

Chapter 18

Major Accidents and Natural Disasters

18.1 Introduction

18.1.1 Major Accidents and Natural Disasters

Article 3 of Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, as amended by Directive 2014/52/EU (the “EIA Directive”), requires an assessment of *“the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project concerned”*. Furthermore, Annex IV, Section 8 of the Directive states that the EIAR shall contain:

“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.”

The Directive also states that 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.”

This chapter comprises an assessment of the vulnerability of the proposed development to risks of major accidents and/or disasters which are relevant to the proposed development.

The assessment of major accident and disasters is a new requirement and national guidelines are not yet available. In the absence of such domestic guidance, the guidance issued by Highways England (an equivalent body to TII) has been consulted. This guidance sets out how the changes brought about by the English Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (which transpose the amended EIA Directive) are to be implemented for Highways England projects. As such, this guidance sets out the proposed scope of assessment in relation to major events (‘events’ being the collective term used in the instructions for both accidents and disasters) and identify that the general scope should cover:

- Vulnerability of the project to risks of major accidents and/or disasters; and
- Any consequential changes in the predicted effects of that project on environmental topics.

To achieve this, the guidance specifies that projects should:

- Apply professional judgement to develop project specific definitions of major events;
- Identify any major events that are relevant to and can affect a project;
- Where major events are identified, describe the potential for any change in the assessed significance of the project on relevant environmental topics in qualitative terms; and
- Clearly describe any assumed mitigation measures, to provide an evidence base to support the conclusions and demonstrate that likely effects have been mitigated/managed to an acceptable level.

For the purposes of this assessment, a Major Event is 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”.

18.1.2 Seveso Sites

The Seveso-III-Directive (2012/18/EU) aims to prevent and control major accidents involving dangerous substances. The Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 (S.I. No. 209 of 2015) (the ‘COMAH Regulations’) transpose the Directive into Irish law. They set out a suite of legal obligations for operators of industrial establishments where dangerous substances may be present.

Such establishments (often referred to as ‘Seveso Sites’) are classified as ‘Upper Tier’ or ‘Lower Tier’ establishments, according to thresholds set out in the COMAH Regulations. In Ireland, there are 95 Seveso Sites, of which 46 are ‘Lower Tier Establishments’ and 49 are ‘Upper Tier Establishments’ (Health and Safety Authority, 2019a; 2019b). Seveso sites within the vicinity of the proposed road development are discussed and assessed below for any potential risks as a result of the development.

18.2 Methodology

18.2.1 Major Accidents and Disasters

The methodology adopted in this major accidents and disasters impact assessment has included three main stages, as follows:

- Stage 1: A long list of all possible major events was developed. This list drew upon a variety of sources, including the UK Government’s Risk Register of Civil Emergencies. Major events with little relevance (for example volcanic eruptions) were not included. Stage 1 also included an initial review of potential receptors to identify any groups that it was not considered necessary to include in the assessment;
- Stage 2: A screening exercise was undertaken to review the long list of major events and to give consideration to their relevance to the proposed road development, and therefore whether they should be included on the project specific short list of events requiring further consideration;
- Stage 3: Where further design mitigation is unable to remove the potential interaction between a major event and a particular topic, the relevant EIA chapter identifies the potential consequence for receptors covered by the topic, and gives a qualitative evaluation of the potential for the significance of the reported effect to be increased as a result of a major event (according to the definitions set out in Table 18.1, below).

The findings of the Stage 2 and 3 assessments are presented in Table 18.2 and Table 18.3, respectively.

The definitions of significance levels are presented in Table 18.1. The residual assessment is based on the exceptionality of the major event to this proposed road development and whether there is a significant effect after the application of mitigation.

Table 18.1 Determining Significance of Major Events

Significance	Effects
Major	Large perceptible risk. The major event is unique to this project due to location and/or design. Mitigation measures will not manage the risk.
Moderate	Additional perceptible risk. The major event is largely due to the project's location and/or design. Mitigation measures will manage some of the risk but not fully.
Minor	Slight perceptible risk. The major event is in part due to the project's location and/or design. Mitigation measures will manage risk to an acceptable level.
Not Significant	No or minimal perceptible additional risk. Risk is not unique to the project or has been effectively eliminated through design and mitigation.

18.2.2 Major Accidents and Disasters

Under Regulation 25 of the COMAH Regulations, Upper Tier Establishments are required to submit certain information regarding their operations for public distribution to the Health and Safety Authority (HSA). Each Seveso site also has a consultation zone, within which developers are required to consult with the Health and Safety Authority. The HSA was consulted in respect of the proposed development to obtain information on Seveso Sites within the vicinity of the proposed road development and to enquire if further consultation is to be undertaken.

The details of the Seveso Sites identified are assessed and potential hazards have been considered in the assessment below (Section 18.4) for any potential risk of further impacts.

18.3 Assessment of Impacts

18.3.1 Stage 1

The long list of major events assessed as part of this chapter is provided in Table 18.2. Although the majority of these major events are already considered under other legislative or design requirements, this is not considered to be a sufficient reason to eliminate the major event from any further consideration. However, where it is concluded that the need for compliance is so fundamental, and the risk of any receptors being affected so remote, such major events have not been included on the shortlist.

Likewise, it is considered reasonable and proportionate to exclude certain receptor groups from the outset. Construction workers, as a receptor, can be excluded from the assessment, because existing legal protection is sufficient to minimise any risk from major events to a reasonable level.

Another potential source of major events related to the proposed road development is road traffic accidents during its operation. These can clearly impact on people through fatalities and serious injury, but can also impact on the environment, through the spillage of fuel and hazardous loads. However, for the proposed road development, Chapter 5 of this EIAR has identified that there would be an overall reduction in the number of road traffic accidents.

As such, although the EIAR will still consider the risk of spillages, as part of the assessment of road drainage and the water environment (See Chapter 10 of this EIAR,

Hydrology), the potential for such accidents to affect people, as receptors under the topic of human health, is not considered further.

Table 18.2 Major Accidents and Disasters Screening

* Note if risk to the proposed development or proposed development exacerbates risk

** i.e. Continue to Stage 3 of assessment? (Y / N)

#	Accident / Disaster	Relevant? (Y/N)	Why / Why Not? *	Potential Receptors	Addressed in EIAR?	Screen In? ** (Y/N)
1	<i>Geological Disasters</i>					
1.1	Avalanches / Landslides	Y	Landslides have been considered as a fundamental part of the design. This has ensured that the risk has been designed out, both in terms of the vulnerability of the proposed road development to these types of event, and also in terms of the potential for the proposed road development to increase the risk of such an event happening.	N/A	N/A	N
1.2	Earthquakes	N	The site is not in a geologically active area and as such earthquakes are considered to be a real risk or serious possibility.	N/A	N/A	N
1.3	Sinkholes	Y	The study area has a high degree of karst features. Although this is likely to be covered in the geotechnical design, there are sufficient examples of roads that have been affected by sinkholes to warrant taking this event forward.	Road users	Chapter 8	Y
2	<i>Hydrological Disasters</i>					
2.1	Floods	Y	Both the vulnerability of the project to flooding, and its potential to exacerbate flooding, are to be covered in the EIAR, both in terms of the risk to the proposed road development and increased risk due to the proposed road development. The proposed road development is crossing a number of streams and Rivers which have the potential to flood.	Road users; Property and persons in areas with increased flood risk.	Chapter 10	Y
2.2	Limnic Eruptions	N	Not applicable as there are no deep-water lakes nearby	N/A	N/A	N
2.3	Tsunami / Storm Surge	Y	The River Maigue is tidal in the study area and the effect of storm surges have been considered in the Flood Risk Assessment. See Item 2.1 above.	N/A	Chapter 10	N

#	Accident / Disaster	Relevant? (Y/N)	Why / Why Not? *	Potential Receptors	Addressed in EIAR?	Screen In? ** (Y/N)
3	<i>Meteorological Disasters</i>					
3.1	Blizzards	N	Blizzard conditions could affect road users. However, the risk is no different from other roads/road users in Ireland, and as such is not considered further.	N/A	N/A	N
3.2	Cyclonic Storms	N	N/A	N/A	N/A	N
3.3	Droughts	N	Droughts are only considered as a disaster due to water shortages for essential services and where there are indirect impacts on food production, loss of soils etc. The proposed development is not considered to be vulnerable to drought.	N/A	N/A	N
3.4	Thunderstorms	Y	The proposed bridge designs will consider the potential risk of lightning strikes, though the risk is not considered to be any greater than any other road bridge.	Road users	N/A	N
3.5	Hailstorms	N	Hailstorms could affect road users. However, the risk is no different from other roads/road users in Ireland, and as such is not considered further.	N/A	N/A	N
3.6	Heat Waves	Y	The road design will consider the effect of high temperatures on the road surfacing. However, the proposed development will be no more vulnerable than any other road.	N/A	N/A	N
3.7	Tornadoes	N	Although there are tornadoes in Ireland, their destructive force tends to be much less than in other parts of the world and the proposed road development is not particularly vulnerable to any potential effects.	N/A	N/A	N
3.8	Wildfires	Y	There may be some potential for scrub, grassland or heather fires, though the risk is no greater than the existing road. The reduced accident rate means the risk of a road traffic accident causing a fire will be reduced.	Road users; Habitats and species	N/A	N
3.9	Air Quality Events	Y	Although relevant, as vehicles emissions can contribute to poor air quality, it is not considered necessary to undertake any more assessment than is already proposed for the Air Quality assessment.	Road users; Local residents	Chapter 13	N

#	Accident / Disaster	Relevant? (Y/N)	Why / Why Not? *	Potential Receptors	Addressed in EIAR?	Screen In? ** (Y/N)
4	<i>Space Disasters</i>					
4.1	Impact Events / Airburst	N	The proposed road development is considered to be no more vulnerable than any other development.	N/A	N/A	N
4.2	Solar Flare	N	Solar flares can interrupt radio and other electronic communications. The design of the technology will take this into consideration.	N/A	N/A	N
5	<i>Transport</i>					
5.1	Road Accidents	Y	The risk posed by spillage from hazardous loads as a result of a road traffic accident e.g. fuel tankers has been considered in the Hydrology and Hydrogeology Chapters. However, as these types of vehicles already use the existing road, and given the reduced accident rate as a result of the proposed road development, it is likely that the risk will decrease.	Road users; Aquatic environment; Residents.	Chapter 5; Chapter 9; Chapter 10	Y
5.2	Rail Accidents	Y	No active railways are located close to the proposed development. The existing Foynes to Limerick rail line which is not currently in operation, will be bridged by the proposed road development. The landscaping for the proposed road development has provided planting to ensure that there is no potential for light glare from vehicles using the proposed road, spilling onto the railway line, in the event that the railway is reinstated. The railway if returned to operation, will need to be designed to modern safety standards.	Potential railway users	Chapter 11	N
5.3	Aircraft Disasters	N	There is not considered to be an increased risk to road users or aircraft users as a result of the proposed road development.	Road users; Property; Aircraft Passengers	N/A	N
5.4	Maritime Disasters	N	The proposed road development is not likely to cause any maritime disasters due to the distance from the sea. While the proposed road development is approx. 950 m from the sea, it is no more susceptible to maritime disasters than any other project in the locality.	N/A	N/A	N

#	Accident / Disaster	Relevant? (Y/N)	Why / Why Not? *	Potential Receptors	Addressed in EIAR?	Screen In? ** (Y/N)
6	<i>Engineering Accidents / Failures</i>					
6.1	Bridge Failure	Y	There are several proposed bridge crossings as part of the proposed road development. They have all been designed to modern safety standards.	Road users	N/A	N
6.2	Tunnel Failure / Fire	N	There are no tunnels proposed as part of the proposed road development.	N/A	N/A	N
6.3	Dam Failure	N	There are no dams that would affect the proposed road development.	N/A	N/A	N
6.4	Flood Defence Failure	N	There are no flood defences proposed as part of this development.	N/A	N/A	N
6.5	Mast and Tower Collapse	Y	Roadside signs, lighting and masts will be part of the proposed road development. They will be designed to modern design standards. Where masts or towers are required to be relocated as part of the proposed development, they will be carried out in consultation with ESBI.	Road users	Chapter 4	N
6.6	Building Failure / Fire	Y	Only one building is proposed as part of the development. The building which is located within the HGV Service Area, will be designed to comply with the necessary Building Regulations.	HGV Service area users.	N/A	N
6.7	Utilities Failure (gas, electricity, water, sewage, oil, communications)	Y	There are a number of utilities directly affected by the proposed road development – including gas pipelines and electricity wires. These will be diverted and remain in the vicinity of the proposed road development. Diversions will be carried out in consultation with the relevant statutory bodies.	Road users; Residents; Landowners; Businessowners and employees	Chapter 4; Chapter 16	Y
7	<i>Industrial Accidents</i>					
7.1	Defence Industry	N	None in the study area.	N/A	N/A	N
7.2	Energy Industry	N	None in the study area.	N/A	N/A	N

#	Accident / Disaster	Relevant? (Y/N)	Why / Why Not? *	Potential Receptors	Addressed in EIAR?	Screen In? ** (Y/N)
7.3	Oil and Gas Refinery Storage	Y	Shannon – Foynes harbour is located in the study area and contains such facilities. The proposed road development is not within the port area and is unlikely to be affected by (or bring about) industrial accidents as a result of the storage of such materials due to the proposed road development. The proposed road development will improve the road infrastructure connecting to the port and therefore if the materials are being transported, the proposed road development will make the transport safer through improved road conditions and reduced accident rates. The proximity of such sites to the proposed road development has been considered in Section 18.4, 'Seveso Sites', below.	Businessowners and employees; Residents; Road users; Aquatic environment.	Chapter 5; Chapter 18 (above)	Y
7.4	Food Industry	Y	Not affected (besides agricultural land).	Landowners	Chapter 15	N
7.5	Chemical Industry	Y	A number of agrochemical manufacturing facilities are situated nearby. The proposed road development is unlikely to be affected by (or bring about) chemical industry accidents. The proximity of the proposed development to such facilities is considered in Section 18.4, below.	Businessowners and employees; Residents; Aquatic environment	Chapter 18 (above)	N
7.6	Manufacturing Industry	Y	Rusal Aughinish Ltd. (bauxite refinery) is located in the study area (approx. 2km from the nearest boundary of the proposed road development). The proposed road development is unlikely to be affected by (or bring about) industrial accidents in relation to this industry.	Businessowners and employees	N/A	N
7.7	Mining Industry	Y	No active mining identified in the area. Potential for current or past mining activity in the vicinity to lead to unstable ground conditions.	Road users	Chapter 8	Y
8	<i>Crime / Civil Unrest</i>					
8.1	Crime / Civil Unrest	N	No more vulnerable than any other infrastructure.	N/A	N/A	N
8.2	Cyber Attacks	Y	Roadside technology could be vulnerable to a cyber-attack. Technology will be designed to modern standards to prevent cyber-attacks.	Road users	Chapter 4	N

#	Accident / Disaster	Relevant? (Y/N)	Why / Why Not? *	Potential Receptors	Addressed in EIAR?	Screen In? ** (Y/N)
9	<i>Disease</i>					
9.1	Human Disease	N	No more vulnerable than any other infrastructure.	N/A	N/A	N
9.2	Animal and Plant Disease	Y	The proposed road development is no more vulnerable than any other infrastructure. Mitigation measures for construction and operation stages to control and eliminate the potential for the spread of animal and plant disease have been included in the EIAR.	Landowners; Aquatic environment; Biodiversity	Chapter 4; Chapter 15	Y

18.3.2 Stage 2

In general, major events, as they relate to the proposed road development, fall into three categories:

- Events that could not realistically occur, due to the type of development or its location;
- Events that could realistically occur, but for which the proposed development, and associated receptors, are no more vulnerable than any other development; and
- Events that could occur, and to which the proposed development is particularly vulnerable, or which the proposed development has a particular capacity to exacerbate.

The screening stage was undertaken primarily to identify this third group of major events, which would then form the shortlist of events to be taken forward for further consideration. The results of the screening exercise undertaken for the long list of events are provided in Table 18.2.

18.3.3 Stage 3

Stage 3 of the assessment requires more detailed consideration of the short list of major events developed during Stage 2, though this may only mean that the risk needs to remain on the design risk register until it is closed out through design. Major events that were included on the short list and which have subsequently been considered in more detail are presented in Table 18.3. The assessment of the risks from the major events is also outlined in this table. The significance is based on the criteria present in Table 18.1, above.

Table 18.3 Major Events Shortlisted for Further Consideration

Major Event	Reason for consideration on Short List and Assessment Undertaken	Potential Receptors	Mitigation	Residual Significant
Sinkholes	Karst is known to be present in the area, the properties of which may present ground stability issues. There are sufficient examples of roads that have been affected by sinkholes to warrant taking this event forward. Extensive ground investigation and assessment of the existing geological conditions have been undertaken to ensure that the ground conditions are known and assessed with respect to the construction of the proposed road development.	Road users	As per Chapters 4 and 8:	Not significant
Floods	Both the vulnerability of the project to flooding, and its potential to exacerbate flooding, are assessed in Chapter 10 Hydrology of the EIAR, both in terms of the risk to the proposed road development and increased risk due to the proposed road development. All bridge crossings have been stepped back sufficiently to eliminate the risk of affecting flooding and culverts have been sized to accommodate a 1 in 100-year flood event in addition to climate change.	Road users, property and people in areas of increased flood risk.	As per Chapter 10	Not significant
Road Accidents	The risk posed by spillage and / or explosions / fires from hazardous loads as a result of a road traffic accidents (e.g. fuel tankers carrying hydrocarbons or other explosive / toxic substances) has been considered in the Hydrology Chapter of this EIAR (Chapter 10). As stated in this Chapter, the risk of spillage associated with the proposed road development is “very low” (<0.4%) and, as such, no specific mitigation measures are required in this respect. In fact, as a result of improved alignment and design, the proposed road development is expected to decrease the likelihood of such events relative to the existing scenario. Additionally, in the unlikely event of a serious accidental spillage, drainage outfalls will contain restrictive measures such that the outflow of pollutants can be halted in order to facilitate clean-up efforts.	Aquatic environment; Soils; Road users; Construction workers; Land-users; Wildlife	As per Chapters 5, 9; and 10	Not significant
Utilities Failure	There are a number of utilities directly affected by the proposed road development – including gas pipelines and electricity wires. These will be diverted and remain in the vicinity of the proposed road development. Diversions will be carried out in consultation with the relevant statutory bodies.	Road-users; Local / regional residents	As per Chapters 4 and 16	Not significant
Mining Industry	No mining identified in the area. Potential for current or past mining activity in the vicinity to lead to unstable ground conditions. Extensive ground investigation and assessment of the existing geological conditions have been undertaken to ensure that the ground conditions are known and assessed with respect to unstable ground conditions.	Road users	As per Chapter 8	Not significant

Major Event	Reason for consideration on Short List and Assessment Undertaken	Potential Receptors	Mitigation	Residual Significant
Animal and Plant Disease	<p>The proposed road development is no more vulnerable than any other infrastructure. Biosecurity measures have been included as mitigation measures for the construction stage to control the spread of invasive species and to ensure there is no potential for the transfer of Crayfish Plague between watercourses. The design of the proposed road development has also provided underpasses for farm owners whose properties will be severed due to the proposed road. Private accommodation tracks and underpasses have been provided where possible within the road design. In the existing scenario, a number of farmers walk their animals along public roads, with some currently crossing paths. The provision of private underpasses where possible will therefore improve the current scenario.</p>	<p>Land-users; Biodiversity; Aquatic Environment</p>	<p>As per Chapter 15</p>	<p>Not significant</p>

18.4 Seveso Sites

Of the Seveso Sites listed on the HSA website (<https://www.hsa.ie>), five are situated within 10km of the proposed road development (Table 18.4). Two of these establishments are Upper Tier Establishments; Atlantic Fuel Supply Company Ltd. and Goulding Chemicals Ltd. Table 18.5 provides an overview of the information made publicly available on the HSA website regarding the hazards associated with these sites.



Plate 18.1 Map showing locations of Seveso Sites within 10km of the proposed development (numbers correspond with Table 18.4). Source: Google Earth

The principal hazards associated with the Upper Tier Seveso Sites in the immediate vicinity of the proposed road development as detailed in Table 18.5 are:

- Physical damage and / or adverse human health effects due to fire and / or explosion as a result of ignition of flammable liquids / vapours;
- Environmental pollution as a result of release of toxic substances; and
- Adverse human health effects as a result of release of toxic substances.

These potential hazards have been considered in the major accidents and disasters impact assessment below (Table 18.4 and Table 18.5).

Table 18.4 Seveso Sites within 10km of the Proposed Road Development

Tier	#	Name	Industry	Address	Approx. linear distance from proposed road development
Upper	1	Atlantic Fuel Supply Company Ltd.	Petroleum storage / distribution	Foynes Harbour, Foynes, Co. Limerick	650 m
	2	Goulding Chemicals Ltd.	Agrochemical (fertiliser) manufacturing	Morgans South, Askeaton, Co. Limerick	1.9 km
Lower	3	Analog Devices International	Electronics (integrated circuit) manufacturing	Raheen Business Park, Raheen, Co. Limerick	5 km
	4	Grassland Agro	Agrochemical (fertiliser) manufacturing	Dock Rd., Limerick City, Co. Limerick	8.8 km
	5	Inter Terminals Shannon Ltd.	Petroleum storage / distribution	Foynes Harbour, Foynes, Co. Limerick	650 m

Table 18.5 Hazards Associated with Upper Tier Seveso Sites within 10km of the Proposed Road Development

Sources: *HSA, 2017; **HSA, 2018

Name	Classes of dangerous substance used	Dangerous characteristics of substances used	Major hazards
Atlantic Fuel Supply Company Ltd.*	E1 Hazardous to the Aquatic Environment E2 Hazardous to the Aquatic Environment P5c Flammable Liquids Petroleum Products: <ul style="list-style-type: none"> • Petrol • Diesel • Dual Purpose Kerosene • Heavy Fuel Oil • Gas Oil 	H225 Extremely flammable liquid and vapour H410 Very toxic to aquatic life with long lasting effects H411 Toxic to aquatic life with long lasting effects.	Fire Vapour Cloud Explosion Spillage Spillage and fire at a road tanker loading gantry Fire and potential for an explosion
Goulding Chemicals Ltd.**	E1 Hazardous to the Aquatic Environment E2 Hazardous to the Aquatic Environment P2 Flammable Gases P5a Flammable Liquids P8 Oxidising Liquids and Solids Ammonium Nitrate Liquified Petroleum Gas Petroleum Products and Alternative Fuels	H220 Extremely flammable gas H226 Flammable liquid and vapour H272 May intensify fire; oxidiser H400 Very toxic to aquatic life H410 Very toxic to aquatic life with long lasting effects H411 Toxic to aquatic life with long lasting effects	Fire and Explosion Release of dangerous substances with potential for adverse health effects Release of dangerous substances with potential for adverse environmental effects.

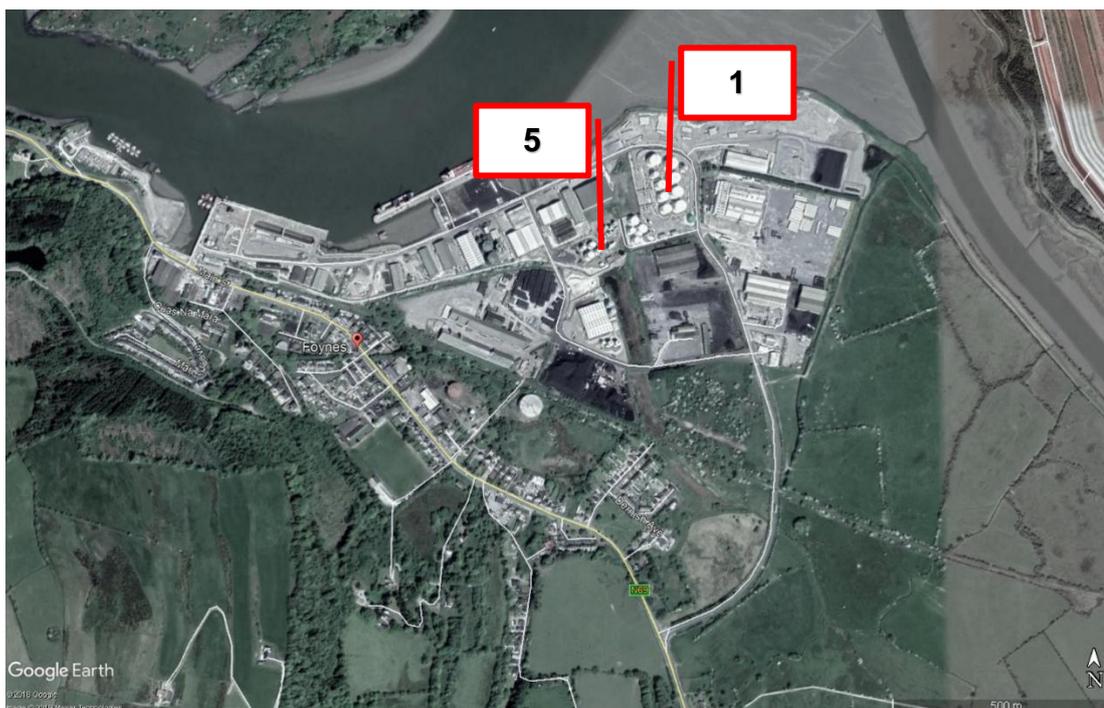


Plate 18.2 Map showing locations of Atlantic Fuel Supply Company Ltd. (1) and Inter Terminals Shannon Ltd. (5). Source: Google Earth

The two Lower Tier Establishments; Analog Devices International; and Grassland Agro, and the Upper Tier Establishment Goulding Chemicals Ltd., are not expected to pose any significant risks during the construction or operation of the proposed development, since they are all situated at a distance of ≥ 2 km from the proposed road development.

In respect of the proposed road development, the dangerous substances and corresponding hazards associated with the operations of Atlantic Fuel Supply Company Ltd. are considered to be similar to (and no more dangerous than) those of Inter Terminals Shannon Ltd. since it is engaged in broadly the same activities (i.e. storage and distribution of petroleum-based fuels).

In short, it is not considered that the construction or operation of the proposed road development will result in any significant negative effects on any Seveso Site in terms of major accidents and/or disasters. On the contrary, as discussed in Chapter 5 of this EIAR, Traffic Analysis, it is considered that the completion of the proposed road development will reduce the risk of road accidents involving HGVs carrying toxic and / or explosive substances to and from industrial facilities in the study area, including the above-stated Seveso Sites.

Human health and the environment are at risk of serious injury due to major industrial accidents which involve dangerous substances. All planning applications within the consultation zones of Seveso sites require referral to the Health & Safety Authority (HSA) for technical advice in order to reduce the risk and limit the consequences of major industrial accidents. The HSA were consulted as part of the EIA Scoping Report consultation in June 2018, however, no response was received. The HSA were subsequently consulted to establish the consultation distances for the above-stated Seveso Sites, and on 23/10/2019, ROD were informed by the HSA (via email) that the consultation distances for both Atlantic Fuel Supply Company Ltd. and Inter Terminals

Shannon Ltd. is 300m. Since both sites are situated at a distance of >300m from the proposed road development, the Applicant is not required to consult further.

The proposed development is not likely to increase the risk of a major industrial accident at either of these two establishments. The level of construction activity at the western tie in will comprise the construction of a Service Area with a turn in facility provided off the Shannon - Foynes Port access road. This service area will provide parking for up to 35 HGVs and will provide some basic facilities for drivers including toilets, showers and a small common room as per Chapter 4. The development as a whole will provide improved road infrastructure in the operation phase which will reduce the likelihood for traffic collisions. As the primary activity associated with the above Seveso sites is the storage and distribution of petroleum, the proposed road development should therefore reduce the likelihood of vehicles transporting petroleum being involved in a road traffic accident.

18.5 References

Council Directive 96/82/EC on the control of major-accident hazards involving dangerous substances (as amended)

Health and Safety Authority (2019a). *Upper Tier Establishments* [09/07/2019].

Health and Safety Authority (2019a). *Lower Tier Establishments* [09/07/2019].

Health and Safety Authority (2018). *Public information on an upper-tier establishment as required by Regulation 25 – Goulding's Chemicals Ltd.* [01/11/2018].

Health and Safety Authority (2017). *Public information on an upper-tier establishment as required by Regulation 25 – The Atlantic Fuel Supply Company Ltd.* [29/11/2017].

The Chemicals Act (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2015 (S.I. No. 209 of 2015)