

Limerick City and County Council
New Junction at Plassey Road
Report for the Purposes of
Appropriate Assessment Screening

Issue 1 | 13 July 2020

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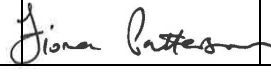

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Appendix A

Finding of No Significant Effects Report

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Recorded Species in the Study Area

1 Introduction

1.1 Introduction

Arup has prepared this Screening for Appropriate Assessment on behalf of Limerick City and County Council for proposed upgrade works at Plassey Road/Plassey Park Road/Troy Studios Road in Castletroy, County Limerick (hereafter referred to as ‘the proposed development’).

The proposed development will include:

- The provision of a new signalised junction at Plassey Park Rd / Plassey Rd.
- Upgrading Troy Studios Road to reduce car delays.
- Provision of new pedestrian and cycle facilities to provide safer routes and crossing points.
- Provision of additional bus lanes on the Plassey Park Road and Plassey Road to allow buses to move more freely. New bus stops are to be provided; others are to be reconstructed.

The development is described in further detail in **Section 2 Description of the Proposed Development**.

The location of the proposed development is indicated in **Figure 1**, will the existing road layout illustrated in **Figure 2**.



Figure 1: Location of the Proposed Development

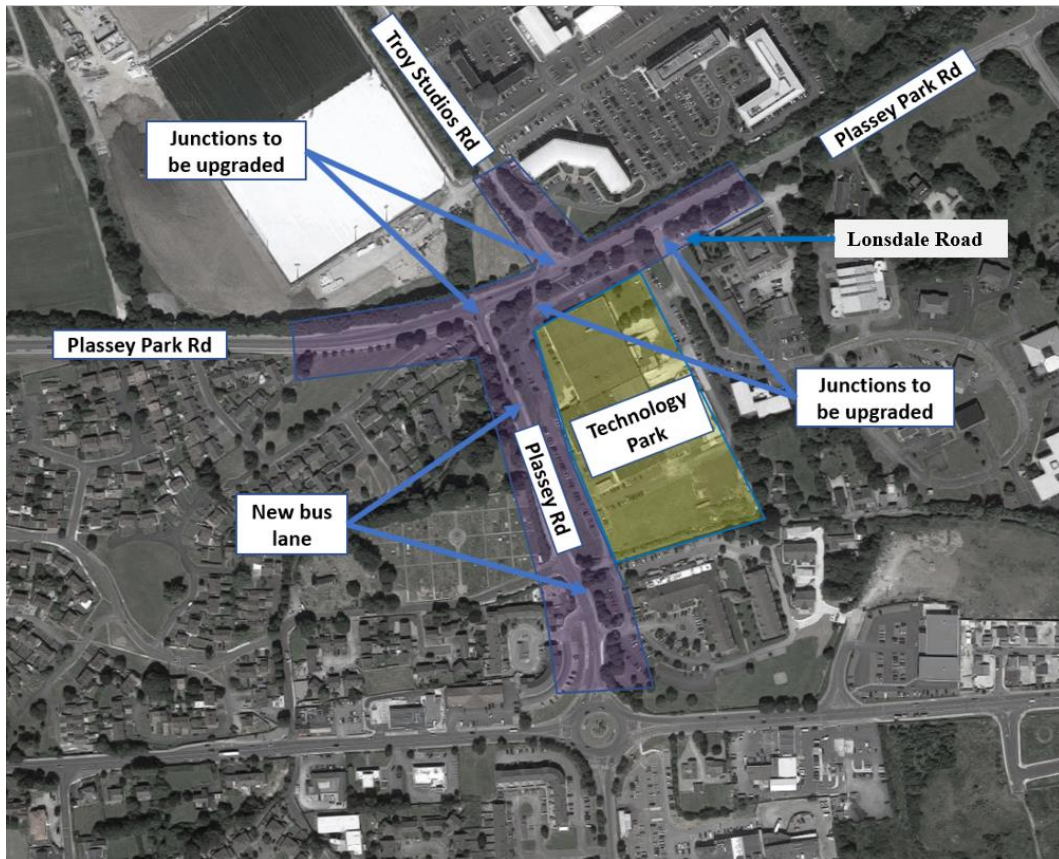


Figure 2: Location of the proposed development – Road Layout

This is the report for the Purposes of Appropriate Assessment (AA) Screening, hereafter referred to as ‘the AA Screening Report,’ for the proposed development.

According to European Commission (EC) Guidance¹, AA Screening can be defined as ‘*the process which identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant.*’

This AA Screening Report contains the information required for LCCC, as the competent authority, to undertake screening for AA with regards to the proposed development. The findings of this AA Screening Report will assist LCCC in making an AA Screening determination.

According to EC Guidance¹, the AA Screening process is made up of the following four steps:

- *“Determining whether the project or plan is directly connected with or necessary to the management of the site;*
- *Describing the project or plan and the description and characterisation of other projects or plans that in combination have the potential for having significant effects on the Natura 2000 site;*

¹ *Assessment of plans and projects significantly affecting Natura 2000 sites Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (European Commission, 2001)*

- *Identifying the potential effects on the Natura 2000 site; and*
- *Assessing the significance of any effects on the Natura 2000 site.”*

The assessment of potential for significant effects of the proposed development on Natura 2000 sites has therefore been undertaken having due regard to the process or ‘steps’ outlined under EC Guidance¹, as set out in **Section 5** of this AA Screening Report.

1.2 Guidance and Data Sources

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

- *"Managing Natura 2000 sites- The provisions 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); and
- *Guidelines for Ecological Impact Assessment in the UK and Ireland, Terrestrial, Freshwater, Coastal and Marine* (Institute of Ecology and Environmental Assessment, September 2018).

Sources of information that were used to collect data on the Natura 2000 network of sites and on the existing ecological environment are listed below:

- Google aerial photography (viewed in June 2020);
- National Parks and Wildlife Service online data on European Sites and (www.npws.ie) (viewed in June 2020);
- National Parks and Wildlife Service online data on protected flora and fauna (viewed in June 2020);
- Information on environmental quality data available from www.epa.ie (EPA Online Environmental Map Viewer) (viewed in June 2020);
- Information on environmental water quality data available from (EPA, www.catchments.ie);

- River Basin Management Plan for Ireland 2018-2021 (Government of Ireland, 2018)
- Castletroy Local Area Plan 2019-2025, as extended (Limerick City and County Council, 2019);
- Appropriate Assessment Screening: Review of the Castletroy Local Area Plan 2009 – 2015, as extended, (Limerick City and County Council, 2019);
- Limerick County Development Plan 2010-2016, as extended (Limerick City and County Council, 2010);
- AA Screening Report for the Draft Limerick County Development Plan 2010-2016 (Limerick City and County Council, 2010);
- Natura Impact Report for the proposed Variation No. 6 to the Limerick County Development Plan 2010-2016) (Limerick City and County Council, 2017); *and*
- Limerick County Heritage Plan 2017-2030 (Limerick City and County Council, 2017).

1.3 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 site 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 or 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 after 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 AA, 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 plan or project 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 plan or project, 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 significant effects on the integrity of the Natura 2000 site.

- **Stage 4 – Assessment where no alternative solutions exist and where significant effects 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.

2 Description of the Proposed Development

2.1 Location of the Proposed Development

The proposed development is located at Troy Studios Road, Plassey Park Road and Plassey Road in Castletroy, County Limerick, and makes up an area of approximately 1.61 Ha. The location of the proposed development is illustrated in **Figure 1**, in **Section 1**.

The proposed development site is located approximately 4.7Km to the north-east of Limerick City Centre and approximately 650m south-east of the River Shannon. The site is located directly adjacent to lands belonging to the University of Limerick, and the Mid-West National Technology Park.

Figure 3 below provides an aerial view of the proposed development site.



Figure 3: Aerial View of the Proposed Development (not to scale. Source Google Maps 2020)

2.2 Overview

The proposed development will involve signalling an unsignalized junction at Plassey Road/Plassey Park Road and adding dedicated pedestrian and cycle crossing facilities. It also includes an additional bus lane along the Plassey Road, two additional bus lanes along Plassey Park Road and two additional cycle lanes along Troy Studios Road. Additionally, two smaller junctions along the Plassey Park Road will also be upgraded, one at the northern entrance of the National Technology Park and another at Lonsdale Road.

The purpose of the proposed upgrade works is to:

- Improve the road arrangement to accommodate existing and future pedestrian, cycle, public transport and vehicular traffic accessing the area through the consideration of a new signalised junction layout.
- Reduce the delays for cars accessing and exiting the Troy Studios Road.
- Provide safe crossing points for pedestrians.
- Upgrade of existing footways and creation of new pedestrian and cycle links.
- Assess bus stop locations and adequacy and amend as necessary.
- Provision of bus lanes on the Plassey Park Rd and the Plassey Road.
- Be compatible with existing road network operation.
- Be compatible with other projects underway in the vicinity (i.e. new layout proposed for Plassey Park Road to the east of the scheme, which is currently going through planning).
- Minimise impact on the existing services.

An overview of the proposed development is illustrated in **Figure 4** while the redline boundary of the proposed development is shown in **Figure 5**. A detailed description of the proposed works is included hereafter, in **Section 2.3** and **Section 2.4**.

The details of the proposed development are shown in drawings T0100-01 and T0100-02 which accompany the planning package.

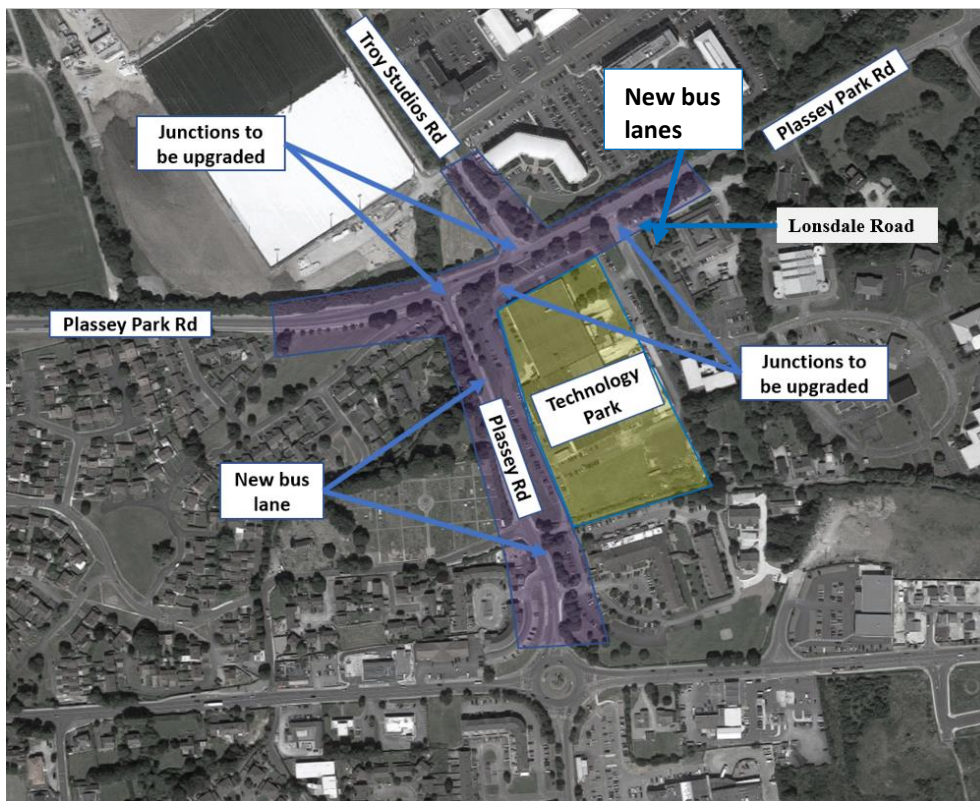


Figure 4: Overview of the proposed development (not to scale)

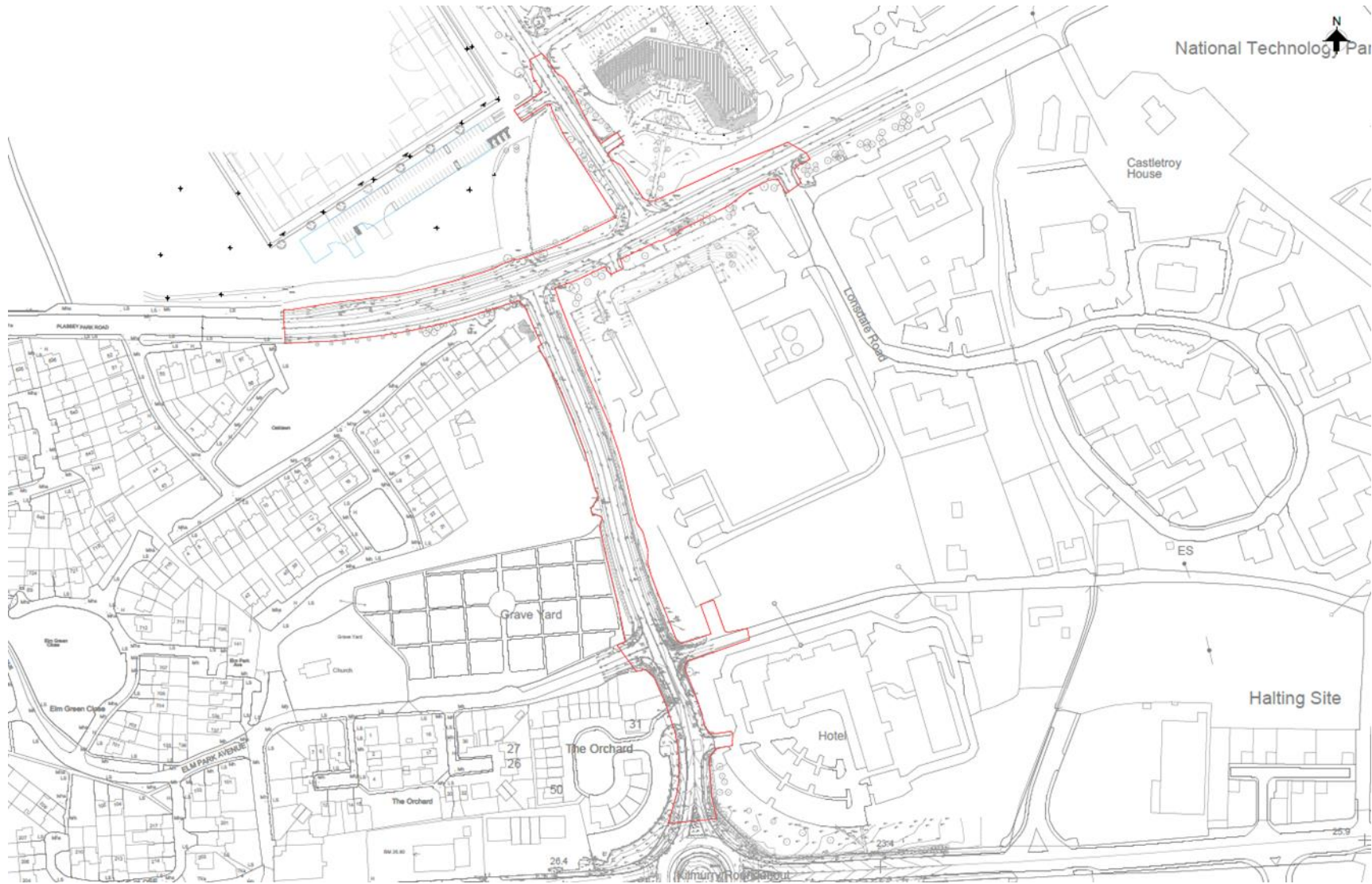


Figure 5: Redline boundary of the proposed development (not to scale)

2.3 Operational Phase

The main features of the proposed scheme are listed below and are shown in **Figure 6** and **Figure 7** below:

- On the Troy Studios Road (over approximately 99m of total length):
 - On road cycle lane to be constructed on both sides of the road.
 - Footpath to be constructed on both sides of the road.
 - Additional left-turn pocket to be constructed on Troy Studios Road to separate vehicles turning right and left.
- On Plassey Park Road (over approximately 313m of total length):
 - Convert the existing kneeling bus stop (approximately 90m west of the Plassey Road junction) to an in-line bus stop, and to extend the existing east-bound right-turn lane on Plassey Park Road to allow buses to enter the right-turn lane directly from the bus stop.
 - Additional bus lanes to be introduced on both sides of the Plassey Park Road.
 - Extension and realignment of cycle facilities to be carried out on both sides of the road. These will vary between on road cycle lanes and raised cycle lanes.
 - Off-line waiting area for right-turning cyclists to cross at toucan crossing to be installed at both junctions.
 - Both the Plassey Park Road / Plassey Road junction and the Plassey Park Road / Troy Studios Road are to be operated as signalised junctions.
 - Bus Priority Traffic signal on Cantilever for advanced signalling is to be put in place at the Plassey Park Road/Troy Studios Road junction.
 - An additional west-bound right-turn lane is to be constructed on the Plassey Park Road to turn right onto the Troy Studios Road.
 - Widening of the existing road/footpath into existing roadside grassed areas/vegetation in the order of 0.5m to 2m past back of existing footpath on the northern side of the road.
 - Proposed scheme to tie-in with future bus lane provision on Plassey Park Road.
- On Plassey Road (over approximately 314m of total length):
 - A new bus stop to be constructed on the west side of the Plassey Road. A north-bound bus lane is also to be constructed on the west side of the road ending at the Plassey Park Road / Plassey Road junction and starting approximately 130m south of the junction.
 - On the east side of the road a south-bound bus lane which is approximately 170m in length is to be constructed, commencing north of Dun an Oir junction and ending at the Kilmurry Roundabout.
 - Improved pedestrian / cycle facilities are to be constructed on both sides of the Plassey Road.
 - A new bus stop to be constructed on the east side of the Plassey Road just north of the Dun an Oir junction.

- Junctions are to be upgraded to allow safer crossing of pedestrians and cyclists.
- Formalised access/egress from the National Technology Park with widening and formalisation of Dun an Oir junction to Plassey Road.
- New block wall / fenceline constructed to tie in with existing and to form new boundary on the east side of the Plassey Road.

A full lighting design will be completed as part of detailed design and agreed, as required, by Limerick City and County Council.

The lighting design will cater for new lighting of the roadway if the existing provision is deemed insufficient for the proposed uses, in addition to lighting being provided to ensure a continuity of illumination along footpaths and within public areas.

Columns shall be rooted type and shall be manufactured to European stand EN40–Lighting Columns. Light fittings will be in keeping with the existing provision.

2.3.1 Surface Water Drainage

Surface water from the site currently drains as follows:

Troy Studios Road

Surface water enters a number of gullies on both sides of this road and discharges to the River Shannon.

Plassey Park Road

Surface water on Plassey Park Road, east of Plassey Road, is collected in various gullies along the road before travelling east through 150mm uPVC collector pipes. On-site inspection confirmed that much of this network continues east via a collector drain along Plassey Park Road. However, there are several gullies on the northern side of the road which are connected to the Troy Studios Road network which appears to flow into the River Shannon.

Along Plassey Park Road, west of Plassey Park, the surface water is collected and drains into a 450mm concrete pipe travelling west.

Plassey Road

Surface water on Plassey Road is collected by gullies along the road, connecting to the existing network which then follows the road north until it reaches the Plassey Park Road network. The system then travels east and continues east along Plassey Park Road as described above.

Construction Compound

The construction compound will be located within the business park. The outfall from the business park in which the construction compound is located appears to drain east along Plassey Park Road.

Ultimately all surface water from within the redline boundary enters the River Shannon. Once construction is complete, the surface water drainage system will revert back to the existing scenario.

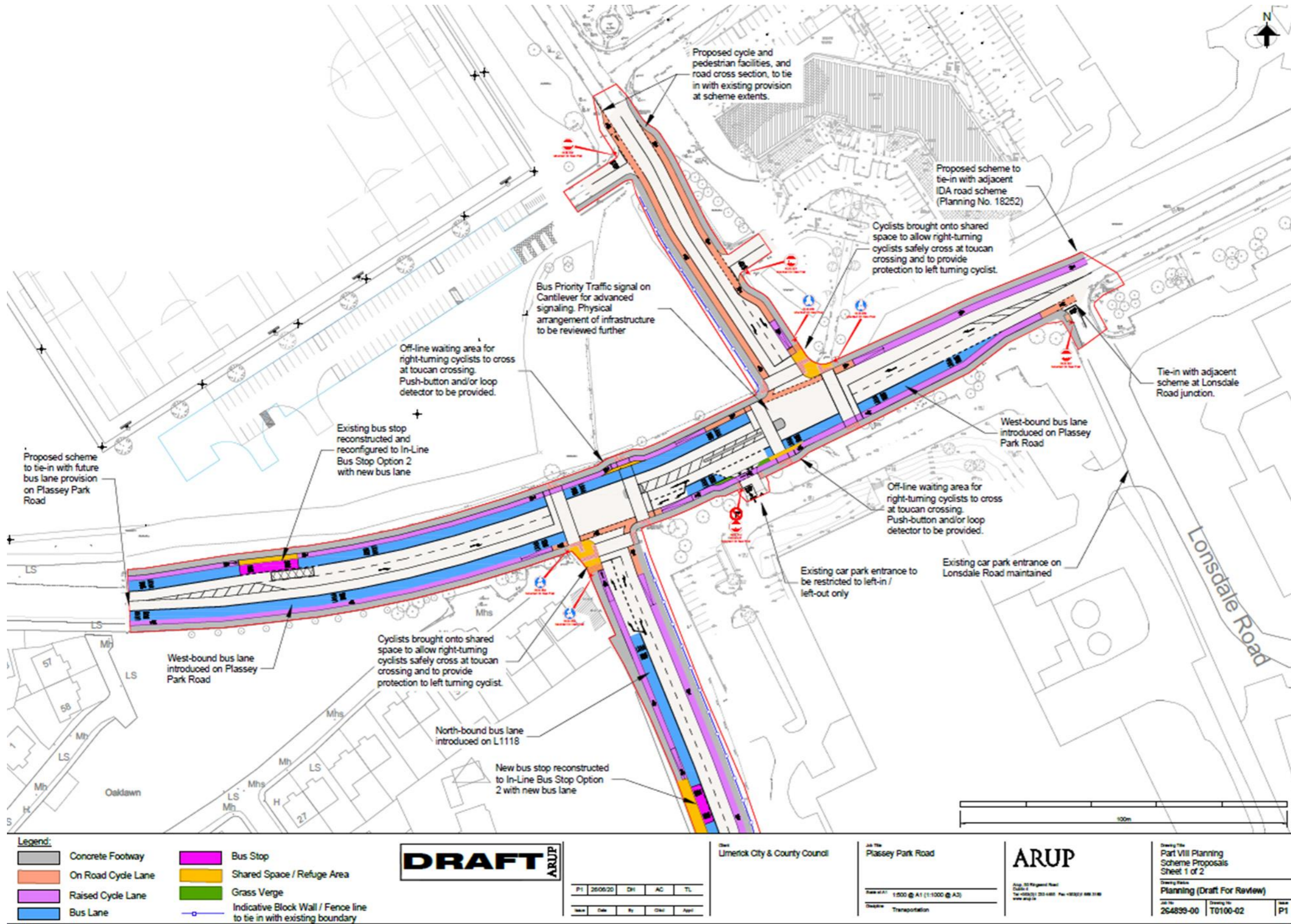


Figure 6: Main features of the proposed development

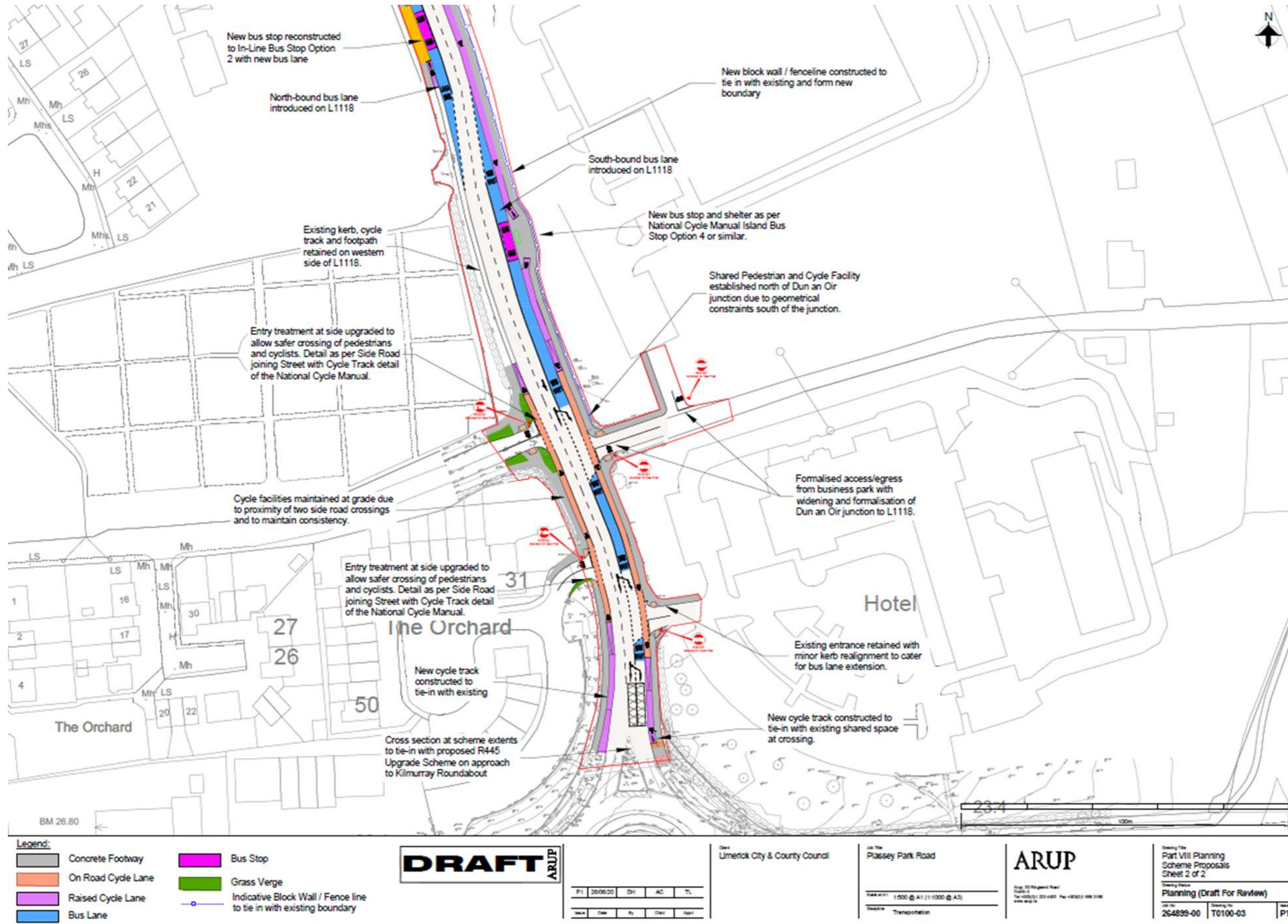


Figure 7: Main features of the proposed development

2.4 Construction Phase

2.4.1 Indicative Construction Programme

The proposed development is anticipated to be constructed over a four-month period. The development is proposed to be constructed on the following basis:

- Set up site compound (Refer to **Figure 8**)
- Establish temporary traffic management zones on Troy Studios Road and Plassey Park Road
- Carry out works on the Troy Studios Road
- Carry out works on northern side of Plassey Park Road initially then focussing on the southern side
- Establish new footpaths and road alignments with traffic signals installed but not operational until instruction is given
- Establish temporary traffic management zones on Plassey Road
- Works then to be carried out on Plassey Road to construct new bus lane with appropriate temporary traffic management zones established
- Final snagging and completion

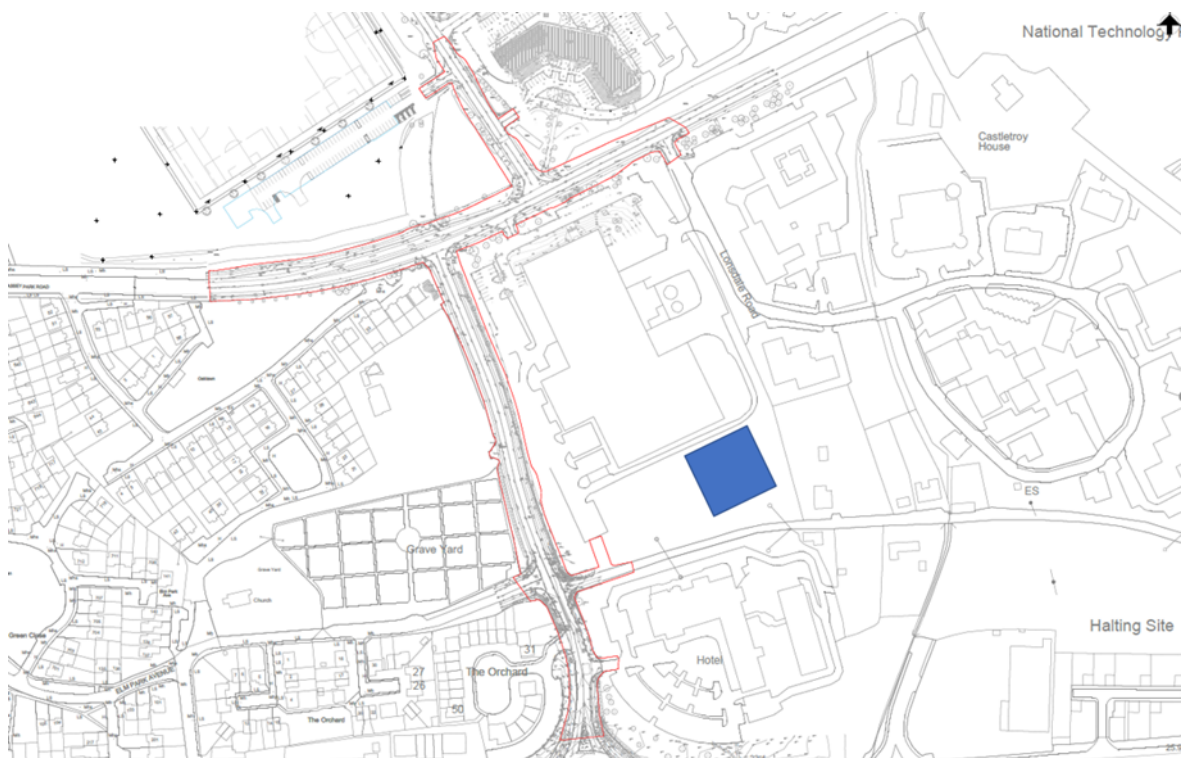


Figure 8: Proposed construction compound location (indicated in blue)

2.4.2 Typical Construction Methodology

The following is the typical construction methodology expected for the road widening works. This is the envisaged sequencing however the Main Contractor may propose an alternative, to be approved. **Figure 9 - Figure 12** illustrates the main stages of construction.

Phase 1

Initially the Contractor shall set up the site extents for off-line work, leaving existing kerb and road-side gullies in place. The works area shall generally be to back of proposed footpath or existing boundary. The Contractor shall carry out required excavations for the proposed footpath, proposed cycle lanes/tracks, road widening, and any off-line utilities.

The expected excavation depths would be c. 500mm for footpaths, and c. 800mm for cycleways and roadways.

The total predicted volume of excavated material expected to be c. 3,600m³ based on this.

Dewatering may be required for minor local excavations, such as road widening locations. Water will be removed off site or may be reinjected to the subsurface through a number of wells or injection points within the site compound on agreement with the Local Authority. Local dewatering is likely to be necessary for only a portion of the construction programme, approximately 5 weeks.

Appropriate traffic management will be required in this period to ensure pedestrian and cyclist route through and around the works are maintained which may require reduction of roadway widths to provide temporary routes.

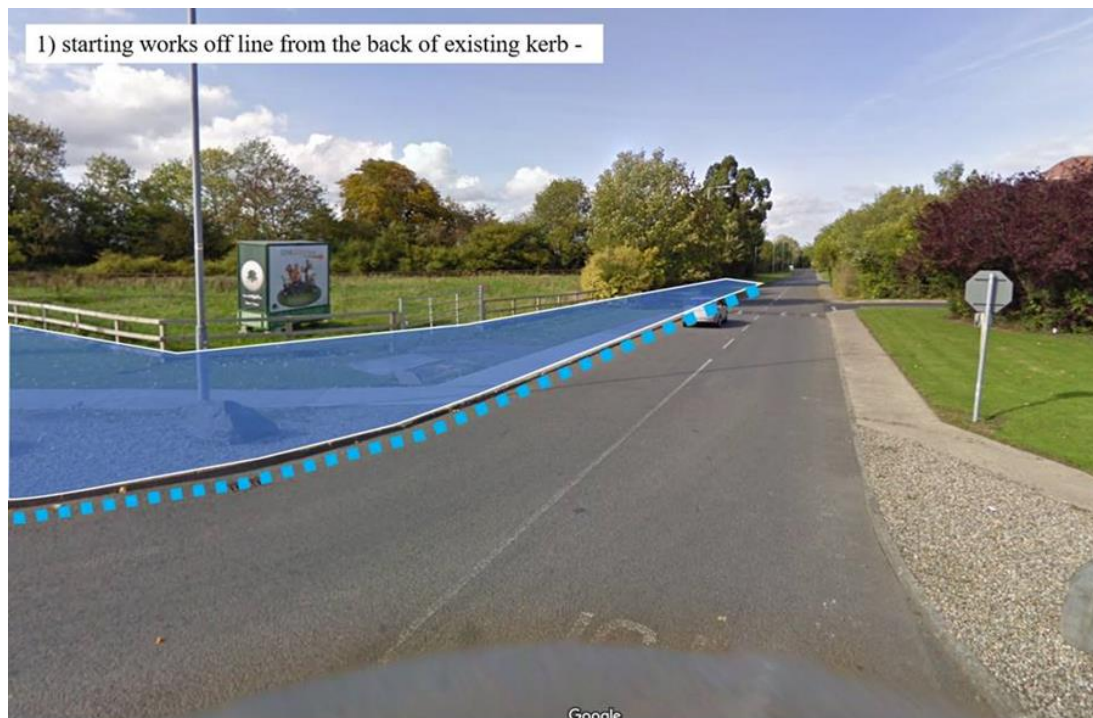


Figure 9: Construction Phase 1 © Google 2020

Phase 2

The Contractor shall then construct the proposed footpaths and cycle lanes up to back of proposed road edge. The remaining excavation shall be left for future tie-in with existing pavement and for future installation of new gullies.

Pedestrian and cyclist temporary routes to be maintained until such time that the proposed footpaths and cycle lanes are clear from works and suitable for use.

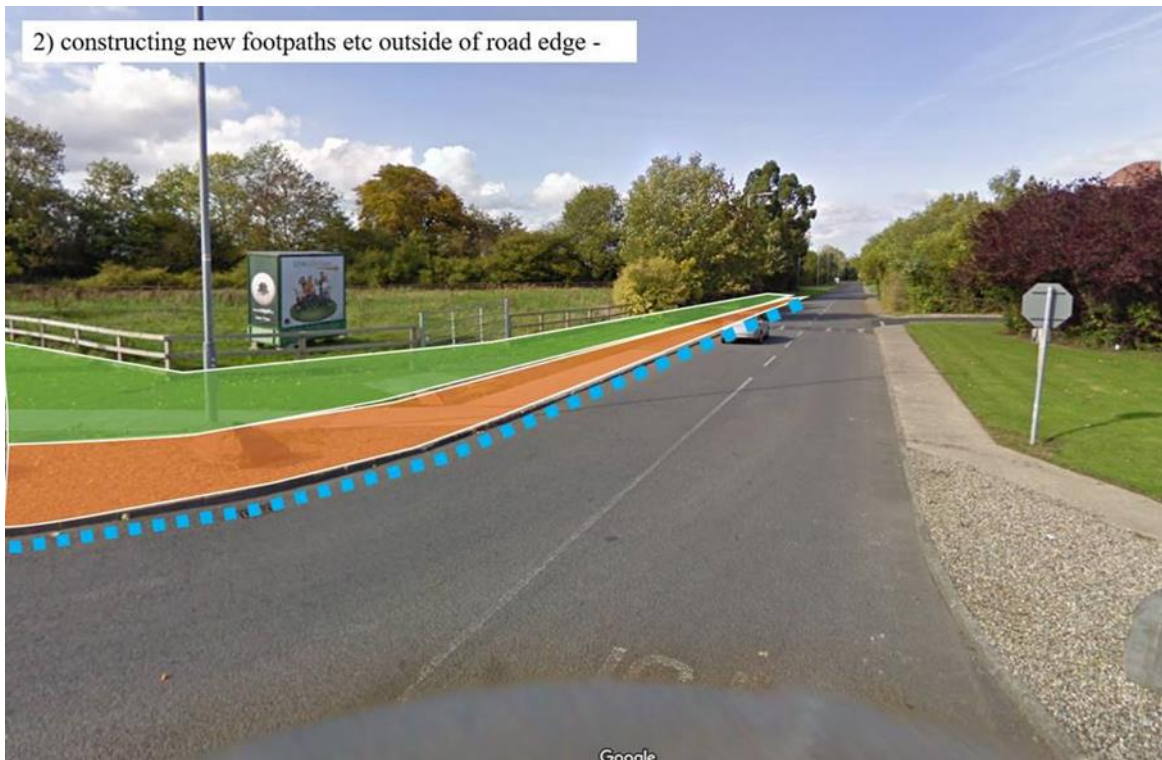


Figure 10: Construction Phase 2 © Google 2020

Phase 3

The Contractor shall then move on-line and break out existing kerbs and gullies and begin excavating existing pavement in order to carry out the tie-in to new pavement and prepare for any recambering and/or resurfacing works required to the existing pavement.

In this interim period before new gullies are installed, surface water will run into excavations rather than drainage network. Due to the soil conditions, the water is likely to infiltrate. The excavations will be at a maximum depth of 800mm. During silt trenching site investigations, groundwater was encountered at approximately 1.5m, therefore, any surface water run-off will not enter the groundwater aquifer. If the excavation needs to be cleared of water, the water can be pumped out and removed off site.

Pedestrian and cyclist temporary routes to be maintained until such time that the proposed footpaths and cycle lanes are clear from works and suitable for use.



Figure 11: Construction Phase 3 © Google 2020

Phase 4

The Contractor shall then construct the new pavement, tying in with existing retained. Final works shall include surface course and installation of new gullies along the road edge.



Figure 12: Construction Phase 4 © Google 2020

2.4.3 Surface Water Drainage

Surface water drainage during construction will be managed as described under Phase 3 above. The construction compound will be located within the business park. The outfall from the business park in which the construction compound is located will drain east along Plassey Park Road and ultimately enter the River Shannon. However, given the temporary and small nature of the works proposed, significant pollution effects are not envisaged.

3 Ecological Overview

3.1 Overview

The site of the proposed development is surrounded by various amenities and buildings. The University of Limerick sports grounds are located to the north-west of the proposed development site. Roselawn House Office Services, E-Net and various other commercial buildings are located within the National Technological Park, which extends from the north east to the South East of the proposed development site. Commercial buildings such as ACI Worldwide and Casa Communications the closest to the subject area. In addition to the above-mentioned commercial areas there are two residential estates to the south-west, in close proximity to the proposed development site (Oaklawns and Chestnut Close respectively).

The closest watercourse to the proposed development is the River Shannon which is located approximately 650m north of the proposed development. The risk status of the River Shannon is classified as ‘not at risk’ according to the River Waterbodies Risk, while it is classified as ‘unpolluted’ according to the Transitional Waterbody WFD Status 2010-2015.

A high-level desktop assessment of the proposed development site was carried out in order to determine the baseline ecological environment. The desktop assessment has identified the following likely habitats within the study area, as defined in *A Guide to Habitats in Ireland* (Fossitt, 2000):

- **Amenity grassland (improved) GA2-** This type of grassland habitat is defined as improved, or species-poor, and is managed for purposes other than grass production. It includes amenity, recreational or landscaped grasslands, but excludes farmland. This habitat is present along the roadside grass verges along Troy Studios Road and Plassey Park Road and is of low ecological value.
- **Hedgerows WL1-** This habitat type consists of linear strips of shrubs, often with occasional trees, that typically form field or property boundaries. Most hedgerows originate from planting and many occur on raised banks of earth that are derived from the excavation of associated drainage ditches. This habitat type is present as a hedgerow along Troy Studios Road and Plassey Park road. Depending on species type and condition of the hedgerow, it could be valued as possibly low to medium local ecological value;
- **Treelines WL2-** This type of habitat consists of a narrow row or single line of trees that is greater than 5 m in height and typically occurs along field or property boundaries. This category includes tree-lined roads or avenues, narrow shelter belts with no more than a single line of trees, and overgrown hedgerows that are dominated by trees. This habitat type is present as mature and semi-mature trees scattered along the periphery of Troy Studios Road, Plassey Road and Plassey Park Road. Depending on species type and condition of the treeline, it could be valued as possibly low to medium local ecological value;

- **Buildings and artificial surfaces BL3-** This habitat type is present as roadway and paths within the development area.

The construction phase of the proposed development will require removal of the following habitat types: Dry meadow and grassy verge GS2, Hedgerows WL1, Treelines WL2, in the locations identified in **Figure 13** and **Figure 14**.

In accordance with the Guidelines for Assessment of Ecological Impacts of National Road Schemes (NRA, 2009) the following geographic frame of reference have been used when determining value for the habitats being removed:

- International importance
- National importance
- County importance (or vice-county in the case of plant or insect species)
- Local importance (higher value)
- Local importance (lower value)

Table 1 below provides an assessment of the value of each of the habitat areas to be removed as part of the proposed development.

None of the vegetation/habitats to be removed are of international, national or county importance. None of the works areas are located within a Natura 2000 site. None of the areas contain any habitats listed in Annex I of the Habitats Directive and are not considered to be of particular conservation value. None of the habitats to be removed are considered to be of value to any QI species from the nearby Lower River Shannon SAC, which are mainly aquatic, and are not of value as nesting/foraging habitat to any other QIs from the River Shannon and River Fergus Estuaries given its location near a busy main road and junction.

All of the vegetation/habitat to be removed as part of the proposed development is common in the Castletroy area, and to County Limerick and considered to be of local importance at either a high or low local level.

Approximately 31 no. trees may need to be removed to facilitate the works at road edge and/or in private lands. Specifically, the tree line along the northern side of Plassey Park Road may be impacted as part of works.

The National Biodiversity Data Centre (NBDC) website (www.biodiversity.ie) contains a mapping tool that indicates known records of legally protected and invasive species within a selected OS 1km grid square. The site is located within square R6257 and data on this square was downloaded from the website on 18th June 2020. 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.

The following protected species have been recorded in this 1km grid square: Common Frog (*Rana temporaria*), Black-headed Gull (*Larus ridibundus*), Common Starling (*Sturnus vulgaris*), House Sparrow (*Passer domesticus*) and West European Hedgehog (*Erinaceus europaeus*).

The following invasive species have been recorded in this 1km grid square: Japanese knotweed (*Fallopia japonica*) and Eastern Grey Squirrel (*Sciurus carolinensis*). A number of Invasive Species are present along the main River Shannon channel close to the University of Limerick, including Balsam Rhododendron, Sycamore and Laurel, which can cause major ecological changes and damage to habitats where they become established.

The site has no suitable habitat for amphibians or reptiles.

Having regard to the location of the proposed development, which is an existing busy road in an urban area, and in considering the level of noise, vibration and dust expected during the construction and operational phases of the proposed development, no significant disruption is expected on species in the study area during construction or operation.

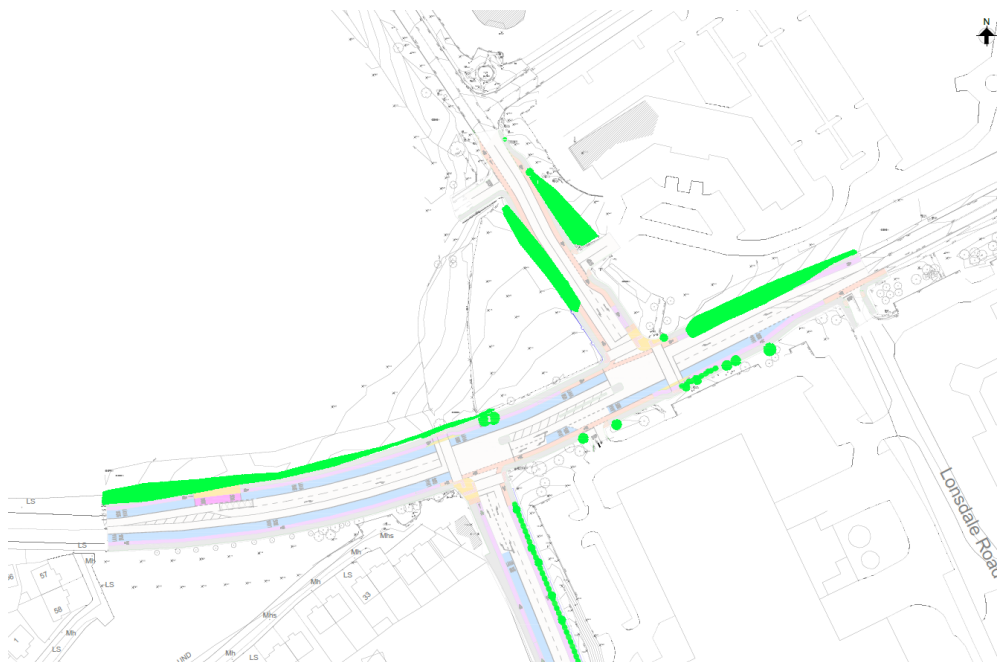


Figure 13: Vegetation to be removed (illustrated in green)

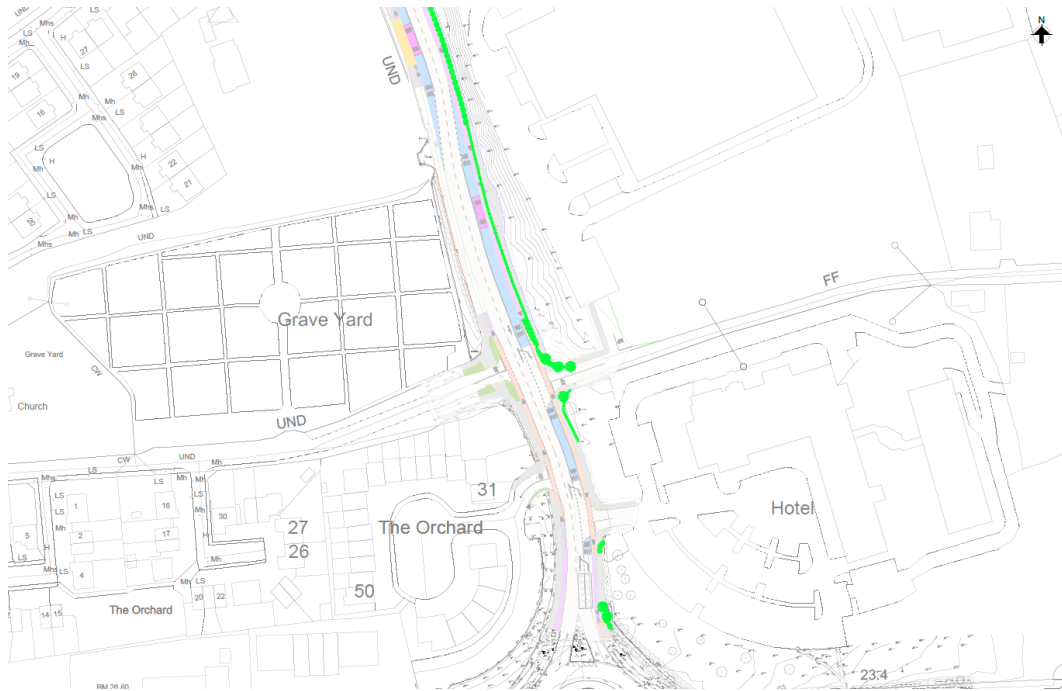








Figure 14: Vegetation to be removed (illustrated in green)

Table 1: Vegetation to be removed- Analysis of Ecological Importance Value

<p>Troy Studios Road - West Boundary Likely Habitats (Fossitt, 2000): Dry meadow and grassy verge GS2, HedgerowsWL1, Treelines WL2</p> <p>This small area is likely to be of some local importance for wildlife. However, the trees present in this area are not particularly mature and, having regard to this and the location of the same to existing busy roadway, the trees are not considered to be of particular value to bird or bats species. The hedgerow in this area is not particularly dense and is therefore limited in its biodiversity value. This site is considered to lack the diversity and other characteristics of a more valuable site and is valued as of Local Importance (lower value).</p>	

	
<p>Troy Studios Road - East Boundary Likely Habitat (Fossitt, 2000): Dry meadow and grassy verge GS2, HedgerowsWL1.</p> <p>This small area of dense hedgerow is likely to be of some local importance for wildlife and is valued as of Local Importance (higher value).</p>	
	
<p>Corner of Troy Studios Road and Plassey Park Road Likely Habitat (Fossitt, 2000): Dry meadow and grassy verge GS2, Treelines WL2</p> <p>The trees in this area are relatively mature and there is therefore potential for the presence of bats and bird species. However, having regard to the proximity of the trees to an existing busy road, the likelihood of the significant presence of bat and bird species is minimal. This small area is likely to be of some local importance for wildlife but lacks the diversity and other characteristics of a more valuable site and is valued as of Local Importance (higher value).</p>	
	
<p>Plassey Park Road East Likely Habitat (Fossitt, 2000): Dry meadow and grassy verge GS2, HedgerowsWL1, Treelines WL2</p> <p>The trees in this area are relatively mature and there is therefore potential for the presence of bats and bird species. However, having regard to the proximity of the trees to an existing busy road, the likelihood of the significant presence of bat and bird species is minimal.</p>	

The hedgerow in this location is not particularly dense, and its biodiversity value is therefore limited. This small area is likely to be of some local importance for wildlife but lacks the diversity and other characteristics of a more valuable site and valued as of **Local Importance (higher value)**.



Plassey Park Road East Likely Habitat (Fossitt, 2000): Dry meadow and grassy verge GS2, Hedgerows WL1, Treelines WL2

The trees in this area are relatively mature and there is therefore potential for the presence of bats and bird species. However, having regard to the proximity of the trees to an existing busy road, the likelihood of the significant presence of bat and bird species is minimal. The extent and size of hedgerow in this location is also minimal, and it is regularly maintained. Its biodiversity value is therefore limited. This small area is likely to be of some local importance for wildlife but lacks the diversity and other characteristics of a more valuable site and should be considered and is valued as of **Local Importance (higher value)**.



Plassey Park Road East Likely Habitat (Fossitt, 2000): Dry meadow and grassy verge GS2, Treelines WL2

The trees in this area are relatively mature and there is therefore potential for the presence of bats and bird species. However, having regard to the proximity of the trees to an existing busy road, the likelihood of the significant presence of bat and bird species is minimal. This small area is likely to be of some local importance for wildlife but lacks the diversity and other characteristics of a more valuable site and is valued as of **Local Importance (higher value)**.









Plassey Road Likely Habitat (Fossitt, 2000): Dry meadow and grassy verge GS2, Hedgerows WL1, Treelines WL2

This area consists of some small, maintained hedgerow which is considered to be of limited biodiversity value. The trees in this area are relatively mature and there is therefore potential for the presence of bats and bird species. However, having regard to the proximity of the trees to an existing busy road, the likelihood of the presence of bat and bird species is minimal. This small area is likely to be of some local importance for wildlife but lacks the diversity and other characteristics of a more valuable site and is valued as of **Local Importance (higher value)**.



Plassey Park Road West Likely Habitat (Fossitt, 2000): Dry meadow and grassy verge GS2, Treelines WL2

The trees in this area are mature and there is therefore potential for the presence of bats and bird species. However, having regard to the proximity of the trees to an existing busy road, the likelihood of the presence of bat and bird species is minimal. This small area is likely to be of some local importance for wildlife but lacks the diversity and other characteristics of a more valuable site and is valued as of **Local Importance (higher value)**.

	
<p>Plassey Road Likely Habitat (Fossitt, 2000): Dry meadow and grassy verge GS2, HedgerowsWL1, Treelines WL2</p> <p>This area consists of small, maintained hedgerow. This small area is likely to be of some local importance for wildlife but lacks the diversity and other characteristics of a more valuable site and is valued as of Local Importance (lower value).</p>	
	
<p>Plassey Road Likely Habitat (Fossitt, 2000): Dry meadow and grassy verge GS2, HedgerowsWL1, Treelines WL2</p> <p>This area is consists of some small, maintained hedgerow which is considered to be of limited biodiversity value. The trees in this area are relatively mature and there is therefore potential for the presence of bats and bird species. However, having regard to the proximity of the trees to an existing busy road, the likelihood of the presence of significant bat and bird species is minimal. This small area is likely to be of some local importance for wildlife but lacks the diversity and other characteristics of a more valuable site and is valued as of Local Importance (higher value).</p>	
	
<p>Plassey Road Likely Habitat (Fossitt, 2000): HedgerowsWL1</p> <p>This site consists of some small, maintained hedgerow which is of limited biodiversity value.</p>	

This small area is likely to be of some local importance for wildlife but lacks the diversity and other characteristics of a more valuable site and is valued as of **Local Importance (lower value)**.



Plassey Road Likely Habitat (Fossitt, 2000): Dry meadow and grassy verge GS2, HedgerowsWL1, Treelines WL2

This area consists of some small, maintained hedgerow which is considered to be of limited biodiversity value. The trees in this area are relatively mature and there is therefore potential for the presence of bats and bird species. However, having regard to the proximity of the trees to an existing busy road, the likelihood of the presence of bat and bird species is minimal. This small area is likely to be of some local importance for wildlife but lacks the diversity and other characteristics of a more valuable site and should be valued as of **Local Importance (higher value)**.



Plassey Road Likely Habitat (Fossitt, 2000): Dry meadow and grassy verge GS2, HedgerowsWL1, Treelines WL2

This area consists of some small, maintained hedgerow which is considered to be of limited biodiversity value. The trees in this area are relatively mature and there is therefore potential for the presence of bats and bird species. However, having regard to the proximity of the trees to an existing busy road, the likelihood of the presence of bat and bird species is minimal. This small area is likely to be of some local importance for wildlife but lacks the diversity and other characteristics of a more valuable site and should be considered to be valued as of **Local Importance (higher value)**.

The construction compound located to the east of Plassey Road and access road are entirely made ground (asphalt) and are of no value to any QI species.

As outlined in **Table 1**, the proposed development will involve the removal of some locally important habitats, some of which may offer the potential for the presence of bird and bat species.

Any removal or cutting of hedgerow and felling of trees which will be required to facilitate the proposed development will be carried out in accordance with Section 40 of the Wildlife Act 1976 as amended, which restricts vegetation removal, cutting or felling during nesting and breeding season between the 1st March and the 31st August.

Thus, having regard to the relatively low ecological importance of the vegetation/habitat to be removed to facilitate the proposed development, and the restrictions described above with regards felling and cutting, no significant negative effect on biodiversity is predicted.

3.2 Natura 2000 Sites

The proposed development site is set within the Lower Shannon landscape character area as designated by the Limerick County Development Plan 2010-2016 (as extended) and is located approximately 0.65km from the River Shannon. The River Shannon has been designated as an SAC and is an excellent wildlife corridor, flanked by alluvial woodlands. The Lower River Shannon SAC is hydrologically linked to the River Shannon and River Fergus Estuaries SPA.

The River Shannon flowing through Limerick 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 are 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.

The proposed development site itself is made up mainly of roads and hardstanding areas. As described previously, there will be some vegetation and tree removal along all of the roads within the site boundary. None of the habitats to be removed are considered to be of value to any QI species from the nearby Lower River Shannon SAC, which are mainly aquatic, and are not of value as nesting/foraging habitat to any other QIs from the River Shannon and River Fergus Estuaries given its location near a busy main road and junction.

This is discussed further in **Section 5.1.3** and **Section 5.1.4** below.

A description of the surface water drainage from the site during operation and construction stages is described in **Sections 2.3** and **2.4** respectively. Surface water entering the existing drainage network ultimately enters the River Shannon. However, given the temporary and small nature of the works proposed and the lack of pathways for pollution to the river, significant effects on water quality and ultimately biodiversity, are not envisaged.

4 Natura 2000 Sites and the Zone of Influence of the Proposed Development

4.1 Overview

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 and that the appropriate assessment process should include the following Natura 2000 sites:

1. Any Natura 2000 sites within or adjacent to the plan or project area.
2. Any Natura 2000 sites within the likely zone of impact of the plan or project. A distance of 15km is currently recommended in the case of plans, and derives from UK guidance (Scott Wilson et al., 2006). For projects, the distance could be much less than 15km, and in some cases less than 100m, but this must 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.
3. Natura 2000 sites that are more than 15km from the plan or project area depending on the likely impacts of the plan or project, and the sensitivities of the ecological receptors, bearing in mind the precautionary principle.

Natura 2000 sites (also referred to as European sites) are only at risk from significant effects where a source-pathway-receptor link exists between a project/plan and a Natura 2000 site(s). This can take the form of a direct effect (e.g. where the project/plan and/or associated construction works are located within the boundary of the Natura 2000 site(s)) or an indirect effect where impacts outside of the Natura 2000 site(s) affect ecological receptors within (e.g. impacts to water quality which can affect riparian habitats or indeed marine 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.

4.2 Zone of Influence of the Proposed Development

The site itself is not of significant ecological value. However, given the close proximity of the works to the River Shannon and the hydrological link between the river and the site during the construction and operational phase via surface water drainage (as described in **Section 2** above), all those Natura 2000 sites within a 15km distance from the proposed development site are considered to be within the Zone of Influence of the proposed development, for the purposes of this assessment.

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.

4.3 Natura 2000 Sites within the Zone of Influence

This section provides an overview of the Natura 2000 sites identified within the Zone of Influence.

The Natura 2000 network of European sites includes SACs and 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.

Consultation of NPWS online data identified four Natura 2000 sites located within 15km of proposed development site. These are Lower River Shannon SAC, Glenomra Wood SAC, River Shannon and River Fergus Estuaries SPA, and Slievefelim to Silvermines Mountains SPA. The sites identified are listed and described below in **Table 2** and indicated on **Figure 15**.

The nearest Natura 2000 site to the proposed development is the Lower River Shannon SAC, which is located approximately 0.65km to the north from the proposed development site. The Lower River Shannon SAC is hydrologically linked to the River Shannon and River Fergus Estuaries SPA.

Table 2: Natura 2000 Sites in the Zone of Influence of the Proposed Development

Site Code	Site Name	Distance from development site	QI's
SAC's			
002165	Lower River Shannon	0.65km	Sandbanks which are slightly covered by sea water all the time [1110] Estuaries [1130] Mudflats and sandflats not covered by seawater at low tide [1140] Coastal lagoons [1150] Large shallow inlets and bays [1160] Reefs [1170] Perennial vegetation of stony banks [1220] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] Salicornia and other annuals colonising mud and sand [1310] Atlantic salt meadows (<i>Glaucopuccinellietalia maritima</i>) [1330] Mediterranean salt meadows (<i>Juncetalia maritimi</i>) [1410] Water courses of plain to montane levels with the <i>Ranunculum fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation [3260] Molinia meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>) [6410]

Site Code	Site Name	Distance from development site	QI's
			Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (Alno-Padion, Alnion incanae, <i>Salicion albae</i>) [91E0] Margaritifera margaritifera (Freshwater Pearl Mussel) [1029] Petromyzon marinus (Sea Lamprey) [1095] Lampetra planeri (Brook Lamprey) [1096] Lampetra fluviatilis (River Lamprey) [1099] Salmo salar (Salmon) [1106] Tursiops truncatus (Common Bottlenose Dolphin) [1349] Lutra lutra (Otter) [1355]
001013	Glenomra Wood	9.1km	Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles [91A0]
SPAs			
00407	River Shannon and River Fergus Estuaries	5.2km	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]
004165	Slievefelim to Silvermines Mountains	10.2km	Hen Harrier (<i>Circus cyaneus</i>) [A082]

As discussed in **Section 4.1**, in some instances, Natura 2000 sites outside of the Zone of Influence may need to be considered, depending on the likely significant effects of the plan or project, and the sensitivities of the ecological receptors, bearing in mind the precautionary principle.

While not included in **Table 2**, this assessment has had due regard to Natura 2000 sites outside the Zone of Influence in the consideration of potential for significant environmental effects in respect of the precautionary principal and potential for source-path-receptor linkages.

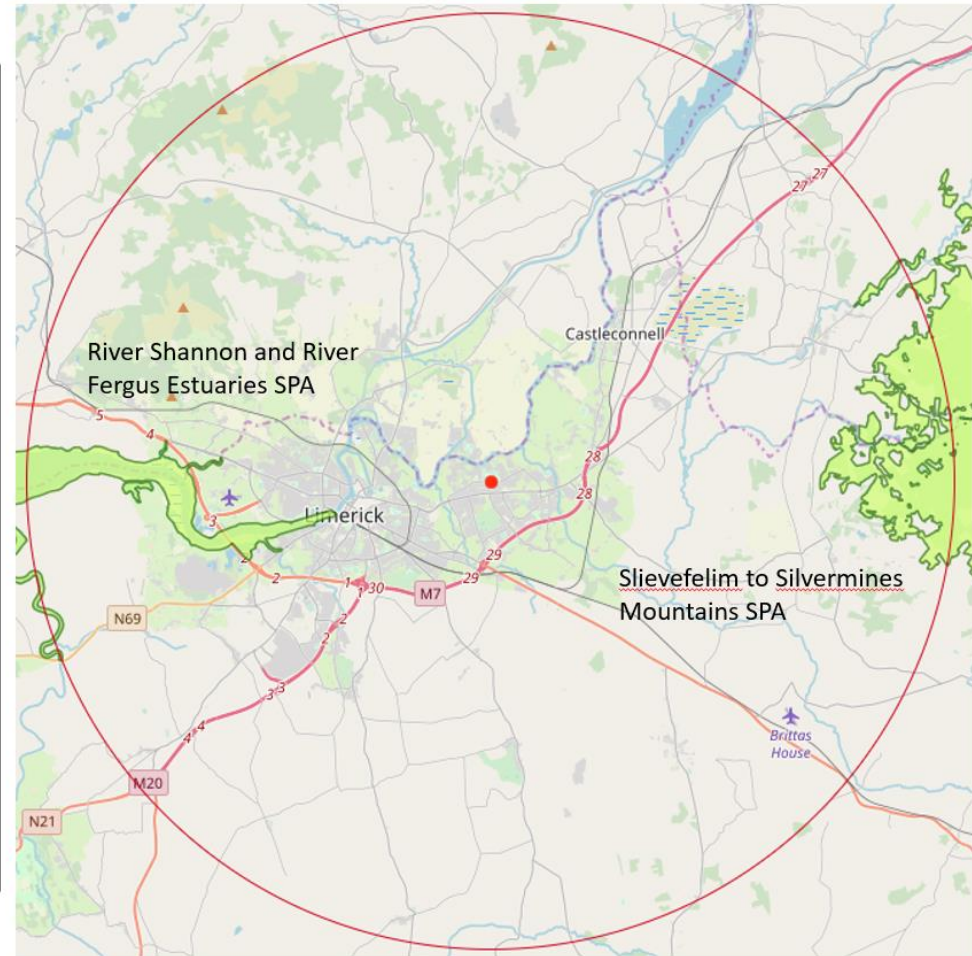
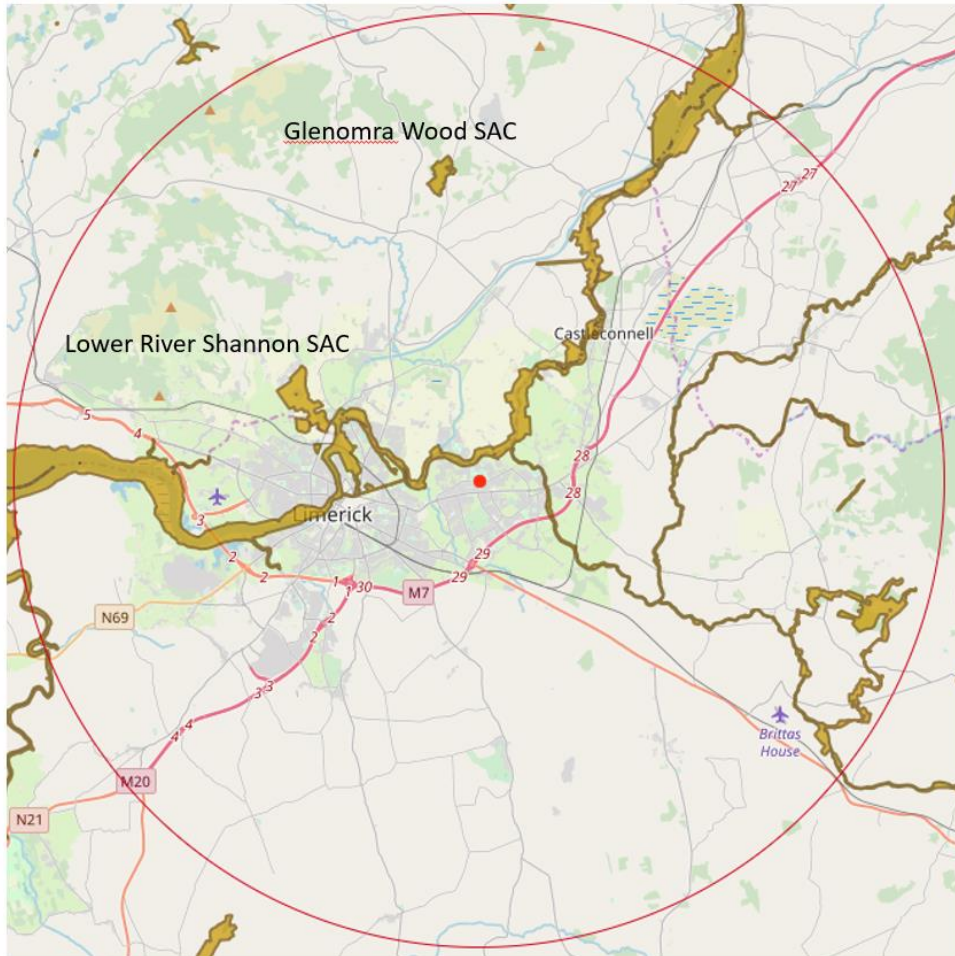


Figure 15: Natura 2000 Sites within the Zone of Influence. Proposed Development Site indicated as red dot (Source: EPA ‘Geoportal’ Maps)

4.4 Other Designated Sites within the Zone of Influence

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 the Zone of Influence of the proposed development are listed in **Table 3**. None of these sites will be impacted by the proposed development.

Table 3: Other Designated Sites within the Zone of Influence of the Proposed Development

Site Code	Site Name
NHA's	
002401	Gortacullin Bog
002402	Woodcock Hill Bog
pNHA's	
001013	Glenomra Wood
002001	Knockalisheen Marsh
001012	Garrannon Wood
000435	Inner Shannon Estuary - South Shore
000438	Loughmore Common Turlough
001996	Skoolhill
001850	Dromsallagh Bog
001849	Ballyvorheen Bog
001432	Glenstal Wood
000930	Clare Glen
000931	Derrygareen Heath

5 Assessment of Potential for Significant Effects on Natura 2000 Sites

5.1 Introduction

As outlined in Section 1, and according to EC Guidance¹, the AA Screening process is made up of the following four steps:

- *“Determining whether the project or plan is directly connected with or necessary to the management of the site;*
- *Describing the project or plan and the description and characterisation of other projects or plans that in combination have the potential for having significant effects on the Natura 2000 site;*
- *Identifying the potential effects on the Natura 2000 site; and*
- *Assessing the significance of any effects on the Natura 2000 site.”*

The assessment of potential for significant effects of the proposed development on Natura 2000 sites has therefore been undertaken having due regard to the process or ‘steps’ outlined under EC Guidance¹ (refer to **Section 5.1.1- 5.1.4**).

5.1.1 Determination of connectivity with, or necessity to, the management of Natura 2000 Sites

As outlined in **Section 4.1**, Natura 2000 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 effect (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 effect where effects outside of the Natura 2000 site(s) affect ecological receptors within the Natura 2000 site (e.g. effects 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 existing site has an indirect hydrological link with the River Shannon via the existing surface water drainage system, as described in **Section 2**. Two Natura 2000 sites are located at the River Shannon; the Lower River Shannon SAC and the River Shannon and River Fergus Estuaries SPA.

The proposed development site is not necessary to the management of any Natura 2000 sites. No habitat loss will occur within any Natura 2000 site and no works will take place in any Natura 2000 site as a result of this proposed development.

A description of the surface water drainage from the site during operation and construction stages is described in **Sections 2.3** and **2.4** respectively. Surface water entering the existing drainage network ultimately enters the River Shannon.

However, given the temporary and small nature of the works proposed and the lack of pathways for pollution to the river, significant effects on water quality and ultimately biodiversity, are not envisaged. This is discussed further below.

As noted previously, the proposed construction works will involve excavation (max depths of 800mm) which will be carried out prior to the installation of new gullies, therefore surface water will run into excavations rather than the drainage network. However, due to the soil conditions, the water is likely to infiltrate into the soil. Groundwater was encountered at approximately 1.5m during slit trenching investigations, therefore, any surface water run-off from within the redline boundary will not enter the groundwater aquifer and ultimately will not enter a Natura 2000 site. If the excavation needs to be cleared of water, the water can be pumped out and removed off site.

The construction compound will be located within the business park. The outfall from the business park in which the construction compound is located will drain east along Plassey Park Road and ultimately enter the River Shannon. However, given the temporary and small nature of the works proposed and low levels of construction staff and vehicles, significant pollution effects are not envisaged. Any spillages that may arise would be minor in nature and would be considerably diluted and dispersed within the surface water drainage network before entering the River Shannon. As such, the construction phase of the proposed development is not predicted to result in a significant negative effect on surface water quality.

During the operational phase, new gullies will be installed which will revert surface water drainage to the River Shannon, as per the current scenario. Thus, a neutral effect on water quality is predicted during the operational phase of the proposed development.

5.1.2 Identification and Assessment of potential effects on Natura 2000 sites

5.1.2.1 Construction Phase

Surface Water

As detailed above in **Section 5.1.1**, the water quality of the River Shannon Natura 2000 sites and their QIs will not be impacted by the construction works of the proposed development.

Groundwater

As detailed above in **Section 5.1.1**, there is no groundwater hydrological pathway between the groundwater and the Lower River Shannon SAC as a result of the construction of the proposed development. Thus impacts on Natura 2000 sites will not arise.

Air and Noise emissions

Transportation requirements associated with the construction phase of the proposed development will include construction machinery and trucks necessary to carry out the proposed excavation and paving processes, as well as vehicles belonging to construction staff. However, construction related air and noise emissions are not expected to be significant due to the short duration of the works, the low level of construction vehicles/plant required to carry out the works, the nature of the works proposed and the relatively small construction footprint along an already busy trafficked road. Any QI species which utilise the site of the proposed development area will already be accustomed to a certain level of disturbance due to the existing traffic noise, and frequent construction works in the area. There will be no impact on QI species as a result of air and noise emission produced during the construction of the development.

Vegetation removal

Habitat removal is detailed in Section 3.1 above. No habitat loss will occur within any Natura 2000 site as a result of this proposed development. The habitats within the proposed development site are not significant foraging/breeding/commuting habitat for any mobile QI species. Species and habitats for which the River SAC is designated are associated with the aquatic habitat of the River Shannon and those for which the SPA are designated are wintering birds which inhabit the estuarine habitat further downstream. No significant negative effects on any Natura 2000 sites or Q.I species are therefore expected as a result of vegetation removal.

Due to the nature and short duration of the proposed construction works, the low level of construction vehicles/plant required to carry out the works, the small construction footprint along an already busy trafficked road, as well the lack of direct hydrological link between the site and the River Shannon, no likely significant effects on the Lower River Shannon SAC or River Shannon and River Fergus Estuaries SPA during construction has been identified.

5.1.2.2 Operational Phase

As outlined in **Section 2.3.1**, gullies will be relocated as part of the works and surface water drainage from the site will remain as it is now and will ultimately enter the Lower River Shannon SAC. Therefore, there will be no significant changes to the existing situation.

The proposed drainage infrastructure will facilitate a greater area of hardstanding due to the proposed road/pathway widening. However, in considering the extent of the proposed new hardstanding, the increase in volume of surface water run-off that will be generated during the operational phase is not expected to be significant.

While the operational phase of the proposed development will result in a minor change to the local road network, no direct increase in traffic volume is predicted. Emissions from transport are therefore not expected to exceed the existing background rate that pertains in the surrounding urban transport network.

Therefore, the operation of the proposed development will not result in significant negative effects on the water quality of the Lower River Shannon SAC and River Shannon and River Fergus Estuaries SPA, or their Q.I species.

5.1.3 In-combination Effects

Having regard to other projects or plans that, in combination, have the potential for significant effects on Natura 2000 sites, the following are considered:

Ref. 18252 - Redevelopment of Plassey Park Road, Annacotty Roundabout and R445 Road

In December 2018, LCCC granted permission to the Industrial Development Authority Ireland (IDA) Ireland for the redevelopment of Plassey Park Road, Annacotty roundabout and R445 road at the National Technology Park, Plassey, Co. Limerick. The development, as approved, consists of (a) new left slip lane from Plassey Park road to R445 road. (b) new site entrance opposite the existing Vistacon Ireland entrance, as well as new turning lanes to be incorporated onto Plassey Park road at this location. (c) widening of Plassey Park road for the length within the National Technology Park from the Annacotty roundabout to the vicinity of the junction of Plassey Park road with Milford road. (d) Addition of cycle lanes on Plassey Park road. (e) new boundary fences, footpaths, pedestrian crossings, relocation of affected public lighting columns, landscaping and all associated site works and services.

It is possible that both the construction of the proposed development and the construction of the IDA redevelopment project will take place concurrently.

The IDA Ireland, as the applicant, made a determination as to whether the project should be subject to AA, as follows:

“Overall it is considered that the development as proposed should not exercise a significant effect on the conservation status of any SAC or SPA and therefore an Appropriate Assessment is not necessary.”

No significant effects of the proposed development in-combination with the IDA development are therefore predicted on any Natura 2000 sites.

Ref. 181263 - Johnson & Johnson Vision Care

This development is located to the east of the National Technology Park, approximately 500m to the north of the proposed development.

In May 2019, LCCC granted permission to Johnson & Johnson Vision Care (Ireland) for (a) an extension to the main building comprising the construction of an extended production hall with mezzanine plant space overhead, a predominantly 2 storey (part 3 storey) production support/utility block, expansion of the existing control room, a single storey loading bay, and roof access stairwell, all on the south side of the existing building (5,005 sqm);

(b) the construction of a new plant and equipment to the rear of the building, including storage tanks, bunds, piperacks, a 15m high stack, and 2 new truck loading bays, (c) the relocation of an existing chemical storage shed (35 sqm), (d) the construction of an additional water retention pond along the southern boundary, and associated site works.

According to planning documents, construction for the proposed development is envisaged to be carried out between May 2020 and June 2021, which will result in an overlap of construction activities.

The planning report for this project stated that:

'overall it is concluded that the development as proposed should not exercise a significant effect on the conservation status of any SAC or SPA and therefore an Appropriate Assessment is not necessary'.

No significant effects of the proposed development in-combination with the J&J Vision Care development are therefore predicted on any Natura 2000 sites.

Ref. 181020 - Edwards Lifesciences Ireland Ltd Development

In March 2019, LCCC granted permission to Edwards Lifesciences Ireland Ltd. for the development of (1) a single storey multi-purpose manufacturing, assembly and warehouse and utility functions and a two storey administration area sized 17,774 sq.m. and 12.5m high including 5 no. boiler stacks 19.5m high and docks and both roof mounted and yard based items of plant and equipment. (2) a fire fighting water storage tank & single storey sprinkler pump house sized 32 sq.m. and 5m high, a single storey electrical substation sized 50 sq. m. and 6m high, a single storey drum store sized 68 sq.m and 6m high and a single storey security building 20 sq.m. and 5m high. (3) Site works include a bicycle shelter for 180 bicycles, e-car parking stations, landscaped carparking for 500 cars, perimeter and local fencing, signage, landscaping, landscaped berms and general site works including 2 no. vehicular entrances off Plassey Park Road and a pedestrian entrance beside adjacent bus stop.

Construction for this development is expected to cease in October 2020. As such, there may be a minimal overlap in construction activities.

As stated in the planning conditions *'the mitigation measures set out in the Natura Impact Statement submitted on file shall be carried out in full on site by the applicant as part of the development'.*

No significant effects of the proposed development in-combination with the Edwards Lifesciences Ireland Ltd Development are therefore predicted on any Natura 2000 sites.

Ref. 181259 - IDA Ireland, National Technology Park

In April 2019 IDA received permission for a 3,009 sqm (gross area) part single and part two storey light industrial advanced technology building comprising of: technology research & development floor, ancillary collaboration & administrative spaces, canteen, visitor & staff welfare facilities, internal plant rooms, screened rooftop plant area and reception area.

The proposed development also provides for all associated site infrastructure works and services including: single storey electrical sub station (14 sqm), carparking, sheltered bicycle parking, amenity spaces including pedestrian paths, hard and soft landscaped areas, way finding signage, site planting and boundary treatments, service yard and internal access roads.

This development will commence construction in July 2020 and will be carried out over a 12-month period. As such, there will be an overlap of construction activities between these developments.

The planning report for this project stated that:

‘Overall, it is considered that the development as proposed should not exercise a significant effect on the conservation status of any SAC or SPA and therefore an Appropriate Assessment is not necessary’.

In relation to the projects outlined above, it was concluded that these projects would not have a significant effect on Natura 2000 sites. The relevant competent authorities also stated in their respective conditions that the mitigation measures and monitoring commitments identified in plans and particulars submitted to the planning authority will be carried out in full.

While there will be an overlap in construction durations, with the absence of any residual impacts that will adversely affect the conservation objectives of the qualifying interests/special conservation interests of European sites as a result of the proposed development or projects mentioned above, it can be concluded that there will be no significant negative cumulative effects on Natura 2000 sites.

Castletroy Local Area Plan 2019-2025

In January 2019 the review of the Castletroy Local Area Plan came into effect.

An NIR was prepared out as part of the review of this LAP.

This is the review of the Castletroy Local Area Plan, a statutory process in which the policy content of the plan is updated. This will result in updates of planning policy and the zoning content of the Plan. As part of this review a submission was received which sought to re-zone the IDA lands in Castletroy as Enterprise and Employment. As part of this submissions, works are proposed to expand and enhance the existing flood defences in these lands. These works have the potential to have significant effects on the Mulkear River and the River Shannon and as such merit progression to Stage 2 of the appropriate assessment process

In relation to the rezoning of lands at Castletroy the NIS concluded that:

“The zoning template of this plan at this stage is not likely to change further in any way that would significantly affect Natura 2000 sites. Though both the IDA lands and the Shannon Commercial Properties lands at Towlerton have been re-zoned back to Enterprise and Employment, an assessment of the possible effects of these changes indicates that any effects would not be significant”

No significant effects of the proposed development in-combination with the Castletroy LAP are therefore predicted on any Natura 2000 sites.

6 Conclusion and Screening Statement

The assessment of potential for significant effects of the proposed development on Natura 2000 sites has been undertaken having due regard to the following process or ‘steps’ outlined under EC Guidance¹:

- *“Determining whether the project or plan is directly connected with or necessary to the management of the site;*
- *Describing the project or plan and the description and characterisation of other projects or plans that in combination have the potential for having significant effects on the Natura 2000 site;*
- *Identifying the potential effects on the Natura 2000 site; and*
- *Assessing the significance of any effects on the Natura 2000 site.”*

The proposed development will not result in any significant direct, indirect or cumulative impacts on Natura 2000 sites. **Table 4** below has been used to determine whether significant impacts are likely.

Table 4: Significant Impacts Checklist

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 arrived at on the following basis:

- All works 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, ground or water during the construction or operational phase.

It has been objectively concluded by Arup that:

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

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.

Refer to **Appendix A** *Finding of No Significant Effects Report*

Appendix A

Finding of No Significant Effects Report

A1 Finding of No Significant Effects Report

Name of Project:

Plassey Park Road

Names of Natura 2000 Sites of relevance to the proposed development:

There will be no direct or indirect significant negative effects on any Natura 2000 sites as a result of the proposed development. However, listed below are the Natura 2000 sites within 15km of the proposed development with which there is a hydrological pathway.

Site Name	Site Code
Lower River Shannon	002165
River Shannon and River Fergus Estuaries	00407

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?

No.

THE ASSESSMENT OF SIGNIFICANCE OF EFFECTS

Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site.

It has been determined by Arup that it is possible to rule out likely significant impacts on any Natura 2000 sites.

Explain why these effects are not considered significant.

- All works 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, ground or water during the construction or operational phase.

Sources of Data:

- Google aerial photography (viewed in June 2020);
- National Parks and Wildlife Service online data on European Sites and (www.npws.ie) (viewed in June 2020);
- National Parks and Wildlife Service online data on protected flora and fauna (viewed in June 2020);
- Information on environmental quality data available from www.epa.ie (EPA Online Environmental Map Viewer) (viewed in June 2020);
- Information on environmental water quality data available from (EPA, www.catchments.ie);
- River Basin Management Plan for Ireland 2018-2021 (Government of Ireland, 2018)
- Castletroy Local Area Plan 2019-2025, as extended (Limerick City and County Council, 2019);
- Appropriate Assessment Screening: Review of the Castletroy Local Area Plan 2009 – 2015, as extended, (Limerick City and County Council, 2019);
- Limerick County Development Plan 2010-2016, as extended (Limerick City and County Council, 2010);
- AA Screening Report for the Draft Limerick County Development Plan 2010-2016 (Limerick City and County Council, 2010);
- Natura Impact Report for the proposed Variation No. 6 to the Limerick County Development Plan 2010-2016) (Limerick City and County Council, 2017); *and*
- Limerick County Heritage Plan 2017-2030 (Limerick City and County Council, 2017).

Appendix B

Recorded Species in the Study Area

B1 Recorded Species in the Study Area

Table B1 Recorded Species in the Study Area (Source: Biodiversity.ie)

Species Group	Species Name	Designation
Amphibian	Common Frog (<i>Rana Temporaria</i>)	Protected Species: EU Habitats Directive Protected Species: EU Habitats Directive >> Annex V Protected Species: Wildlife Acts
Bird	Black-Billed Magpie (<i>Pica Pica</i>)	
Bird	Blackcap (<i>Sylvia Atricapilla</i>)	
Bird	Black-Headed Gull (<i>Larus Ridibundus</i>)	Protected Species: Wildlife Acts Threatened Species: Birds Of Conservation Concern Threatened Species: Birds Of Conservation Concern >> Birds Of Conservation Concern - Red List
Bird	Blue Tit (<i>Cyanistes Caeruleus</i>)	-
Bird	Chaffinch (<i>Fringilla Coelebs</i>)	-
Bird	Coal Tit (<i>Parus Ater</i>)	-
Bird	Common Blackbird (<i>Turdus Merula</i>)	-
Bird	Common Starling (<i>Sturnus Vulgaris</i>)	Protected Species: Wildlife Acts Threatened Species: Birds Of Conservation Concern Threatened Species: Birds Of Conservation Concern >> Birds Of Conservation Concern - Amber List
Bird	Eurasian Collared Dove (<i>Streptopelia Decaocto</i>)	-
Bird	Eurasian Jackdaw (<i>Corvus Monedula</i>)	-
Bird	European Goldfinch (<i>Carduelis Carduelis</i>)	-
Bird	European Greenfinch (<i>Carduelis Chloris</i>)	-
Bird	European Robin (<i>Erithacus Rubecula</i>)	-
Bird	Great Tit (<i>Parus Major</i>)	-
Bird	Hooded Crow (<i>Corvus Cornix</i>)	-
Bird	House Sparrow (<i>Passer Domesticus</i>)	Protected Species: Wildlife Acts Threatened Species: Birds Of Conservation Concern Threatened Species: Birds Of Conservation Concern >> Birds Of Conservation Concern - Amber List
Bird	Long-Tailed Tit (<i>Aegithalos Caudatus</i>)	-
Bird	Pied Wagtail (<i>Motacilla Alba Subsp. Yarrellii</i>)	-

Species Group	Species Name	Designation
Bird	Rook (Corvus Frugilegus)	-
Bird	Winter Wren (Troglodytes Troglodytes)	-
Fern	Maidenhair Spleenwort (Asplenium Trichomanes)	-
Fern	Polypody (Polypodium Vulgare)	-
Fern	Rustyback (Ceterach Officinarum)	-
Fern	Wall-Rue (Asplenium Ruta-Muraria)	-
Flowering Plant	American Willowherb (Epilobium Ciliatum)	-
Flowering Plant	Bush Vetch (Vicia Sepium)	-
Flowering Plant	Common Field-Speedwell (Veronica Persica)	-
Flowering Plant	Common Ramping-Fumitory (Fumaria Muralis)	-
Flowering Plant	Cow Parsley (Anthriscus Sylvestris)	-
Flowering Plant	Cowslip (Primula Veris)	-
Flowering Plant	Cuckooflower (Cardamine Pratensis)	-
Flowering Plant	Field Forget-Me-Not (Myosotis Arvensis)	-
Flowering Plant	Germander Speedwell (Veronica Chamaedrys)	-
Flowering Plant	Greater Plantain (Plantago Major)	-
Flowering Plant	Groundsel (Senecio Vulgaris)	-
Flowering Plant	Japanese Knotweed (Fallopia Japonica)	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Flowering Plant	Lesser Celandine (Ranunculus Ficaria)	-
Flowering Plant	Red Clover (Trifolium Pratense)	-
Flowering Plant	Red Dead-Nettle (Lamium Purpureum)	-
Flowering Plant	Ribwort Plantain (Plantago Lanceolata)	-
Flowering Plant	Selfheal (Prunella Vulgaris)	-
Flowering Plant	Tormentil (Potentilla Erecta)	-

Species Group	Species Name	Designation
Flowering Plant	Winter Heliotrope (Petasites Fragrans)	-
Flowering Plant	Yarrow (Achillea Millefolium)	-
Insect - Beetle (Coleoptera)	14-Spot Ladybird (Propylea Quattuordecimpunctata)	-
Insect - Beetle (Coleoptera)	2-Spot Ladybird (Adalia Bipunctata)	-
Insect - Hymenopteran	Large Red Tailed Bumble Bee (Bombus (Melanobombus) Lapidarius)	Threatened Species: Near Threatened
Insect - Moth	Death's-Head Hawk-Moth (Acherontia Atropos)	-
Insect - True Fly (Diptera)	Chromatomyia Horticola	-
Terrestrial Mammal	Eastern Grey Squirrel (Sciurus Carolinensis)	Invasive Species: Invasive Species Invasive Species: Invasive Species >> High Impact Invasive Species Invasive Species: Invasive Species >> EU Regulation No. 1143/2014 Invasive Species: Invasive Species >> Regulation S.I. 477 (Ireland)
Terrestrial Mammal	West European Hedgehog (Erinaceus Europaeus)	Protected Species: Wildlife Acts