



Mungret Link Streets Project

Environmental Impact Assessment Screening

20 May 2019

Mott MacDonald
South Block
Rockfield
Dundrum
Dublin 16 D16 R6V0
Ireland

T +353 (0)1 2916 700
mottmac.com

Limerick City and County
Council
City Hall,
Merchant's Quay,
Limerick V94 EH90

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Directors: C O'Donovan BE MBA CEng
MIET (Managing), J T Murphy BE
HDipMM CEng FIEI CMCILT (Deputy
Managing), D Herlihy BE MSc CEng, K
Howells BSc MBA CEng MICE MCWEM
(British), F McGivern BSc DipEnvEng
CEng MIEI
Innealtóirí Comhairleach (Consulting
Engineers)
Company Secretary: Ian Kilty BA (Hons)
ACA
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1 Introduction

1.1 Project Background

This Environmental Impact Assessment (EIA) Screening Report has been prepared by Mott MacDonald Ireland Limited on behalf of Limerick City and County Council for the proposed Mungret Link Streets project. The Mungret Link Streets project (hereafter referred to as the project) consists of the provision of ca. 1.7km of new public road within the Mungret / Loughmore Common area of County Limerick. The project includes the following associated infrastructure:

- Surface water drainage / sustainable urban drainage
- Foul water drainage connection into Limerick Main Drainage Scheme
- Water mains
- Gas Mains
- Telecommunications
- Street lighting and
- Landscaping

The purpose of the project is to accommodate the future construction of new residential development in Mungret, Limerick (Limerick 2030 housing), within lands zoned for residential development under the Southern Environs Local Area Plan 2011 – 2017 (Extended until May 2021). The Limerick 2030 housing project will, in itself, be subject to Environmental Impact Assessment in accordance with Part 10 of the Planning and Development Regulations, 2001 as amended. The potential for combined environmental effects with the Mungret Link Streets project is considered in this assessment.

1.2 EIA Legislative Background

The requirement for environmental impact assessment has its origins in Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment. This Directive has been amended three times and was codified by Directive 2011/92/EU in 2011. Directive 2011/92/EU was subsequently replaced by Directive 2014/52/EU in 2014. The primary objective of the EIA Directive is to ensure that projects which are likely to have significant effects on the environment are subject to an assessment of their likely impacts.

Directive 2014/52/EU provides a definition of environmental impact assessment as being a process consisting of:

- The preparation of an environmental impact assessment report (EIAR);
- The carrying out of consultations required to inform the EIAR;
- The examination by the competent authority of the information presented in the EIAR and any supplementary information;
- The reasoned conclusion by the competent authority on the significant effects of the project on the environment; and
- The integration of the competent authority's reasoned conclusion into its decisions.

In determining the requirement for EIA, the Directive differentiates between the projects that always require EIA and those for which an EIA may be required. These projects are listed in Annex I and Annex II of the Directive.

1.2.1 Annex I Projects

These are projects which are considered as having significant effects on the environment and require a mandatory EIA.

Annex I lists the following road developments as requiring mandatory EIA:

Construction of motorways and express roads

Construction of a new road of four or more lanes, or realignment and/or widening of an existing road of two lanes or less so as to provide four or more lanes, where such new road or realigned and/or widened section of road would be 10 km or more in a continuous length

The Mungret Link Streets project is not of a type requiring mandatory EIA under the EIA Directive.

1.2.2 Annex II Projects

These are projects where Member States decide whether an EIA is needed. This is done by the "screening procedure", which determines the effects of projects on the basis of thresholds/criteria or a case by case examination. The projects listed in Annex II are in general those not included in Annex I which may be considered to have a lesser environmental impact. Annex II lists the "*Construction of roads, harbours and port installations, including fishing harbours (projects not included in Annex I)*" as projects to undergo the "screening procedure" to determine the need for EIA.

1.3 Irish Legislative Context

Directive 2014/52/EU was formally transposed into Irish planning law on 1st September 2018 through the European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018. Project types and project criteria that are used to determine whether a project requires "mandatory EIA" are listed in the following legislation:

- First Schedule of European Communities (Environmental Impact Assessment) Regulations (S.I. No. 349 of 1989) as amended
- Schedule 5 of the Local Government (Planning and Development) Regulations (S.I. No. 25 of 1990) as amended
- Section 50 (1) of the Roads Act 1993 as amended;
- Article 8 of the Roads Regulations 1994.

Road schemes that require mandatory environmental impact assessment are as follows:

- The construction of a new road of four or more lanes, or the realignment or widening of an existing road so as to provide four or more lanes, where such new, realigned or widened road would be eight kilometres or more in length in a rural area, or 500 metres or more in length in an urban area; and
- The construction of a new bridge or tunnel which would be 100 metres or more in length
- construction of a motorway, busway or service area

The proposed Mungret Link Streets Project is not of a scale or in a location type which would require a mandatory EIA under current national law.

1.4 Subthreshold EIA Screening

The project is not of a type that would require a mandatory EIA. However, having regard to Circular Letter PL 1/2017, Limerick City and County Council are committed to assessing the Project for its potential to have significant effects on the environment. As such, Mott MacDonald, on behalf of Limerick City and County Council has prepared this Assessment Report to inform a determination as to whether any application for statutory approval for the Mungret Link Streets project should be accompanied by an Environmental Impact Assessment Report.

It is of note also that, in accordance with Section 50 of the Roads Act, 1993 as amended, where a Roads Authority (such as Limerick City and County Council) considers that a proposed road development (which is not the subject of mandatory EIA) would be likely to have significant effects on the environment, then there is a requirement for the Roads Authority to inform An Bord Pleanála in writing of this conclusion. Where An Bord Pleanála concurs with the conclusion of the EIA Screening assessment, then it will direct the Roads Authority to prepare an Environmental Impact Statement. Where An Bord Pleanála does not concur with the conclusion of the assessment, then this conclusion will be notified to the Roads Authority. This Assessment Report has therefore also been prepared to assist the Roads Authority in their consideration of whether the proposed Mungret Link Streets project would be likely to have significant effects on the environment.

With specific reference to Circular PL10/2018 (Department of Housing, Planning and Local Government, 22nd November 2018) Article 120(3) of the Planning and Development Regulations 2001 (the Regulations) as amended by S.I. 296 of 2018, there is a requirement for inclusion with the public notices of proposed development by a local authority of the conclusions of the preliminary examination or screening determination by the local authority (that an EIA is not required) in respect of the proposed development. Where any person considers that a development proposed to be carried out by a local authority would be likely to have significant effects on the environment, he or she may, at any time before the expiration of 4 weeks beginning on the date of the publication of the notice apply to the Board for a screening determination as to whether the development would be likely to have such effects.

1.5 EIA Screening Methodology

This assessment was undertaken having regard to the following legislation and guidance:

- Circular Letter PL 1/2017, Implementation of Directive 2014/52/EU on the effects of certain public and private projects on the environment (EIA Directive), Department of Housing, Planning, Community and Local Government, May 2017
- Key Issues Consultation Paper - Transposition of 2014 EIA Directive (2014/52/EU) in the Land Use Planning and EPA Licencing Systems, Department of Housing, Planning, Community and Local Government, May 2017
- The Planning and Development Acts 2000 to 2018, as amended and the Planning and Development Regulations 2001 to 2018, as amended
- Draft Guidelines on the Information to be Contained in Environmental Impact Assessment Reports, EPA, Draft, August 2017
- Advice Notes for Preparing Environmental Impact Statements, EPA, Draft, September 2015
- Guidance on EIA Screening (Directive 2011/92/EU as amended by 2014/52/EU), European Commission, 2017

- EIA, Guidance for Consent Authorities regarding Sub-Threshold Development, DEHLG, 2003
- Environmental Impact Assessment of National Road Schemes – A Practical Guide (NRA, 2008)
- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities, 2009 (revised 2010)
- Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment August 2018 - Prepared by the Department of Housing, Planning and Local Government
- Circular PL 05/2018 - Transposition into Planning Law of 2014 EIA Directive and Revised EIA Guidelines – Department of Housing, Planning and Local Government (August 2018)

1.6 Report Structure

This report is structured such that the criteria to be considered in determining whether the project has potential to have significant effects on the receiving environment, as set out in Annex IIA and Annex III of the EIA Directive (2014/52/EU), are addressed. These screening criteria are also set out in Schedule 7 of the Planning and Development Regulations, 2001 as amended.

1.6.1 Annex IIA

Annex IIA of the EIA Directive sets out the information to be provided by the ‘developer’ to the competent authority, for the purpose of EIA Screening. This information, which normally would only apply only to Annex II projects, is as follows:

1. *A description of the project, including in particular:*
 - a) *a description of the physical characteristics of the whole project and, where relevant, of demolition works;*
 - b) *a description of the location of the project, with particular regard to the environmental sensitivity of geographical areas likely to be affected.*
2. *A description of the aspects of the environment likely to be significantly affected by the project.*
3. *A description of any likely significant effects, to the extent of the information available on such effects, of the project on the environment resulting from:*
 - a) *the expected residues and emissions and the production of waste, where relevant;*
 - b) *the use of natural resources, in particular soil, land, water and biodiversity.*

The Directives that the criteria of Annex III shall be taken into account, where relevant, when compiling the information in accordance with points 1 to 3 above.

1.6.2 Annex III

Annex III of the EIA Directive sets out the following evaluation criteria to determine whether projects listed in Annex II should be subject to EIA.

Characteristics of Projects

The characteristics of projects must be considered, with particular regard to:

- a) the size and design of the whole project;*
- b) cumulation with other existing and/or approved projects;*
- c) the use of natural resources, in particular land, soil, water and biodiversity;*
- d) the production of waste;*
- e) pollution and nuisances;*
- 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;*
- g) the risks to human health (for example due to water contamination or air pollution).*

Location of Projects

The environmental sensitivity of geographical areas likely to be affected by projects must be considered, with particular regard to:

- a) the existing and approved land use;*
- b) the relative abundance, availability, quality and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground;*
- c) the absorption capacity of the natural environment, paying particular attention to the following areas:*
 - i. wetlands, riparian areas, river mouths;*
 - ii. coastal zones and the marine environment;*
 - iii. mountain and forest areas;*
 - iv. nature reserves and parks;*
 - v. areas classified or protected under national legislation; Natura 2000 areas designated by Member States pursuant to Directive 92/43/EEC and Directive 2009/147/EC;*
 - vi. areas in which there has already been a failure to meet the environmental quality standards, laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure;*
 - vii. densely populated areas;*
 - viii. landscapes and sites of historical, cultural or archaeological significance.*

Type and Characteristics of Potential Impact

The likely significant effects of projects on the environment must be considered in relation to criteria set out in points 1 and 2 of this Annex, with regard in particular to the impact of the project on the factors specified in Article 3(1), taking into account:

- a) the magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected);*
- b) the nature of the impact;*

- c) the transboundary nature of the impact;*
- d) the intensity and complexity of the impact;*
- e) the probability of the impact;*
- f) the expected onset, duration, frequency and reversibility of the impact;*
- g) the cumulation of the impact with the impact of other existing and/or approved projects;*
- h) the possibility of effectively reducing the impact.*

Section 3.0 of this report provide a comprehensive analysis of the Mungret Link Streets project having regard to the above headings.

2 Description of the Development

2.1 Project Overview

The Mungret Link Streets project will provide approximately 1.7km of new road, 26.9m wide, consisting of 6.5m carriageway, two by 2.5m car parking, two by 1.2m verge, two by 2.0m cycleways, two by 2m footway and two by 2.5m private strip (refer to Figure 1 Mungret Link Streets Project below). The infrastructure provision directly associated with the proposed road development includes the following:

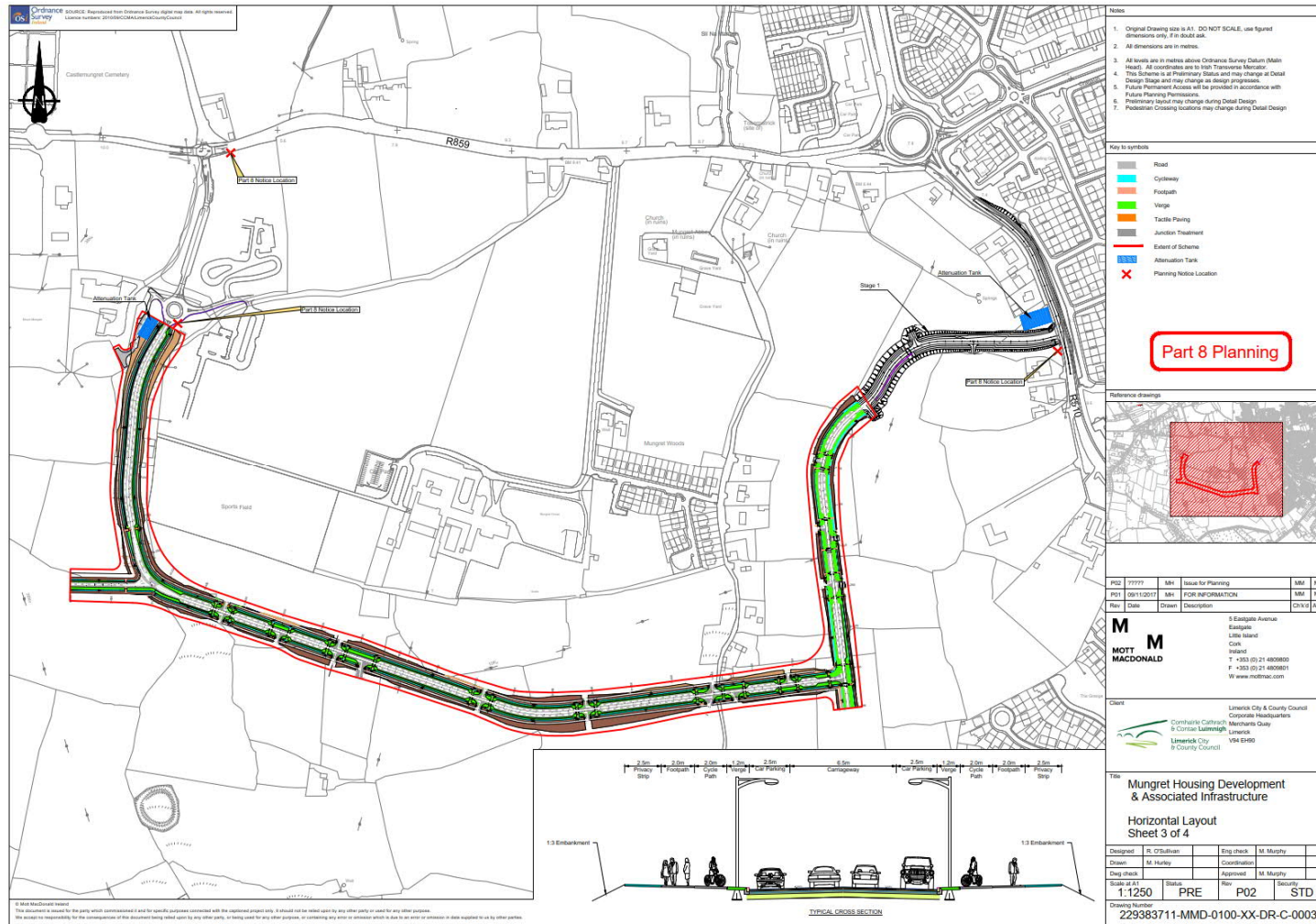
- Surface water drainage: road drainage will, for the most part connect by gravity to the existing drainage network serving the R859 road. Drainage will also include sustainable urban drainage systems such as attenuation basins.
- Foul water drainage: gravity pipe networks, rising main and connection into Limerick Main Drainage Scheme.
- Water mains, gas mains, telecommunications and street lighting will be installed within/along the new road.
- Landscaping.

The project will require the excavation of lands which are predominantly in agricultural use. The aim of the design will be to achieve an optimal cut/fill balance such that excavated material is reused on site where possible thereby minimising waste. The project will not require the demolition of any existing buildings or structures. A number of field boundaries will be removed to accommodate the road.

The project will be progressed in accordance with CIRIA environmental good practice guidelines. The appointed Contractor will be required to prepare construction method statements under contract, which must have the Employers (Limerick City and County Council) approval in advance of the works.

The project is considered in the context of Annex IIA and Annex III of the EIA Directive in Section 3 of this Report.

Figure 1: Mungret Links Scheme



Source: Mott Macdonald 2019

2.2 Spatial Planning Context

2.2.1 Southern Environs Local Area Plan 2011-2017 (as extended)

The Southern Environs Local Area Plan 2011-2017 (Limerick City and County Council) was initially adopted by the elected members of Limerick County Council in May 2011. On 16th May 2016 Limerick City and County Council extended the duration of the Southern Environs Local Area Plan 2011-2017 for a further five years, until May 2021.

The Southern Environs Local Area Plan covers approximately 21 square kilometres and falls mainly into two Electoral Divisions (EDs) namely Ballycummin and Limerick South Rural. It is located south of Limerick City and stretches east to Banemore, south to Ballycummin and west to Conigar in Mungret. It includes the areas of Dooradoyle, Raheen, Mungret, Gouldavoher, and Rosbrien. Its natural boundaries include the Shannon Estuary and the Ballinacurra Creek along the City boundary. It is an area largely urban in nature that has experienced considerable population increase over the years and it is envisaged to continue to do so. Its locational importance for the county and the region is reflected in the range and scale of land use in the area and the provision of important large scale infrastructural development in the area.

The development of the Mungret Link Streets Project is a key element of public infrastructure to enable the delivery of the Mungret-Loughmore Masterplan (a significant objective of the Southern Environs Local Area Plan specifically Objective MLO2: Mungret – Loughmore Land Use Zoning).

2.2.2 Strategic Environmental Assessment and Appropriate Assessment

The preparation of the Southern Environs Local Area Plan was informed by a Strategic Environmental Assessment and Appropriate Assessment (as included in Appendix 3 and Appendix 4 of the plan). Likely significant effects from the implementation of the plan are set out in Section 2.9 of Appendix 3. The aspects of the plan with potential for significant effects were identified as being;

- quantum of zoned lands and associated development;
- lands within the plan area where were low-lying and identified as being at risk of flooding;
- cross-border effects of zoning practices.

In relation to potential cumulative effects of the Local Area Plan on the receiving environment, the consolidation of the LAP boundaries coupled with a range of policies to deal with issues such as flooding, renewable energy, and resource use, and additional protective zoning for the Shannon were included to minimise the risk of emergence of cumulative adverse effects. The incorporation of the new flooding guidance and the reduction of the amount of land zoned for residential use, particularly within flood benefiting lands is also a key attribute of the plan to avoid cumulative adverse effects. The low-lying areas in Mungret were specifically identified as being vulnerable and the zoning of lands has been developed in specific response to this risk.

Specifically, in the context of Appropriate Assessment, responsive policies requiring the ecological surveying of potential development sites for species of particular conservation importance in the LAP area, and updating policies as they applied to designated ecological sites are included. With particular relevance to the lands at Mungret and those where the Mungret Link Streets project is proposed to be developed, the importance of Loughmore Common, the

turlough and its associated habitat and species were identified as being of particular importance.

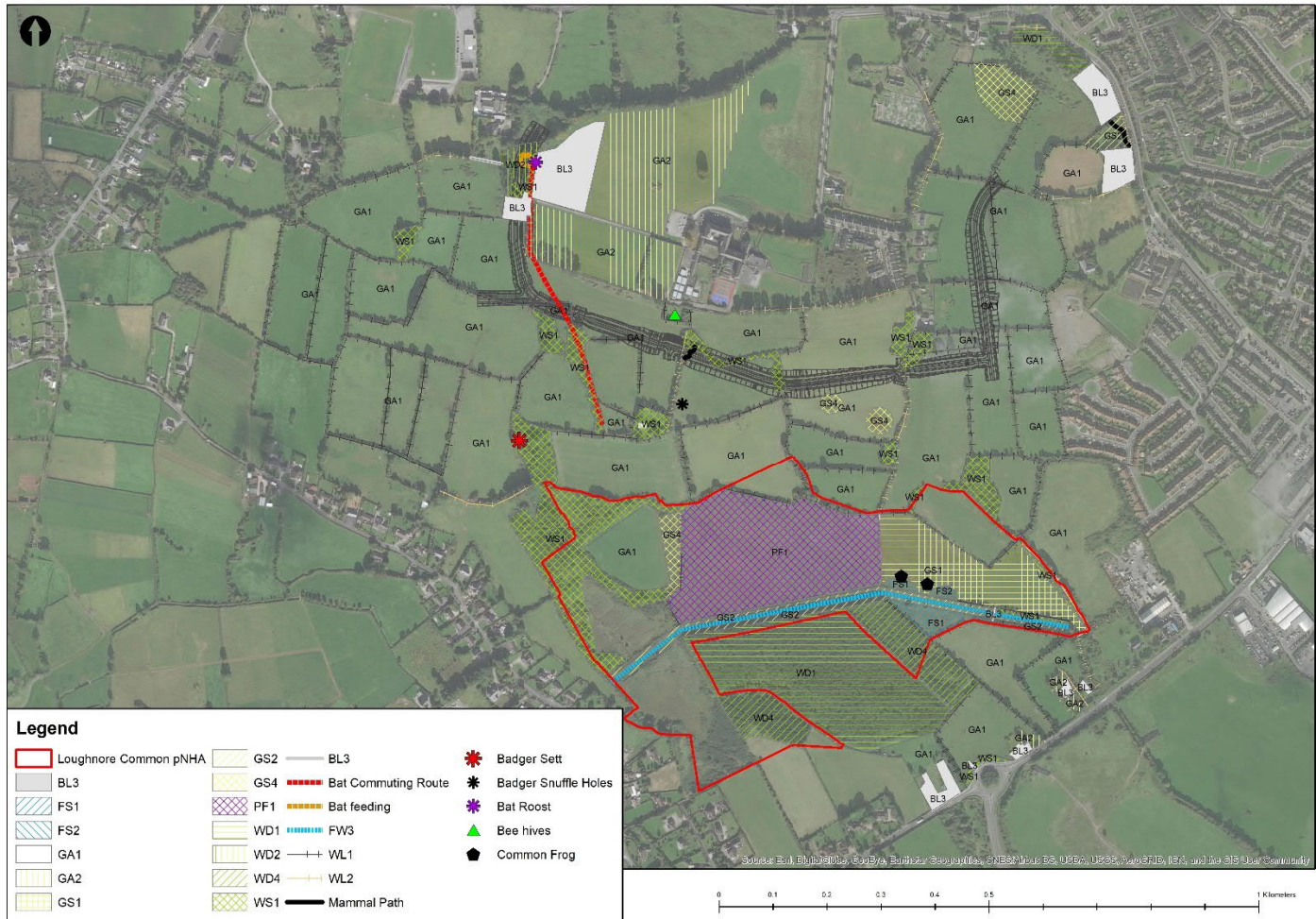
2.3 Baseline Ecology

Mott MacDonald ecologists undertook a field survey of the Mungret Link Streets project on 15th September 2017, and on the 6th and 7th of June 2018. The proposed project is located approximately 2km south of the Lower River Shannon SAC (002165) and the River Shannon and River Fergus Estuaries SPA (004077). Drainage from the road will be to the existing drainage network serving the R859 and R510 roads.

The project is located within lands comprising improved agricultural grassland (dominated by rye-grass, *Lolium* spp.) in current use as grazing for beef cattle. The agricultural fields are separated by mature hedgerows which comprise hawthorn (*Crataegus monogyna*) and blackthorn (*Prunus spinose*), with intermittent ash (*Fraxinus excelsior*) and elder (*Sambucus nigra*), and with an undergrowth of bramble (*Rubus fruticosus* agg.). The lands are in general of lower ecological value due to the low species diversity.

Loughmore Common Turlough pNHA is located approximately 100m south of the Mungret Link Streets project. Environmental features of greater value which might be affected by the project are described hereunder.

Figure 2: Habitat Map



2.3.1 Key Ecological Receptors

2.3.1.1 Loughmore Common Turlough pNHA

The southern spur of the original Mungret Link Streets projects was originally planned to pass through Loughmore Common Turlough pNHA, a site of national importance, (between approximate road chainage 0+260 and 0+440). This would have resulted in associated loss of ca. 0.0033km² of agricultural grassland within the pNHA (which has a total area of 0.2849 km²) along the footprint of the road however it is now no longer part of the development under consideration due to the ecological sensitivity of this particular location. The section of road that passes through the pNHA would be required to be designed to allow the free movement of turlough flood waters between lands bisected by the road. Thus, whilst this is not currently anticipated to have any effect on the surface movement of turlough waters it is considered important that this section of road is not progressed until there is conclusive information associated with the hydrological/hydrogeological functioning in the area.

The lands to be traversed by the road comprise heavily grazed agricultural grassland. Further west, beyond the road alignment, the habitat presents with species typical of wetter conditions with a high frequency of hard rush (*Juncus inflexus*), common sedge (*Carex nigra*) and compact rush (*Juncus conglomeratus*). The turlough was observed to be dry on the day of site walkover and no wetland birds were observed using the site.

The original southern spur passed along the periphery of an area of large sedge swamp, immediately south of the Loughmore Canal, within the pNHA boundary. This swamp is ca. 0.5ha in area. This would have resulted in the permanent loss of a narrow strip of this habitat ca 0.03ha in area along the eastern periphery of the swamp. This habitat is wet under foot and is dominated by reed canary-grass (*Phalaris arundinacea*). This habitat is evaluated as of local importance (higher value) given its high biodiversity within the local context.

The protected species *Vertigo moulinsiana* (Desmoulin's whorl snail) is often associated with tall-growing vegetation of reed-beds and swamps. The sedge swamp at Mungret is suitable habitat for this species. A targeted whorl snail survey was carried out by Mott MacDonald Ecologists on 18th of October 2018 within the swamp habitat. Striated whorl snail (*Vertigo substriata*) was recorded within the sedge swamp habitat, however no whorl snail protected under Annex II of the Habitats Directive was recorded.

The rare plant species opposite-leaved pondweed (*Groenlandia densa*) has been recorded in Loughmore Canal in the past. Road drainage design will ensure no change in the natural hydrology of the canal. No field signs of otter were observed along the canal during the site walkover.

Scrub Habitat and Mature Trees

There are several areas of blackthorn (*Prunus spinose*) and hawthorn (*Crataegus monogyna*) scrub within the site as follows: the disused cattle path at Baunacloka (Photo 1), ringfort LI013-011, ringfort LI013-007, enclosure LI013-133 and enclosure LI013-008.

The ringforts and enclosures are included on the National Monument Service Records. The road alignment is outside of the zone of notification for these records.

Photo 1 Disused Cattle Path



Source: Mott MacDonald 15/09/2017

2.3.1.2 Badgers

The scrub habitats within the site are in use by badger (Figure 6 and 7) and act as stepping stones within the agricultural lands. One disused badger sett (annex set with one entrance) was observed within the ringfort LI013-01. Badger paths, snuffle holes and prints were observed within the study area, particularly in proximity to Mungret House. These scrub areas are of local importance (higher value). The ringforts and enclosures will not be affected by the project. No badger setts were observed during site walkover at this location. The loss of this habitat will not significantly affect the movement of badger in the area given that it is immediately adjacent to a busy residential area and less likely to be in use by badger.

Photo 1 Badger Sett Entrance



Source: Mott MacDonald 15/09/2017

Photo 2 Badger Prints



Source: Mott MacDonald 15/09/2017

2.3.1.3 Bats

The field boundaries within the site typically comprise hawthorn / blackthorn scrub and have low bat roost potential. There are however several mature trees throughout the site which have a high potential to act as bat roosts (Figure 2 and Photo 3). Confirmed bat roosts cannot be removed unless in accordance with a derogation afforded under the Wildlife Act 1976 as amended. The detailed design of the landscaping and lighting for the road project will be informed by the findings of bat survey(s) such that commuting routes are maintained by the use

of hop-over landscape planting and that lighting is controlled according to bat usage (while having regard to health and safety requirements).

Photo 3 High Bat Potential Tree



Source: Mott MacDonald 15/09/2017

2.4 Development of Mungret Link Streets Project

As a key enabler for the delivery of the Mungret lands Masterplan there is a compelling need to progress with the delivery of the Mungret Link Streets infrastructure project. As part of this process Mott MacDonald were appointed to develop an alignment and design which would minimise the effects on the environment whilst still meeting its functional purpose. Initially the design included for three individual spurs providing transport links to the south (regional road R526), to the east (regional road R510) and to the north (R859).

Due to the sensitivities profiled in the Southern Environs Local Area Plan 2011-2017 (as extended) specifically related to ecology, land flooding and the natural functioning of the Loughmore Common a decision was taken to only progress with the spurs providing transport links to the east (regional road R510) and to the north (R859). The transport link to the south (regional road R526) may be progressed in the future, however due to the sensitivity of the receiving environment in this general area (Loughmore Common) this requires a further comprehensive understanding of the complex hydrological/hydrogeological functioning at this location.

With specific consideration to the potential for cumulative and in-combination effects associated with other development envisaged within the Local Area Plan in the specific lands where the proposed Mungret Link Streets project is proposed this needs to be considered in the context of the Strategic Environmental Assessment and Appropriate Assessment processes and conclusions which informed the plan. As set out in Section 2.2.2 above, the key environmental aspects where potential in-combination and cumulative impacts were considered likely to arise were associated with flooding and ecological sensitivities. To this extent the planning and

design of the Mungret Link Streets project has been informed by detailed ecological and hydrological/hydrogeological assessments.

3 EIA Screening Assessment

Table 1: Characteristics of the Project

Criterion	Discussion
Will the size and design of the whole project be considered significant?	<p>No. The project is not significant in terms of design or size.</p> <p>The Mungret Link Streets project will provide 1.7 km of new public road, 26.9m wide. The project will also entail the provision of the following supporting infrastructure:</p> <ul style="list-style-type: none"> • Surface water drainage, gravity pipe networks along with sustainable urban drainage systems such as attenuation basins. • Foul water drainage: gravity pipe networks, pumped rising main and connection into Limerick Main Drainage Scheme • Water mains; • Gas Mains; • Telecommunications; • Street lighting and; • Landscaping
Will the project have a significant impact when considered in cumulation with other existing and/or approved projects?	<p>The provision of the Mungret Link Streets project will allow for residential development in the Mungret area in line with the proposals outlined in the Southern Area Local Area Plan 2011-2017 as extended. The timeline for the development of all the associated lands is unclear but it is understood that Limerick Twenty Thirty are currently developing a project for 250 residential units at the Mungret College location. However, it should be noted that this and future proposed residential projects at the site are subject to their own consent processes and will assessed for environmental impacts.</p> <p>The Mungret Link Streets project will be within agricultural lands. There will be an associated direct loss of agricultural lands and severance of lands. The project will accommodate cattle passage which will mitigate the severance effect. The lands zoned for development under the Southern Area Local Area Plan 2011-2017 are within agricultural lands adjacent to the road development. There will be a permanent change in land use in these areas.</p> <p>The lands zoned for development are outside of the Loughmore Common pNHA and will have no land take within the turlough. Thus, there will be no combined effect in relation to habitat loss within the turlough.</p> <p>Drainage from the Mungret Link Streets project will be to the existing network. Drainage from the zoned land will be to ground and to the canal via the road drainage. The road drainage will be designed to accommodate the future development. Drainage design will be to industry standards. Soakaways will be sized relative to local soil conditions in order to maintain existing hydrological conditions. Thus, an alteration in groundwater flows is not expected.</p> <p>It is considered that there is potential for a cumulative</p>

Criterion	Discussion
	<p>impact arising from the Mungret Link Streets project in combination with future large scale residential development (which have yet to receive planning approval) on the receiving environment. Development consent for future residential development will be required to comply with the Environmental Impact Assessment Directive and Habitats Directive where the scale, nature or location of such development requires same having due regard to in-combination effects with the Mungret Link Streets project.</p>
<p>Will the project involve the use of natural resources, in particular land, soil, water and biodiversity? Is the use of these natural resources considered significant?</p>	<p>The Mungret Link Streets project will require land take from landowners along the 1.7 km length of road and the required spatial area of the associated infrastructure e.g. drainage and sewer network.</p> <p>The road will pass through agricultural lands located approximately 100m north of Loughmore Common Turlough pNHA. There will be no loss of land within the pNHA.</p> <p>The construction of the road will involve the use of raw materials. It is proposed that construction material is sourced locally, where possible, and where possible cut/fill will be balanced so the impact will not be significant.</p>
<p>Will the project produce a significant volume of wastes?</p>	<p>During construction, solid waste will be generated however volumes requiring off-site management will not be significant. Other non-soil wastes associated with the project are not considered to be significant and can be readily disposed of/recycled through existing waste management infrastructure in the locality.</p> <p>The project will include for the provision of a sewerage system to serve the lands zoned for future residential development. The sewerage system has been appropriately sized in accordance with Irish Water requirements to fully accommodate the zoned lands. All foul waste will therefore be appropriately managed.</p>
<p>Will the proposed development create a significant amount or type of pollution during its construction or operation?</p>	<p>The Contractor will be obliged to develop and implement a Construction Environmental Management Plan (CEMP), which must be approved by the Employer, which will ensure that the potential for environmental pollution during construction (e.g. dust, noise, site runoff) will be controlled.</p> <p>During operation no significant pollution is envisaged. A SUDS drainage system will be designed to ensure that runoff from the road surfaces is collected and appropriately treated prior to discharge. The foul drainage system has been designed in accordance with Irish Water requirements such that it will fully accommodate the development of the zoned lands. The project will include environmentally sensitive design such that lighting and landscaping will accommodate bat passage in so far as practicable.</p>
<p>Will the project result in a 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?</p>	<p>There is significant industry experience in Ireland in the construction of roads and bridge projects. It is not considered likely that the substances or technologies to be used during the construction or operational phases of the proposed development could be considered as presenting a significant accident risk.</p> <p>The drainage design includes for climate changes such that any soakaways and attenuation ponds are appropriately sized for future scenarios.</p>
<p>Will the project result in any risks to human health (i.e. due to water contamination or air pollution)?</p>	<p>Mitigation measures will be incorporated into the project Construction Environmental Management Plan (CEMP) to ensure there is no risk to human health in terms of</p>

Criterion	Discussion
	<p>water and wastewater emissions, chemical storage and control during the construction phase.</p> <p>During the operational phase of the road, the project in combination with the proposed residential developments will have potential to generate significant volume of traffic at the site. This has potential to impact on human health in terms of potential impacts on air quality and traffic congestion in the local area. The effects of increased traffic on human health will be assessed and mitigated as necessary as part of the EIAR for the residential development of the zoned lands.</p>

Table 2: Location of the Project

Criterion	Response
Is the proposed development in line with the existing and approved land use?	The proposed Mungret Link Streets Project will support the proposed residential development identified for the site as zoned under the Southern Area Local Area Plan 2011-2017 (as extended).
Has the project the potential to impact on the relative abundance, availability, quality, and regenerative capacity of natural resources (including soil, land, water and biodiversity) in the area and its underground?	<p>The project will involve only limited use of natural resources, for example in terms of land take and water supply, and as such the use of these resources is not considered significant.</p> <p>Drainage will be via a SUDS system which will be operated and maintained by Limerick City and County Council.</p>
Has the project the potential to impact on the absorption capacity of the natural environment, paying particular attention to wetlands, riparian areas, river mouths	<p>The project has no potential to impact on riparian areas or river mouths.</p> <p>The implementation of a Construction Environmental Management Plan (CEMP) will ensure that there is no potential for the proposed road project to impact on the receiving environment having particular regard to the Loughmore Common pNHA.</p> <p>It should also be noted that there is evidence that Loughmore Common pNHA is already significantly degraded due to desiccation. An application has been made to the National Parks and Wildlife Service (NPWS) by a local landowner to get the site removed from the pNHA listing.</p>
Has the project the potential to impact on the absorption capacity of the natural environment, paying particular attention to coastal zones and the marine environment	The project has no potential to impact on these features of the natural environment having regard to its location.
Has the project the potential to impact on the absorption capacity of the natural environment, paying particular attention to mountain and forest areas	The project has no potential to impact on these features of the natural environment having regard to its location.
Has the project the potential to impact on the absorption capacity of the natural environment, paying particular attention to nature reserves and parks.	The project has no potential to impact on these features of the natural environment having regard to its location.
Has the proposed development the potential to impact directly or indirectly on any site designated under national legislation or/and by Member States pursuant to Directive 92/43/EEC and Directive 2009/147/EC (e.g. SAC, SPA, NHA)?	<p>The proposed project is not located at or in close proximity to any European site. The proposed project is located c. 2km south of the Lower Shannon SAC (002165) and River Shannon and River Fergus Estuaries SPA (004077). A report to inform Screening for Appropriate Assessment has been undertaken for the project and has identified that there is no potential for a significant effect on any European site.</p> <p>The proposed link road is located approximately 100m north of the Loughmore Common pNHA, no works will occur within the pNHA. The implementation of a Construction Environmental Management Plan (CEMP) will ensure that there is no potential for impacts on this turlough resulting from the construction of the proposed scheme.</p> <p>The design of the road scheme has been developed with no significant element of the road in cut, which means that the project will not impact the hydrological flow in the area, resulting in no potential for desiccation or drying out of the turlough.</p> <p>It should be noted that there is evidence that Loughmore Common pNHA is already significantly degraded due to</p>

Criterion	Response
	desiccation. An application has been made to the National Parks and Wildlife Service (NPWS) by a local landowner to get the site removed from the pNHA listing.
Has the project the potential to impact on the absorption capacity of the natural environment, paying particular attention to areas in which there has already been a failure to meet the environmental quality standards, laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure	The proposed project has no potential to impact on these features of the natural environment. The drainage design will ensure no change in the status of receiving waters. Potential construction stage effects will be managed through the CEMP.
Has the project the potential to impact on the absorption capacity of the natural environment, paying particular attention to densely populated areas	The proposed project has no potential to impact on the natural environment in densely populated areas as the site is currently primarily rural in nature. Following road construction, the lands zoned for residential development in the Mungret area will be developed over time. The effects of this residential development will be assessed through their own planning consent processes.
Has the project the potential to impact on the absorption capacity of the natural environment, paying particular attention to landscapes and sites of historical, cultural or archaeological significance	<p>A review of the Sites and Monuments Record (SMR) data available from the National Monuments Service indicates that there are a number of sites of archaeological significance located within the proposed project site. These include:</p> <p>an Enclosure (LI013-002), Enclosure (LI013-184), Cremation pit (LI013-219), Moated site (LI013-003), Fulacht fia (LI013-221), Enclosure (LI013-005), Standing stone (LI013-148), Ringfort (LI013-007), Graveyard (LI013-009004), Ecclesiastical site (LI013-009008), Enclosure (LI013-133), Enclosure (LI013-131), Enclosure (LI013-132), Church (LI013-009001), Ritual site – holy well (LI013-009006), Excavation – miscellaneous (LI013-241), Fulacht fia (LI013-222), Enclosure (LI013-185) and Excavation miscellaneous (LI013-009007).</p> <p>A review of the National Inventory of Architectural Heritage (NIAH) indicates that there are a number of NIAH's located within the proposed project site which includes:</p> <p>Mount Mungret (Reg. No. 21901311), Mount College (Reg. No. 21901312), Mungret College Chapel (Reg. No. 21901313), Mungret College (Reg. No. 21901314), Farm House (Reg. No. 21901315), Little Treasure (Reg. No. 21901316), Gate Lodge (Reg. No. 21901317), Roache Castle (Reg. No. 21901309), Flowers Forever (Reg. No. 21901308) and (Reg. No. 21901318).</p> <p>There is one Architectural Conservation Areas (ACA) located approximately 100m north east of the project.</p> <p>A review of the Record of Protected Structures (RPS) in the Limerick County Council County Development Plan 2010 - 2016 indicates that there are number of RPS's located in proximity to the proposed project which include:</p> <p>Mungret College (Reg. No. 1658), Mungret College (Reg. No. 1660), Mungret College (Reg. No. 1661), Mount Mungret (Reg. No. 1663), Mungret Abbey (in Ruins) (Reg. No.1656) and Church (in ruins) (Reg. No. 1657).</p> <p>The proposed road has been chosen so as not to impact directly on any sites or monuments listed.</p>

Criterion	Response
	<p>The site is not located within or in proximity to scenic views or protected landscapes as identified in the Limerick County Development 2010-2016 (as extended).</p> <p>As a result, there is no potential for the proposed project to impact directly or indirectly on listed or scenic views or protected landscapes.</p>

3.1 Type and Characteristics of Potential Impact

Criteria	Discussion
Outline the magnitude and spatial extent of the impact (for example geographical area and size of the population likely to be affected)	The magnitude of impacts is not considered to be significant as the road project is 1.7km in length and is located within a rural area with a limited number of sensitive residential receptors in the area.
Outline the nature of the impact	<p>There is no potential for negative adverse impacts arising from the proposed project. Construction will be to good industry standard and will be in accordance with environmental good practice. Road design, and design of associated infrastructure will be in accordance with industry standards.</p> <p>The project will result in a permanent change in landuse of the lands within the footprint of the project from agricultural use to road. This is not a significant impact.</p>
Outline the transboundary nature of the impact	The project will not result in transboundary impacts.
Outline the intensity and complexity of the impact	<p>It is considered that the project in isolation with appropriate design and construction phase environmental best practice will not have potential to have a significant impact on the receiving environment.</p> <p>However, in combination effects with proposed future residential developments at the site could result in significant impacts on the receiving environment, resulting from relatively complex interactions between future projects which could impact air quality, noise and traffic in the local area. Development consent for future residential development will be required to comply with the Environmental Impact Assessment Directive and Habitats Directive where the scale, nature or location of such development requires same having due regard to in-combination effects with the Mungret Link Streets project.</p>
Outline the probability of the impact	<p>In order to ensure no significant effect during construction a Construction Environmental Management Plan (CEMP) for the project will be implemented during this phase of the project. The CEMP will provide a framework for the management and implementation of construction activities to minimise the impact of the construction phase. Effective development, implementation and monitoring of the CEMP will minimise potential impacts on the receiving environment.</p> <p>The proposed design of the Mungret Link Road having full regard to the hydrology in the area will minimise the potential impacts of the proposed project on the Loughmore Common pNHA.</p>
Outline the expected onset, duration, frequency and reversibility of the impact	<p>It is considered that there is no potential for significant environmental effect resulting from the proposed project in isolation.</p> <p>However potential in combination effects may arise in the future in the event that proposed residential development occurs at the site. It is not possible to estimate the duration and frequency of the potential cumulative impacts until such time as the details of future residential developments are available. However, the potential impacts in the event of future residential development would be permanent in terms of impacts on air quality, noise and traffic.</p>
Outline the cumulation of the impact with the impact of other existing and/or approved projects	A masterplan for the Mungret site is being developed which will allow for the development of residential units in the Mungret area. It should be noted that the Southern Environs Local Area Plan 2011-2017 (as extended) identified the key in-combination or cumulative effects arising from the proposed project as being associated with flood risk, hydrology and ecological sensitivity. As has been described in this report (specifically sections 2.3 and 2.4) the Mungret Link Streets project has been designed to avoid potentially significant environmental effects including those associated with flooding, hydrology and ecology. In the absence of the development of a design for the proposed residential units

Criteria	Discussion
Outline the possibility of effectively reducing the impact	it is assumed that when designed they will adhere to the policies and objectives of the Local Area Plan which require avoidance of effects on sensitive receptors such as Loughmore Common pNHA and its associated hydrological/hydrogeological and ecological features. The design of the project has been optimised to ensure that environmental impacts are minimised as much as possible.

4 Conclusions

Based on an assessment of the characteristics of the project, location of the project and the type and characteristics of potential impacts, it is considered that the project (in isolation) does not have potential for significant environmental effects.

The analysis, undertaken for the purposes of this EIA Screening assessment came to the conclusion stated above based on the following:

- *Loughmore Common pNHA: Appropriate design of the Mungret Link Road having full regard to the hydrology in the area, has no potential of impacting Loughmore Common pNHA. Furthermore, the implementation of a Construction Environmental Management Plan (CEMP) will ensure that the potential for significant effects during the construction phase are minimised.*
- *Cultural Heritage: The proposed route option passes in close proximity to a number of designated sites and structures; however, the route has been chosen to minimise the potential for an impact on any identified feature.*

Having regard to the potential impacts associated with the construction and operation of the project in combination with potential future developments at the site (with specific reference to the significant residential and other development in the Mungret area as envisaged by the Southern Environs Local Area Plan) it is not considered that these other developments are well enough advanced to assess their in-combination effects at project level. The Southern Environs Local Area Plan 2011-2017 includes a range of objectives to ensure that the impacts on the environment from the delivery of the plan are not significant and it is anticipated that other such projects progressed under the plan will be delivered on this basis. In a situation where any future development progressed under the Southern Environs Local Area Plan is required to be subjected to EIA (for example through exceeding a mandatory threshold as set out in the Planning and Development Regulations, 2001 as amended) it is not considered that the environmental impacts associated with the proposed Mungret Link Streets project are of such a magnitude as to potentially materially alter the conclusions of such assessments when considered in-combination. Development consent for future residential development will be required to comply with the Environmental Impact Assessment Directive and Habitats Directive where the scale, nature or location of such development requires same having due regard to in-combination effects with the Mungret Link Streets project.

A. Loughmore Common Turlough pNHA Site Synopsis

Site Code: 000438

Loughmore Turlough is located about 5km south-west of Limerick City, adjacent to the main Limerick/Cork road (N20) and north of it. It lies in a shallow basin, elongated in an east-west direction, and floods shallowly (30-40cm) in winter.

A variety of plant communities occur, depending on substrate type and degree of wetness. In the western half of the site, and along the eastern shore, the substrate is peaty, and the vegetation is dominated by sedges (*Carex* spp.), with Tufted Hair-grass (*Deschampsia cespitosa*), Marsh Horsetail (*Equisetum palustre*), Tall Fescue (*Festuca arundinacea*), Early Marsh-orchid (*Dactylorhiza incarnata*), Hard Rush (*Juncus inflexus*) and Yellow Loosestrife (*Lysimachia vulgaris*). Some of these species are more commonly associated with marshes than with turloughs. Also unusual is the occurrence of Greater Bird's-foot-trefoil (*Lotus uliginosus*) and Common Fleabane (*Pulicaria dysenterica*), two species which, although relatively more common here than in other regions, have not been recorded at other Irish turloughs. A calcium-rich environment is evident in places, with the occurrence of the moss species, *Campylium stellatum*, in the ground layer.

The flooding area is largely dominated by Common Sedge (*Carex nigra*), with accompanying grasses and herbs such as Silverweed (*Potentilla anserina*), Creeping Bent (*Agrostis stolonifera*), and creeping Buttercup (*Ranunculus repens*). Wetter areas within the site, e.g. hollows and ditches, support a slightly different vegetation, with Water Horsetail (*Equisetum fluviatile*) and Amphibious Bistort (*Persicaria amphibia*). The vegetation shows a maritime influence with the occurrence of Parsley Water-dropwort (*Oenanthe lachenalii*) and Slender Spike-rush (*Eleocharis uniglumis*). These species are more typically found in upper saltmarsh habitats, and their presence suggests that there may be a slight salt influence in the floodwater, or may be a reflection of the site's location close to the Shannon Estuary.

Standing water on the site is colonised by Water Horsetail, Branched Bur-reed (*Sparganium erectum*), Water-cress (*Nasturtium officinale*) and Broad-leaved Pondweed (*Potamogeton natans*). Small areas of limestone grassland and wet grassland are also present.

The rare plant species, opposite-leaved Pondweed (*Groenlandia densa*), occurs on the site, as does Meadow Barley (*Hordeum secalinum*). Both of these species are protected under the Flora (Protection) Order, 1999.

Loughmore provides suitable winter habitat for Lapwing and Golden Plover, and Snipe breed here.

The main threats to the site are drainage, agricultural reclamation, pollution and afforestation. Loughmore is apparently drier today than it has been in the past, and it seems that drainage of the surrounding land rather than of the site itself may be the reason. There is evidence that bird numbers at the site may have reduced as a result of the dessication.

Turloughs are a rare habitat in Europe, and in Ireland are under threat from agricultural intensification. Although affected by drainage, Loughmore is an unusual example of this habitat type. Due to the site's southerly location, its shallowness, its proximity to the sea and some

calcium enrichment, the flora of Loughmore includes some unique elements, which enhance the conservation value of this turlough.

