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Clare County Council

Springfield Flood Relief Scheme

Environmental Impact Assessment
Screening Report

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Glossary of Terms and Abbreviations

AA	Appropriate Assessment
AASS	Appropriate Assessment Screening Statement
AEP	Annual Exceedance Probability
CEMP	Construction Environmental Management Plan
CFRAMS	Catchment Flood Risk Assessment and Management Study
CIEEM	Chartered Institute of Ecology and Environmental Management
CO	Conservation Objectives
EC	European Commission
EEC	European Economic Community
European Sites	Appropriate assessment tests whether a plan or a project is likely to have a significant negative impact on any Special Protection Areas, Special Areas of Conservation, and/or Ramsar sites. Jointly, these are called 'European sites'.
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EQS	Environmental Quality Standard
EU	European Union
FRS	Flood Relief Scheme
ha	Hectare
IROPI	Imperative Reasons of Overriding Public Interest
km	Kilometre
LSE	Likely significant effects
m	Metres
m ²	Square metres
mm	Millimetres
Natura 2000	Natura 2000 is a network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types which are protected in their own right. It stretches across all 27 EU countries, both on land and at sea.
NBDC	National Biodiversity Data Centre
NIS	Natura Impact Statement
OD	Ordnance Datum
OPW	Office of Public Works
SAC	Special Area of Conservation
SCI	Special Conservation Interests
SEA	Strategic Environmental Assessment
SPA	Special Protected Area
QIs	Qualifying Interests
RPS	Record of Protected Structures
UoM	Unit of Management
Zone of Influence	The area where potential environmental changes may potentially impact upon sensitive environmental receptors, considering the spatial scope of the proposed scheme.

1 Introduction

1.1 Background

ByrneLooby have been appointed by Clare County Council to examine the feasibility of the proposed flood relief measures for the Springfield area at Clonlara, and to bring the proposed scheme through the necessary statutory approvals.

This EIA screening exercise was undertaken to determine if an EIA is required for the Springfield Flood Relief Scheme (hereafter referred to as the proposed scheme) as set out in the mandatory and discretionary provisions of the Planning and Development Act, 2000 (as amended)(the Act) and set in Schedule 5 of the Planning and Development Regulations, 2001-2019 (the Regulations).

The screening exercise was undertaken in two stages. The first stage considered the requirement for a mandatory EIA, while the second stage considered the requirement or need for a subthreshold EIA.

This report documents the methodology employed to complete the screening exercise, having regard to the relevant legislation and guidance documents.

1.2 Need for the scheme

The Springfield area at Clonlara, Co. Clare is vulnerable to flooding from the River Shannon. High water levels in the River Shannon resulted in significant flooding in the surrounding areas in November 2009, December 2015 and February 2020 due to very heavy and prolonged rainfall.

At Parteen weir in County Clare, large volumes of water were diverted from the Ardnacrusha headrace and released down the Old River Shannon corridor as a result of these high-water levels and weather conditions. This resulted in flooding over a large area of land including Springfield.

Many homeowners were cut off from their houses during these floods and access was only possible by boat for a period of up to six weeks.

The Office of Public Works undertook a review of the possible flood mitigation options for Springfield in 2016. The review identified a cost beneficial flood mitigation measure that would allow protection from the 0.1% AEP flood events in the River Shannon.

ByrneLooby have been appointed by Clare County Council to examine the feasibility of the proposed flood mitigation measures and to bring the proposed scheme through the necessary statutory approvals. Extracts of the flood extent maps are presented in the following section to outline the flood risk in Springfield.

1.3 Scheme Location

The proposed development site is located in Springfield, a few kilometres south of Clonlara, Co. Clare. The site of the proposed works consists primarily of agricultural grazing with some overgrown areas.

The site is served by local roads which are accessed by the R463 to the north-west of the Shannon Headrace (Figure 1.1.)

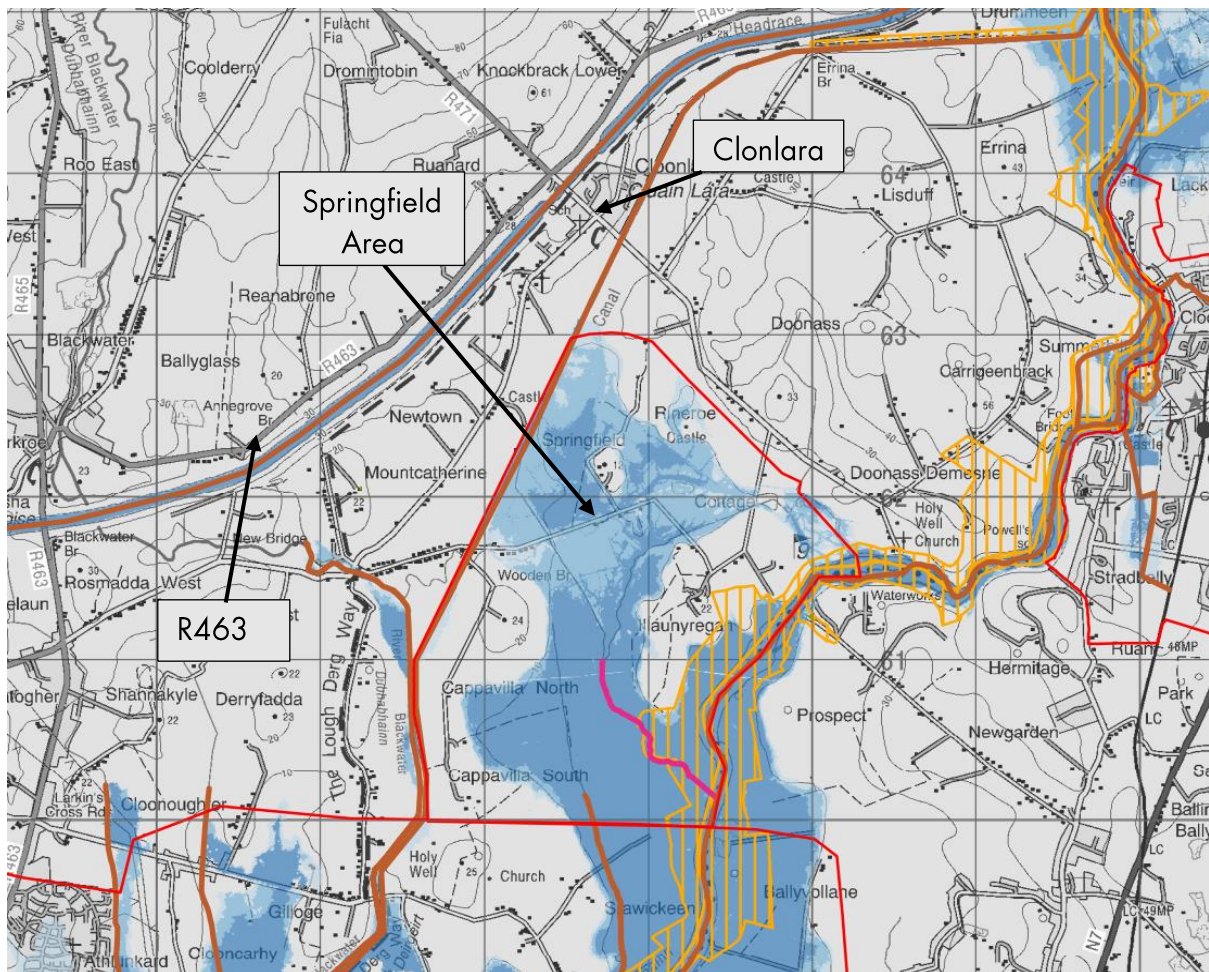


Figure 1.1 – Location Map

1.1 Preparation of this report

The primary author of this report is Fiona Symes. Fiona is a Chartered Environmentalist with a master's degree in Environmental Impact Assessment, Auditing and Management. Fiona has approximately 20 years of experience in preparing Scoping Reports, Environmental Impact Assessment Reports and Environmental Statements for a variety of schemes in a number of different sectors including infrastructure (particularly roads and water) and development. She has notable experience in the delivery of multi-disciplinary projects through collaborative working models, taking projects from project inception to on site management and maintenance.

Ecological inputs have been provided by Pascal Sweeney M.Sc. He is an expert in ecological matters and the full spectrum of environmental assessment techniques, methodologies and statutes. Professionally, he is a member of relevant Institutes requiring the highest standards of professional competence and integrity. He is a member of the Institute of Ecology and Environmental Management, the Freshwater Biological Association and the Botanical Society of Britain and Ireland.

Pascal has practised for over 35 years, during which time he has undertaken complex Ecological Impact Assessments and Habitats Regulations Assessments for a variety of schemes. He has been involved with the proposed scheme since its inception and is familiar with both the proposed site and the full spectrum of environmental parameters which have influenced the design of the proposal.

2 Existing Drainage Infrastructure

2.1 Watercourses

The Springfield catchment consists of numerous watercourses and drains, which connect in a complex manner to drain the overall catchment. Figure 2.1 below outlines the locations of the key watercourses in Springfield and these are described in further detail below.

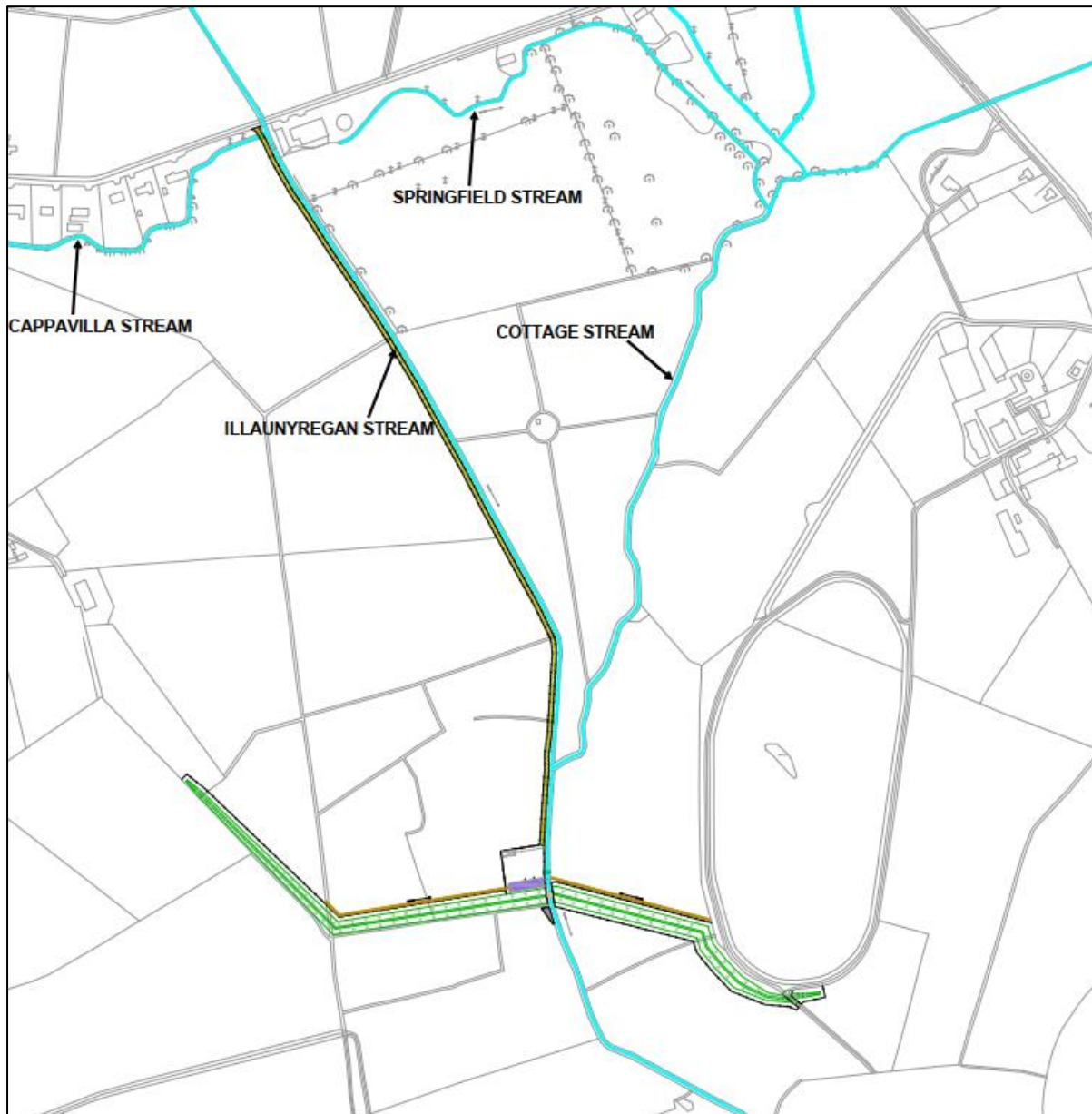


Figure 2.1: Springfield Catchment Watercourses

2.1.1 River Shannon

Springfield is located to the west of the River Shannon approximately 11 km downstream of the Parteen Weir (the River Shannon is identified in Figure 2.2 below and flows in the south east

of the area shown in Figure 2.1). The Shannon flows in a south-south west direction. When the capacity of the Ardnacrusa head race at Parteen Weir is reached due to high flow conditions, the excess flood flows are directed down the old River Shannon which results in the river overtopping its banks and encroaching into the Springfield catchment. Figure 2.2 shows the extent of the flood plain in Springfield arising from flooding of the River Shannon.

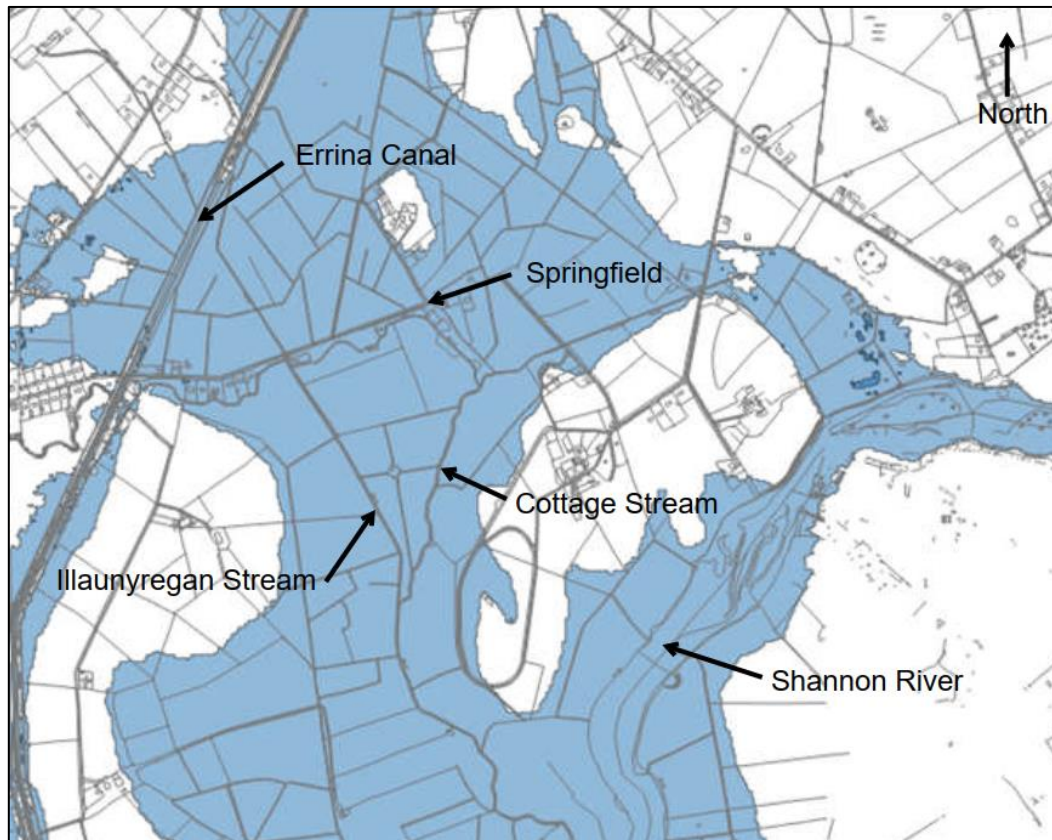


Figure 2.2 Flood Extent in Springfield for the 0.1% AEP event on the River Shannon

2.1.2 Illaunygagan Stream

A series of streams lie within the Springfield area. The Illaunygagan Stream is the main stream in the catchment and rises west of the Ardnacrusa Head Race. It flows under the head race and then under the Errina Canal in a south-east direction past Clonlara and the residential houses and other properties in Springfield. The Illaunygagan Stream continues further south downstream where it receives flows from the Cappavilla Stream and Cottage Stream before discharging to the River Shannon.

2.1.3 Springfield Stream

The Springfield Stream was originally a natural watercourse running from east to west through Springfield and then south to the Blackwater River. At some point in time, possibly when the Errina Canal was constructed, the stream was diverted to flow in the opposite direction (west to east) to join the Cottage Stream and now operates as a drainage ditch. The stream is dry for much of the year.

2.1.4 Cappavilla Stream

Cappavilla Stream flows west to east and discharges to the Illaunygren Stream. It has a very flat gradient and does not convey much water. There are typically very low flows in the stream. During all site visits water was observed to be standing still, including during heavy rainfall events indicating that it acts more like a drain rather than a watercourse.

2.1.5 Cottage Stream

Cottage Stream flows in a westerly direction from Clonlara Golf Course where it meets and receives flows from the Springfield stream before discharging to the Illaunygren stream. There are typically very low flows in the stream. Its upper reaches are often dry.

2.1.6 Land Drains

There are numerous land drains located in the Springfield area. These drains are low-lying and very flat and interconnected which means the area is far more prone to flooding. Fig 2.3 below outlines in blue some of the drains in the Springfield area in the vicinity of the proposed works.



Figure 2.3 Drains & streams highlighted in blue as digitised from OSi mapping

3 The Proposed Scheme

Following an assessment of options, the proposed scheme was identified as a cost beneficial preferred option for flood relief in Springfield (Options Report, 2020). The proposed scheme (Option 2) comprises the following components:

- the construction of an embankment in Springfield;
- raising of a small portion of land to cut-off overland flows near Clonlara Golf Course;
- the installation of a pumping platform to accommodate mobile tractor driven pumps; and
- the installation of 1 no. flood gate/penstock.

The proposed flood defence measures are shown in detail in **Appendix A** of this report and are described in the following sections.

3.1 Flood Defence Embankment

The proposed scheme involves the construction of an embankment of an approximate length of 850m. This embankment is to be constructed on agricultural land and will vary in height extending up to 2.75m at its highest point. The proposed embankment, by necessity, crosses the Illaunygren Stream. At this location a penstock will be constructed.

In the event of a flood in the River Shannon, the penstock in the stream will be closed to prevent inundation of the Springfield Catchment. In order to permit discharge from the defended areas during a flood event, it will be necessary to over-pump stream flows from Springfield to the Shannon floodplain. This will be achieved from a common pumping platform (see below).

3.2 Ground Raising

The proposed scheme includes for raising an area of ground of approximately 435m² with a maximum increase of 500mm. It is positioned crossing the Cottage Stream near to its source (within meters) to prevent shallow flood waters from the River Shannon entering the Springfield catchment. It is intended to regrade the existing stream in parts to provide cut-off.

3.3 Pumping Platform

The proposed pumping platform is to be located north of the embankment. Mobile pumps will over-pump flows from the Springfield catchment during a flood in the Shannon River when the proposed penstock is closed. Pumping is only required during events with a return period greater than 5-10 years in the River Shannon. Natural drainage as per the existing regime will be maintained otherwise.

3.4 Penstock

One penstock is proposed for the scheme. This penstock will be located at the pumping station site where the embankment meets the Illaunyregan Stream. The penstock will be closed during significant River Shannon events and stream flows from the Springfield catchment will be pumped over the embankment. A typical penstock/embankment arrangement is provided in Figure 3.1 below.



Figure 3.1 Example of Proposed penstock Gate

3.5 Effect on Water Levels in the River Shannon

A report has been produced to assess the impact of flood levels in the River Shannon should the scheme be constructed¹. The consequence of the proposed development will be a reduction in the area of the flood plain of the River Shannon. This is predicted to cause a minimal earlier onset and increased duration of flooding, however, the increase in peak flood levels in the Shannon will be insignificant for the proposed option. An inspection of the results for the 0.1% AEP event in the River Shannon indicates that the effect of removal of the floodplain caused by the proposed option is seen on the rising limb on the hydrograph, causing flooding to commence earlier in the hydrograph; however there is no significant effect on the estimated maximum water levels coinciding with the peak flow in the Shannon. The table below shows the peak flood level on the Shannon for the existing scenario and the proposed scheme option at the location of the works. No discernable difference was evident elsewhere.

Scenario	Peak Flood Level (m OD)
Existing (Baseline)	10.281
Option 2	10.284

¹ Springfield FRS – Stage 1 Report, June 2020

4 EIA Screening Methodology

4.1 EIA Legislation

The requirement for an EIA derives from Council Directive 85/337/EEC (as amended by Council Directives 97/11/EC, 2003/35/EC and 2009/31/EC) and as codified and replaced by Directive 2001/92/EU of the European Parliament and the Council on the assessment of the effects of certain public and private projects on the environment (and as amended in turn by Council Directive 2014/52/EU).

The mandatory requirement for an EIA is generally based on the nature or scale of a proposed development, as set out in EU Directive 85/337/EEC (as amended by Directive 97/11/EC).

The 2014 Directive defines the EIA as a process, the responsibility for which lies with the developer, to prepare an EIAR (Environmental Impact Assessment Report) for examination by the Competent Authority to allow reasonable conclusions to be drawn on the proposed development.

These requirements are transposed into Irish Law and included in the Planning and Development Regulations 2001-2020 as necessary. The Planning and Development Regulations 2001-2020 also identify certain types and scales of development, generally based on thresholds of scale, for which an EIA is mandatory.

In addition, there can be a requirement to undertake an EIA for 'sub-threshold' developments. In this respect, it is necessary to undertake a screening exercise to assess whether the proposed development requires an EIA (either mandatory or sub-threshold).

4.2 Overview of EIA Screening Methodology

EIA Screening is the first stage of the EIA process and determines whether the environmental impact of a proposed development or project will be such that an EIA is required. EIA Screening for the proposed scheme was undertaken with consideration of the following legislation and guidance:

- Planning and Development Acts, 2000 to 2020;
- Planning and Development Regulations, 2001 to 2020 (incl. Schedules 5 and 7);
- Guidance on EIA Screening, European Commission, 2001;
- Guidelines on the information to be contained in EIS, EPA, 2002;
- Draft Guidelines on the information to be contained in Environmental Impact Assessment Reports, EPA, 2017;
- Annex IIA of Council Directive 2014/52/EU;

- Annex III of Council Directive 2014/52/EU; and
- EU Directive 85/337/EEC (as amended by Directive 97/11/EC).

Screening for EIA requires a developer to provide the information listed in Annex IIA and to determine the need against the Criteria in Annex III to the 2014 Directive. The Planning and Development Regulations 2001 (as amended) also apply and must be considered as the legislation specifies projects in Schedule 5 of the Regulations that must undergo mandatory EIA.

If the project does not require a mandatory EIA under Schedule 5 of the Planning and Development Regulations 2001 (as amended), it may still be required under Article 103 of the Planning and Development Regulations 2001 (as amended) where the competent Authority considers that the development would be likely to have a significant effect on the environment.

4.2.1 Screening for Mandatory EIA

The mandatory requirement for an EIA is generally based on the nature or scale of a proposed development, as set out in EU Directive 85/337/EEC (as amended by Directive 97/11/EC). This is transposed into Irish Law in the Planning and Development Act 2000, as amended, and the Planning and Development Regulations 2001, as amended. These identify certain types and scales of development, generally based on thresholds of scale, for which EIA is mandatory.

The methodology for screening for mandatory EIA involved:

- An examination of the proposed scheme against Schedule 5 of the Planning and Development Regulations 2001 (as amended).
- A review of Schedule 7 of the Planning and Development Regulations 2001 (as amended) to check if the development would or would not be likely to have significant effects on the environment.
- A review of Annex III criteria of Council Directive 2014/52/EU.

The screening process for a mandatory EIA for the Springfield Flood Relief Scheme is described in Chapter 5 of this report.

4.2.2 Screening for Sub-threshold EIA

Whether a 'sub-threshold' development should be subject to EIA is determined by the likelihood that the proposed development would result in significant environmental effects. Significant effects may arise due to the nature of the proposed development, its scale or extent and its location in relation to the characteristics of the receiving area, particularly sensitive environments.

Schedule 7 of the Planning and Development Regulations 2001 (as amended) sets out the criteria for assessing whether or not a project will have “likely” and “significant” effects on the environment, in which case an EIA is also required. These criteria include the following:

- Characteristics of proposed development;
- Location of proposed development; and,
- Characteristics of potential impacts.

These criteria were considered for the proposed development under the topics recommended in EIA guidance documents. The screening process for a sub-threshold EIA for the Springfield Flood Relief Scheme is described in Chapter 6 of this report.

5 EIA Screening – Consideration of Requirement for Mandatory EIA

5.1 Assessment

This section addresses the need for a mandatory Environmental Impact Assessment in accordance with EU directives and the relevant Acts and Regulations that transpose them into Irish Law as described in Section 4 above.

The EU Screening Checklist was completed for the proposed scheme². This is shown in Table 5.1 below.

An examination of the proposed scheme against the relevant legislation was undertaken and is presented in Tables 5.2 – 5.4.

Table 5.1 EU Screening Checklist

Questions to be Considered	Yes / No / ? . Briefly describe	Is this likely to result in a significant effect? Yes/No/? – Why?
Brief Project Description: The project's purpose is to address flooding (major accident) in the locality. The proposed scheme comprises the following components (see Chapter 3 of this report for further information): <ul style="list-style-type: none"> the construction of an embankment in Springfield; raising of a small portion of land to cut-off overland flows near Clonlara Golf Course; the installation of a pumping platform to accommodate mobile tractor driven pumps; and the installation of 1 no. flood gate/slucice gate/penstock. 		
1. Will construction, operation or decommissioning of the Project involve actions which will cause physical changes in the locality (topography, land use, changes in waterbodies, etc)?	Yes. The proposed scheme involves the construction of an embankment approximately 850m long. This embankment is to be constructed mainly on agricultural land and will vary in height extending up to approximately 2.75m at its highest point. The proposed embankment is positioned so that it crosses the Illaunryegan Stream. The proposed scheme also includes for raising an area of ground of 435m ² with a maximum increase of 500mm. It is positioned at the head of Cottage Stream near to its source (within meters) to prevent shallow flood waters from the River Shannon entering the Springfield catchment.	No. The footprint of the proposed works is relatively small (site area is approx. 7.78ha and 2.43ha footprint of permanent works). There will be a minor short term adverse impact on a small number of local people during construction. These people are represented by a local community group and are aware of the scheme and are encouraging the Local Authority to progress the scheme to protect their homes and properties from flooding.
2. Will construction or operation of the Project use natural resources such as land, water, materials or energy, especially any resources	Yes. However, the scheme is small in nature and will not utilise significant natural resources or generate significant volumes of waste.	No. The use of natural resources such as aggregates, soil materials and energy will be required during the construction and operational stages of the proposed scheme. It is

² https://ec.europa.eu/environment/eia/pdf/EIA_guidance_Screening_final.pdf

Questions to be Considered	Yes / No / ? . Briefly describe	Is this likely to result in a significant effect? Yes/No/? – Why?
which are non-renewable or in short supply?		unlikely that imported material will surpass 20,000m ³ and bulk excavation is anticipated to be less than 5,000m ³ . Where technically possible, it is planned to balance these materials. The total use of natural materials and waste is not considered to be significant.
3. Will the Project involve use, storage, transport, handling or production of substances or materials which could be harmful to human health or the environment or raise concerns about actual or perceived risks to human health?	No.	N/A.
4. Will the Project produce solid wastes during construction or operation or decommissioning?	Yes. Please refer to question 2 above.	No. Please refer to question 2 above.
5. Will the Project release pollutants or any hazardous, toxic or noxious substances to air?	No.	N/A.
6. Will the Project cause noise and vibration or release of light, heat energy or electromagnetic radiation?	Yes. There may be short-term impacts to during the construction phase caused by excavation activities, but these will be limited to plant operations.	No. Site is in a sparsely populated agricultural area.
7. Will the Project lead to risks of contamination of land or water from releases of pollutants onto the ground or into surface waters, groundwater, coastal waters or the sea?	Yes. It is possible that oil or fuel spillage could occur that might contaminate (very locally) land and water courses from the plant used during the construction.	No. The risk of occurrence is very low and will be safeguarded against in any event as per normal environmental management measures.
8. Will there be any risk of accidents during construction or operation of the Project which could affect human health or the environment?	Yes. Typical onsite health and safety risk will be present such as moving plant, excavations, work near water etc. which puts human health of the workers at risk. No environmental risk.	No. The risk is limited to typical onsite health and safety risk and there is no risk to the wider community.
9. Will the Project result in social changes, for example, in demography, traditional lifestyles, employment?	No.	N/A.
10. Are there any other factors which should be considered such as consequential development which could lead to environmental effects or the potential for cumulative impacts with other existing or planned activities in the locality?	No.	N/A.
11. Are there any areas on or around the location which are protected under international or national or local legislation for their ecological, landscape, cultural or	Yes. There are a number of European Protected Sites within 15km of the scheme, designated for their ecological value.	No. An appropriate assessment Natura Impact Statement has been completed and it can be concluded on the basis of objective scientific information that the proposed

Questions to be Considered	Yes / No / ? . Briefly describe	Is this likely to result in a significant effect? Yes/No/? – Why?
other value, which could be affected by the project?	<p>There are no designations with regard to landscape value in the immediate vicinity of the scheme.</p> <p>Two Recorded Monuments (Enclosure CL063-021 approx. 308m from the development and Castle CL053-044 approx. 592m from the development) are located within the general vicinity of the proposed development, while neither are in close proximity to any elements of the proposed design.</p>	<p>scheme will not give rise to significant effects (see chapter 6 of this report for further information).</p> <p>With regard to the cultural heritage aspects, no significant effects are anticipated.</p>
12. Are there any other areas on or around the location which are important or sensitive for reasons of their ecology e.g. wetlands, watercourses or other waterbodies, the coastal zone, mountains, forests or woodlands, which could be affected by the project?	See above.	See above.
13. Are there any areas on or around the location which are used by protected, important or sensitive species of fauna or flora e.g. for breeding, nesting, foraging, resting, overwintering, migration, which could be affected by the project?	See above.	See above.
14. Are there any inland, coastal, marine or underground waters on or around the location which could be affected by the project?	See above.	See above.
15. Are there any areas or features of high landscape or scenic value on or around the location which could be affected by the project?	No.	N/A.
16. Are there any routes or facilities on or around the location which are used by the public for access to recreation or other facilities, which could be affected by the project?	No.	N/A.
17. Are there any transport routes on or around the location which are susceptible to congestion or which cause environmental problems, which could be affected by the project?	No.	N/A.
18. Is the project in a location where it is likely to be highly visible to many people?	No.	N/A.

Questions to be Considered	Yes / No / ? . Briefly describe	Is this likely to result in a significant effect? Yes/No/? – Why?
19. Are there any areas or features of historic or cultural importance on or around the location which could be affected by the project?	No. No national monuments or protected structures are situated within footprint of the works. The nearest Record of Protected Structures (RPS) site is over 300m away.	N/A.
20. Is the project located in a previously undeveloped area where there will be loss of greenfield land?	Yes. The scheme is located on agricultural land.	No. The land is not considered environmentally sensitive and the footprint of the proposed works is relatively small (approx. 2.43ha).
21. Are there existing land uses on or around the location e.g. homes, gardens, other private property, industry, commerce, recreation, public open space, community facilities, agriculture, forestry, tourism, mining or quarrying which could be affected by the project?	Yes. The scheme is located on agricultural land in a sparsely populated rural area. There are a few scattered dwellings in the vicinity of the scheme.	No. There will be a minor short term adverse impact on a small number of local people during construction. These people are represented by a local community group and are aware of the scheme and are encouraging the Local Authority to progress the scheme to protect their homes and properties from flooding.
22. Are there any plans for future land uses on or around the location which could be affected by the project?	No.	N/A.
23. Are there any areas on or around the location which are densely populated or built-up, which could be affected by the project?	No.	N/A.
24. Are there any areas on or around the location which are occupied by sensitive land uses e.g. hospitals, schools, places of worship, community facilities, which could be affected by the project?	No.	N/A.
25. Are there any areas on or around the location which contain important, high quality or scarce resources e.g. groundwater, surface waters, forestry, agriculture, fisheries, tourism, minerals, which could be affected by the project?	Yes. Applicable resources addressed in Question 11 above.	N/A.
26. Are there any areas on or around the location which are already subject to pollution or environmental damage e.g. where existing legal environmental standards are exceeded, which could be affected by the project?	No.	N/A.

Questions to be Considered	Yes / No / ? . Briefly describe	Is this likely to result in a significant effect? Yes/No/? – Why?
27. Is the project location susceptible to earthquakes, subsidence, landslides, erosion, flooding or extreme or adverse climatic conditions e.g. temperature inversions, fogs, severe winds, which could cause the project to present environmental problems?	No.	N/A.
<p>Summary of features of the project and of its location indicating the need for EIA.</p> <p>Based on the above and having regard to the scale and nature of the project and based on a considered assessment taking account of all available information, the overall probability of impacts on the receiving environment arising from the proposed scheme (during the construction or operational phases) is considered very low. No likely significant, long-term, and permanent negative environmental impacts have been identified in the course of the screening process. Further information is provided within the tables below.</p>		

Table 5.2 Planning Development Regulations 2001-2019 Schedule 5 Review

Schedule 5 Reference	Description	Comment
Part 1 Section 15	<i>Dams and other installations designed for the holding back or permanent storage of water, where a new or additional amount of water held back or stored exceeds 10 million cubic metres.</i>	There will be no permanent storage area or impoundment of water. The need for an EIA is not triggered by this class of development.
Part 2 Section 1(c)	<i>Development consisting of the carrying out of drainage and/or reclamation of wetlands where more than 2 hectares of wetlands would be affected.</i>	<i>Wetlands are defined as "biogeochemical functions are dependent on inundation or saturated that occurs annually".</i> The areas to be defenced do not flood (statistically) on an annual basis and hence, are not classified as wetlands under the regulations. Therefore, no wetlands are affected. The need for an EIA is not triggered by this class of development.
Part 2 Section 1(d)(lii)	<i>Deforestation for the purpose of conversion to another type of land use, where the area to be deforested would be greater than 10 hectares of natural woodlands or 70 hectares of conifer forest.</i>	Development does not require deforestation. The need for an EIA is not triggered by this class of development.
Part 2 Section 10(dd)	<i>All private roads which would exceed 2000 metres in length.</i>	A private road of approx. 920m in length will be constructed. The need for an EIA is not triggered by this class of development.
Part 2 Section 10(f)(i)	<i>Inland waterway construction not included in Part 1 of this Schedule which would extend over a length exceeding 2 kilometres.</i>	The works do not include any inland waterway construction. Two existing drains will be diverted at the embankment location to an alternative route, but in total these are less than 2km. The need for an EIA is not triggered by this class of development.
Part 2 Section 10(f)(ii)	<i>Canalisation and flood relief works, where the immediate contributing sub-catchment of the proposed works (i.e. the difference between the contributing catchments at the upper and lower extent of the works) would exceed 100 hectares or where more than 2 hectares of wetland would be affected or where the length of river channel on which works are proposed would be greater than 2 kilometres.</i>	The works do not constitute canalisation. The embankment runs perpendicular to the Illaunygren Stream and as such the impact of the sub-catchment is limited to the footprint of the embankment and far less than 100 hectares. There will be no wetlands affected. The length of watercourses impacted is less than 2km. The need for an EIA is not triggered by this class of development.
Part 2 Section 10(g)	<i>Dams and other installations not included in Part 1 of this Schedule which are designed to hold water or store it on a long-term basis, where the new or extended area of water impounded would be 30 hectares or more.</i>	During a flood, the embankment will prevent inundation of flood waters to the Springfield area from the River Shannon. This is not considered to be a dam to hold or store water. The duration of flood event is not expected to exceed 42 days. There is no new or extended area of impoundment.

Schedule 5 Reference	Description	Comment
		The need for an EIA is not triggered by this class of development.
Part 2 Section 14	<i>Works of demolition carried out in order to facilitate a project listed in Part 1 or Part 2 of this Schedule where such works would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.</i>	No demolition works are proposed. Refer to assessment of Schedule 7 below. The need for an EIA is not triggered by this class of development.
Part 2 Section 14	<i>Any project listed in this Part which does not exceed a quantity, area or other limit specified in this Part in respect of the relevant class of development but which would be likely to have significant effects on the environment, having regard to the criteria set out in Schedule 7.</i>	Refer to assessment of Schedule 7 below.

Table 5.3 Planning Development Regulations 2001-2015 Schedule 7 Review

Schedule 7	Description	Comment
Section 1	<p><i>Characteristics of proposed development</i> <i>The characteristics of proposed development, in particular:</i></p> <ul style="list-style-type: none"> – the size of the proposed development, – the cumulation with other proposed development, – the nature of any associated demolition works, – the use of natural resources, – the production of waste, – pollution and nuisances, – the risk of accidents, having regard to substances or technologies used. 	<p>The footprint of the proposed works is relatively small (approx. 2.43ha). Currently, there are no other relevant planning applications within the vicinity of the proposed scheme.</p> <p>One dwelling has been granted planning in the Springfield area (File No.1988) which is a minimum distance of 175m from the proposed works footprint. The cumulative impact with the scheme works is not significant.</p> <p>No demolition works are proposed as part of the proposed scheme.</p> <p>The scheme is small in nature and will not utilise significant natural resources or generate significant volumes of waste. The use of natural resources such as aggregates, soil materials and energy will be required during the construction and operational stages of the proposed scheme. While exact quantities of materials/resources are not known at this stage, it is unlikely that imported material will not surpass 20,000m³ and bulk excavation is anticipated to be less than 5,000m³. Where technically possible, it is planned to balance these materials. The total use of natural materials and waste is not considered to be significant.</p> <p>The scheme is not considered to pose any likelihood of significant negative effects (pollution/nuisance) on the environment. The greatest risk is pollution and sediment mobilisation during the construction phase which is readily mitigated by the application of appropriate standard construction methods. During operation, refuel of pumps will be the key risk in relation to environmental impact, but again appropriate standard refuelling methods will mitigate the risk. The majority of the material used in the construction will be inert materials and it is not anticipated that there is a significant risk of an accident based on the technologies and substances used.</p> <p>The need for an EIA is not triggered by these classes of development.</p>

Schedule 7	Description	Comment
Section 2	<p>Location of proposed development</p> <p><i>The environmental sensitivity of geographical areas likely to be affected by proposed development, having regard in particular to:</i></p> <ul style="list-style-type: none"> - the existing land use, - the relative abundance, quality and regenerative capacity of natural resources in the area, - the absorption capacity of the natural environment, paying particular attention to the following areas: <ul style="list-style-type: none"> (a) wetlands, (b) coastal zones, (c) mountain and forest areas, (d) nature reserves and parks, (e) areas classified or protected under legislation, including special protection areas designated pursuant to Directives 79/409/EEC and 92/43/EEC, (f) areas in which the environmental quality standards laid down in legislation of the EU have already been exceeded, (g) densely populated areas, (h) landscapes of historical, cultural or archaeological significance. 	<p>Existing land use is agricultural and is not considered environmentally sensitive.</p> <p>The use of natural resources such as aggregates and energy will be required during the construction and operational stages of the proposed scheme. As Section 1 above, the total use of natural materials is not considered to be significant.</p> <p>The area does not consist of wetlands, coastal, mountainous, forest or a nature reserve/park.</p> <p>The Appropriate assessment (AA) screening has identified that the development site is not within a Natura 2000 site although it is hydrologically linked to Special Area of Conservation (SAC) 002165 (Lower River Shannon SAC) and the River Shannon and River Fergus Estuaries Special Protected Area (SPA 004077). The AA screening concluded that the proposed development would have neither a positive nor negative effect on the targets set in the Conservation Objectives for the various qualifying interests of SAC 002165 or SPA 004077.</p> <p>There are no Environmental Quality Standards (EQS) set for the watercourses on which the works are proposed. However, there is 'good' status assigned to the watercourse immediately downstream (River Shannon) with a target to protect this status. The development will not exacerbate any of the parameters for which the at-risk status is assigned.</p> <p>The proposed scheme lies within a sparsely populated rural area.</p> <p>No national monuments or protected structures are situated within footprint of the works. The nearest Record of Protected Structures (RPS) site is over 300m away.</p> <p>The need for an EIA is not triggered by these classes of development.</p>

Schedule 7	Description	Comment
Section 3	<p>Characteristics of potential impacts</p> <p><i>The potential significant effects of proposed development in relation to criteria set out under paragraphs 1 and 2 above, and having regard in particular to:</i></p> <ul style="list-style-type: none"> <i>- the extent of the impact (geographical area and size of the affected population),</i> <i>- the transfrontier nature of the impact,</i> <i>- the magnitude and complexity of the impact,</i> <i>- the probability of the impact,</i> <i>- the duration, frequency and reversibility of the impact.</i> 	<p>The footprint of the proposed works is relatively small (site area is approx. 7.78ha and 2.43ha footprint of permanent works).</p> <p>There will be a minor short term adverse impact on a small number of local people during construction. These people are represented by a local community group and are aware of the scheme and are encouraging the Local Authority to progress the scheme to protect their homes and properties from flooding.</p> <p>The development is not in a location.</p> <p>The magnitude is small and its complexity is relatively simple.</p> <p>The probability of impacts is considered to be extremely low.</p> <p>Construction stage impacts will occur over a period of 8-12 months and while permanent will be mitigated for and are fully reversible if the scheme was to be decommissioned. Operational stage impacts are predicted to be rare (>1 in 5 years), but may last for a duration of 6 weeks. Again these are fully reversible.</p> <p>The need for an EIA is not triggered by these criteria.</p>

Table 4.4 Council Directive 2014/52/EU Annex III Review

Annex III	Requirement	Comment
Section 1	Characteristics of projects <i>The characteristics of projects must be considered, with particular regard to:</i> <i>(a) the size and design of the whole project;</i> <i>(b) cumulation with other existing and/or approved projects;</i> <i>(c) the use of natural resources, in particular land, soil, water and biodiversity;</i> <i>(d) the production of waste;</i> <i>(e) pollution and nuisances;</i> <i>(f) the risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge;</i> <i>(g) the risks to human health (for example due to water contamination or air pollution).</i>	<p>Items (a) – (f) are addressed in Schedule 7, Section 1 above.</p> <p>The impact of climate change will necessitate potential future works, but it is not considered that this would change the nature of this assessment.</p> <p>The project's purpose is to address flooding (major accident) in the locality. The project will reduce the risk of such accidents and will be adaptable to climate changes in accordance with OPW policy. The project will also reduce the risk of point source contamination of the watercourse during floods and septic tanks and farm slurry pits will be protected by the development. This will improve water quality.</p> <p>The need for an EIA is not triggered by these criteria.</p>
Section 2	Location of projects <i>As per section 3 of Schedule 7 the planning regulations plus:</i>	<p>See table 5.2 above.</p> <p>The need for an EIA is not triggered by this criterion.</p>
Section 3	Type and characteristics of the potential Impact <i>As per section 3 of Schedule 7 the planning regulations plus:</i> <i>h) the possibility of effectively reducing the impact.</i>	<p>See table 5.2 above. Construction stage impacts will occur over a period of 8-12 months and while permanent will be mitigated for and are fully reversible if the scheme was to be decommissioned. Operational stage impacts are predicted to be rare (>1 in 5 years), but may last for a duration of 6 weeks. These are fully reversible.</p> <p>The need for an EIA is not triggered by this criterion.</p>

6 Sub Threshold Development Requiring EIA – Criteria to Determine Significance

The EIA Directive comments at paragraph 27 that *“The Screening procedure should ensure that an environmental impact assessment is only required for projects likely to have significant effects on the environment.”*

As outlined in Section 5 above, the proposed scheme does not exceed the threshold for mandatory EIA. Therefore, a sub-threshold assessment of the need for EIA was also undertaken.

6.1 Criteria to Determine Significance

Having regard to the guidance documents as set out in Section 4.1 and in order to inform this screening evaluation, consideration was given to environmental sensitivities in the area and to the potential for impacts on particular aspects of the environment based upon the relevant findings from a desk-based study and a site walkover survey.

This section describes the aspects of the environment likely to be significantly impacted by the project and has regard to the Environmental Topics as set out in the EIA Directive:

- population, material assets and human health;
- biodiversity;
- landscape and visual
- land and soil;
- water;
- air and climate;
- landscape and cultural heritage, including architectural and archaeological aspects; and
- the interrelationship between the environmental topics.

A summary of this assessment and likely impacts, if any, on the environment by the implementation of the proposed development is described below and summarised in Table 6-1.

For further information on the best practice measures which are to be undertaken to ensure that the proposed construction works can be delivered in a logistical, sensible and safe sequence to protect the environment, please refer to the Outline CEMP which is included as part of the Springfield FRS planning.

6.2 Potential Impacts and Effects

6.2.1.1 Population, Materials, Assets and Human Health

A proposal of this nature has the potential to impact positively on population, material assets and human health by way of reducing the risk of flooding.

The proposed scheme lies within a sparsely populated rural area. There will be some temporary negative effects to properties and residents in and around construction zones from increased construction traffic, dust, noise and vibration. During construction, disturbance to local roads and paths will be managed in line with best practice to minimise effects upon the local population.

6.2.1.2 Biodiversity

A study has been carried out to inform the decision making process regarding options in the works to be undertaken. European sites were identified for consideration in the study based on the presence of qualifying features within the proposed scheme's Zone of Influence and potential connectivity to European sites. The following European sites are within 15km of the proposed development:

- SAC 002165 (Lower River Shannon Special Area of Conservation (SAC)), to which there is a direct fluvial connection from the proposed development site.
- SAC 001013 (Glenomra Woods SAC), to which the proposed development has no direct physical link.
- SAC 002312 (Slieve Bernagh Bog SAC), to which the proposed development has no direct physical link.
- SAC 000030 (Danes Hill Pulnalecka SAC), to which the proposed development has no direct physical link.
- SAC 001432 (Glenstal Woods SAC), to which the proposed development has no direct physical link.
- SPA 004165 (Slievefelim & Silvermines mountains Special Protected Area (SPA)), to which the proposed development has no direct physical link.
- SPA 004077 (River Shannon and River Fergus Estuaries SPA), to which there is a fluvial connection from the proposed development site.

The proposed development has no direct physical link to any of the above listed SACs and SPAs with the exception of sites SAC 002165 and SPA 004077. The paragraphs below provide further information with regard to these sites.

6.2.1.2.1 SAC 002165

The qualifying interests of SAC 002165 are as follows;

Habitats:

- Floating River Vegetation (Habitat Code 3260)
- Alluvial Wet Woodlands (Habitat Code 91E0)
- Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinia caerulea) (Habitat Code 6410)

A number of other habitats are found in saline conditions, downstream of the potential impact zone of proposed development which have not been listed here. Please refer to the AA NIS Report which accompanies the documentation prepared as part of Clare County Council's statutory requirements under Part 10 of the Planning and Development Regulations 2001-2019 for further details.

Species:

- Atlantic Salmon (*Salmo salar*) (Species Code 1106)
- Sea Lamprey (*Petromyzon marinus*) (Species Code 1095)
- Brook Lamprey (*Lampraea planeri*) (Species Code 1096)
- River Lamprey (*Lampraea fluviatilis*) (Species Code 1099).
- Otter (*Lutra lutra*) (Species Code 1355).
- Freshwater Pearl Mussel (*Margaritifera margaritifera*) (Species Code 1029)
- Bottle-nosed Dolphin (*Tursiops truncatus*) (Species Code 1349)

For further information on the qualifying species listed above, please refer to the AA NIS Report which accompanies the Part 10 Planning Documents for the Springfield FRS.

In relation to SAC 002165 (Lower River Shannon Special Area of Conservation), the AA NIS Report stated that "... it can be concluded on the basis of objective scientific information that the proposed scheme will not give rise to significant effects on the qualifying interests or integrity of The Lower River Shannon SAC."

6.2.1.2.2 SPA 004077

The Features of Interest for SPA 004077 are as follows;

- Cormorant (*Phalacrocorax carbo*) [A017]

- Whooper Swan (*Cygnus cygnus*) [A038]
- Lightbellied Brent Goose (*Branta bernicla hrota*) [A046]
- Shelduck (*Tadorna tadorna*) [A048]
- Wigeon (*Anas penelope*) [A050]
- Teal (*Anas crecca*) [A052]
- Pintail (*Anas acuta*) [A054]
- Shoveler (*Anas clypeata*) [A056]
- Scaup (*Aythya marila*) [A062]
- Ringed Plover (*Charadrius hiaticula*) [A137]
- Golden Plover (*Pluvialis apricaria*) [A140]
- Grey Plover (*Pluvialis squatarola*) [A141]
- Lapwing (*Vanellus vanellus*) [A142]
- Knot (*Calidris canutus*) [A143]
- Dunlin (*Calidris alpina*) [A149]
- Black-tailed Godwit (*Limosa limosa*) [A156]
- Bar-tailed Godwit (*Limosa lapponica*) [A157]
- Curlew (*Numenius arquata*) [A160]
- Redshank (*Tringa totanus*) [A162]
- Greenshank (*Tringa nebularia*) [A164]
- Black-headed Gull (*Chroicocephalus ridibundus*) [A179]
- Wetland and Waterbirds [A999]

For further information on the qualifying species listed above, please refer to the AA NIS Report which accompanies the Part 10 Planning Documents for the Springfield FRS.

In relation to SPA 004077 (River Shannon and River Fergus Estuaries SPA) and given the distance of the site from the proposed works, the AA NIS Report stated that ‘.... it can be concluded on the basis of objective scientific information that the proposed scheme will not give rise to significant effects on the features of interest or integrity of River Shannon and River Fergus Estuaries SPA.’

6.2.1.2.3 Summary

The assessment has shown that given the suggested mitigation measures and based on the best scientific knowledge available, there will be no significant adverse impact on the Lower River Shannon SAC or the River Shannon and River Fergus Estuaries SPA as a result of the proposed scheme. It is concluded that the conservation objectives and integrity of the SAC and SPA will not be adversely affected by the proposed scheme.

Similarly, and based on the foregoing, an EIA is not required. The AA NIS Report accompanies the Part 10 Planning Documents for the Springfield Flood Relief Scheme.

6.2.1.3 Land and Soil

The use of natural resources such as aggregates and energy will be required during the construction and operational stages of the proposed scheme. While exact quantities of materials/resources are not known as this stage (detailed amounts will be quantified in detailed design), the estimated quantities referred to in Table 5.1 above are not considered to be significant in the context of environmental effects. Minimal impacts are anticipated to soils and geology.

The land on which the development site is situated is currently in use as agricultural land and the proposed change in use will not negatively affect the environment.

6.2.1.4 Water

The site of the proposed development crosses small watercourses, at the nearest point approximately 390m upstream of SAC 002165. Throughout the period of the works, in order to comply with national legislation that prohibits any 'polluting matter' to enter 'waters', e.g. Fisheries (Consolidation) Act 1959, Environmental Protection Agency Acts 1992 and 2003, and Local Government (Water Pollution) Acts 1977 and 1990, standard operational procedures, both published and unpublished, will be adhered to. The adherence to these environmental protection measures would be implemented on-site irrespective of the presence of a European designated site downstream.

Watercourses can be sensitive to pollution, particularly suspended solids released into the water course during the construction phase of the project. Aquatic life has the potential to be disturbed during construction, be it physically obstructed from migrating through the waterbody, and be impacted by accidental pollution incidents/suspension of solids. However, construction within water bodies is limited to the construction of the penstock and any impact would be of a very short-term nature. During the construction phase, potential impacts will be managed utilising standard best practice site procedures. Even if these measures were not implemented, it is not considered that the development has potential to impact significantly on the qualifying interests of the SAC.

Refer also to the Outline CEMP which accompanies the Part 10 Planning Documents and the additional measures to protect the SAC outlined in the Appropriate Screening Natura Impact Statement.

6.2.1.5 Air and Climate

The operational phase will not result in any impacts in relation to air and climate.

There may be short-term impacts to air quality during the construction phase of the proposed Scheme caused by increased construction traffic and excavation and stockpiling activities. Management measures will be implemented to control potential impacts.

Refer also to the Outline CEMP which accompanies the Part 8 Planning Documents.

6.2.1.6 Landscape and Visual

The site of the proposed works is agricultural land. From a landscape and visual perspective, the only potentially obstructive component of the proposed works is the embankment which will be 2.75m high at its highest point. The embankment will be approx. 390m from the nearest public road and approx. 500m from the nearest private dwelling. As such, it will have a minimum visual impact. Furthermore, grass will be planted on the embankment once constructed, further reducing its visual impact.

It is not anticipated that the proposed Scheme will result in significant effects to the surrounding landscape.

6.2.1.7 Landscape and Culture Heritage, including Architectural and Archaeological Aspects

The site for the proposed scheme is not situated within a Historic Town.

No National Monuments or Protected Sites are situated within the study area. Two Recorded Monuments (Enclosure CL063-021 approx. 308m from the development and Castle CL053-044 approx. 592m from the development) are located within the general vicinity of the proposed development, while neither are in close proximity to any elements of the proposed design.

The locations of these recorded monuments relative to the proposed site boundary are shown in figure 6.1 below.

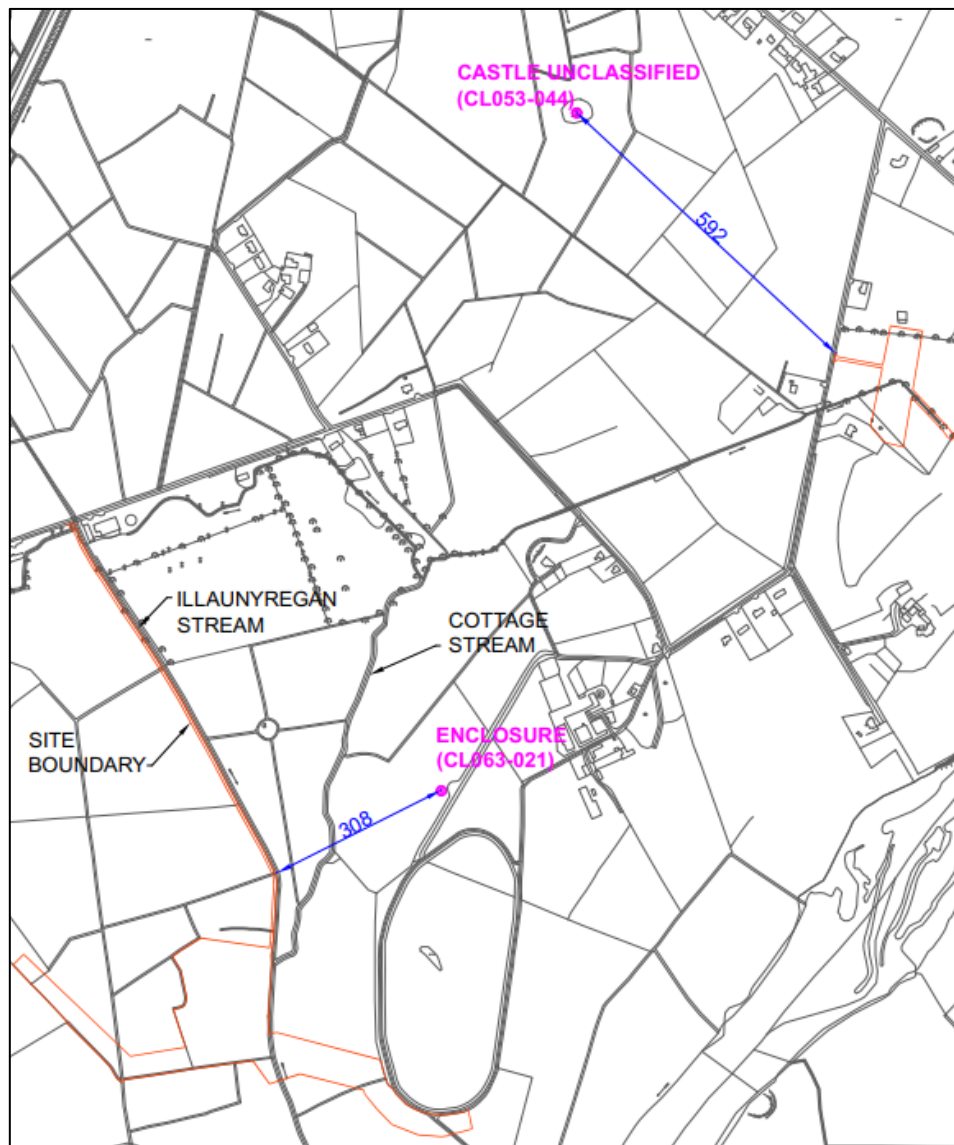


Figure 6.1 Recorded Monuments

As illustrated in Figure 6.1, none of the proposed works are located within the zone of archaeological potential of either of the recorded monuments. The site boundary is a distance of 308m from the nearest recorded monument. It is not anticipated that the proposed scheme will result in significant effects to the surrounding landscape, cultural heritage, architectural or archaeological features in the area.

6.2.1.8 Cumulative effects and interactions

Cumulative impacts can be defined as the additional changes caused by a proposed development in conjunction with other similar developments, or as the combined effect of a set of developments, taken together.

It is considered in the case of the proposed Scheme that the most significant potential interaction is that between water quality and aquatic ecology. Siltation and therefore eutrophication are likely if a pathway is allowed between the proposed works and the

surrounding watercourses. This predicted impact will be fully managed for via the implementation of standard practice construction methodologies. It should be noted that the majority of the proposed works will be carried out outside of the local watercourses. The works which will be carried out within the Illaunygagan stream will be carried out in the dry, with temporary river diversions in place. As such the likelihood and severity of construction phase impacts is negligible.

The Clare County Council website shows a single residential planning application in the townland of Springfield since 2013. No other proposed plans or projects that could add to the cumulative impact are known.

There are numerous other potential developments along the Shannon that may or may not become developments in the future. These have been assessed at a high level in the CFRAM study (Shannon Upper and Lower River Basin (UoM 25_26) Catchment Flood Risk Assessment and Management Study (CFRAMS)).

The proposed development will not, on its own, negatively impact on the environment of the site and/or its surrounds. Neither will it contribute to cumulative impacts on other known development sites.

Table 6.1 Summary of sub-threshold screening assessment

Topic	Likely significant effects	Comment
Population, materials assets and human health	Construction traffic, dust, noise and vibration	These effects will be temporary and localised within a sparsely populated area. Furthermore, they will be managed in line with standard practice to minimise effects upon the local population.
Biodiversity	A fluvial link exists between the proposed works and SAC002165 and SPA004077.	The assessment has shown that there will be no significant adverse impact on the Lower River Shannon SAC or the River Shannon and River Fergus Estuaries SPA as a result of the proposed scheme. It is concluded that the conservation objectives and integrity of the SAC and SPA will not be adversely affected by the proposed scheme.
Land and soil	None identified	N/A
Water	Potential for siltation/eutrophication	The works will generally be carried out outside of the watercourses. Any works within the watercourses will be carried out in the dry to minimise the likelihood of siltation. The likelihood will be further minimised by the measures outlined in the Outline CEMP and as stated in the NIS.
Air and climate	None identified	N/A
Landscape and Visual	None identified	N/A
Landscape and cultural heritage, including architectural and archaeological aspects	None identified	N/A
Cumulative effects and interactions	None identified	N/A

7 Conclusion

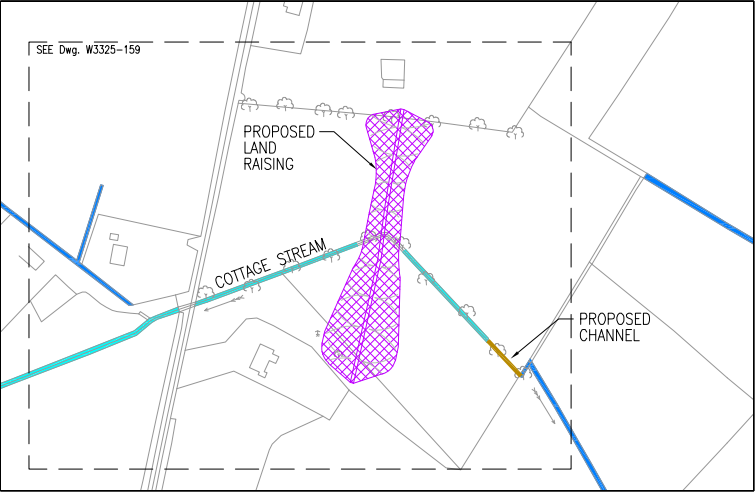
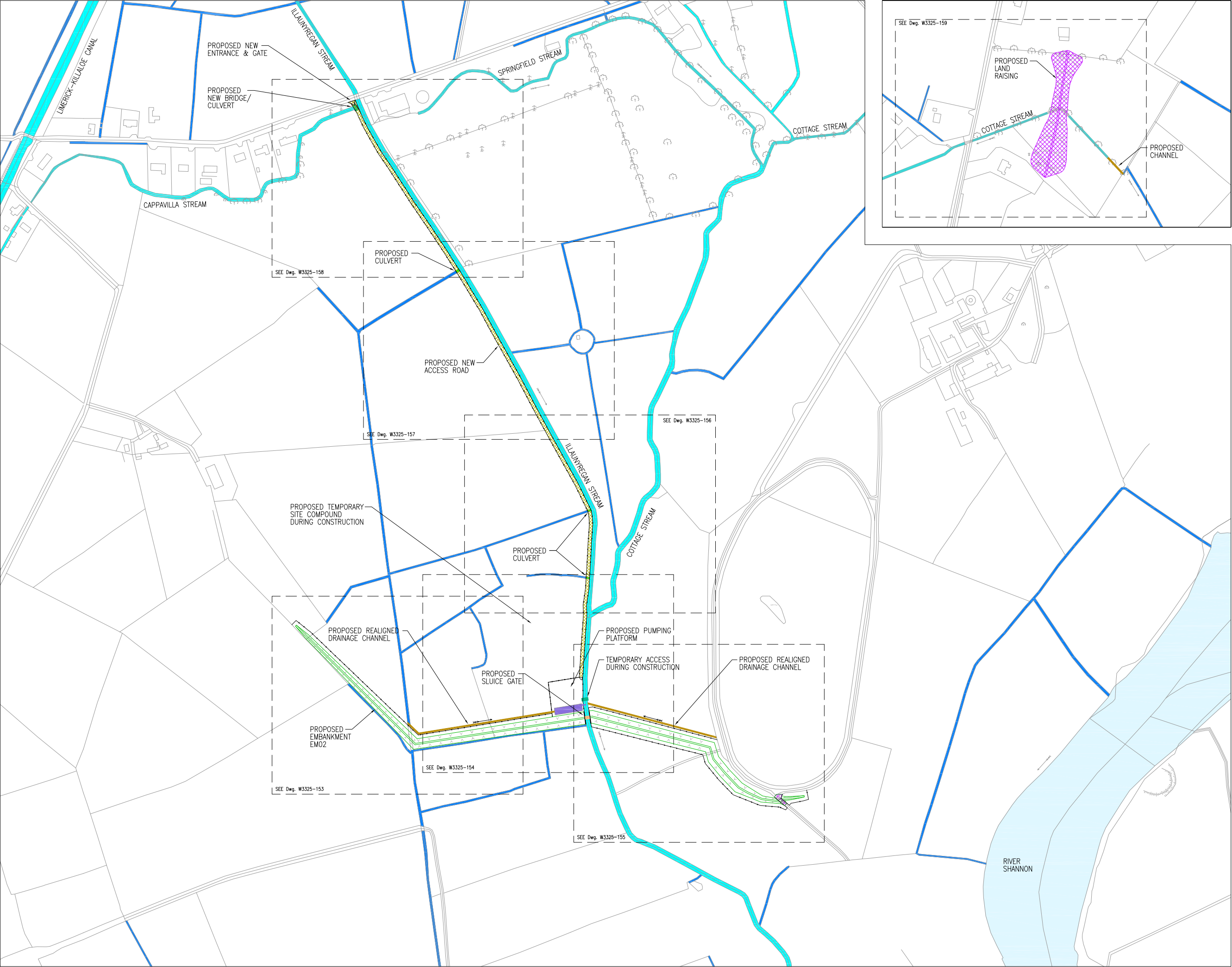
This EIA screening assessment report has reviewed if an EIA is required for the Springfield Flood Relief Scheme. The proposed scheme does not meet the mandatory EIA criteria prescribed in Annex I in the EIA Directive (Schedule 5, Part 1 of the Planning and Development Regulations 2001, as amended). Therefore, a mandatory EIA is ruled out.

Having regard to the scale and nature of the project and based on a considered assessment taking account of all available information, including proposed environmental management measures described in the Outline Construction Environmental Management Plan (CEMP) which are routine and tested, the overall probability of impacts on the receiving environment arising from the proposed scheme (during the construction or operational phases) is considered very low. No likely significant, long-term, and permanent negative environmental impacts have been identified in the course of the screening process.

All possible risks of impact on the receiving environment have been identified in the screening report and no significant environmental impacts are anticipated. Standard industry environmental management systems in accordance with the CEMP will also be in place, providing additional environmental safeguarding against effects to the receiving environment.

Thus, it is recommended that it is not necessary for the proposed project to proceed to a sub threshold Environmental Impact Assessment.

Appendix A – Scheme Layout



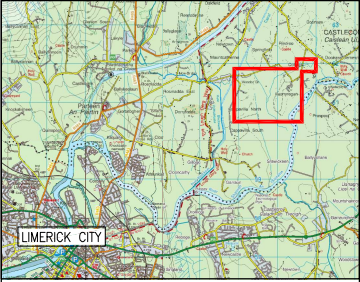
GENERAL NOTES



NOTES:
1. ORDNANCE SURVEY IRELAND LICENCE NUMBER EN0064809

- LEGEND:
- EXISTING RIVER
 - EXISTING STREAM
 - EXISTING DRAINAGE CHANNEL
 - PROPOSED ACCESS ROAD
 - PROPOSED BRIDGE
 - PROPOSED CHANNEL
 - PROPOSED CULVERT
 - PROPOSED SLUICE GATE
 - PROPOSED EMBANKMENT
 - PROPOSED GROUND RAISING
 - PROPOSED PUMPING LAGOON
 - PROPOSED PUMPED PIPELINE

SITE LOCATION



P1	08.05.20	ISSUE FOR PLANNING	LT	SH	KT
P0	06.03.20	ISSUE FOR PLANNING	LT	SH	KT
Rev	Date	Description	By	Chk	App

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CLIENT
CLARE COUNTY COUNCIL

PROJECT
SPRINGFIELD FLOOD RELIEF SCHEME

DRAWING TITLE
SITE LAYOUT PLAN – OPTION 2
KEY PLAN

STATUS
FOR PLANNING

Date: 03.03.20	Scale: 1:2500	Drawn: LT	Chk: SH	App: KT
Project No: W3325	Org. No: W3325-152			Rev: P1