

Proposed Large Scale Residential
Development at Rathgowan, Mullingar,
Co. Westmeath
Applicant: Marina Quarter Ltd.

RECEIVED: 24/08/2023

Volume II

Main Statement

CHAPTER 11

Material Assets: Waste



RECEIVED: 24/08/2023

Table of Contents

11	Material Assets: Waste.....	11-3
11.1	Introduction.....	11-3
11.2	Expertise & Qualifications	11-3
11.3	Proposed Development.....	11-3
11.3.1	Construction Phase.....	11-3
11.3.2	Operational Phase	11-4
11.4	Methodology	11-4
11.4.1	Relevant Legislation & Guidance.....	11-4
11.4.2	Site Surveys/Investigation	11-5
11.4.3	Consultation	11-5
11.5	Difficulties Encountered	11-5
11.6	Baseline Environment.....	11-5
11.6.1	Site Location and Immediate Surroundings	11-5
11.6.2	Wastewater Management.....	11-6
11.6.3	Waste Management	11-6
11.7	The ‘Do nothing’ Scenario	11-6
11.8	Potential Significant Effects.....	11-6
11.8.1	Waste.....	11-6
11.8.2	Wastewater	11-7
11.9	Cumulative Effects.....	11-8
11.10	Mitigation	11-10
11.10.1	Waste.....	11-10
11.10.2	Wastewater	11-10
11.11	Residual Impact Assessment	11-11
11.12	Risk of Major Accidents or Disasters	11-11
11.13	Significant Interactions.....	11-11
11.13.1	Population and Human Health	11-11
11.13.2	Biodiversity	11-11
11.13.3	Hydrology and Hydrogeology	11-12
11.13.4	Traffic.....	11-12
11.14	References & Sources.....	11-13

RECEIVED: 24/08/2023

Table of Tables

Table 11.1 Nearby permitted or pending planning applications 11-8

11 Material Assets: Waste

RECEIVED: 24/08/2023

11.1 Introduction

This chapter of the EIAR was prepared to assess the potential significant effects of the Proposed Development on Material Assets: Waste.

This Chapter of the Environmental Impact Assessment Report (EIAR) provides an assessment of the potential impacts of the Proposed Development on Material Assets or physical resources in the environment of human origin including built services and infrastructure comprising waste management and wastewater management.

11.2 Expertise & Qualifications

This chapter of the EIAR has been prepared by Arthur Greene of Enviroguide.

Arthur holds a B.A in Geography and Geoscience, as well as a Dual MSc in Ecosystem Science and Policy from University College Dublin and Justus Liebig University. Arthur has carried out EIARs, EIA Screening Reports, CEMPs and in the overall assessment of potential impacts to environmental receptors from a range of developments and has been involved in the preparation of EIA documents for the following projects:

- Large Scale Residential Development at Athlone, County Westmeath;
- Large-Scale Residential Development at Newcastle, South Dublin (Phase 2 and 3); and
- Commercial development at Horizon Logistics Park, Swords, County Dublin.

11.3 Proposed Development

The full description of the Proposed Development is outlined in Chapter 2 ‘Development Description’ of this EIAR. A summary of Construction Phase and Operational Phase activities is provided below.

11.3.1 Construction Phase

All construction works will occur following a phased process. However, the entire Construction Phase will involve site preparation works, the establishment of construction services and the construction of the proposed residential units. Site preparation works will involve site clearance, establishing entranceways and haul roads for vehicles, surveying and setting out, setting up the construction site fencing and compounds.

It is noted the Proposed Development (Phases 1 & 2) assessed in this chapter will form part of a larger three-phase development. Phase 3 of the development (ref 22515) consists of 213 dwellings and a creche and was granted permitted with conditions by Westmeath County Council.

11.3.2 Operational Phase

The Operational Phase of the Proposed Development will consist of the normal day-to-day operations necessary for the management of a residential development and the ongoing maintenance of the dwelling units, operational infrastructure and landscaping features.

11.4 Methodology

Material assets have been defined as “Resources that are valued and that are intrinsic to specific places, they may be either human or natural origin and the value may arise for either economic or cultural reason” (EPA 2002).

This definition was further expanded by the EPA in 2022 in ‘Guidelines on the information to be contained in Environmental Impact Assessment Reports’ which states:

‘The meaning of this factor is less clear than others. In Directive 2011/92/EU it included architectural and archaeological heritage. Directive 2014/52/EU includes those heritage aspects as components of cultural heritage. Material assets can now be taken to mean built services and infrastructure. Traffic is included because in effect traffic consumes roads infrastructure. Sealing of agricultural land and effects on mining or quarrying potential come under the factors of land and soils.

11.4.1 Relevant Legislation & Guidance

The methodology for the assessment takes into account the relevant guidelines, in particular the following:

- Environmental Protection Agency (EPA) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports (EIAR) (2022)
- EPA (2021) Best Practice Guidelines for the Preparation of Resource and Waste Management Plans for Construction and Demolition Projects

All phases of the Proposed Development were considered in the assessment of potential impacts on Material Assets within the subject site. Assessment of the likely impact of features of the Proposed Development, was carried out in accordance with the following codes of practice, guidelines, legislation, and plans:

- ESB Networks National Code of Practice for the Customer Interface Version 5 (2021);
- ESB Networks Construction Standards for MV Substation Buildings (2019);
- Irish Water Code of Practice for Water Infrastructure Connections and Developer Services Design and Construction Requirements for Self-Lay Developments July 2020 (Revision 2);
- IS EN752, Drain and Sewer Systems Outside Buildings;
- Water Services Acts 2007 to 2017;
- CIRIA Report c753 “The SuDS Manual” (2015);
- Section 3.2 of the Urban Development and Building Heights: Guidelines for Planning Authorities (2018);
- Waste Framework Directive (Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste) as amended by Directive (EU) 2018/851;

- European Union (Waste Directive) Regulations 2020;
- Waste Management Acts 1996 to 2011; and
- Eastern-Midlands Region (EMR) Waste Management Plan 2015-2021.

RECEIVED: 24/08/2023

11.4.2 Site Surveys/Investigation

A desk-based study of built services, utilities and waste management infrastructure within the Mullingar and wider County Westmeath study area has been undertaken. The desk study involved collecting all the relevant data for the site and surrounding area, including published information and details pertaining to the Proposed Development provided by the Applicant and the Design Team.

Information on built assets in the vicinity of the Site of the Proposed Development was assembled by the following means:

- ESB Networks Utility Maps;
- Irish Water Utility Plans;
- Gas Networks Ireland Service plans;
- EIR E-Maps;
- Civil Works Design Report (Tobin Consulting Engineers Ltd., July 2023)
- Flood Risk Assessment (Tobin Consulting Engineers Ltd., May 2022);
- Construction Demolition and Operational Waste Management Plan (Tobin Consulting Engineers Ltd., July 2023)
- Preliminary Construction Environmental Management Plan (Tobin Consulting Engineers Ltd., July 2023)

11.4.3 Consultation

Consultations were not deemed necessary as part of this assessment.

11.5 Difficulties Encountered

No difficulties were encountered in the preparation of this Chapter.

11.6 Baseline Environment

11.6.1 Site Location and Immediate Surroundings

The Site is located west of Mullingar town, in the townland of Rathgowan. The Site is adjacent to and east of the R394 road referred to as the 'C-link' Road. The Site is bound along its northern and eastern Site boundary by residential dwellings and by Ashe Road to its south. The Site is bounded by lands designated as 'Existing Residential' and 'Open Space' under Mullingar Local Area Plan 2014-2020 (extended). The main vehicular entrance location for the site is via an access onto the existing roundabout on the R394 (Tobin Consulting Engineers, April 2023).

11.6.2 Wastewater Management

The site is currently a greenfield site and there is currently no existing connection to a public sewer. The closest drainage infrastructure is located approximately 300m north of the Proposed Development on the C-Link Road (R394) (Tobin Consulting Engineers, April 2023). It is proposed that wastewater generated from the Proposed Development will discharge to an existing 225mm ϕ Irish Water foul sewer which runs within the site along the southern boundary. Due to site topography and level of the existing foul sewer, a pumping station (granted under planning application reference number 22515) is proposed to raise the wastewater generated from dwellings making up the remaining one third of the development (Tobin Consulting Engineers, April 2023).

11.6.3 Waste Management

Westmeath County Council (WCC) is the local authority responsible for setting and administering waste management activities in the area of the Proposed Development. WCC's waste management activities are governed by the requirements set out in the Eastern Midlands Region Waste Management Plan (EMRWMP) 2015-2021. The EMRWMP is a statutory document prepared by the local authorities of the region. It covers the period from 2015 to 2021, after which time it will be revised or replaced. The site is currently a greenfield site and has no existing waste management requirements.

11.7 The 'Do nothing' Scenario

If the Proposed Development is not advanced, the site will remain as a greenfield site. A "Do-Nothing" scenario would result the lands remaining undeveloped, which would cause no significant adverse impact on the Material Assets in the surrounding area.

11.8 Potential Significant Effects

11.8.1 Waste

11.8.1.1 Construction Phase

The Construction Phase will give rise to the requirement to remove and bring quantities of various materials to and from the Site. Construction and excavation related wastes will be created during the Construction Phase. This has the potential to impact on the local waste management network.

A Preliminary Construction Environmental Management Plan (PCEMP) and Construction Demolition and Operational Waste Management Plan (CDOWMP) have been prepared for the Construction Phase of the Proposed Development by Tobin Consulting Engineers Ltd. and will be submitted with the planning application (2023).

The majority of waste arising during the Construction Phase will comprise soil and stone materials associated with the excavation works required for foundations and connections to utilities and services. A member of the construction team will be appointed as the Waste Officer to ensure commitment, operational efficiency and accountability during the Construction Phase of the Proposed Development.

The potential impact from the Construction Phase on waste recovery and disposal is likely to be negative, short-term and minor.

11.8.1.2 Operational Phase

The Operational Phase of the Proposed Development will result in an increase in the production of municipal waste in the region and will increase demand on waste collectors and treatment facilities, however, as the surrounding area is highly residential in nature, waste collection is commonplace.

Municipal waste is made up of household waste and commercial waste that is compositionally comparable to household waste. It includes residual, recyclables, organic, bulky, and waste electrical and electronic equipment.

An CDOWMP has been prepared by Tobin Consulting Engineers Ltd. (July 2023) and has been submitted with this planning application. A waste strategy is presented in the CDOWMP which considers legal requirements, policies, and best management guidelines. This plan also demonstrates that the Waste Storage Area (WSA) has been incorporated within the design of the Proposed Development. Implementation of the CDOWMP will ensure that a high level of recycling, reuse, and recover at the Proposed Development during the Operational Phase. All materials that are considered recyclable will be segregated and separated at source to reduce costs from the waste collector and ensure maximum diversion of material from landfill. The waste strategy presented in the CDOWMP will provide sufficient storage capacity for the estimated quantity of segregated waste. The designated WSA will provide sufficient room for the required receptacles in accordance with the details of this strategy.

Residents will be required to separate waste into the main following streams and place the same in bins provided:

- MNR (mixed non-recyclables);
- DMR (dry-mixed recyclables);
- OW (organic waste).

Each bin will be labelled clearly and will be colour coded to avoid cross-contamination. The types of wastes permitted in each bin will be clearly posted within the bin store above the bins. Restricted access will be given to the bin store with only residents of the Proposed Development permitted access via a code/electronic fob. Infrequently generated waste such as textiles/furniture/WEE will be stored on a temporary basis within the resident's unit and disposed of appropriately.

The potential impact from the Operational Phase on municipal waste disposal is likely to be long term, negligible and minor.

11.8.2 Wastewater

11.8.2.1 Construction Phase

A temporary connection is required to facilitate on-site works for all housing developments. Commencement of construction will therefore result in a net increase in the foul water produced at the Site of the Proposed Development. Foul water sewers will be constructed strictly in accordance with Irish Water requirements. Confirmation of feasibility was received from Irish Water on the 03rd

August 2023 (Ref. CDS23002571). The wastewater connection is 'Feasible without infrastructure upgrade by Irish Water' (Tobin Consulting Engineers, April 2023).

Due to the temporary and phased nature of the Construction Phase the likely effect of the Proposed Development on the existing foul water network during this phase is considered to be negative, slight and temporary.

11.8.2.2 Operational Phase

It is proposed that wastewater generated from the Proposed Development will discharge to an existing 225mm ø Irish Water foul sewer which runs within the site along the southern boundary. The Irish Water Confirmation of Feasibility dated 03rd August 2023 was obtained for 200 no. properties (ref. CDS23002571). Irish Water have requested that a new enquiry be submitted in light of the commencement of Phase 3, which has been carried out. However, Confirmation of Feasibility for Phase 3 was obtained subsequent to the Confirmation of Feasibility from Irish Water for the initial Phases 1 & 2 design. In addition, the pumpstation approved within Phase 3 has been sized to accommodate the flows from Phase 1 and 2. Therefore, a minimal risk of a negative response from the Utility Provider is expected (Tobin Consulting Engineers, April 2023).

11.9 Cumulative Effects

Cumulative Impacts can be defined as “impacts that result from incremental changes caused by other past, present or reasonably foreseeable actions together with the project”. Effects which are caused by the interaction of effects, or by associated or off-site projects, are classed as indirect effects. Cumulative effects are often indirect, arising from the accumulation of different effects that are individually minor.

A review of other off-site developments and Proposed Developments was completed as part of this assessment. The following projects and plans were reviewed and considered for possible cumulative effects with the Proposed Development.

Table 11.1 details the existing, proposed and granted planning permissions on record in the area which have been considered for potential cumulative impacts with the Proposed Development. The Proposed Development will increase the impact on the existing Material Assets. Having regard to other permitted developments in the area, which are either under construction or where construction has not yet commenced, there is potential for greater impact arising from the demand of additional population living in the area.

Table 11.1 Nearby permitted or pending planning applications

Planning reference	Location relative to the Proposed Development	Development description
22515	North of the C-Link Road	Permission for the following Large-Scale Residential Development comprising of the construction of 213 no. residential units, 1 no. creche, 1 no. pumping station and all associated ancillary development works including 2 no. ESB sub-stations, footpaths, cycle lane, car and bicycle

Planning reference	Location relative to the Proposed Development	Development description
		parking, drainage, bin storage, landscaping/amenity areas and the undergrounding of existing 38KV overhead electricity lines at Rathgowan, Mullingar, Co. Westmeath. Access will be via the existing roundabout on the R394 (C-Link). This development will form Phase 3 of a larger (three-phase) residential development at this location.
Part 8 Application	0.3km east of the Proposed Development.	Part 8 application for the construction of 22 no. dwelling units adjacent to Ashfield/Abbeylands/Green Road and St. Bridget's Terrace, Mullingar, Co. Westmeath.
Part 8 Application	2km east of the Proposed Development	The construction of 17 no. dwelling units on a site at the junction of Delvin & Robinstown Road, Springfield TD, Mullingar, Co. Westmeath.
Part 8 Application	0.8km south of the Proposed Development.	The construction of 15 no. single storey houses on four separate sites at Ennell Court and Trinity Cottages, Mullingar, Co. Westmeath.
Part 8 Application	1.3km east of the Proposed Development.	Proposed Housing Development of 32 no. dwelling units consisting of 19 no. 2 bed units and 13 no. 1 bed units at Friar's Mill Road / Canal Avenue, Mullingar, Co. Westmeath.
21568	0.6 km northwest of the Proposed Development Site.	An extension of duration was sought for 16/6001: planning reference no: 11/5121 for the construction of a new housing development, consisting of 28 no. houses to be constructed in 3 phases made up of a combination of 26 no. detached 2 storey houses (as per condition no.5 of outline permission planning ref. no. 11/4121) with associated services.
196159	This site lies 1.8km south of the Proposed Development.	Planning permission was sought for the construction of 98 no. residential units consisting of 14 no. 2 bed terraced houses, 10 no. 3 bed end-terraced houses, 12 no. 3 bed semi-detached houses, 8 no. 4 bed semi-detached houses and 54 no. duplex units (comprising 27 no. 1 bed units and 27 no. 3 bed units). Provision of a creche and community facility, 142 no. car parking spaces, 8 no. motorcycling spaces and 102 no. bicycle spaces. Access from the R390. All site development and servicing works, bin stores, ESB substation, pumping station, open space, landscaping and boundary treatments.
196121	Directly east of the Proposed Development.	Planning permission was sought for the construction of 18 Apartment units in 2 Blocks (Block A & B). Block A consists of 1 no. 1 bedroom units, 3 no. 2 bedroom units and 2 no. 3 bedroom duplex apartment units in 2 and 3 storey high building with private balconies and patios. Block B consists of 6 no. 1 bedroom units and 6 no. 2 bedroom duplex apartment units in 3 storey high building with private balconies and patios. The Proposed Development will also consist of a new site entrance, shared access road, footpaths, car parking spaces, boundary wall and fence, covered cycle rack, recycling bin storage area, public and private open spaces, partial removal and trimming of existing hedgerows to accommodate proposed site entrance, landscaping and all associated site works and services.

The cumulative effects of the Proposed Development on Material Assets have been assessed taking other planned, existing, and permitted developments in the surrounding area into account. Good construction management practices, as detailed in the PCEMP and CDOWMP, (Tobin Consulting Engineers Ltd., July 2023.) will minimise the risk of pollution and nuisance arising from construction activities at the Site. The works will be carried out in such a way that inconvenience to the public arising from increase in traffic flows and disruptive effects of construction traffic on local and main roads is limited wherever practical. Each of the developments that have been permitted in the vicinity of the site (detailed in Table 11.1) are subject to conditions, which, when considered in conjunction with the Proposed Development, it is predicted that the cumulative effects the Proposed Development on construction and municipal waste will be negligible.

11.10 Mitigation

11.10.1 Waste

11.10.1.1 Construction Phase Mitigation

The Contractor will be required to follow all guidelines in the PCEMP and CDOWMP (Tobin Consulting Engineers Ltd., July 2023), subject to approval by Westmeath County Council for the duration of the Construction Phase of the Proposed Development. This PCEMP and CDOWMP will contain the necessary measures for amelioration and remediation during the Construction Phase of the Proposed Development.

11.10.1.2 Operational Phase Mitigation

As outlined in the CDOWMP (Tobin Consulting Engineers Ltd., July 2023) for the Proposed Development, it is intended to ensure that the highest possible levels of waste reduction, waste reuse and waste recycling are achieved for the Proposed Development. Specifically, the CDOWMP will aim to achieve waste prevention, maximum recycling, and recovery of waste with a focus on diversion of waste from landfill wherever possible. The Management Company will be responsible for the provision of a leaflet to all new tenants encouraging good waste segregation and pictorial information detailing the waste streams that can be placed in each bin. In addition to this, clauses that support waste segregation targets will be included in relevant legal documentation e.g., tenancy agreements where possible. The CDOWMP also states that the facilities management company must employ suitably permitted or licenced contractors to undertake off-site management of their waste in accordance with all legal requirements. This includes the requirement that a waste contractor handle, transport and reuse / recover / recycle / dispose of waste in a manner that ensures that no adverse environmental impacts occur as a result of any of these activities.

11.10.2 Wastewater

11.10.2.1 Construction Phase Mitigation

Specific avoidance, remedial and mitigation measures to be taken during the Construction and Operational Phase with respect to foul water and wastewater are detailed within Chapter 7 Hydrology and Hydrogeology, of this EIAR. All works will be carried out in accordance with the PCEMP/CDOWMP (Tobin Consulting Engineers Ltd., July 2023) prepared for the Proposed Development and the Irish

Water Code of Practice for Water Infrastructure (July 2020) and the Irish Water Code of Practice for Wastewater Infrastructure (July 2020). Laying of watermains/wastewater sewers and testing of pipelines and infrastructure will be in accordance with Irish Water standard details.

11.10.2.2 Operational Phase Mitigation

It is proposed that wastewater generated from the Proposed Development will discharge to an existing 225mm \varnothing Irish Water foul sewer which runs within the site along the southern boundary. A new manhole will be constructed on the existing sewer at the point of connection. Approximately two-thirds of the site will drain under gravity to this location. A factor of 6 times the dry weather flow was used to determine the relevant pipe requirements, with loading rates for the development in accordance with the Code of Practice for Wastewater Infrastructure (IW-CDS-5030-03) - Wastewater Flow Rates for Design (Tobin Consulting Engineers, April 2023). All flow velocities within the proposed gravity foul drainage network fall within the limits of 0.75 and 2.5m/sec as set out in Irish Water Code of Practice for Wastewater Infrastructure.

11.11 Residual Impact Assessment

Residual impacts are defined as “effects that are predicted to remain after all assessments and mitigation measures”. They are the remaining ‘environmental costs’ of a project and are the final or intended effects of a development after mitigation measures have been applied to avoid or reduce adverse impacts. Potential residual impacts from the Proposed Development were considered as part of this environmental assessment.

Having regard to the prevention and mitigation measures proposed within this and other chapters of the EIAR, no significant residual impacts are anticipated.

11.12 Risk of Major Accidents or Disasters

11.13 Significant Interactions

The interactions between Material Assets: Waste and other environmental receptors addressed in this report are as follows:

11.13.1 Population and Human Health

In the absence of mitigation, the improper removal, handling and storage of waste could negatively impact on the health of construction workers.

11.13.2 Biodiversity

The improper handling and storage of waste during the Construction and Operational Phases could negatively impact on biodiversity. Potential impacts on biodiversity are addressed in Chapter 14 Biodiversity. Appropriate waste management practices on Site will ensure no significant effects occur on local biodiversity as established in the PCEMP/CDOWMP (Tobin Consulting Engineers Ltd., July 2023).

11.13.3 Hydrology and Hydrogeology

All connections to the public water network (water supply or foul sewer), abstractions from water supply and discharges to the foul sewer during the Construction and Operational Phases will be under consent from Irish Water. An assessment of the potential impact of the Proposed Development on Water are addressed in Chapter 6 Hydrology and Hydrogeology of this EIAR.

11.13.4 Traffic

Waste collection activities at the Proposed Development have the potential to impact upon traffic movements in the local areas. An assessment of the potential impact of the Proposed Development on Traffic are addressed in Chapter 12 of this EIAR. Chapter 12 has concluded that the residual traffic impacts associated with the Proposed Development will be low having an imperceptible effect on the existing road network.

RECEIVED 24/08/2023

11.14 References & Sources

Eastern-Midlands Region (EMR) Waste Management Plan 2015-2021

Environmental Protection Agency (EPA) (2022) Guidelines on the Information to be Contained in Environmental Impact Assessment Reports

EPA (2021) Best Practice Guidelines for the Preparation of Resource & Waste Management Plans for Construction & Demolition Projects

EPA (2002) Guidelines on the information to be contained in Environmental Impact Statements.

ESB Networks (2021) National Code of Practice for the Customer Interface Version 5

European Union (Waste Directive) Regulations 2020.

Health and Safety Authority (2010) Code of Practice for Avoiding Danger from Underground Services

<https://siteviewer.comreg.ie/#site/1318/53.3334867275/-6.2920326981/1/Site%201318> viewed online 29/05/2023

<https://www.gov.ie/en/publication/5634d-national-broadband-plan-map/#interactive-map> viewed online 29/05/2023

<http://mywaste.ie> viewed online 29/05/2023

<https://epawebapp.epa.ie/terminalfour/waste/index.jsp> viewed online 30/05/2023

<http://www.nwcpc.ie/permitsearch.aspx> viewed online 26.07.2022

Irish Water Code of Practice for Water Infrastructure Connections and Developer Services Design and Construction Requirements for Self-Lay Developments July 2020 (Revision 2)

Waste Framework Directive (Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste) as amended by Directive (EU) 2018/851.

Waste Management Acts 1996 to 2011

Water Services Acts 2007 to 2017