



Comhairle Cathrach
Bhaile Átha Cliath
Dublin City Council

Ballymun Recycling Centre
St. Margaret's Road, Ballymun, Dublin 11
Waste Licence Application

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Non-Technical Summary

Prepared by

Tobin Consulting Engineers

Non-Technical Summary

PROJECT: **Ballymun Recycling Centre**
Waste Licence Application

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FIGURES

FIGURES

Figure 1.1: Ballymun Recycling Centre (extract from Site Plan) (Waste Licence Facility at NCOD outlined in orange)..... 1

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1 INTRODUCTION

Dublin City Council (DCC) is developing a new North City Operations Depot (NCOD) at St. Margaret’s Road, Ballymun, Dublin 11 to consolidate its operations for the north city area, replacing a number of existing depots. The NCOD site will include the provision of a new public civic amenity site for the collection, recycling and transfer of domestic waste. This facility is referred to as the Ballymun Recycling Centre.

DCC is applying to the Environmental Protection Agency (EPA) (herein referred to as the Agency) for a Waste Licence for the operation of the civic amenity site. The activities proposed at the facility are outlined herein.

1.1 SITE DESCRIPTION

The NCOD was granted planning permission by Fingal County Council (FCC) (Reg. Ref. F17A/0686) in January 2018 and construction of the development, including the civic amenity site, is scheduled for commencement in mid-2019.

The civic amenity site comprises an area of 0.45 hectares (ha) at the western wide of the overall NCOD site. The NCOD site is approx. 5.03 ha in area. The layout of the civic amenity site in the context of the NCOD site is shown in Figure 1.1. The redline boundary signifies the Waste Licence boundary for the civic amenity site and the blue line signifies the DCC site ownership boundary.

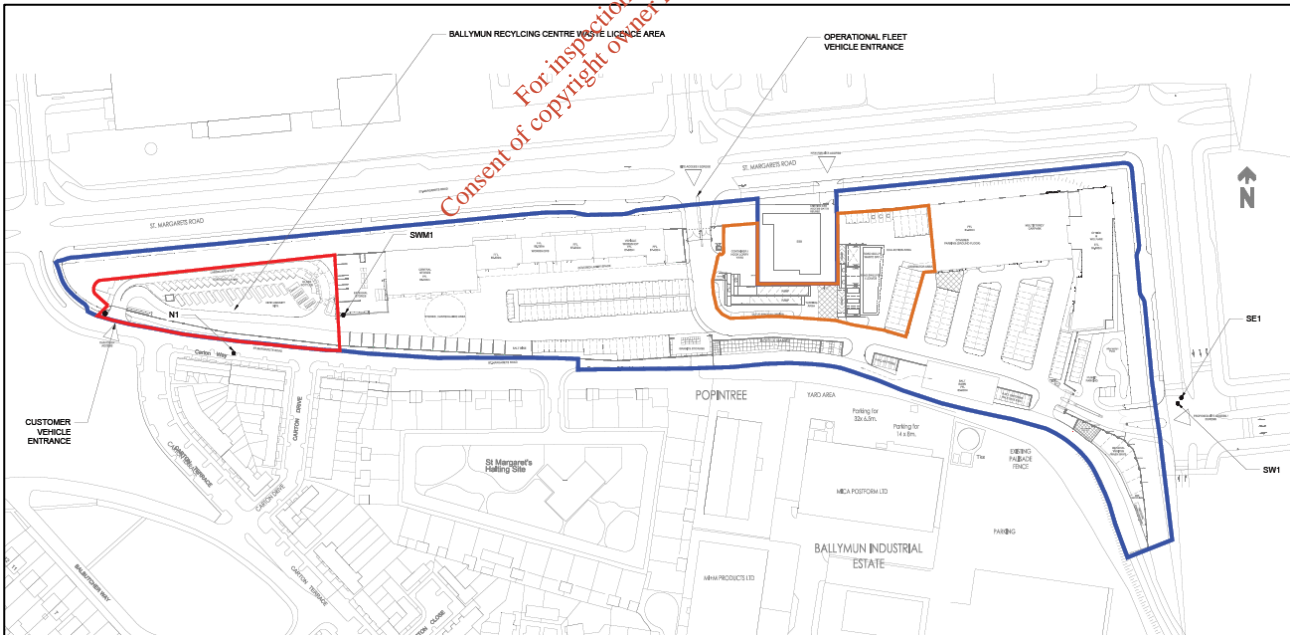


Figure 1.1: Ballymun Recycling Centre (extract from Site Plan) (Waste Licence Facility at NCOD outlined in orange)

While the civic amenity site is located within the overall ownership boundary of DCC, the facility will be segregated from the rest of the NCOD site by means of a gated access at the south-east corner of the facility. Only operational traffic will use this gated access point, primarily for the removal of waste materials from the civic amenity site by HGVs. Operational vehicles are only permitted to access the NCOD site

via the northern access to St. Margaret's Road. Public access to the civic amenity site will be via Carton Way only to the south-west.

1.2 FACILITY DETAILS

1.2.1 Class of Activity

The classes of activity being applied for are specified in the Third and Fourth Schedules of the Waste Management Acts 1996 to 2011, as follows:

The principal activity to be carried out on the site is:

Class R13 (4th Schedule): Storage of waste pending any of the operations numbered R1 to R12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced)

The following classes of activity are also applied for:

Class D13 (3rd Schedule): Blending or mixing prior to submission to any of the operations numbered D1 to D12 (if there is not other D code appropriate, this can include preliminary operations prior to disposal including pre-processing such as, amongst others, sorting, crushing, compacting, pelletising, drying, shredding, conditioning or separating prior to submission to any of the operations numbered D1 to D12).

Class D14 (3rd Schedule): Repackaging prior to submission to any of the operations numbered D1 to D13.

Class D15 (3rd Schedule): Storage pending any of the operations numbered D1 to D14 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced).

Class R03 (4th Schedule): Recycling/reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes), which includes gasification and pyrolysis using the components as chemicals.

Class R04 (4th Schedule): Recycling/reclamation of metals and metal compounds.

Class R05 (4th Schedule): Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials.

Class R12 (4th Schedule): Exchange of waste for submission to any of the operations numbered R 1 to R 11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as, amongst others, dismantling, sorting, crushing,

compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11).

1.2.2 Best Available Techniques (BAT)

The BAT Guidance Note *Waste Sector (Waste Transfer and Materials Recovery)* (Dec 2011) has been followed in the preparation of this Waste Licence application.

1.2.3 COMAH Regulations

The *EC (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2006* do not apply to the NCOD facility.

2 DESCRIPTION OF SITE OPERATIONS

The facility will operate in a similar manner to the existing Northstrand and Ringsend Recycling Centres which are currently managed and operated by Greenstar on behalf of DCC. Both of these sites are authorised under Certificates of Registration (COR); namely R00330-05 (Northstrand) and R02651-01 (Ringsend).

Household waste only will be accepted at the facility and no commercial waste will be accepted. Large commercial vans carrying waste will not be accepted into the site.

The following waste types are proposed for acceptance and include both non-hazardous and hazardous waste materials:

- Plastic
- Cardboard
- Glass
- Tin cans (food and drinks cans)
- Other dry recyclables (including paper, newspapers, magazines)
- Green Waste (such as grass, hedge trimmings, light branches, leaves)
- Household DIY rubble
- Steel (including gas cylinders)
- Wood
- Bulky Waste (such as furniture, bicycles)
- Food Waste
- Waste Electronic and Electrical Equipment (WEEE) (including white goods, IT equipment, mobile phones, household electricals)
- Batteries
- Clothes
- Oils (cooking oil, engine oil, hydraulic oil etc.)
- Aerosols, Fire Extinguishers, Pesticides, Herbicides

- Paints (including solvents for DIY works)
- Light Tubes

Customers will bring the above waste types to the facility and access the site via the Carton Way entrance. They will be directed into the site via a one-way traffic flow system and parking spaces will be provided adjacent to the waste storage receptacles.

An indicative layout of the waste storage containers at the facility is shown on the Site Plan. The waste storage receptacles will include a mixture of open and enclosed skips of varying sizes with and without compactors as appropriate to the waste type and quantities of waste being received. Drums and bins will be used for certain waste types as listed above and any liquid wastes will be contained in approved sealed containers. Additionally, glass and tin can banks will be used and there will be a dedicated recycling store building for clothes/textiles and batteries.

Parking bays are allocated for members of the public to park while distributing waste to the appropriate receptacles. Signage will be erected at each of the receptacles to identify the waste types permitted to be deposited. A facility office will also be provided for welfare facilities and administration activities. Staff will be positioned here to inspect and take payment, as appropriate, for incoming waste materials.

Facility staff will arrange and coordinate the collection of the various segregated wastes on a regular basis. Operational vehicles, including light and heavy goods vehicles (LGVs and HGVs) are only permitted to enter and exit the civic amenity site via the gated access to the main depot. Vehicles will then be able to exit the main depot to the north at the signal-controlled junction onto St. Margaret's Road.

2.1 WASTE ACCEPTED AT THE FACILITY

The annual quantities of waste to be accepted and transferred off-site from the Ballymun Recycling Centre are anticipated to be similar to the existing recycling centre at Ringsend in Dublin 4.

It is anticipated that the new Ballymun Recycling Centre will handle approx. 3,000 tonnes of waste per annum. To allow for future increase in waste handling and recycling, permission is being sought for acceptance of up to 5,000 tonnes of waste per annum.

Based on the proposed receptacles and waste types for acceptance at the Ballymun Recycling Centre, it is anticipated that a maximum of 40 tonnes of hazardous waste will be temporarily stored at the facility at any one time.

3 SITE INFRASTRUCTURE AND OPERATIONS

3.1 FOUL DRAINAGE

An existing 750mm diameter foul sewer pipe runs along St. Margaret's Road to the east of the NCOD site. The foul drainage from the civic amenity site will discharge to this existing 750mm diameter sewer. A pre-connection enquiry was submitted to Irish Water on 31 July 2017 along with preliminary calculations for effluent discharge from the overall site (including the civic amenity centre) and the response from Irish

Water stated that the proposed connection can be facilitated. This correspondence is included in the Engineering Services Report.

The only effluent discharged from the civic amenity site will be domestic effluent generated by site staff in the facility office. It is anticipated there will be a maximum of five full-time staff on-site at the facility typically generating 60 litres/person/day ¹.

3.2 SURFACE WATER DRAINAGE

Irish Water records indicate a 900mm diameter surface water pipe east of the NCOD site on St. Margaret's Road. The surface water drainage system for the overall NCOD site has been designed in accordance with the Greater Dublin Strategic Drainage Strategy (GSDSDS) and the Greater Dublin Regional Code of Practice for Drainage Works. It will ensure that surface water discharge from the site is limited to the allowable greenfield runoff rate. All surface water to the attenuation system will discharge to the existing surface water network via a fuel/oil separators and vortex type flow control chambers.

The storm water drainage has been designed to cater for surface water from hard surfaces in the site including roadways, footpaths, and buildings.

3.3 WATER SUPPLY

It is proposed to connect a new 250mm diameter watermain to the existing 300mm diameter watermain on the northern boundary of the NCOD site along St. Margaret's Road. This new watermain is to include boundary boxes with integral stopcocks at the connections. Provision is also to be made for the installation of bulk flow meter chambers.

Water consumption on the civic amenity site will be from site staff and water used for wash-down and cleaning.

3.4 HOURS OF OPERATIONS

It is anticipated that the Ballymun Recycling Centre opening hours will be similar to the existing Ringsend Recycling Facility, however this will be determined in agreement with the private contractor. Therefore, authorisation is being sought to accept waste from members of the public at the facility within the following opening hours:

- 09:00 – 17:00 (Monday to Wednesday)
- 09:00 – 18:00 (Thursday to Friday)
- 09:00 – 16:00 (Saturdays and Bank Holidays)

It is not proposed to provide public access to the civic amenity site on Sundays. The above opening times will provide suitable opportunity for the public to avail of the facility outside of normal working hours.

¹ EPA, *Wastewater Treatment Manuals – Treatment Systems for Small Communities, Business, Leisure Centres and Hotels* (1999)

3.5 WASTE ACCEPTANCE

It is anticipated that the vast majority of the public will bring waste to the facility using cars and small vans. Facility staff will be in position at the entrance gate to inspect incoming waste and take payment, as appropriate.

Commercial waste will not be accepted at the facility. A Waste Acceptance Procedure is included as Attachment-4-3-5.

3.6 QUARANTINE

Any inappropriate incoming waste will be refused, and the customer requested to remove the unsuitable waste from the facility. A quarantine area will be identified for temporary storage of unsuitable waste.

3.7 WASTE COLLECTION

All waste materials collected from the facility and transferred off-site for reuse, recycling, recovery or disposal will be transferred through the NCOD depot site and will exit the site onto St. Margaret's Road opposite the entrance to IKEA. This signal-controlled junction is permitted for HGV use in accordance with the relevant planning permission. All waste collection vehicles removing waste from the site will be required to hold a valid waste collection permit in accordance with the requirements of the *Waste Management (Collection Permit) Regulations 2007* as amended.

3.8 WASTES GENERATED AND STORED ON SITE

On account of the nature of waste activities which will be carried out at the civic amenity facility, there will be minimal waste generated. Any wastes generated in the facility office will be segregated and transferred to the appropriate waste containers at the facility.

3.9 EMISSIONS

3.9.1 Emissions to Sewer

The only emissions to sewer from the civic amenity facility will be domestic effluent from the site office.

3.9.2 Noise Emissions

Noise emissions associated with the facility will include traffic entering and exiting the site as well as the operation of plant and waste compaction equipment.

4 DESCRIPTION OF THE EXISTING SITE CONDITIONS

A Site Condition Report has been prepared for the facility and is included with the Licence Application.

4.1 SOIL

The Geological Survey of Ireland (GSI) Geology Maps illustrate a complex geology in the region. The site is underlain by the Tober Colleen Formation and Lucan Formation. The bedrock is gently folded and dips towards the north-east.

A site investigation programme was undertaken at the NCOD site to acquire site-specific data on the nature and characteristics of the underlying ground conditions and identify any contamination that may exist. Site investigations, which were conducted between 7 June and 7 July 2017, included:

- Six light cable percussion boreholes;
- Ten boreholes by dynamic (windowless) sampling methods;
- A standpipe installation in one of the boreholes; and
- 15 no. trial pits.

Environmental samples were taken at depths of 0.5m and 1.5m bgl in each trial pit with an additional sample taken at 2.0m bgl in Trial Pits TP12 and TP15. Disturbed (small jar and bulk bag) samples were taken at standard depth intervals and at changes in strata. No significant water inflows were encountered during excavation.

A summary of the subsoil encountered in the exploratory holes is presented below, in approximate stratigraphic order:

- Topsoil: encountered typically in 150 – 300mm thickness in most exploratory holes.
- Made Ground (sub-base material): 50 – 200mm of aggregate fill (sandy silty gravel) present in Borehole BH05 from ground level and Trial Pit TP09 beneath 200mm of topsoil.
- Made Ground (fill): reworked clay fill with localised pockets of debris was encountered in the majority of boreholes and trial pits across the site. Typically, sandy gravelly clay with fragments of brick, concrete, ceramic, glass, plastic and ash extending to a depth of 0.50 – 3.45m bgl.
- Glacial Till: sandy gravelly clay, frequently with low cobble and occasional boulder content, typically firm or stiff in upper horizons, becoming very stiff with increasing depth.

Waste acceptance criteria (WAC) testing and asbestos screening was carried out on 20 no. soil samples. No asbestos was encountered in any sample. No hydrocarbon contamination was encountered on the site. Mineral oil concentrations reported are less than 500 mg/kg.

Testing was undertaken to assess the condition of the soil on-site and classify the material for removal off-site for recovery or disposal. 17 no. samples were classified as Inert and two samples (BH10 and TP1) were classified as Non-Hazardous in accordance with the Landfill Directive WAC. TP1 is located within the civic amenity site boundary.

4.2 GROUNDWATER & SURFACE WATER

The topography of the NCOD site is gently sloping towards the east and is surrounded by existing industrial premises, infrastructure and future development sites. The site is located in the Liffey and Dublin Bay Catchment (Hydrometric Area 09) within the Eastern River Basin District (ERBD).

The site is located in the Santry River (EPA Ref: 09-1502) catchment. The Santry River flows 0.5km to the north of the site. All drains in the vicinity of the NCOD site are culverted. The Santry River discharges to Dublin harbour via Raheny Strand approximately 8km south-east of the site.

As there are no surface waterbodies located adjacent to the site, there was no surface water quality data obtained during site investigations. In accordance with the Water Framework Directive (WFD) classification status (2010 – 2015), the Santry River is determined as being of *Poor* quality and *At Risk* of not achieving the WFD objectives.

The most recent biological quality sample obtained by the Agency on the Santry River in 2016 at Clonsaugh Road Bridge (Station ID: RS09S010300) reported the river quality as *Moderately Polluted* (Q-Value = 3). This monitoring location is approx. 3.4km east of the NCOD site.

The groundwater vulnerability at the site is defined by the GSI as *Low* which indicates a typical depth of 10m of low permeability till above the bedrock. There is no drinking water source protection zone delineated in the vicinity of the site.

4.3 FLOOD RISK ASSESSMENT

Hydraulic modelling of the Santry River by TOBIN in November 2017 estimated the 100 and 1000-year Mid-range future scenario (MRFS) flood levels adjacent to the site as 57.73m above ordnance datum (AOD) and 57.81m AOD, respectively.

The NCOD site has existing an existing ground level ranging from 71.4m OD to 64.2m OD and therefore, at a minimum, is 6.4m above the estimated 1000-year MRFS flood level; i.e. the site is located in Flood Zone C. According the Office of Public Works' (OPW's) Planning System and Flood Risk Management (PSFRM) guidelines ², commercial developments (such as the NCOD and associated civic amenity site) are appropriate in this flood zone.

Based on a review of the Preliminary Flood Risk Assessment (PFRA) study ³ and surveyed site levels, it is predicted that pluvial flooding will not impact the NCOD site. It is predicted that flood risk to the development will be minimal.

4.4 AIR QUALITY

As part of the implementation of the *Air Quality Standards Regulations 2002 (S.I. No. 271 of 2002)*, four air quality zones have been defined in Ireland for air quality management and assessment purposes. Dublin is defined as Zone A and Cork as Zone B. Zone C is composed of 23 no. towns with a population of greater than 15,000. The remainder of the country, which represents rural Ireland but also includes all towns with a population of less than 15,000, is defined as Zone D. The NCOD site is located within Zone A.

² Office of Public Works (OPW), *Planning System and Flood Risk Management: Guidelines for Planning Authorities* (2009)

³ OPW, *Preliminary Flood Risk Assessment* (2012)

In terms of the existing air quality environment, data available from similar environments indicates that the levels of NO₂, CO, PM₁₀, PM_{2.5} and benzene are well within the National and European Union (EU) ambient air quality standards.

4.5 NOISE

The main source of noise in the existing environment at the NCOD site is road traffic from the R104, St. Margaret's Road, the R108 to the east and the M50 to the north.

A baseline noise survey was undertaken in the vicinity of the site as part of the planning submission. Noise levels were monitored at one location to the north of the site to obtain noise levels representative of the site and the surrounding environment. The monitoring position was located at roof level of the adjacent IKEA retail store overlooking the site of the NCOD site (N1).

Noise levels at this position were dominated by road traffic along St Margaret's Road, the M50 Motorway and the R108 Road.

5 BEST AVAILABLE TECHNIQUES

The measures and techniques outlined in the EPA's *Final Draft BAT Guidance Note on Best Available Techniques for the Waste Sector: Waste Transfer and Materials Recovery* have been considered in the design of the Ballymun Recycling Centre. Such measures include:

Emissions to Air:

Regular sweeping and cleaning of the facility will be carried out by staff to reduce potential for dust arising.

Best practice waste handling procedures, regular removal of waste from site and stringent facility management will limit the potential for odour emissions.

Emissions to Water:

Surface water run-off from hard standing areas will discharge into a storm sewer system via fuel/oil interceptors to eliminate the requirement for discharge to surface water bodies. Surface water run-off will be attenuated in accordance with SuDS principals to control discharge into the storm sewer network.

Emissions to Sewer:

The only emissions to sewer from the facility will be domestic effluent from the site office.

Noise & Vibration:

Equipment operations and vehicle access points have been located away from sensitive residential receptors, where possible, to minimise noise impacts on the local population. Operational hours are also restricted to minimise impact on the local population.

6 CLOSURE AND CESSATION OF ACTIVITIES

In the event of permanent cessation of activities at the facility, no more waste materials will be accepted to the facility and all waste stored within skips and containers will be removed from site by authorised waste contractors. The surface water and foul water drainage network will be cleaned, and residues removed from drainage channels, screens and interceptors. Upon completion of the above activities, there will be no materials remaining at the facility with the potential for environmental pollution.

7 ENVIRONMENTAL QUALITY

DCC operations are carried out in accordance with local and national policy. Environmental management initiatives outlined by relevant Government Departments and State Bodies are incorporated into DCC operations and issued to the relevant operations divisions which will include the Ballymun Recycling Centre.

8 TRANSBOUNDARY EFFECTS

The proposed Ballymun Recycling Centre will not have any transboundary effects.

9 ALTERNATIVES

A site selection exercise was carried out by Dublin City Council which identified the Ballymun site as the most suitable location for a new operations depot. Accordingly, the co-location of a new civic amenity facility in proximity to the new operations depot provides for maximum efficiency and control of the daily operations.

DCC have operated a number of civic amenity facilities across the city and the experience and knowledge of these operations have been aggregated in the design and layout of the new facility. As stated in the application, it is intended that prior to commencement of operations, the waste licence for the Ballymun Recycling Centre will be transferred to a private operator to run the facility on behalf of DCC as is the current practice at the Northstrand and Ringsend Recycling Centres.

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