and/or significant interference with amenities or the environment beyond the facility boundary.

Building A1 has a steel portal frame with metal cladding. There is a 2.5m high reinforced concrete wall between the steel structural supports and two large vehicular access doors at the southern side. The inside to the building will be cleaned and then a 25mm thick foam spray will be 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 of the upgrade is to achieve an air leakage rate of < 2m³/m²/hour

The OCU will be located outside Building A1, at the south-western side. It will have an air extraction system capable of achieving 2 air changes/hour (45,000m³) and comprising two (2No.) 25kw fans. The fans will connect to ceiling mounted galvanised ducting inside building and will have the capacity to draw 50,000m³ of air per hour, providing duty and standby functions.

The air will be drawn through a dust filter and scrubber to remove particulates and then into an activated carbon treatment unit, where odorous compounds in the air will be absorbed. The treated air will then vent to atmosphere via a 14m high stack. There will be continuous monitoring of the static pressure across the filter using pressure sensors to assess performance and identify when filter changes are required. Sniff ports will be provided to allow a daily assessment of odour character.

Surface Water Controls

The only emission to surface water from the facility is rainwater run-off from roofs and paved areas. The run-off is collected in the surface water drainage system and directed to the attenuation tank that has a capacity of 1,400m³ and is connected to a Class 1 Full Retention Klargest Oil Interceptor. The locations of the tank and interceptor are shown on Drawing No 138-01.

The attenuation tank provides temporary storage of the run-off and also acts as a settlement chamber. The outflow from the tank is regulated by a hydrobrake, which has a maximum discharge rate of 6 litres/second (l/s). This passes through the interceptor before discharging to the Stadium Business Park storm water sewer. There is a shut off facility on the outlet from the

tank that can be activated in the event of an incident within the site to contain any contaminated run-off within the site boundary.

The size of the attenuation tank is based on the run-off from an impermeable surface area (roof and paved yards) of 25,284 m² and the requirement to accommodate 1:100 year 6 hour rainfall event (60mm) that will generate 1,517.04m³ of run-off. Assuming a continuous discharge rate of 6l/second, which equates to 129.6m³ over the 6 hour period, the required storage capacity is 1387.44m³

Noise

The closest noise sensitive location to the facility is a private residence that is 30m south east of the southern site boundary. A 3m high acoustic wall has been constructed along the south-eastern boundary.

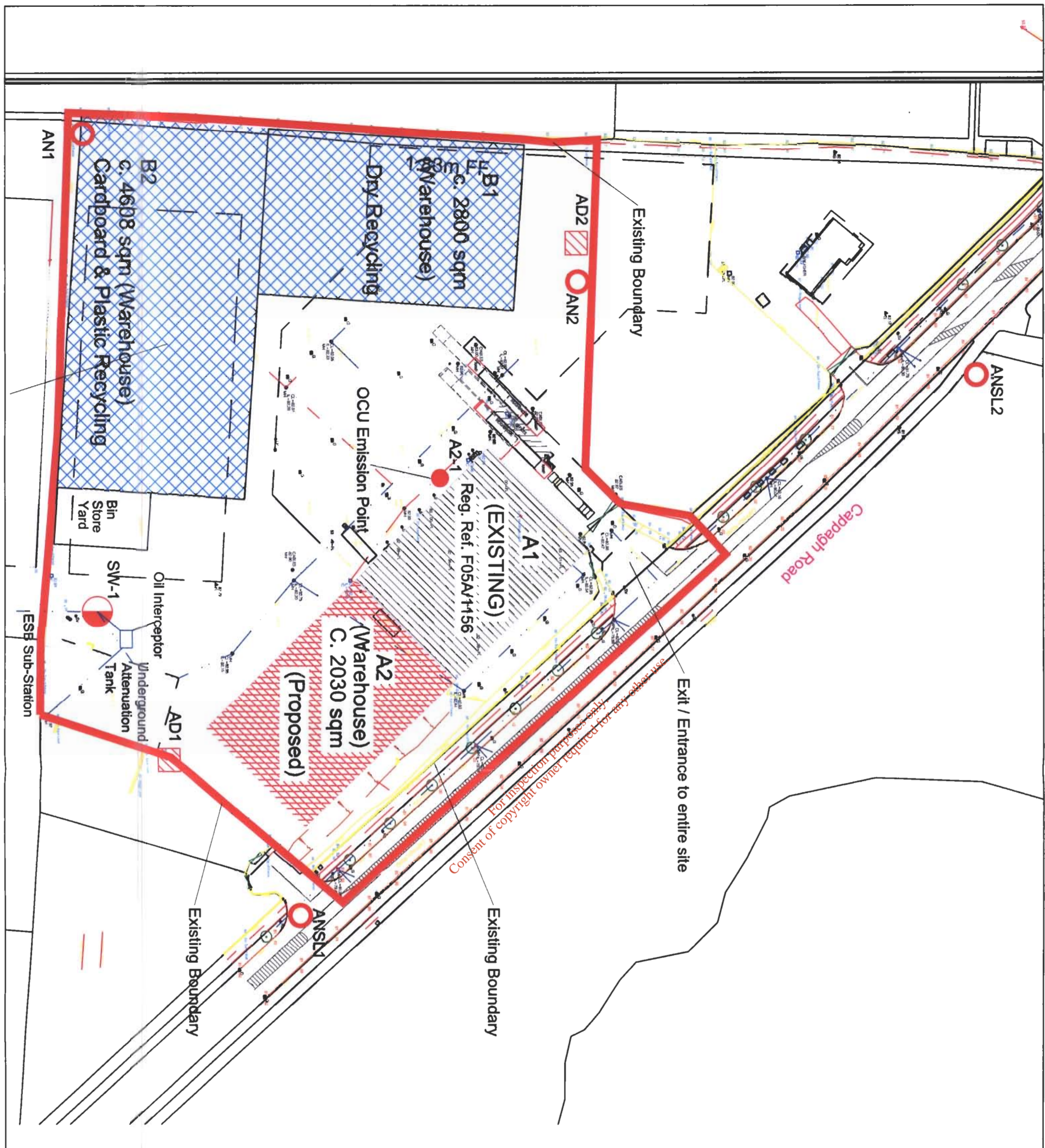
Wastewater

Sanitary wastewater is collected and stored in an underground tank before being tinkered off-site for treatment in a municipal wastewater treatment plant.

Dust

All waste processing is carried out indoors, which minimises the risk of dusts escaping the site boundaries. There is a sprinkler system inside Building A1 which is used to dampen the floor. There are external wall mounted sprinklers on the western side to the building that can be used in dry weather to damp down the access road.

For inspection purposes only.
Consent of copyright owner required for any other use.



NOTES

- NOISE MONITORING LOCATION
- ▨ DUST MONITORING LOCATION
- OCU Monitoring/Emission
- ◐ Surfacewater Sampling/Emission

#	I.D.	EASTING	NORTHING
1	AN1	310786	240435
2	AN2	310825	240564
3	ANSL1	310991	240491
4	ANSL2	310848	240668
5	SW1	310812	240438
6	AD1	310848	240458
7	AD2	310816	240566
8	A2-1	310876	240528

CLIENT
PANDA

TITLE
EMISSIONS AND SAMPLING LOCATIONS

SCALE
DRAWING No. 138-01

REV.
A

ED_APP
01/2014

DESCRIPTION
0' Callaghan Moran & Associates, Emery House, Belford Street, Cork, Ireland. Tel: (021) 423151 Fax: (021) 423152 email: com@callaghan.com

DATE
01/2014

HW
JDC

CHKD_APP
APP

DESCRIPTION
This drawing is the property of Callaghan Moran & Associates and shall not be used, reproduced or disclosed in any way without the prior written permission of Callaghan Moran & Associates and shall be returned upon request.

F.2 Emission Monitoring and Sampling Points

Locations

The current licence identifies noise, dust and surface water monitoring points and these are considered suitable monitoring locations for the proposed expansion. The only new emission point will be the OCU stack and this will be incorporated into the routine monitoring programme. The emission and monitoring locations are shown on Drawing No 138-01.

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 weekly and visually checked and the pH and electrical conductivity will be measured. At quarterly intervals the sample will be tested for hydrocarbons.

Odour

Odour monitoring will be carried out on the emissions from the OCU. This will comprise annual olfactometry testing by an independent specialist consultancy. In addition, facility staff will carry out daily odour patrols along the site boundary and will record the findings in a daily log.

Point Code	Point Type	Easting	Northing	Verified	Pollutant
Provide label ID's assigned in section F3	M=Monitoring	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used	e.g. SO ₂ , HCl, NH ₃
	S=Sampling			N = GPS not used	
AN1	M			N	
AN2	M			N	
ANSL1	M			N	
ANSL2	M			N	
SW1	S			N	
AD1	M			N	
AD2	S			N	
A2-1	M			N	

For inspection purposes only.
Consent of copyright owner required for any other use.