

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

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Volume II

Main Statement

CHAPTER 18

Screening for Major Accidents



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18 Screening for Major Accidents

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18.1 Introduction

In order to ensure a comprehensive assessment of potential environmental effects due to risks of major accidents and/or disasters as relevant to the development, this chapter presents a review of the characteristics of the proposed development and of the project location to consider potential for accident scenarios.

In assessing likely potential and predicted impacts, account has been taken of both the importance of the attributes and the predicted scale and duration of the likely impacts. Section 8 of Annex IV of the EIA Directive specifies that the EIAR must include:

“A description of the expected significant adverse effects of the project on the environment deriving from the vulnerability of the project to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to Union legislation such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments carried out pursuant to national legislation may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies”.

A major accident can be defined as an acute or chronic accident or disaster, of human or natural origin, which occurs either as a consequence of, or which interacts with, the construction or operation of the proposed Scheme, and which has substantial consequences for people or the environment.

The Seveso III Directive (2012/18/EU) also requires Member States to apply land-use or other relevant policies to ensure that appropriate distances are maintained between residential areas, areas of substantial public use and the environment, including areas of particular natural interest and sensitivity and hazardous establishments (commonly referred to as Seveso sites). For existing establishments, Member States are required to implement, if necessary, additional technical measures so that the risk to persons or the environment is maintained at an acceptable level.

The Health and Safety Authority (HSA) is the Competent Authority in Ireland as defined by Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015, (COMAH Regulations 2015) which implements the Seveso III Directive in Ireland. The HSA is responsible for ensuring that the impacts of facilities which fall within the remit of this legislation are taken into account with respect to land use planning.

The HSA does not currently consider the proposed development to be a COMAH facility. However, in order to ensure a comprehensive assessment of potential environmental effects due to risks of major accidents and/or disasters as relevant to the development, this chapter presents a review of the

characteristics of the proposed development and of the project location to consider potential for accident scenarios that do not fall under COMAH reporting requirements.

18.2 Expertise & Qualifications

This chapter of the EIAR has been prepared by Saoirse Kavanagh, Executive Planning Consultant of McCutcheon Halley Planning Consultancy. Saoirse holds a bachelor's degree in Arts (International), majoring in Geography, and a Master's in Planning and Sustainable Development. She has over 4 years' experience working with multi-disciplinary teams and has provided input into a variety of projects. In particular, she has co-ordinated the preparation of the following three Environmental Impact Assessment Reports (EIARs) including the completion of the Introduction, Alternatives, and Population and Human Health chapters.

- Cooldown Commons Strategic Housing Development, Citywest, Dublin.
- Parkside 5B Strategic Housing Development, Belmayne, Dublin.
- Clonattin Strategic Housing Development, Gorey, Co. Wexford.

18.3 Proposed Development

The full description of the proposed development is outlined in Chapter 2 'Development Description' of this EIAR.

18.4 Methodology

In the EIA assessment, consideration is given to both the importance of an attribute and the magnitude of the potential environmental impacts of the proposed activities on that attribute.

The principal attributes (and impacts) to be assessed include the following:

- Localised flooding (potential increase or reduction) and floodplains including benefitting lands and drainage districts (if any).
- Potential Seismic Activity (if any).
- Proximity to any COMAH/SEVESO sites.

COMAH/Seveso sites are defined as industrial sites that, because of the presence of dangerous substances in sufficient quantities, are regulated under the Seveso II Directive.

18.4.1 Relevant Legislation & Guidance

The assessment has been carried out generally in accordance with the following guidelines:

- EPA 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (2022);
- EPA 'Draft Advice Notes on Current Practice in the Preparation of Environmental Impact Statements' (2015);
- HSA 'A Short Guide to the European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations, 2006 (S.I. No. 74 of 2006)' and;

- National Roads Authority (NRA) 'Guidelines on Procedures for the Assessment and Treatment of Hydrology for National Road Schemes' (2009).

18.4.2 Site Surveys/Investigation

The collection of baseline regional data was undertaken by reviewing the following sources:

- Office of Public Works (OPW) flood mapping data (www.floodinfo.ie).

Site specific data was derived from the following sources:

- Civil Works Design Report. Proposed Residential Development, Rathgowan, Mullingar, Co. Westmeath, completed by Tobin Consulting Engineers and submitted with the application.
- Various site plans and drawings

18.4.3 Consultation

The Health and Safety Authority (HSA) were contacted in June 2023 regarding the proposed development and were notified that an EIAR was being completed. The Authority did not provide any feedback in relation to the proposed development or the content of the EIAR.

18.5 Difficulties Encountered

There were no difficulties encountered during the compilation of this chapter.

18.6 Baseline Environment

The description of the proposed development is presented in detail in Chapter 2 – Project Description. The subject site is surrounded by established residential areas (to the east, north and south) and agricultural lands (to the west). It is located in close proximity to Mullingar town centre and served by public transport on the Ashe Road. The density of the proposed development attempts to optimise the number of units in accordance with current planning policies, while respecting the scale and amenity of the adjoining context.

The proposed scheme intends to create distinctive neighbourhoods, each of which are intended to have a different character via a mix of units and materials. The proposed layout of the streets and design of the buildings will create a high-quality residential environment which contributes to and completes the residential character of the area.

The permitted Phase 3 comprises construction of 213 houses, within a site area of c. 8.27 ha. The current application relates to Phase 1 and 2 which will provide a further 181 no. units. A total of 394 no. units will be provided across the three phases. Chapter 2 Project Description provides further details on the application.

The study area measures 13.58 ha, and is located at Rathgowan, Mullingar, Co. Westmeath to the northwest of Mullingar Town Centre. Access is from the C-Link Road via an existing roundabout. The site is bound by the residential developments to the southeast and northwest.

It is proposed to construct a Residential Development with associated services, access roads and car parking at the proposed site. The site is currently greenfield and is situated off the G-Link Road to the northwest of Mullingar Town. The proposed construction is envisaged to consist of conventional foundations and pavement make up with some local excavations for services and plant.

18.6.1 Site Description

The site is currently a green field site. The site is located within a mainly residential area.

The subject site is currently zoned residential under the Westmeath County Council's Development Plan and Mullingar Local Area Plan and is surrounded by suburban housing generally built at a low to medium density. The neighbouring areas generally comprise two-storey residential buildings arranged around central green spaces in distinct neighbourhoods.

The site comprises open grassland and scrub with some hedgerow/treeline borders. Mature deciduous trees and smaller trees, hedgerows, & perimeter planting will be retained where possible - gorse and scrub will be removed as required.

The site is free from structures on the Record of Protected Structures and is not located within an Architectural Conservation Area (ACA). There are no sites on the Record of Monuments and Places (RMP) within the development area. The site is also not within a Special Area of Conservation (SAC) or a Special Protection Area (SPA).

18.6.2 Flood Risk

A desktop study of the flood history at the site was carried out by Tobin Consulting Engineers (2022). There are no records of any flooding in this area of Mullingar in the OPW's floodinfo.ie database of maps and the development lies outside all flood zones shown in the Local Area Plan for the Mullingar Municipal District.

Map information for river and coastal flood events were viewed for the proposed site. The river flood map for low, medium and high probability fluvial flood events were assessed. The map confirms that neither fluvial nor coastal flood risk is not a concern for the proposed development.

The information reviewed during the Stage 1 Flood Risk Assessment identifies that there is no risk of flooding to the proposed development. As there is no risk of flooding a Stage 2 - Initial Flood Risk Assessment and Stage 3 - Detailed Risk Assessment was not required for the proposed development.

18.6.3 Seismic Activity

Much of the Earth's surface is covered by unconsolidated sediments which can be especially prone to instability. Water often plays a key role in lubricating the slope failure. Instability is often significantly increased by man's activities in building houses, roads, drainage and agricultural changes. Landslides, mud flows, bog bursts (in Ireland) and debris flows are a result.

In general, Ireland suffers few landslides. Landslides are more common in unconsolidated material than in bedrock, and where the sea constantly erodes the material at the base of a cliff landslides and

falls lead to recession of the cliffs. Landslides have also occurred in Ireland in recent years in upland peat areas due to disturbance of peat associated with construction activities.

In Ireland, seismic activity is recorded by the Irish National Seismic Network. The Geophysics Section of the School of Cosmic Physics, Dublin Institute for Advanced Studies (DIAS) has been recording seismic events in Ireland since 1978. The station configuration has varied over the years. However, currently there are five permanent broadband seismic recording stations in Ireland including IWEX on Carrickbyrne Hill, Co. Wexford, running from 01/01/2011 and operated by DIAS. The seismic data from the stations comes into DIAS in real-time and are studied for local and regional events.

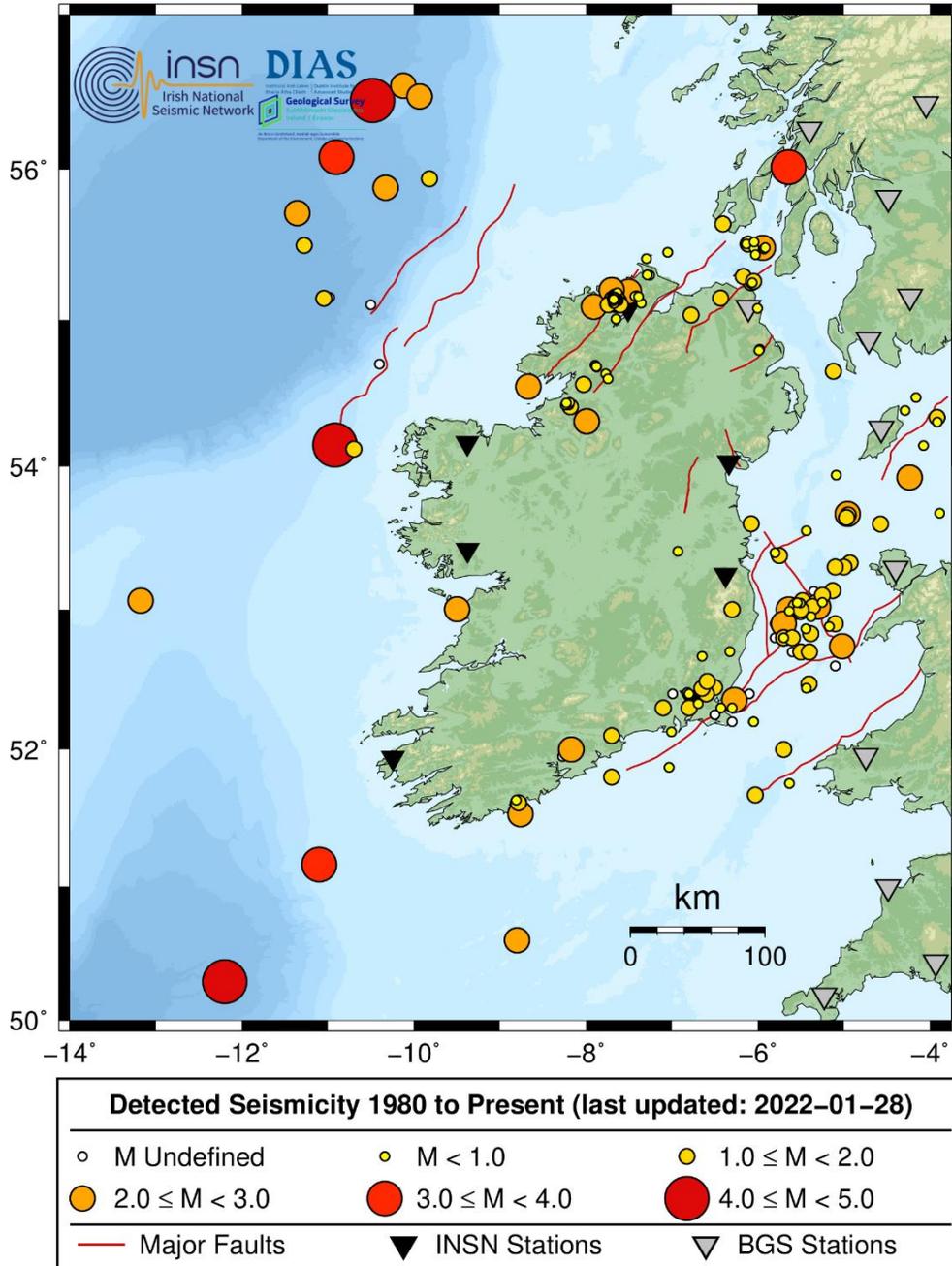


Figure 18.1 Seismic Movements. Source: Irish National Seismic Network. Y

As can be seen in Figure 18.1, the principal events have occurred along/ beyond the east, south-east and south of Ireland with seismic movements generally up to 2.9 Magnitude recorded on land with no large seismic events recorded in the immediate vicinity of the Mullingar site.

18.6.4 COMAH/SEVESO Sites

The Seveso Directive (Directive 82/501/EEC, Directive 96/82/EC, Directive 2012/18/EU) was developed by the EU after a series of catastrophic accidents involving major industrial sites and dangerous substances. Such accidents can give rise to serious injury to people or serious damage to the environment, both on and off the site of the accident. The Chemicals Act (Control of Major Accident Hazards involving Dangerous Substances) Regulations 2015 (S.I. No. 209 of 2015) (the "COMAH Regulations"), implement the latest Seveso III Directive (2012/18/EU).

The purpose of the COMAH Regulations is to transpose the Seveso Directive into Irish law and lay down rules for the prevention of major accidents involving dangerous substances, and to seek to limit as far as possible the consequences for human health and the environment of such accidents, with the overall objective of providing a high level of protection in a consistent and effective manner.

There are two tiers of establishment, which are related to the quantities of dangerous substances present. Depending on quantity, an establishment may be upper-tier or lower-tier. Upper-tier establishments have greater quantities of dangerous substances present and therefore are obliged to comply with additional requirements specified in the Regulations. Lower-tier establishments have lower quantities of dangerous substances present.

There are no SEVESO sites in close proximity to the proposed development. The nearest Seveso site is ECOLAB Irl. Which is a 'lower tier establishment' located over two kilometres from the proposed development at Forrest Park, Mullingar Industrial Park, Mullingar, Co. Westmeath. The activity on site is described in the HSA's 'Public Information material required by Regulation 25, as "General Chemicals Manufacture" and is considered low risk i.e., the advice in the event of a major accident is that *"members of the public are advised to go indoors, stay in and tune to local radio."*

Given the low risk and 'lower tier' nature of the ECOLAB Irl. premises and the distance to the proposed development, it is not considered a concern for the proposed development at construction or operational phase.

The proposed development has been designed in accordance with the Safety, Health and Welfare at Work Act 2005 (S.I. 10 of 2005) as amended and the Safety, Health and Welfare at Work (General Application) Regulations 2007 to 2016 (S.I. 299 of 2007, S.I. 445 of 2012, S.I. 36 of 2016) as amended and associated regulations.

18.7 The 'Do nothing' Scenario

The site will remain as underutilised greenfield area.

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18.8 Potential Significant Effects

18.8.1 Construction Phase

No scenarios of concern have been identified during the construction phase. As such the predicted impact is considered to be short term, imperceptible and neutral.

18.8.2 Operational Phase

The proposed development is not located in an area prone to flooding or an area prone to seismic events or within close proximity to a COMAH/Seveso site. As such, these accident scenarios are not of concern.

Therefore, the impact is considered to be long term, imperceptible and neutral.

18.8.3 Cumulative Effects

Cumulative impacts are considered imperceptible and neutral.

18.9 Mitigation

18.9.1 Construction Phase Mitigation

No mitigation measures necessary.

18.9.2 Operational Phase Mitigation

No mitigation measures necessary.

18.9.3 Cumulative Mitigation

No mitigation measures necessary.

18.9.4 Monitoring

No monitoring is proposed.

18.10 Residual Impact Assessment

18.10.1 Construction Phase

No scenarios of concern have been identified during the construction phase. As such the predicted impact is considered to be short term, imperceptible and neutral.

18.10.2 Operational Phase

The proposed development is not located in an area prone to flooding or an area prone to seismic events or within close proximity to a COMAH/Seveso site. As such, these accident scenarios are not of concern.

Therefore, the impact is considered to be long term, imperceptible and neutral.

18.10.3 Cumulative Impact

Cumulative impacts are considered imperceptible and neutral.

18.11 References & Sources

- EPA 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' (2022).
- EPA 'Draft Advice Notes on Current Practice in the Preparation of Environmental Impact Statements' (2015).
- National Roads Authority (NRA) 'Guidelines on Procedures for the Assessment and Treatment of Hydrology for National Road Schemes' (2009).
- Office of Public Works (OPW, www.floodinfo.ie).
- Irish National Seismic Network (INSN, www.insn.ie).
- Civil Works Design Report for Residential Development at Rathgowan, Mullingar, Co. Westmeath, prepared by Tobin Consulting Engineers.
- HSA 'A Short Guide to the European Communities (Control of Major Accident Hazards involving Dangerous Substances) Regulations, 2006 (S.I. No. 74 of 2006)'.
- Flood Risk Assessment for Residential Development at Rathgowan, Mullingar, Co. Westmeath, prepared by Tobin Consulting Engineers.