



Comhairle Cathrach
Bhaile Átha Cliath
Dublin City Council

North City Operations Depot

St. Margaret's Road, Ballymun, Dublin 11

Waste Licence Application



Non-Technical Summary

Prepared by

TOBIN Consulting Engineers

Non-Technical Summary

PROJECT: **North City Operations Depot**
Waste Licence Application

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FIGURES

FIGURES

Figure 1.1: Waste Licence Facility at NCOD (extract from Site Plan) (Ballymun Recycling Centre facility 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 facilities for the management and handling of waste materials as part of the DCC daily operations.

DCC is applying to the Environmental Protection Agency (EPA) for a Waste Licence for the operation of a Waste Transfer Station at the NCOD. 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 is scheduled for commencement in mid-2019.

The NCOD site is approx. 5.03 hectares (ha) in area and the proposed Waste Licence boundary occupies an area of 0.47 ha (see Figure 1.1). The redline boundary in Figure 1.1 signifies the boundary for the waste transfer station and the blue line signifies the DCC site ownership boundary.

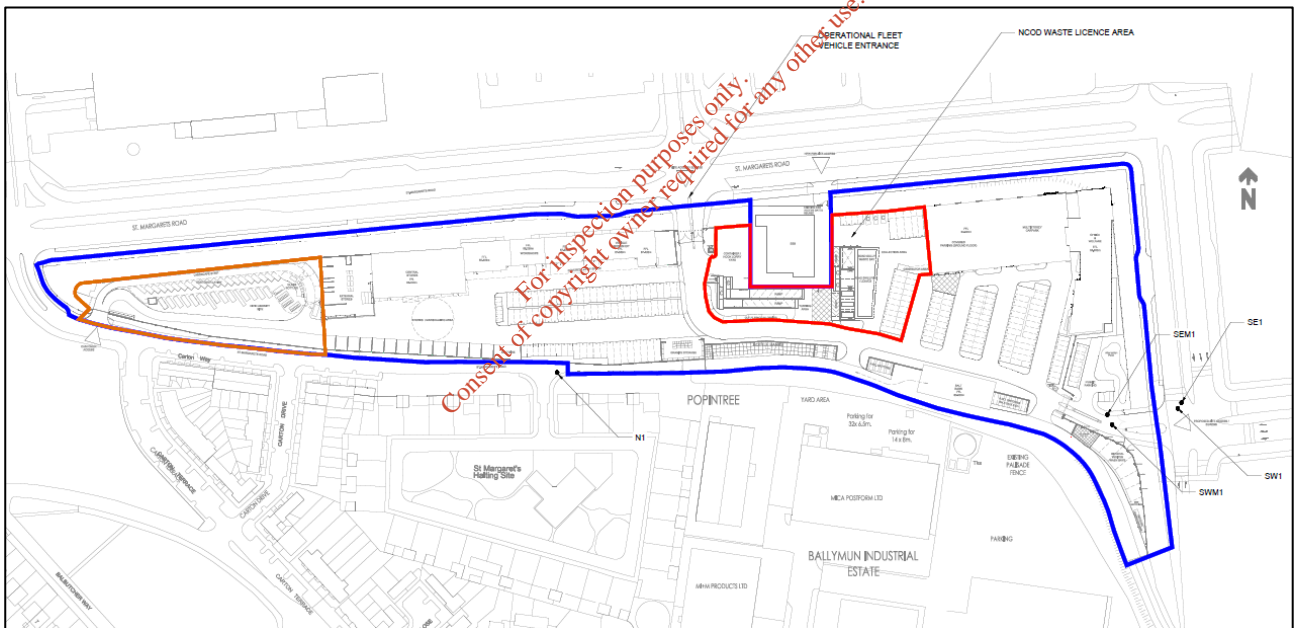


Figure 1.1: Waste Licence Facility at NCOD (extract from Site Plan) (Ballymun Recycling Centre facility outlined in orange)

Vehicles associated with DCC operations are only permitted to use the northern access to St. Margaret's Road, while staff vehicles and visitors will use the eastern entrance from St. Margaret's Road. These site access locations are shown on the Site Plan. An internal access gate connects the main depot with a Civic Amenity Site and a separate public entrance is provided to the civic amenity site from Carton Way.

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 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).

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 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).

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).

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 new DCC depot will bring together under a single corporate facility the following existing operational departments:

- Housing Maintenance;
- Roads Maintenance;
- Surface Water and Drainage (excluding foul drainage/Irish Water activities);
- Public Lighting and Electrical;
- Signage;
- Traffic Management; and
- Waste Management.

The depot will provide a range of buildings and facilities to service all of the departments including:

- Administration offices and welfare facilities (open plan offices with a small number of cellular offices, changing, locker and shower facilities, meeting and briefing rooms, welfare room, storage, canteen facilities and plant areas);
- Covered parking facilities (multi-storey type for fleet and private staff vehicles as well as bicycle parking);
- Workshops (welding/metalwork, painting, carpentry, electrical, vehicle repair and signage);
- Stores Warehouse;
- Salt Barn;
- Security Kiosks;
- External material and equipment storage bays;
- External fleet vehicle parking areas;
- Vehicle wash bays;
- Waste compaction and collection areas;
- Waste receptacle storage area (for large items);
- Grit box storage area; and
- Antique granite storage bay.

The operations of a number of the teams listed above will generate waste materials which are required to be handled, temporarily stored and transferred off-site for disposal or recovery from the depot. Accordingly, the waste activities are consigned to a dedicated area of the site which will be governed under this Waste Licence.

The waste activities can be summarised as:

- Compaction of waste collected from litter bins throughout the city;
- Management of waste collected by road sweepers and gulley cleaners; and

- Management of waste generated from roads maintenance, housing maintenance and river cleaning.

The waste activities above will be confined to specific areas of the site which are within the designated Waste Licence boundary. Compaction, segregation and temporary storage of waste will only be carried out using dedicated skips/receptacles at locations as shown in the Site Plan. Management of waste collected by the road sweepers and gully cleaners will be restricted to the dedicated bays as shown on the Site Plan. The waste licence boundary incorporates car parking spaces adjacent to the street cleaning and gully waste bays to allow for temporary parking and manoeuvring of waste haulage vehicles and operations vehicles, as required.

2.1 WASTE ACCEPTED AT THE FACILITY

Waste received at the facility will be from DCC operations only and will be municipal in nature. Approval is sought for a total of up to 24,900 tonnes/annum of waste to be received at the facility.

While it is not proposed to collect any specific hazardous waste types at the facility, it is likely that typical Council activities such as housing maintenance and fly-tipping clean up may generate some hazardous wastes. These quantities would typically be small in nature and similar to household and agricultural chemicals and fuel/oil storage containers. Approval is sought for handling of up to 500 tonnes/annum of hazardous waste in the event that this material type is encountered during operations.

It is anticipated that the actual quantity of hazardous waste received at the facility on an annual basis will be much less than 500 tonnes. Approval is sought for a combined (non-hazardous and hazardous) total waste acceptance of up to 24,900 tonnes/annum.

3 SITE INFRASTRUCTURE AND OPERATIONS

3.1 FOUL WATER DRAINAGE

An existing 750mm diameter foul sewer pipe runs along St. Margaret's Road to the east of the overall NCOD site. The foul drainage from the overall site will discharge to this existing 750mm diameter sewer.

Wastewater effluent discharged from the overall site will comprise both trade effluent and domestic effluent. Domestic effluent will be generated from the site offices and welfare buildings by a combination of depot-based staff, fleet staff and visitors.

Trade effluent will be generated from the NCOD waste licensed area as a result of liquid run-off from the street cleaning and gully sucker waste bays. Collection drains will be located around this area to ensure any 'dirty' run-off from these activities is kept out of the 'clean' surface water drainage network.

Run-off and wash-water will also be collected from around the street waste receptacles and from the base of the ramp leading up to the skips and collected in the foul water network.

All the foul effluent from the NCOD waste licenced area will be combined with the domestic effluent from the rest of the NCOD site (including the civic amenity site) and discharged to the Irish Water network at the eastern boundary of the overall site (Emission Point Code SE1 as shown on the Site Plan).

In addition to the above, 'dirty' wash-water will be generated in the general vehicle washing bays in the south-east corner of the overall site (outside of the waste licenced area). Collection drains around this area will divert the wash-water into the foul network and keep it separate from the 'clean' surface water drainage network.

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 at the NCOD waste facility will be from water used for wash-down and cleaning.

3.4 HOURS OF OPERATIONS

In the main, therefore, the depot will be operational from 06:00 to 18:00 with limited additional times for waste management night crews, winter road salting operations and emergency call-outs.

3.5 WASTE ACCEPTANCE

Waste material will only be brought to the NCOD site from DCC operations teams and no waste will be received at this facility from the public. A Waste Acceptance Procedure is included as Attachment-4-3-5.

3.6 QUARANTINE

The waste types proposed for acceptance at the facility are outlined in the application. However, on occasion, operations teams may encounter other waste types as part of clean-up operations and/or removal of illegal dumping. Where appropriate, waste contractors will be engaged to remove this waste, or the waste will be brought to a suitable facility.

In the event that waste materials are brought to the depot which are not suitable for segregation into the skips as provided, this waste will be transferred to a quarantine area. The material will be subsequently removed from the NCOD facility as soon as possible.

3.7 WASTE COLLECTION

All waste materials collected from the NCOD waste facility and transferred off-site for reuse, recycling, recovery or disposal 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 facility within the waste licence boundary, there will be no waste generated at the NCOD facility.

Waste materials will be generated in the workshops, maintenance areas and offices at the depot, however these areas are not located within the NCOD waste licence boundary.

3.9 EMISSIONS

3.9.1 Emissions to Sewer

Liquid run-off from waste deposited in the gully sucker and street sweepers decanting area will be collected in dedicated drains and directed to the foul sewer network via fuel/oil interceptors. Any wash-water generated from cleaning this area will also deposit into the foul sewer network.

Potentially 'dirty' run-off from the street bin waste storage area will also be directed to the foul sewer. Dedicated collector drains will be located at the bottom of the ramp leading up to the waste compactor as well as surrounding the waste compactor and containers.

Trade effluent will also be generated from the vehicle wash-bays at the south-east corner of the site (outside of the waste licence boundary). This vehicle washing activity is not included within the waste licence application but effluent discharge from the activity has been described in the Operational Report and included in Attachment-7-3-1 (Emissions to Sewer) to enable Irish Water to account for the discharge into the foul sewer network.

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 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. BH10 is located within the proposed waste licence 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 Clonshaugh 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 ¹, commercial developments (such as the NCOD) are appropriate in this flood zone.

Based on a review of the Preliminary Flood Risk Assessment (PFRA) study ² 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

¹ Office of Public Works (OPW), *Planning System and Flood Risk Management: Guidelines for Planning Authorities* (2009)

² OPW, *Preliminary Flood Risk Assessment* (2012)

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.

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 NCOD facility. Such measures include:

Emissions to Air:

Regular sweeping and cleaning of the NCOD facility and waste licence area will be carried out by Council 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:

Wash-water and run-off from street cleaning waste management operations will be diverted to the foul sewer network. Emission limits for discharge to the foul sewer have taken account of the Irish Water *Discharge to Sewer: Guidance on applying for a Discharge to Sewer Licence* document.

Noise & Vibration:

Equipment operations and vehicle access points have been located away from sensitive residential receptors to minimise noise impacts 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 Department's and State Bodies are incorporated into DCC operations and issued to the relevant operations divisions.

8 TRANSBOUNDARY EFFECTS

The proposed NCOD facility 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 waste activities to which this licence application relates could only be carried out at the new depot. It would not have been feasible to consider an alternative location for the waste management activities associated with DCC operations.

DCC operate a number of small depots across north Dublin and the experience and knowledge of these operations have been aggregated in the design and layout of the new depot. Staff from DCC and the Design Team also visited the existing Dún Laoighaire-Rathdown County Council depot in Ballyogan to understand the operations at the facility and identify areas for improvement on the design of the waste handling areas.

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