

Limerick City and County Council

**Limerick Urban Centre
Revitalisation - O'Connell Street
Project**

Report for the Purposes of
Appropriate Assessment Screening

Ref/1

Issue 2 | 25 July 2019

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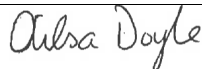
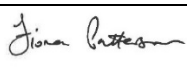

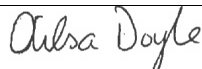
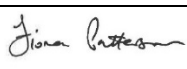
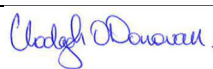
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Appendix A

Finding of No Significant Impacts

1 Introduction

Limerick City and County Council (LCCC) is currently undertaking the Limerick Urban Centre Revitalisation – O'Connell Street Project (LUCROC). The LUCROC project seeks to revitalise Limerick City Centre to a high quality public realm, thereby redefining its role as a destination within the Limerick and Shannon region and providing a stronger and more visually appealing urban link within the city centre.

This report for the purposes of Appropriate Assessment (AA) screening contains the necessary information required for the competent authority, in this case LCCC, to undertake screening for AA of the proposed LUCROC project.

The aims of this report are to:

- Provide information on, and assess the potential for the proposed development to significantly impact on designated Natura 2000 sites;
- Determine whether the proposed development is directly connected with, or necessary to the conservation management of any designated Natura 2000 sites; and
- Determine whether the proposed development, alone or in combination with other projects, is likely to have significant effects on designated Natura 2000 sites.

The screening information presented in this report is as follows:

- Legislative Background, refer to Section 2.
- Overview of the proposed development, refer to Section 3.
- Ecological Overview, refer to Section 4.
- Identification of relevant Natura 2000 sites (European sites) within the zone of influence and assessment of likely significant effects on Natura 2000 Sites, refer to Section 5.
- Assessment of Significance (Section 6) and Conclusions, refer to Section 7.

2 Methodology

This section provides details on the adopted methodology and the information gathered to inform the overall assessment process. The ecological baseline of the site and surrounding area is described in Section 4. The proposed development is described in Section 3. Both sections provide the detail for informing the Stage 1 Screening for Appropriate Assessment.

2.1 Guidance and Data Sources

This report has been prepared with regard to the following guidance documents:

- Managing Natura 2000 Sites: The Provision of Article 6 of the Habitats Directive 92/43/EEC (EC Environment Directorate-General, 2018);
- Assessment of Plans and Projects Significantly Affecting Natura 2000 sites: Methodical Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission Environment Directorate-General, 2001);
- Guidance Document on Article 6(4) of the Habitats Directive 92/43/EEC (European Commission, 2007);
- Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities (Department of Environment, Heritage and Local Government, 2010 revision);
- Appropriate Assessment under Article 6 of the Habitats Directive; Guidance for Planning Authorities. Circular NPW 1/10 and PSSP 2/10;
- Guidelines for Good Practice Appropriate Assessment of Plans under Article 6(3) Habitats Directive (International Workshop on Assessment of Plans under the Habitats Directive, 2011);
- Communication from the Commission on the precautionary principle. European Commission (2000).

2.2 Assessment Methodology

This report is based on a desktop study undertaken in April 2019. The desktop study reviews the nature of the proposed development (construction and operational aspects) and potential effects of the proposed development on Natura 2000 sites and their qualifying interests. The desktop study also identifies potential in-combination effects on the Natura 2000 network, if any.

The following sources of information (accessed April 2019) were used to collect relevant data on the Natura 2000 network and support the desktop study:

- Google maps aerial photography;
- Online mapping and data on protected sites from the National Parks and Wildlife Service (NPWS);
- Information on environmental quality data available from the EPA;

- Status of EU protected habitats in Ireland provided by the NPWS; and
- National Biodiversity Centre database.

2.3 Legislative Background

According to the EU Habitats Directive (92/43/EEC) and the EU Birds Directive (79/409/EEC), Member States are required to establish a Natura 2000 network of sites of highest biodiversity importance for rare and threatened habitats and species across the EU.

In Ireland, the Natura 2000 network of European sites includes Special Areas of Conservation (SACs) and Special Protection Areas (SPAs).

SACs are selected for the conservation of Annex I habitats (including priority types which are in danger of disappearance) and Annex II species (other than birds). SPAs are selected for the conservation of Annex I birds and all migratory birds and their habitats. The Annex habitats and species, for which each site is selected, are the *qualifying interests* (QI) of the site. *Conservation objectives* for the site are defined for these qualifying interests.

A key requirement of the Directives is that the effects of any plan or project, alone, or in combination with, other plans or projects, on the Natura 2000 network, should be assessed before any decision is made to allow that plan or project to proceed. This process is known as Appropriate Assessment (AA). The obligation to undertake an Appropriate Assessment derives from Article 6(3) and 6(4) of the Habitats Directive (92/43/EEC) and both involve a number of steps and tests that need to be applied in sequential order.

Article 6(3) is concerned with the strict protection of sites, while Article 6(4) is the procedure for allowing derogation from this strict protection in certain restricted circumstances.

Article 6(3) of the Habitats Directive states:

“Any plan or project not directly connected with, or necessary to, the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans and projects, shall be subject to appropriate assessment of its implications for the site in view of the site’s conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only having ascertained that it will not adversely affect the integrity of the site concerned and if appropriate, after having obtained the opinion of the general public”.

Article 6(4) states:

“If, in spite of a negative assessment of the implications for the site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest.”

The competent authority is required to carry out Appropriate Assessment, as required by Article 6(3) and 6(4) of the Habitats Directive, as follows:

Stage 1 - Screening for Appropriate Assessment – to assess, in view of best scientific knowledge, if the development, individually or in combination with another plan or project is likely to have a significant effect on the Natura 2000 site.

Stage 2 - Appropriate Assessment – This is required if it cannot be excluded, on the basis of objective information, that the development, individually or in combination with other plans or projects, will have a significant effect on a Natura 2000 site. The Appropriate Assessment must include a final determination by the competent authority as to whether or not a proposed development would adversely affect the integrity of a Natura 2000 site. In order to reach a final determination, the competent authority must undertake examination, analysis and evaluation, followed by findings, conclusions and a final determination. The appropriate assessment must contain complete, precise and definitive findings and conclusions, and may not have lacunae or gaps.

Stage 3 – Assessment of alternative solutions- the process which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site.

Stage 4 - Assessment where no alternative solutions exist and where adverse impacts remain - an assessment of compensatory measures where, in the light of an assessment of imperative reasons of overriding public interest (IROPI), it is deemed that the project or plan should proceed.

3 Characteristics of the Proposed Development

3.1 Location of the Proposed Development

LCCC is proposing to develop the Limerick Urban Centre Revitalisation – O'Connell Street (LUCROC) Project. The LUCROC project seeks to revitalise Limerick City Centre to a high quality public realm, thereby redefining its role as a destination within the Limerick and Shannon region and providing a stronger and more visually appealing urban link within the city centre.

The proposed development is comprised mainly of O'Connell Street, in Limerick City Centre, and makes up an area of approximately 0.96 Ha. The site and surrounding area is a highly urbanised environment within the commercial centre of Limerick City. The location of the proposed development is illustrated in **Figure 1**.

While the effects of the development may extend beyond O'Connell Street itself, the study area for the purposes of developing a proposal of street improvements is shown in **Figure 2** below.

The River Shannon (Lower) is located approximately 200m from the development area.

The land-use within the proposed development area is designated under the Limerick City Development Plan (2010-2016) (as extended), as 'city centre area.' Given this central location, the receiving environment experiences relatively high levels of pedestrian and vehicular traffic and there is a range of land assets and infrastructure within this urbanised area.

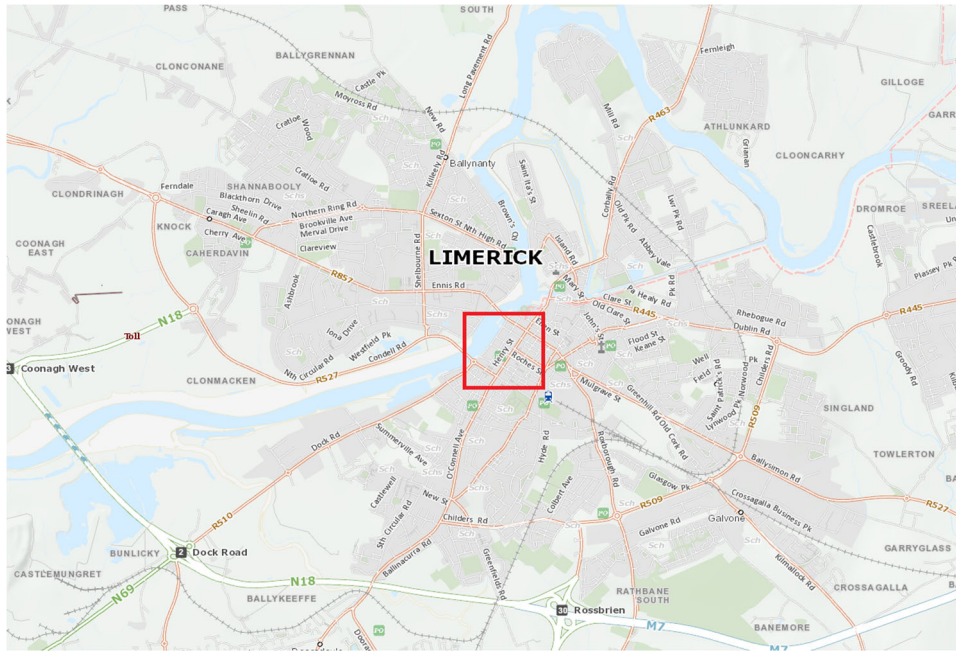


Figure 1: General Location of Project (Source: www.myplan.ie)

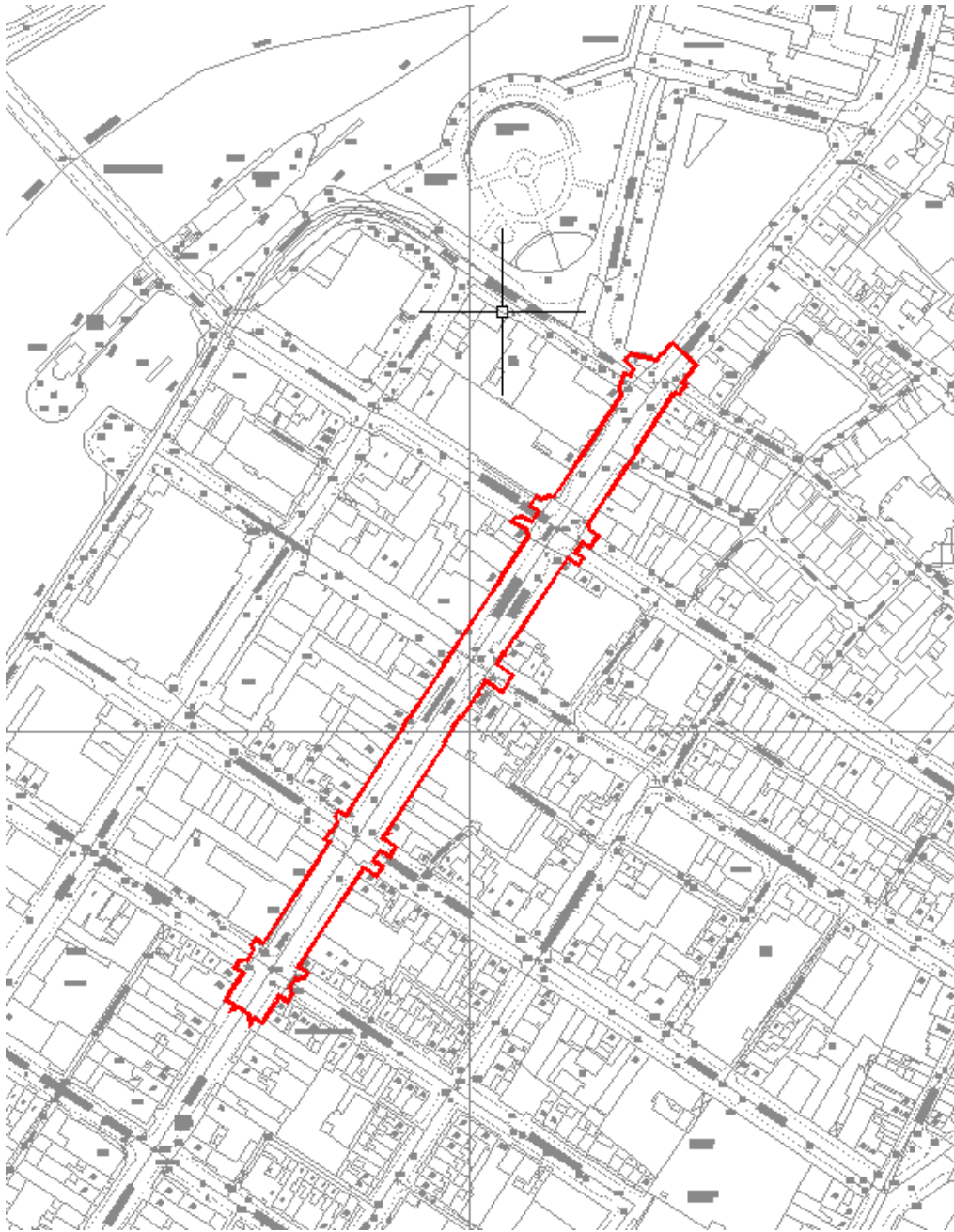


Figure 2: Proposed Development Area (0.96 ha)

3.2 Description of Proposed Development

This section describes the physical characteristics of the proposed development with regard to the design, construction and operational elements of relevance to this AA Screening Report.

The proposed development is comprised mainly of O'Connell Street, in Limerick City Centre, and makes up an area of approximately 0.96 Ha. The proposed development seeks to improve the retail and commercial attractiveness of the O'Connell Street area through the enhancement of public space and streetscape, and through traffic management and enhanced sustainable travel modes.

The proposed development will seek to reinforce and, where possible, enhance the different uses and characteristics of O'Connell Street, particularly in terms of the layout of the street (footpath and roadway widths); the extent of provision for vehicles (traffic management, parking and loading); the incorporation of heritage features (especially the surviving Georgian elements such as lightwells, cellars, coal-holes and ironwork); the rationalisation of street clutter (regulatory and directional signage in particular) and road markings; the introduction of appropriate streetscape elements (including surfaces, lighting, furniture and street trees); and improved legibility throughout the City Centre.

The proposed works will include reconfiguration of traffic movements to facilitate improved pedestrian, cyclist and bus accessibility, and improvements to the public realm along O'Connell Street and in its immediate vicinity at junctions. The upgrade or replacement of underground services and structures may also be required. A detailed description of the proposed works is included below.

3.3 Construction Phase

Construction works within the proposed development area will include excavation of the street surfacing and sub base, removal of existing surface materials, installation of new utilities, build-up of the street, repaving the street to include installation of new high quality public realm, planting trees and other decorative plants, and installation of new street furniture, street lighting and artworks. No demolition work will be required to facilitate the proposed development.

The works are to be undertaken on a phased basis, with an estimated length of time for all construction works to be completed of 12 to 18 months, with an anticipated start date of Q1 2020.

During the Ground Investigation works undertaken in 2017, it was discovered that a reinforced concrete slab, approximately 200mm thick, is present between the road surface and made ground overlaying the crowns of the barrel vault structures (Georgian Cellars) as shown in **Figure 3**. It is proposed to keep this concrete slab in place where present, and to replicate it elsewhere on the street if required for the protection of the vaulted cellars. The existing surfacing will be excavated as far as the tops of the barrel vaults, or to the top of the reinforced concrete slab where this is present. Localised deeper excavations through the concrete slab will be required for replacement and upgrade of utilities; however, the depth of these excavations will also be subject to the limit of the tops of the barrel vaults.

Based on the site investigation carried out to date, it is estimated that the excavations will reach a maximum depth of approximately 1m below the existing surface level, with the majority of the excavations approximately 500mm below the existing surface level.

Limited groundwater information obtained from previous site investigations suggested that groundwater can be found at 3m+ below ground level (i.e. street level) within the study area. No groundwater was encountered during the ground investigation works. As the original ground level for the street is more than 3m below the current ground level, it is assumed that the groundwater level is no higher than this, which would place it below the vaults.

No soil contamination is expected to arise from the construction phase of the proposed development. If excavated soil cannot be reused on-site, it will be transported from the site and disposed of at a suitable licensed facility. Inert construction and demolition waste will also be removed off site in a similar manner. Thus, in considering the nature of the proposed development, the proposed depth of excavations, and the presence of the underlying vaults, no significant negative effect on groundwater or soil is predicted during the construction phase of the proposed development.

There will be no direct discharges to surface water during the construction phase of the proposed development. Surface water run-off which is collected on site will be released via the existing drainage network to a closed network which is treated in the Bunlicky waste water treatment plant prior to discharge to the Shannon estuary, in accordance with the EPA waste water discharge licence. The likelihood that the release of contaminated surface water could cause a significant effect to the River Shannon is considered highly unlikely given the existing drainage network in place and given the nature of the activities proposed.

As such, the construction phase of the proposed development is not predicted to result in a significant negative effect on surface water.

The exact location of trees and structural supports for e.g. street lighting will be determined as part of the detailed design process, in order to locate foundations such that they do not impact on vaults which are active or have the potential to become active in future.

Barriers and hoardings will be installed to restrict access and to provide safety measures for workers and passers-by.

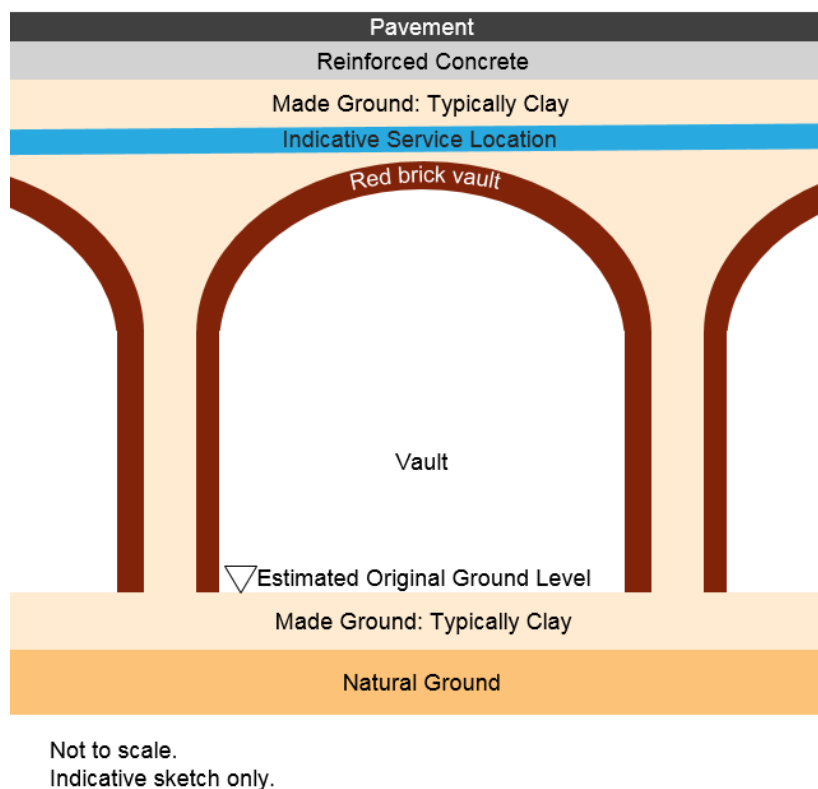


Figure 3: Indicative cross-section through vaults, parallel with street

Most of the existing services require upgrading or replacement. Localised deeper excavations through the concrete slab will be required for the replacement and upgrade of the utilities; however, the depth of these excavations will also be subject to the limit of the tops of the barrel vaults.

Excavation works will be carried out on a phased basis to limit the impact on the activity of the street. This phasing will be set out in detail in an agreed Construction & Environmental Management Plan (CEMP) and Traffic Management Plan (TMP), which will be implemented for the duration of the construction phase. The block layout of O'Connell Street lends itself to divisions based on the cross-streets, although it is likely that multiple blocks will be under construction at any one time.

Access to the city centre and the properties on O'Connell Street will be maintained at all times during the construction phase. This may require night works for final surfacing, utility installation in the vicinity of property entrances, etc. Details of this scheduling will be confirmed as part of the CEMP and TMP.

The construction works should enable the retention of at least one lane of traffic on O'Connell Street at all times.

Temporary diversions may be required over one or multiple blocks, which will be facilitated using parts of the inner orbital loop of Henry Street-Sarsfield Street-William Street-Gerald Griffin Street-Parnell Street-Upper Mallow Street. Side streets, Arthur's Quay, Bishop's Quay and Catherine Street, which run parallel to O'Connell Street, will also facilitate local diversions.

For example, if works necessitate the temporary closure of the block between Roches Street and Cecil Street, traffic could be diverted via Shannon Street, Bishop's Quay, Mallow Street and Henry Street.

Bus routes will be maintained through the city centre. Temporary relocation of bus stops will be required to facilitate construction works at their existing locations, and the reliability of cross-city services may be temporarily impacted by the construction works. However, all bus services can be retained on their existing routes while subject to some congestion due to the reduction of lanes.

The number of construction staff on site will vary throughout the works. It is possible that multiple crews would be on site in different areas of O'Connell Street at any one time. Typically, crews would have 4-5 members, plus the operator of an excavator and/or mini-excavator. For resurfacing of asphalt, a typical crew would consist of 12-15 members plus associated plant, and delivery trucks. At any one time on a typical day, no more than 20-25 staff would be on site.

The Contractor's Traffic Management Plan (TMP) will include construction site offices, the location of which will be agreed with LCCC. Staff parking arrangements will need to form part of the Contractor's Traffic Management Plan and this will also be subject to agreement with LCCC. Construction vehicles will require access to works areas for delivery and removal of materials, but it is anticipated that these will require parking for a short duration only for loading and unloading of material.

It is estimated that a maximum of 90 truck journeys would be required per block based on conservative evaluation of quantities required at the preliminary design stage.

The Contractor will ensure that the proposed works are carried out in accordance with the Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No. 291 of 2013). There is a low probability that accidents will occur as the construction works are standard in nature and well understood. Normal good construction practice will ensure that the risk of accidents will be low. It is envisaged that the risk of accidents, having regard to substances or technologies used is very low and therefore will not result in significant environmental effects.

3.4 Operational Phase

The proposed development includes the redistribution of space on O'Connell Street, from Denmark Street to Cecil Street, between various modes of transport and the public realm.

There are currently two southbound traffic lanes on O'Connell Street between Denmark Street and Mallow Street, with a short additional left turn pocket on the approach to Mallow Street. Between Mallow Street and Barrington Street there is one lane in each direction, which diverge around the O'Connell Monument at the Crescent. Various kerbside activities are provided for along both sides of the street, including parking, disabled parking, taxi ranks, loading bays and bus stops. General parking occupies the vast majority of this space.

The LUCROC project will reduce the width of traffic lanes between Denmark Street and Cecil Street to a maximum of 3.0m and reduce parking and other kerbside vehicular spaces. This space will then be adapted to provide wider footpaths and additional public realm areas.

Street furniture including seating areas, trees, planting, bicycle stands, and lighting will be provided throughout the proposed development, as well as features such as sculptures, pedestrian mini-plazas, and water installations.

In addition to the reallocation of space, the carriageway will be reconfigured to provide one vehicular lane and one bus lane along O'Connell Street from William Street to Cecil Street. All junctions in this section of the street will be converted to raised table junctions, where the street level will be flush with the footpath level at the junction, introducing traffic calming and indicating to motorists that pedestrians have priority at junctions. Traffic using the side streets which intersect O'Connell Street will therefore also be required to ramp up and down to cross the street.

The following sections describe how O'Connell Street will operate under the proposed measures.

Denmark Street to William Street

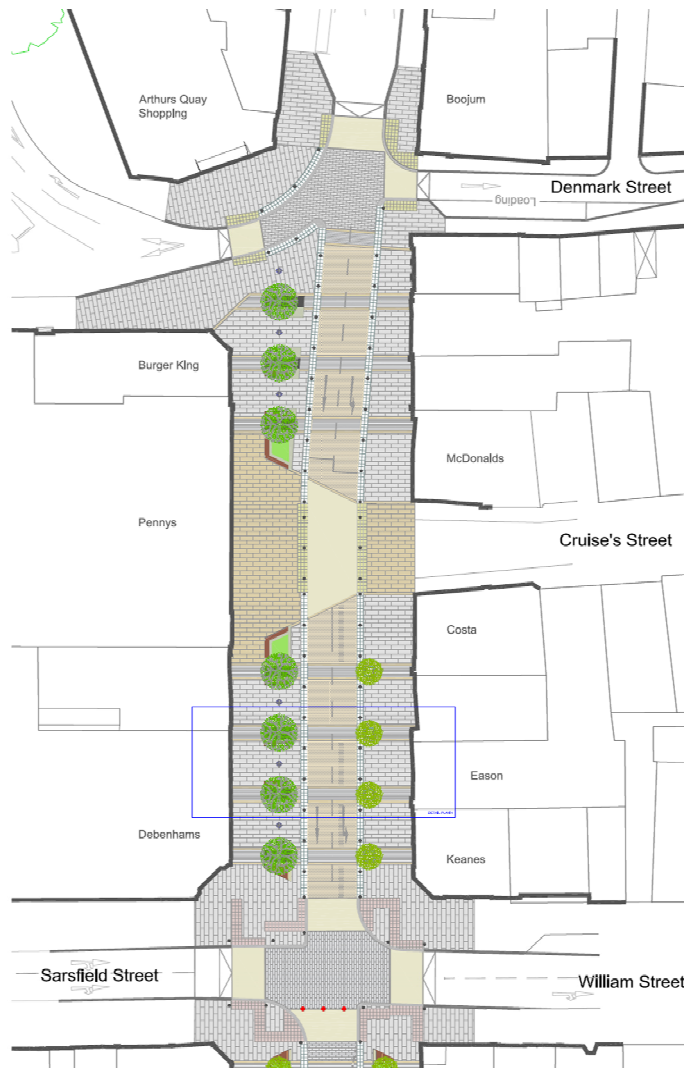


Figure 4: Proposed Design - Denmark Street to William Street

O'Connell Street will be converted to a shared surface between Denmark Street and William Street, as shown in **Figure 4** above, with a combination of street furniture, tactile paving and bollards rather than kerbs to delineate space accessible to vehicles. Two lanes of general traffic will remain on this section of O'Connell Street. An uncontrolled pedestrian crossing area will be provided at the western end of Cruise's Street to cater to the pedestrian desire line across O'Connell Street at this location. This crossing will be ducted to allow for future installation of signals should they be required.

A new bus stop will also be provided on Patrick Street, to the north of Denmark Street, in order to provide sufficient services to the city centre with the relocation of the existing stop outside the Augustinian Church further south.

Seven trees will be planted on this block, on the western side of the street. Seating, other lower-level planting, and bicycle parking areas will be provided between the trees. Four trees in planters will be provided on the eastern side of the street.

These will act as delineators between the carriageway and pedestrian area, as well as providing rest areas and meeting points for pedestrians and cyclists. The presence of trees will also soften the hard landscaping on the street and introduce a natural element in the built environment.

William Street to Roches Street



Figure 5: Proposed Design - William Street to Thomas Street



Figure 6: Proposed Design - Thomas Street to Roches Street

The shared surface will continue from William Street to Roches Street, as shown in **Figure 5** and **Figure 6** above. A combination of street furniture, tactile paving and bollards will again be used instead of kerbs to delineate space accessible to vehicles. The left-hand lane on this section of O'Connell Street will be a bus lane, catering for buses, cyclists, and other public transport vehicles such as taxis, while the right-hand lane will remain as a general vehicular lane. No parking or other kerbside activities will be permitted. Existing disabled parking bays, loading bays, taxi ranks etc. will be relocated to nearby side streets.

A horizontal deflection will be introduced at the junction of O'Connell Street, Thomas Street and Bedford Row. The carriageway will turn towards Bedford Row at the junction and revert to the centre of O'Connell Street to the south of the junction. Access will be maintained from Bedford Row, while Thomas Street will be closed to vehicular traffic. The horizontal movement will act as a traffic calming measure and will provide a pedestrian plaza area extending into Thomas Street. This central space will also allow the potential for a future artwork to be installed to create a further focal point for pedestrian gathering. An interactive surface-level water feature will also be installed opposite the Augustinian church.

A total of 22 trees will be planted on this block, with six at either end in a mirrored arrangement of three on each side. These will “bookend” the block which forms the core retail centre of the city and the key pedestrian priority area. A further six trees will be located on the eastern side of the street on the approaches to Thomas Street. Seating, other lower-level planting, and bicycle parking areas will be provided between the trees in a similar arrangement to the Denmark Street – William Street block, providing continuity along the street. Grass areas will be placed between the trees and the carriageway in the vicinity of Thomas Street. Areas of planting and street furniture will again act as delineators between the carriageway and pedestrian area, as well as providing rest areas and meeting points for pedestrians and cyclists and alerting motorists to a change in layout at the junctions. The presence of trees will also soften the hard landscaping on the street and introduce a natural element in the built environment.

Roches Street to Cecil Street

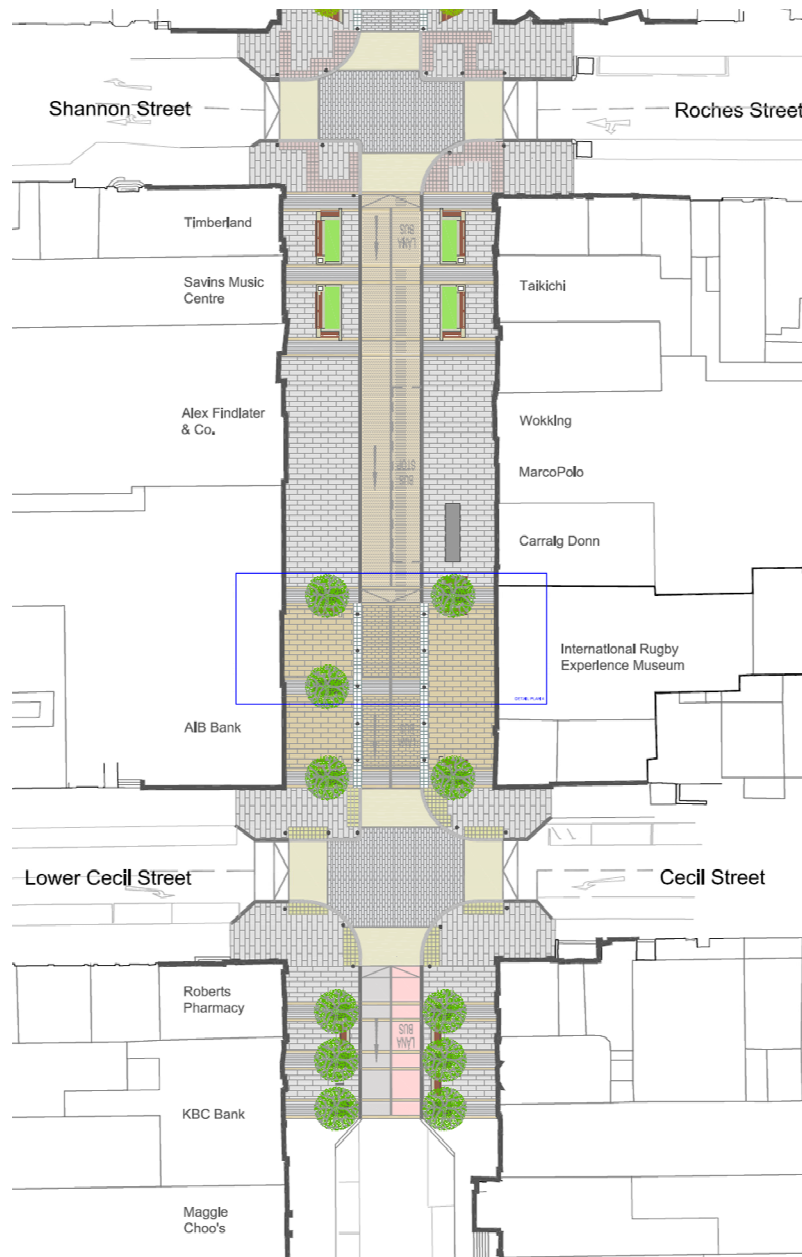


Figure 7: Proposed Design - Roches Street to Cecil Street

As shown in **Figure 7** above, from Roches Street to Cecil Street and to the immediate south of the junction with Cecil Street, the arrangement of two vehicular lanes travelling from north to south will continue with a bus lane on the left and a general vehicular lane on the right. There will be a level difference between the footpath and the carriageway on the northern section of this block, with the carriageway surfaced in asphalt to denote the non-shared nature of this section of the street. An indented bus stop will be provided in this section. No parking or other kerbside activities will be permitted. Existing disabled parking bays, loading bays, taxi ranks etc. will be relocated to nearby side streets.

An extended raised table junction at Cecil Street, similar to the shared surface areas further north will act as a traffic calming measure and provide a sense of

place at the proposed International Rugby Experience, which will occupy the corner of O'Connell Street and Cecil Street.

A total of 11 trees will be planted on this block, around the junction of O'Connell Street and Cecil Street. These will act as a boundary to the scheme, similar to the arrangements at the William Street and Roches Street junctions.

Six trees will be planted on the southern side of the junction in a mirrored arrangement of three on each side. Five trees will be planted on the northern side in a similar arrangement, with three trees on the western side and two on the eastern side in order to frame the façade of the proposed International Rugby Experience. Seating, other lower-level planting, and bicycle parking areas will be provided between the trees on the western side. These will again act as delineators between the carriageway and pedestrian area, as well as providing rest areas and meeting points for pedestrians and cyclists and alerting motorists to a change in layout at the junctions. The presence of trees will also soften the hard landscaping on the street and introduce a natural element in the built environment.

4 Ecological Overview

4.1 Habitats and Species within proposed development area

The proposed development is located within an urban environment in the habitat class of 'buildings and artificial surfaces' (BL3). The majority of the remainder of the site is under tarmac, with an associated road system.

The urban habitat of Limerick City is outlined in the Limerick City Biodiversity Plan (2010-2016). According to the Biodiversity Plan for Limerick City, there are a number of urban areas in the study area which are considered important for wildlife. For example, buildings can act as a roost for birds and bats, and old walls are homes to mosses, lichens, ferns.

Derelict sites and old buildings (including cellars and basements in this case) are also considered to be valuable potential natural habitats, particularly for bat species. A number of underground structures are present along O'Connell Street. These structures include the existing vaulted basements (coal cellars), the lightwells between the vaulted basements and the buildings, and the basement walls of adjacent properties.

Data was obtained from Bat Conservation Ireland. No known bat roosts or sightings have been recorded by Bat Conservation Ireland within the study area of the proposed development.

Two semi-mature trees are located on either side of the road carriageway, at its junction with Bedford Row/Thomas Street. Seven metal planters are located along a median strip in the centre of the roadway, between Denmark Street and William Street, containing flowering plants and some young tree species. A number of additional metal planters containing flowering plants are located along the pavement between William Street and Ceceil Street.

Few mammal species would be expected within the study site due to the low diversity of habitats and the built-up nature of the surrounding areas. Brown rat *Rattus norvegicus*, house mouse *Mus musculus* and pygmy shrew *Sorex minutes* are likely. It is probable that scavenging foxes *Vulpes vulpes* pass through the site at night.

The site has no suitable habitat for amphibians or reptiles.

The National Biodiversity Data Centre (NBDC) website (www.biodiversity.ie) contains a mapping tool that indicates known records of legally protected species within a selected OS 1km grid square. The site is located within square O1834 and data on this square was downloaded from the website on 1st April 2019. It is noted that this list is not exhaustive, and an absence of records does not imply that they are not present within the given area. Also, it is noted that this 1km square will include the River Shannon (200m away).

The following protected species have been recorded in this 1km grid square – Black-headed Gull (*Larus ridibundus*), Common Starling (*Sturnus vulgaris*), Common Swift (*Apus apus*), Lesser Black-backed Gull (*Larus fuscus*), Mute Swan (*Cygnus olor*), Rock Pigeon (*Columba livia*) and Soprano Pipistrelle (*Pipistrellus pymaeus*).

There are no waterbodies within the site of the proposed development construction footprint. The River Shannon is located approximately 200m from the study area. The Shannon River flowing through Limerick City is predominantly freshwater with some saltwater movements. Over its entire reach, the River Shannon is home to many plant species of conservation significance. In addition, protected fauna is also known to occur along the river system for example Otter (an Annex II species of the E.U. Habitats Directive) is commonly found in addition to five species of Annex II fish. Freshwater Pearl Mussel another Annex II species also occur abundantly in parts of the Cloon River, a tributary of the River Shannon.

In summary, there are no natural or semi-natural habitats within this site. All the habitats which occur are frequent in urban and developed areas and none are of conservational value. There are no rare or notable species of flora within the site. Further, the fauna species associated with the study area are commonly occurring species in urban habitats and none is of conservation value. Overall, the site has negligible ecological interests and is not of conservational value.

4.2 Designated Sites

There are no Natura 2000 sites within the project area, however it is noted that the Lower River Shannon SAC is located 0.2km from the proposed development site, and the River Shannon and River Fergus Estuaries SPA is located 0.3km from the site. The proposed development area is of low ecological value and is not of importance for any mobile QI species.

5 Natura 2000 Sites

5.1 Zone of Influence of the Proposed Development

The zone of influence comprises the area within which the proposed development may potentially affect the conservation objectives or qualifying interests (QI) of a Natura 2000 site. There is no recommended zone of influence, and guidance from the National Parks and Wildlife Service (NPWS) recommends that the distance should be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in-combination effects (cumulative).

Natura 2000 sites (European sites) are only at risk from significant effects where a source-pathway-receptor link exists between a proposed development and a Natura 2000 site(s). This can take the form of a direct impact (e.g. where the proposed development and/or associated construction works are located within the boundary of the Natura 2000 site(s)) or an indirect impact where impacts outside of the Natura 2000 site(s) affect ecological receptors within (e.g. impacts to water quality which can affect riparian habitats at a distance from the impact source). Consideration is therefore given to the source-pathway-receptor linkage and associated risks between the proposed development and Natura 2000 sites.

The identification of risk does not automatically mean that an effect will occur, nor that it will be significant. The identification of these risks means that there is a possibility of environmental or ecological damage occurring. The level and significance of the effect depends upon the nature of the consequence, likelihood of the risk and characteristics of the receptor.

The precautionary principle is applied for the purposes of screening to ensure that consideration and pre-emptive action is undertaken where there is a lack of scientific evidence.

As detailed previously, significant environmental emissions are not predicted due to the nature of the works proposed.

Given the low level of emissions predicted from the proposed development, given the low ecological importance of the proposed works area on a highly urbanised area and the nature and duration of the works proposed, it was considered that the zone of influence of the proposed development would not extend beyond the site boundary itself. There are no Natura 2000 sites within the construction footprint boundary and thus none within the zone of influence. The habitats within the proposed development site are not significant foraging or breeding or commuting habitat for any mobile QI species. The proposed development is not directly connected with, or necessary for, the management of any Natura 2000 site. No habitat loss will occur within any Natura 2000 site as a result of this proposed development. The proposed development site is not of importance for the qualifying interests (QI) species of any Natura 2000 site.

Consultation of NPWS online data identified seven Natura 2000 sites within 15km of the project area. Refer to **Table 1** and **Figure 8**. As mentioned previously, there are no Natura 2000 sites within the project area and none of these sites are considered to be within the zone of influence of the proposed development. However, it is noted that the Lower River Shannon SAC is located 0.2km from the proposed development site, and the River Shannon and River Fergus Estuaries SPA is located 0.3km from the site.

These two Natura 2000 sites are indirectly hydrologically linked to the proposed development site via the existing surface water drainage system which drains to the Bunlicky waste water treatment plant prior to discharge to the Shannon estuary, in accordance with the EPA waste water discharge licence. The likelihood that the release of contaminated surface water could cause a significant effect to the River Shannon is considered highly unlikely given the existing drainage network in place and given the nature of the activities proposed.

Therefore, there will be no direct or indirect effects on any sites designated as Special Protection Areas or Special Conservation Areas.

Table 1: Natura 2000 sites within 15km of the project area

Name	Distance from study area	Qualifying Interests and Features of Interest
River Shannon and River Fergus Estuaries SPA 004077	0.2km	Cormorant (<i>Phalacrocorax carbo</i>) [A017] Whooper Swan (<i>Cygnus cygnus</i>) [A038] Light-bellied Brent Goose (<i>Branta bernicla hrota</i>) [A046] Shelduck (<i>Tadorna tadorna</i>) [A048] Wigeon (<i>Anas penelope</i>) [A050] Teal (<i>Anas crecca</i>) [A052] Pintail (<i>Anas acuta</i>) [A054] Shoveler (<i>Anas clypeata</i>) [A056] Scaup (<i>Aythya marila</i>) [A062] Ringed Plover (<i>Charadrius hiaticula</i>) [A137] Golden Plover (<i>Pluvialis apricaria</i>) [A140] Grey Plover (<i>Pluvialis squatarola</i>) [A141] Lapwing (<i>Vanellus vanellus</i>) [A142] Knot (<i>Calidris canutus</i>) [A143] Dunlin (<i>Calidris alpina</i>) [A149] Black-tailed Godwit (<i>Limosa limosa</i>) [A156] Bar-tailed Godwit (<i>Limosa lapponica</i>) [A157] Curlew (<i>Numenius arquata</i>) [A160] Redshank (<i>Tringa totanus</i>) [A162] Greenshank (<i>Tringa nebularia</i>) [A164] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A179] Wetland and Waterbirds [A999]
Lower River Shannon SAC 002165	0.3km	Sandbanks which are slightly covered by sea water all the time [1110] Estuaries [1130]

Name	Distance from study area	Qualifying Interests and Features of Interest
		<p>Mudflats and sandflats not covered by seawater at low tide [1140]</p> <p>Coastal lagoons [1150]</p> <p>Large shallow inlets and bays [1160]</p> <p>Reefs [1170]</p> <p>Perennial vegetation of stony banks [1220]</p> <p>Vegetated sea cliffs of the Atlantic and Baltic coasts [1230]</p> <p>Salicornia and other annuals colonising mud and sand [1310]</p> <p>Atlantic salt meadows (<i>Glauco-Puccinellietalia maritimae</i>) [1330]</p> <p>Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410]</p> <p>Water courses of plain to montane levels with the <i>Ranunculus fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260]</p> <p>Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410]</p> <p>Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) [91E0]</p> <p><i>Margaritifera</i> (Freshwater Pearl Mussel) [1029]</p> <p><i>Petromyzon marinus</i> (Sea Lamprey) [1095]</p> <p><i>Lampetra planeri</i> (Brook Lamprey) [1096]</p> <p><i>Lampetra fluviatilis</i> (River Lamprey) [1099]</p> <p><i>Salmo salar</i> (Salmon) [1106]</p> <p><i>Tursiops truncatus</i> (Common Bottlenose Dolphin) [1349]</p> <p><i>Lutra</i> (Otter) [1355]</p>
Ratty River Cave SAC 002316	14.9km	<p>Caves [8310]</p> <p>Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>) [1303]</p>
Tory Hill SAC 00439	13.2km	<p>Semi-natural dry grasslands and scrubland facies on calcareous substrates (<i>Festuco-Brometalia</i>) (* important orchid sites) [6210]</p> <p>Calcareous fens with <i>Cladium mariscus</i> and species of the <i>Caricion davallianae</i> [7210]</p> <p>Alkaline fens [7230]</p>
Danes Hole Poulnalecka SAC 000030	15km	<p>Caves [8310]</p> <p>Old Oak Woodlands [91A0]</p> <p>Lesser Horseshoe Bat (<i>Rhinolophus hipposideros</i>) [1303]</p>
Glenomra Wood SAC 001013	10.7km	<p>Old Oak Woodlands [91A0]</p>
Askeaton Fen Complex SAC 002279	14.9km	<p><i>Cladium</i> Fens* [7210]</p> <p>Alkaline Fens [7230]</p>

*=priority habitats

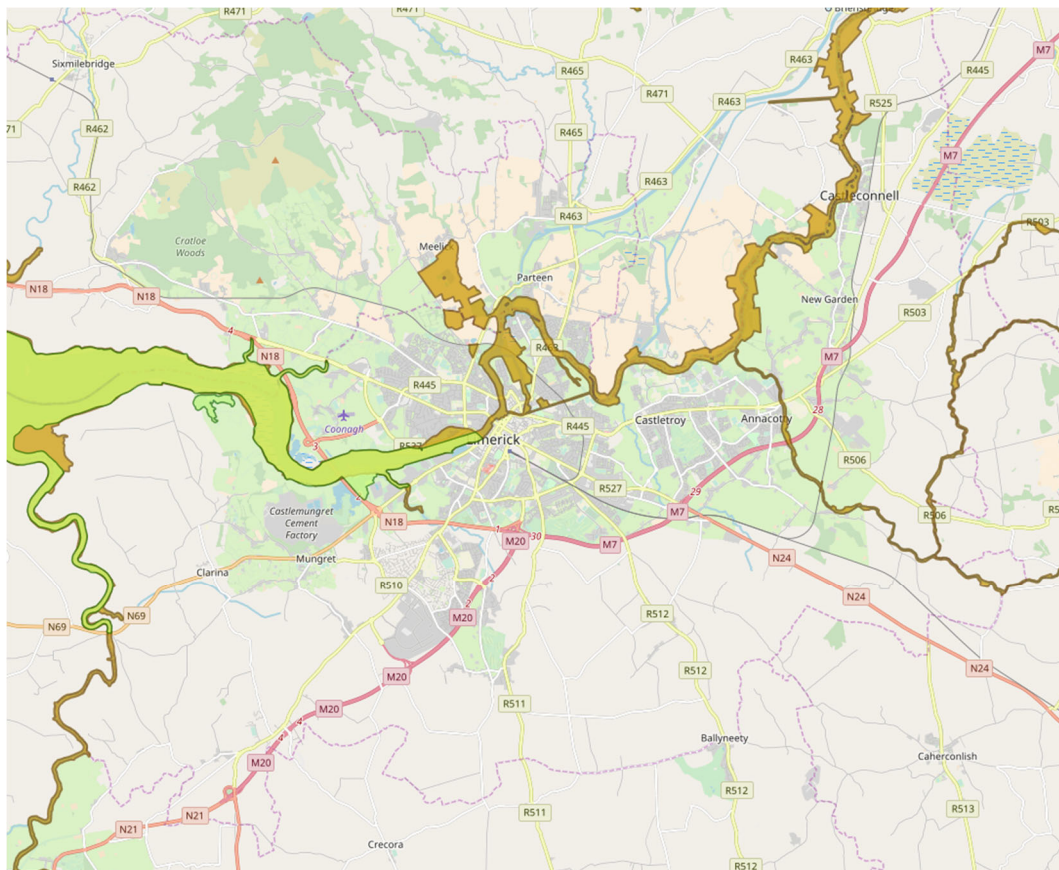


Figure 8: Natura 2000 sites within 15km of the project area

5.2 Other Designated Sites

Natural Heritage Areas (NHAs) and Proposed Natural Heritage Areas (pNHAs) can be considered to be ‘stepping stones’ between Natura 2000 sites and are therefore considered in this assessment. NHAs and pNHAs within 15km of the proposed development are listed in **Table 2** below and shown on **Figure 9**. None of these will be significantly directly nor indirectly impacted by the proposed development.

Table 2: NHAs and pNHAs within 15km of the project area

Name	Site Code	Distance from site
Woodcock Hill Bog NHA	002402	2.7km
Gortacullin Bog NHA	002401	13.3km
Loughmore Common Turlough pNHA	000438	4.8km
Fergus Estuary and Inner Shannon North Shore pNHA	002048	0.4km
Knockalisheen Marsh pNHA	002001	2.1km
Garrannon Wood pNHA	001012	8.5km
Dromore and Bleach Loughs pNHA	001030	12.5km
Inner Shannon Estuary- South Shore pNHA	000435	0.8km
Glenomra Wood pNHA	001030	10.7km

Name	Site Code	Distance from site
Skoolhill pNHA	001996	12.9km
Tory Hill pNHA	000439	13.2km
Adare Woodlands pNHA	000429	14.1km
Castle Lake pNHA	000239	14.4km

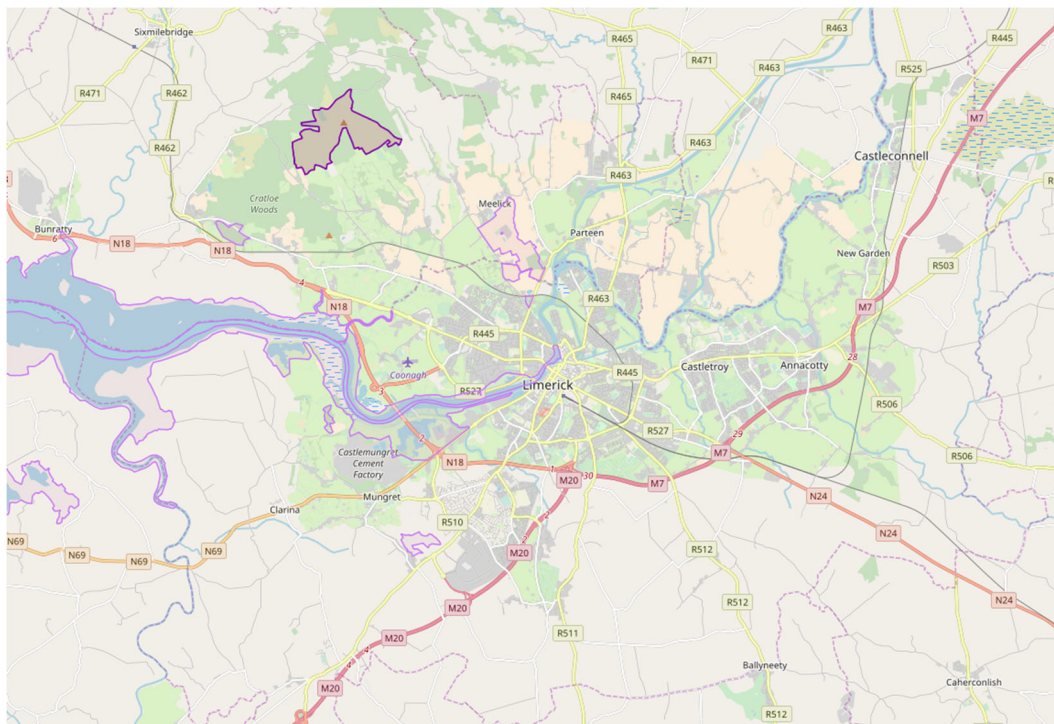


Figure 9: NHAs and pNHAs within 15km of the project area

5.3 Cumulative Effects

Cumulative impacts or effects are changes in the environment that result from numerous human induced, small-scale alterations. Cumulative impacts can be thought of as occurring through two main pathways: first, through persistent additions or losses of the same materials or resource, and second, through the compounding effects as a result of the coming together of two or more effects.

In addition to the proposed development, other relevant projects and plans in surrounding areas in Limerick City have been considered. The purpose of this is to identify any possible significant in-combination or cumulative effects/impacts of the proposed development with other such plans and projects. The following projects were considered to be of relevance to the proposed development:

- The Gardens International Development on Henry Street, which comprises a large-scale five storey over basement office block on the site of the former GPO, Roche's Hanging Garden and the Mercantile Building. This project opened in March 2019 and therefore will be in operation during construction of the LUCROC project. Cumulative effects on Natura 2000 sites are not predicted.

- The Opera development comprises a mixed-use development including a 14-storey landmark office building, with additional smaller buildings incorporating offices, retail premises, a library, an aparthotel and a small number of residential apartments. The completed development is projected to accommodate approximately 50,000 sq.ft of building accommodation. The Opera site is located on the south side of the River Abbey at the confluence with the River Shannon, opposite the Hunt Museum and east of Arthur's Quay Shopping Centre. The statutory consent application was recently submitted to An Bord Pleanála. Anticipated construction period is approximately six years on a phased basis and therefore it is anticipated that the construction of LUCROC and the Opera development may overlap should both developments receive statutory consent. Cumulative effects on Natura 2000 sites are not predicted.
- The Kings Island Flood Relief Scheme (FRS) is another ongoing project in proximity to the proposed study area. The Flood Relief Scheme will consist of one or a combination of flood risk management measures at King's Island, just north of the proposed development. The scheme is being funded by the Office of Public Works. The project started in early September 2015, with construction works due to commence in 2019/2020. It is therefore considered that the construction of LUCROC and the Kings Island FRS are likely to overlap. Construction traffic will need to be managed should this arise. Cumulative effects on Natura 2000 sites are not predicted.
- The Bishops Quay development (0.4 ha site at Lower Cecil Street and Bishops Quay) is another riverside development proposed for the city centre. The development consists of a mixed-use commercial and residential development scheme, with a commercial building comprising 15 storeys and a residential building comprising 7-storeys containing 35 No. apartments, all over a 2-storey basement. The scheme includes the creation of a new plaza on Henry Street and improvements to public areas surrounding the development. The project involves the demolition of the former ESB retail and commercial premises at Lower Cecil Street and Bishop's Quay and the refurbishment of No. 104 Henry Street Limerick, known as 'The Bishop's Palace' and a 2-storey over basement stone building known as 'The Coach House.' Planning permission for this development was granted in June 2017 by An Bord Pleanála. Construction programme is as yet unknown, and therefore the construction of LUCROC may overlap with the construction of this development. Construction traffic will need to be managed should this arise. Cumulative effects on Natura 2000 sites are not predicted.
- The International Rugby Experience museum, proposed for O'Connell Street, at a site on the corner of O'Connell Street and Upper Cecil Street has also received planning permission. It will comprise the demolition of three properties and the construction of a seven-storey building, with a two-storey portico fronting O'Connell Street, and a two-storey block to the rear. The development will see "a multi-media visitor experience, exhibition and education space" plus retail and cafe at ground floor level. Cumulative effects on Natura 2000 sites are not predicted.

A walking culvert (approximately 1300mm high, 900mm wide) is also present along the centre of O'Connell Street, which acts as the combined foul and surface water sewer for the street. Irish Water propose to undertake remedial works to the culvert as a separate project. The delivery of the LUCROC project is not dependent on the completion of the culvert remedial works. No information is available at this time on the scope and timing of the culvert remedial works, and as such, it is not considered in this assessment.

In considering the nature, scope and timeline of the proposed LUCROC project, it is not considered that the above-mentioned projects will contribute cumulatively to the impacts of this proposed development on Natura 2000 sites.

In addition to the above, LCCC is considering the inclusion of foundations (in the proposed development) to accommodate a proposed canopy structure over the main Thomas Street junction on O'Connell Street. The proposed canopy will be installed as a separate project and is not part of the LUCROC project. Should the construction of the two projects occur concurrently, the potential cumulative construction impacts are not considered to be significant, given the nature and scale of the proposed developments.

A number of these projects aim to regenerate the city centre in Limerick and to improve the public realm in this area of the city, thus also improving accessibility and the visitor experience for the city centre area, as well as providing further retail/commercial opportunities. These operational impacts are likely to be positive, long term, cumulative impacts.

6 Assessment of Significance

This assessment concludes that the proposed development is unlikely to have any significant adverse (direct or indirect) effects on Natura 2000 sites, their conservation objectives and/or qualifying interests.

Does the project have the potential to	Yes or No
Reduce the area of key habitats?	No
Reduce the population of key species?	No
Change the balance between key species?	No
Reduce diversity of the site?	No
Result in disturbance that could affect population size or density or the balance between key species?	No
Result in fragmentation?	No
Result in loss or reduction of key features (e.g. tree cover, tidal exposure, annual flooding, etc.)?	No
Cause delays in progress towards achieving the conservation objectives of the site?	No
Interrupt progress towards achieving the conservation objectives of the site?	No
Disrupt those factors that help to maintain the favourable conditions of the site?	No
Interfere with the balance, distribution and density of key species that are the indicators of the favourable condition of the site?	No
Cause changes to the vital defining aspects (e.g. nutrient balance) that determine how the site functions as a habitat or ecosystem?	No
Change the dynamics of the relationships (between, for example, soil and water or plants and animals) that define the structure and/or function of the site?	No
Interfere with predicted or expected natural changes to the site (such as water dynamics or chemical composition)?	No

In addition, this judgement has been made on the following basis:

- All development activity will take place within the site works boundary. No works will take place within any Natura 2000 site. No material or spoil from the works will be deposited in any Natura 2000 site. There will be no encroachment on the habitats or species of any Natura 2000 site.
- There will be no loss of Natura 2000 site habitat area, no fragmentation of the habitats of Natura 2000 sites, no disturbance to the qualifying species of the Natura 2000 sites, no impacts on population density of these species, no impacts on water resources and no impacts on water quality of the Natura 2000 sites.
- There will be no significant emissions to air, water or soil during construction or operation. There will also be no significant noise emissions during the construction or operational phase.

7 Screening Statement and Conclusions

The aims of this report were as follows:

- Provide information on and assess the potential for the proposed development to significantly impact on Natura 2000 Sites (also known as European sites).
- Determine whether the proposed development is directly connected with, or necessary to the conservation management of any Natura 2000 sites.
- Determine whether the proposed development, alone or in combination with other projects, is likely to have significant effects on Natura 2000 sites in view of their conservation objectives.

It has been objectively concluded by Arup that:

- There is no potential for the proposed development to significantly impact on Natura 2000 Sites.
- The proposed development is not directly connected with, or necessary to the conservation management of any Natura 2000 sites.
- The proposed development, alone or in combination with other projects, is not likely to have significant effects on Natura 2000 sites in view of their conservation objectives.

It has been determined by Arup that it is possible to rule out likely significant impacts on any Natura 2000 sites. It is the view of Arup that it is not necessary to undertake any further stage of the Appropriate Assessment process.

Appendix A

Finding of No Significant Impacts

A1 Finding of No Significant Impacts Summary Table

Finding of no significant effects report
Name of project or plan:
Limerick Urban Centre Revitalisation O'Connell Street (LUCROC) Project
Name and location of Natura 2000 sites:
Lower River Shannon SAC River Shannon and River Fergus Estuaries SPA
Description of the project or plan:
<p>LCCC is currently undertaking the Limerick Urban Centre Revitalisation – O'Connell Street Project (LUCROC). The LUCROC project seeks to revitalise Limerick City Centre to a high quality public realm, thereby redefining its role as a destination within the Limerick and Shannon region and providing a stronger and more visually appealing urban link within the city centre.</p> <p>The project seeks to improve the O'Connell Street area for retail and commercial attractiveness through enhancement of public space and streetscape, and through traffic management and enhanced sustainable travel modes. The project also aims to enhance areas adjacent to the City Living Spaces (such as the Georgian Quarter) by improving the human scale of the streetscape in the city centre. The proposed development area makes up approximately of 0.96Ha.</p> <p>The proposed works include reconfiguration of traffic movements to facilitate improved pedestrian, cyclist and bus accessibility, and improvements to the public realm along O'Connell Street and in its immediate vicinity at junctions. The upgrade and replacement of some underground services will also be required. All other services will be retained in their existing locations.</p>
Is the project or plan directly connected with or necessary to the management of the site?
No
Are there other projects or plans that together with the project or plan being assessed could affect the site:
LCCC is considering the inclusion of foundations to accommodate a proposed canopy structure over the main Thomas Street junction on O'Connell Street. The proposed canopy will be installed as a separate project and is not part of the LUCROC project. Should the construction of the two projects occur concurrently, the potential cumulative construction impacts are not considered to be significant, given the nature and scale of the proposed developments. It is not considered that other projects or plans in the vicinity will result in cumulative effects.
<i>The assessment of significance of effects</i>
Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site:
It is considered there are no likely significant direct, indirect or cumulative negative effects on Natura 2000 sites as a result of the LUCROC project.
Explain why these effects are not considered significant

<ul style="list-style-type: none"> • All development activity will take place within the site works boundary. No works will take place within any Natura 2000 site. No material or spoil from the works will be deposited in any Natura 2000 site. There will be no encroachment on the habitats or species of any Natura 2000 site. • There will be no loss of Natura 2000 site habitat area, no fragmentation of the habitats of Natura 2000 sites, no disturbance to the qualifying species of the Natura 2000 sites, no impacts on population density of these species, no impacts on water resources and no impacts on water quality of the Natura 2000 sites. • There will be no significant emissions to air, water or soil during construction or operation. There will also be no significant noise emissions during the construction or operational phase.
Who carried out the assessment - Arup in-house ecologist
Sources of data
<ul style="list-style-type: none"> • Google maps aerial photography; • Online mapping and data on protected sites from the National Parks and Wildlife Service (NPWS); • Information on environmental quality data available from the EPA; • Status of EU protected habitats in Ireland provided by the NPWS; and • National Biodiversity Centre database.
Level of assessment completed
Desktop Assessment
Where can the full results of the assessment be accessed and viewed - LCCC
Overall Conclusions
Based on the information provided above, it is determined that it is possible to rule out likely significant impacts on any Natura 2000 sites and therefore it is not deemed necessary to undertake any further stage of the Appropriate Assessment process.