



An
Coimisiún
Pleanála

Inspector's Report ABP-321350-24.

Development

Proposed flood relief scheme

Location

Castleconnell, County Limerick.

Local Authority

Limerick City & County Council.

Type of Application

Application for approval made under Section 175 and Section 177AE of the Planning and Development Act, 2000 (local authority development requiring environmental impact assessment and appropriate assessment)

Prescribed Bodies

Transport infrastructure Ireland (TII)
Health Service Executive (HSE)
Geological Survey Ireland (GSI)
Development Applications Unit of the Department of Housing Local Government and Heritage. (DAU)
An Taisce

Observer	Eamonn & Nicola Meskell
Date of Site Inspection	6/7 March 2025
Inspector	Hugh O'Neill

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1 Introduction

Limerick City and County Council is seeking approval from An Coimisiún Pleanála to undertake a major flood relief scheme in Castleconnell, Co. Limerick

The application is being made by Limerick City and County Council pursuant to Section 175 and Section 177AE of the Planning and Development Act, 2000 (as amended). Accordingly, an Environmental Impact Assessment Report (EIAR) and a Natura Impact Statement (NIS) have been prepared in respect of the proposed development. Before making a decision on the proposed development, An Coimisiún shall consider the EIAR, any submissions or observations and any other information relating to (i) the likely effects on the environment of the proposed development, and (ii) the likely consequences for proper planning and sustainable development in the area in which it is proposed to undertake the proposed development. The Commission shall also consider the NIS and the likely effects on a European sites in respect of Appropriate Assessment.

2 Site and Location

Castleconnell is approximately 10km northeast of Limerick City. The River Shannon flows in a southerly direction past the western edge of Castleconnell.

The study area for the scheme comprises the village centre with residential areas stretching outwards to the east of the river. Works are proposed to a number of locations across the study area. The location of proposed works are described from North to South, locations are named by the primary structure/feature therein.

2.1 Rivergrove B&B and Grange House (Record of protected Structures (RPS) 1075)

A field to the North of Rivergrove B&B which falls within the historic domain and curtilage of protected structure Lacka house (RPS 10732) is within the application boundary and has been annotated as a possible, alternative site compound. This field is characterised by a wet rough pasture surrounded by a longstanding random rubble boundary wall and timber post and rail. This field contains a number of mature specimen trees.

The entrance from the public road to Rivergrove B&B is constructed of a section of, dashed block wall within a longstanding random rubble boundary wall, intact to the west of the current entrance.

The wall which, forms the boundary to the river (west) of Rivergrove and Grange House in part forms the boundary of the SAC, is longstanding and of random rubble construction. There is a notable quantity of Winter Heliotrope (invasive species) in the vicinity of the proposed works access.

Grange House (RPS 1075) is located to the south of Rivergrove B&B and contains the site of a former Mill building and the Cedarwood Stream which is likely to have been diverted through the site for the purpose of driving the mill. The stream is in part culverted and in part contained within a stone lined open channel within the site. This stream currently receives untreated waste water from Grange House. There are a significant number of large mature trees within the curtilage of Grange House.

Both Rivergrove and Grange House benefit from views of the Shannon over the existing boundary wall. The area on the riverside of the boundary wall from which construction is proposed is characterised by tall grass and reeds (phragmites species.) typical of the riparian wetland habitat.

The Cedarwood stream which flows into the Shannon through the curtilage of Grange House from the West is an urbanised stream flowing through a steep sided channel bound by residential development, it is generally encroached by vegetation along its route.

2.2 Mall House (National Inventory of Architectural Heritage (NIAH) regional importance 21807034) and Dunkineely House

Mall House is a detached two-bay two-storey house, built c. 1890 surrounded by longstanding random rubble stone walls typical of the area. Dunkineely House to the north is accessed by a vehicular entrance south of Mall House with the driveway passing to the west of Mall House (riverside) below the western boundary wall of Mall House.

Dunkineely House immediately north of Mall House is of more modern construction, a significantly higher finish floor level and is oriented towards the river. It has a front garden which slopes down to the driveway which is separated from the river by a low wall. The garden is characterised by a number of trees.

The vehicular entrance to Dunkineely House has existing demountable flood gate receiving channels fixed to the gate piers.

2.3 Mall Road

Mall road from Mall House to Mahers pub (c.400m) runs generally parallel to the Shannon. To the west the road has a concrete footpath, street lighting and a longstanding retaining flood wall with fisher access points. This wall defines circa 200m of the historic townland boundary and c. 400m of the eastern boundary of the lower Shannon SAC. Riparian habitats immediately west of the wall are of wet woodland in character.

There are a number of one-off houses with significant setbacks of relatively recent construction on large sites to the east of the road at its northern end. The majority of the eastern side of the Mall road is defined by a longstanding random rubble wall with a large field of wet rough pasture beyond. This field is the proposed main construction compound for the project.

The junction from Mall road to Scanlon park is located to the south of the open field with an Uisce Eireann pumping station to the south of the junction and access to island house to the west.

2.4 Island House (RPS 1085), Bridge (RPS 5056) and Scanlon Park Junction

Cloon Island is accessed via a driveway which includes a causeway and Single-arch sandstone road bridge c. 1815 with distinctive crenellated rubble parapet walls Cut sandstone voussoirs to round-headed arches. The arches have been fitted with modern sluice control gates. There are a large number of mature trees surrounding the driveway to Island house.

Access to the public road is via a gateway of relatively recent construction consisting of 4 sand and cement rendered and capped piers with random rubble limestone wingwalls. The wing walls contrast in character with the riverside wall of the Mall Road.

The NIAH describes Island House (RPS 1085) as a detached three-bay two-storey over basement villa style house, built c. 1840. There are 5 sites and monuments records on the island primarily associated with the Friary.

2.5 Maher's Pub

Maher's Pub is at the southern end of Mall Road, with a car park to the North (side) and West (rear of the pub) which backs onto the trees/wet woodland inside the SAC associated with Cloon Stream and Island, including a large Cedar tree, which has been used by herons for nesting.

2.6 Meadowbrook Estate

Meadowbrook Estate is a cul-de-sac residential estate of 12 no. semi detached houses, with an entrance from New Street. The area to the west, north and south of Meadowbrook is characterised by wet grassland/woodland/scrub associated with Cloon Stream, Cloon Island and with Stormont House.

2.7 Stormont House

Stormont House is a detached house on a large plot of land to the west of Meadow Brook estate and south of Cloon Island, separated by Cloon Stream. The house is accessed by a long driveway from Chapel Hill which runs below Castleconnell Castle (SMR LI00012) immediately adjacent to the base of the rock upon which the castle is built.

A retaining wall to the west of Stormont house marks the transition to a lower level wet meadow which falls within the natural flood plain and the SAC.

2.8 Coolbane Woods

Coolbane Woods which is also referred to in the application as Cool Bawn Woods is an area 0.4ha of naturalised forestry which has become established following the felling in 2006 of part of a coniferous plantation which was not replanted. There is an area of circa 0.6ha of coniferous planting surrounded by a perimeter of native trees to the east of the area proposed for construction of the embankment. The area becomes inundated in flood conditions from backing up of the Stradbally stream and associated drainage ditch to the east and south.

Coolbane Wood is bound to the east by the rear boundary wall of a housing development of the same name. There is an access road and mixed commercial and residential development to the north east and the Anglo-Norman masonry castle Castelconnell Castle to the top of a isolated rock outcrop to the north west.

2.9 Non location specific details

Flood flows at Castleconnell are heavily influenced by Parteen Weir and Lough Derg which is approximately 6.5km upstream of Castleconnell Village.

There are services, many in the Mall Road area which include foul, combined, and storm water systems which along with field drains including in the area of Coolbane Woods form significant elements of both the receiving environment and the proposed Flood Relief Scheme (FRS). Surface water system upgrades in residential estates to the east of the FRS, consist of new collection and attenuation infrastructure consistent with current best practice and are sub surface and within public roads.

3 Proposed Development

Generally, the Flood Relief Scheme (FRS) will comprise a series of walls and embankments, demountable flood barriers, road raising works, and removal of vegetation and alterations of a culvert the objective of which is to protect 50 properties , 15 commercial and 35 residential.

It is expected that the construction phase will take place over c. 18-24 months in a general north to south sequence which is reflected in the description of works below.

3.1 Rivergrove B&B and Grange House (RPS 1075)

The FRS proposes the following:

Rivergrove B&B

- New sheet piled foundation with a reinforced concrete plinth supporting a flood wall clad in stone replacing existing western boundary wall
- New flood wall across the existing entrance
- New entrance to be constructed to the East
- New low-level plinth inside wall to the north. Tree removal

Grange House

- New sheet piled foundation with a reinforced concrete plinth supporting a flood wall clad in stone replacing existing western boundary wall

- reinforced concrete flood wall along the southern side of the driveway
- Open section of the Cedarwood Stream adjacent to the Mill Building disconnected from the watercourse.
- New culvert north of the open feature, to carry the watercourse to existing outfall into the River Shannon.
- New pumped foul connection to connect the house to the public foul sewer.

3.2 Mall House (NIAH regional importance 21807034)

The FRS proposes the following:

- Replacement of walls to the north, west and south of mall House with a new stone clad flood wall.
- A ramp within the property of Dunkineely House.
- Removal of the northern wing wall and hedge to the main entrance of Dunkineely House. Provisions for demountable barriers in the gateway.
- Tree removal.

3.3 Mall Road

The FRS proposes the following:

- Demolition of the existing wall to the west of the Mall Road ,
- Construction of a new flood wall set back by c. 1m other than 55m of wall immediately south of the entrance to Island house which will be re-built along its existing alignment.
- The Mall road works area will encroach into the SAC
- Moving existing gas main, foul sewer, surface water network, overhead electricity cables, and underground broadband cables.
- New demountable barrier in the main fisher access point through the Mall wall.
- Tree removal.

3.4 Island House and Scanlon Park Junction

The FRS proposes the following:

- A ramp at the entrance to Island House
- A flood gate at the entrance.
- Raising of Island House driveway by c. 250mm
- handrail along either side of the bridge (RPS 5056).
- Raising of Scanlon Park junction, by approx. 100mm.
- Removal of Sluice gates (modern construction) on Cloon bridge

3.5 Maher's Pub

The FRS proposes the following:

- New flood wall set back along the rear (western) boundary by c. 6m in Maher's Pub car park. The wall is outside of the root protection zone of the Cedar tree which contains the Heronry.
- Tree Removal

3.6 Meadowbrook Estate

The FRS proposes the following:

- A flood embankment along the rear of Meadowbrook Estate tying into the proposed flood wall to north east.
- Removal of a section of boundary wall at the end of Meadowbrook cul de sac. A gate will be provided for emergency and maintenance access.
- Tree removal

3.7 Stormont House

The FRS proposes the following:

- A low-level flood wall to the west of the house inside the existing castellated boundary wall.
- Raising of the entrance road ,
- Low-level flood wall to tie in with rock at the Castle concealed by earth.
- Tree removal.

3.8 Coolbane Woods

The FRS proposes the following:

- A demountable flood barrier to the west of the junction.
- A flood embankment along the southern boundary of the Coolbane Woods entrance road.
- Removal of alluvial woodland.

3.9 Cedarwood Stream

The FRS proposes the following:

- Vegetation removal from the Cedarwood Stream for a distance of approximately 300m from the railway to a property known as Coole.
- Replacement of an existing 1.2m diameter circular culvert at Coole House with a larger rectangular culvert.

3.10 Non location specific details

The FRS proposes the following:

- Approx. 33,130m³ of material will be excavated, with approx. 11,815m³ of this volume to be backfilled, and the remaining 21,315m³ removed from site.
- Approx. 24,068m³ of clay will be imported for the proposed embankments, and 4,248m³ of material will be imported for proposed roadworks.

- Limerick City & County Council and/or nominated contractors responsible for erection of the demountable flood barriers ahead of flood events.
- A series of high-level overflows in select manholes to convey surface water to pump sumps (to manage surface water during a flood event).
- The footprint of the proposed embankment and foundations of flood walls have been designed to accommodate future increases in height as part of a future response to climate change impacts.
- Trees will not be allowed to grow close to the base of the embankment as this would compromise their structural integrity.

3.11 Accompanying documents

This application for approval is accompanied by the following documents:

- Planning cover letter and Planning report
- Environmental Impact Report (EIAR) in 3 Volumes as follows:
 - Non-technical summary (NTS) (Vol 1)
 - Main report (Vol 2)
 - Appendices (Vol 3)
- Appropriate Assessment Screening and Natura Impact Statement
- Hydrology report
- Hydraulics report
- Options Report
- Photomontages
- Archaeological Testing Report
- Stage 1 Road safety Audit
- Planning Drawings

4 Planning History

The following decisions are of relevance to the application area:

Planning Ref. No.	Development Description	Location	Decision Date	Status
13460 PL13.2427 38	the construction of a two-storey detached dwelling, new site entrance and all associated site works	The Fishery Yard' adjacent to Dunkineely House	04/11/2013	Refused by LCC at risk of flooding, granted by ABP on first party appeal
2460506	demolition of an existing derelict coach house and external store and the construction of a replacement one and a half storey guest accommodation	Stormont House	10/09/2024	Grant
19518 ABP- 305811-19	52 no. dwellings	Coolbane	15/12/2020	Grant
2460030 ABP- 321152-24	Construction of 16 houses for senior living	Coolbane	12/03/2025	Grant
1848	replacing the original natural slate roof. Remove annex and new extension.	Stormont House	03/07/2018	Grant
17423	change of use of 6 No. ground floor retail units to 6 no. ground floor own access apartments and all associated site works	Castlecentre, Shanacloon	31/08/2017	Grant

5 Legislative and Policy Context

5.1 Relevant legislative provisions

EU 'Floods' Directive 2007

The EU Directive on the assessment and management of flood risk, often referred to as the "Floods Directive", came into force in 2007. The Floods Directive has been implemented in Ireland as the assessment and management of floods through the Catchment Flood Risk Assessment and Management (CFRAM) Programme. Under CFRAM the Office of Public Works published a series of documents, policies and plans that set out measures to deal with flood risk and the most at risk communities. CFRAM recommends a proactive approach to flood risk and protection. See further consideration of CFRAMS below.

EU EIA Directive (2014/52/EU)

The Environmental Impact Assessment Directive (EIA Directive) means Directive 2014/52/EU of the European Parliament and of the Council of 16th April 2014 amending Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment.

European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018

These Regulations transpose the requirements of the 2014 Directive into Irish legislation setting out the requirements for planning consent procedures.

EU Habitats Directive (92/43/EEC)

This Directive deals with the Conservation of Natural Habitats and of Wild Fauna and Flora throughout the European Union. Article 6(3) and 6(4) require an appropriate assessment of the likely significant effects of a proposed development on its own and in combination with other plans and projects which may have an effect on a European Site (SAC or SPA).

European Communities (Birds and Natural Habitats) Regulations 2011

These Regulations consolidate the European Communities (Natural Habitats) Regulations 1997 to 2005 and the European Communities (Birds and Natural Habitats) (Control of Recreational Activities) Regulations 2010, as well as addressing transposition failures identified in CJEU judgements. The Regulations in particular require in Reg 42(21) that where an appropriate assessment has already been carried out by a 'first' public authority for the same project (under a separate code of legislation) then a 'second' public authority considering that project for appropriate assessment under its own code of legislation is required to take account of the appropriate assessment of the first authority.

National nature conservation designations

European and National sites located in proximity to the subject site include:

- SPA 004058 Lough Derg (Shannon)
- SAC 002165 Lower River Shannon SAC
- SPA 004077 River Shannon and River Fergus Estuaries SPA
- NHA 000011 Lough Derg
- pNHA 000433 Castleconnell (Domestic Dwelling, Occupied)
- pNHA 002048 Proposed Natural Heritage Areas: Fergus Estuary And Inner Shannon

Planning and Development Acts 2000 (as amended)

Part X of the Act sets out the requirements for the environmental impact assessment of developments which necessitate the preparation of an EIAR.

- Section 175 (1) sets out the requirements for the environmental impact assessment of developments carried out by or on behalf of local authorities.
- Section 175 (1) requires a local authority to prepare, or cause to be prepared, an Environmental Impact Assessment Report in respect of the proposed development.
- Section 175 (2) states that a proposed development in respect of which an EIAR is required shall not be carried out unless the Board has approved it with or without modifications.
- Section 175 (3) states that where an EIAR has been prepared pursuant to subsection (1), the local authority shall apply to the Board for approval of the proposed development.
- Section 175 (6) states that before making a decision in respect of a proposed development, the Board shall consider the EIAR and any other information furnished and relating to the likely effects on the environment; the likely consequences for proper planning and sustainable development in the area; the views of any other Member State of the European Communities or a state which is a party to the Transboundary Convention to which a copy of the EIAR was sent; the report and any recommendations of the person conducting an oral hearing.
- Under Section 175(9)(a), the Board shall make its decision on the application within a reasonable period of time and may, in respect of such application:
 - approve the proposed development,
 - make such modifications to the proposed development as it specifies in the approval and approve the proposed development as so modified,
 - approve, in part only, the proposed development (with or without specified modifications of it of the foregoing kind), or
 - refuse to approve the proposed development,

- and may attach to an approval under subparagraph (i), (ii) or (iii) such conditions as it considers appropriate.

Section 175 (12) states that the Board shall have regard to the provisions of any special amenity order relating to the area; the area or part of the area is a European site or an area prescribed for the purposes of section 10(2)(c), that fact; where relevant, the policies of the Government, the Minister or any other Minister of the Government, and the provisions of this Act and regulations under this Act where relevant.

Part XAB sets out the requirements for the appropriate assessment of developments which could have an effect on a European site or its conservation objectives.

- 177(AE) sets out the requirements for the appropriate assessment of developments carried out by or on behalf of local authorities.
- Section 177(AE) (1) requires a local authority to prepare, or cause to be prepared, a Natura impact statement in respect of the proposed development.
- Section 177(AE) (2) states that a proposed development in respect of which an appropriate assessment is required shall not be carried out unless the Board has approved it with or without modifications.
- Section 177(AE) (3) states that where a Natura impact statement has been prepared pursuant to subsection (1), the local authority shall apply to the Board for approval and the provisions of Part XAB shall apply to the carrying out of the appropriate assessment.
- Section 177(V) (3) states that a competent authority shall give consent for a proposed development only after having determined that the proposed development shall not adversely affect the integrity of a European site.
- Section 177AE (6) (a) states that before making a decision in respect of a proposed development the Board shall consider the NIS, any submissions or observations received and any other information relating to:
 - The likely effects on the environment.
 - The likely consequences for the proper planning and sustainable development of the area.

- The likely significant effects on a European site.

5.2 Policy and Guidelines of Relevance

The following policy and guidelines are considered relevant to the proposed development:

5.2.1 National

5.2.1.1 National Planning Framework (NPF) (first review April 2025)

The NPF describes how sustainable urban development solutions, such as water sensitive urban design, can help to mitigate the potential for environmental degradation in the form of biodiversity loss, pollution of water bodies, and increased flood risk as the demand for urban development to accommodate a growing population continues to increase.

National Strategic Outcome 9 addresses Sustainable Management of Environmental Resources. NSO 9 acknowledges that the impact of climate change on the water cycle and the resultant impact on water services and flooding need to be considered in settlement strategies.

National Policy Objective 78 Promote sustainable development by ensuring flooding and flood risk management informs place-making by: • Avoiding inappropriate development in areas at risk of flooding that do not pass the Justification Test, in accordance with the Guidelines on the Planning System and Flood Risk Management; • Taking account of the potential impacts of climate change on flooding and flood risk, in line with national policy regarding climate adaptation.

National Policy Objective 79 Support the management of stormwater, rainwater and surface water flood and pollution risk through the use of nature-based solutions and sustainable drainage systems, including the retrofitting of existing environments to support nature based solutions.

National Policy Objective 80 Support the retrofitting of existing environments to cater for surface water run-off through the use of nature based solutions.

5.2.1.2 The Planning System and Flood Risk Management 2009

The guidelines advocate a proactive approach to prevent flooding from occurring. This includes, for example, adopting general policies for protection, improve or restore floodplains and the upgrading of flood barriers. Under these guidelines Planning Authorities have a key role in the delivery of effective measures, policies and infrastructure to minimise the risk of flooding.

5.2.1.3 National Adaptation Framework, Planning for a Climate Resilient Ireland June 2024

The National Adaptation Framework is Ireland's primary adaptation policy response to the impacts of climate change challenges. The most recent approved national adaptation framework, the National Adaptation Framework; Planning for a Climate Resilient Ireland June 2024 (NAF) is Ireland's second statutory National Adaptation Framework (NAF) and was published on 5th of June 2024.

The NAF and its successors do not identify specific locations or propose adaptation measures or projects in individual sectors, but sets out the context to ensure local authorities, regions and key sectors can assess the key risks and vulnerabilities of climate change, implement climate resilience actions and ensure climate adaptation considerations are mainstreamed into all local, regional and national policy making. With a renewal of focus on avoiding maladaptation, promoting nature based solutions, and ensuring just resilience.

The OPW is national authority for the implementation of the EU Directive on the Assessment and Management of Flood Risks (2007/60/EC). With three strategic and policy areas, Prevention, Protection (taking feasible measures, both structural and non-structural, to reduce the likelihood and impact of floods) and preparedness.

The NAF identifies 13 (previously 12) priority sectors under 7 lead Departments that are required to prepare sectoral adaptation plans under the Climate Act in accordance with the Sectoral Planning Guidelines for Climate Change Adaptation which were published in 2018 and updated in 2024. Sectoral adaptation plans include flood risk management.

5.2.1.4 Climate Change Sectoral Adaptation Plan for Flood Risk Management, 2019

The Climate Change Sectoral Adaptation Plan for Flood Risk Management sets out the policy on climate change adaptation of the Office of Public works (OPW) by the OPW, the lead agency for flood risk management in Ireland. The Plan is based on a current understanding of the potential consequences of climate change for flooding and flood risk in Ireland, and the adaptation actions to be implemented by the OPW and other responsible Departments and agencies in the flood risk management sector. A 2025 draft of this plan is currently subject to public consultation.

5.2.1.5 Climate Action Plan 2025 (2024)

Annually, the Climate Action Plan is published by the Government of Ireland which sets out carbon budgets and sectoral emissions ceilings and sets a roadmap for taking decisive action to halve our emissions by 2030. CAP25 is to be read in conjunction with CAP24. The 2025 plan references the National Adaptation Framework. The 2024 CAP contains actions AD/24/2 Complete a review of the national Preliminary Flood Risk Assessment to assess the potential impacts of climate change on flooding and flood risk across Ireland, AD/24/3 Develop options for the delivery of a National Implementation Strategy for Nature-Based Solutions for the management of rainwater and surface water runoff in urban areas and AD/24/4 Publish sectoral technical guidance which is repeated in AD/25/8 Develop Sectoral Adaptation Plan for Flood Risk Management sector. See Section 5.2.3 above.

The Climate Action Plan identifies the role flood risk mitigation can play in how Ireland adapts as a result of climate change and in mitigating the implications of such. The Plan sets out how the Office of Public works will seek to support the development of appropriate flood mitigation and adaption schemes.

5.2.1.6 National Biodiversity Action Plan 2023–2030

The plan takes account of the wide range of policies, strategies, conventions, laws and targets at the global, EU and national level that influence our shared environment in order to scale up biodiversity action and aims to meet urgent conservation and restoration objectives across Ireland's terrestrial, marine, and

freshwater ecosystems. Taking an ‘all-of-government, all-of-society’ approach, 5 objectives are set out towards protecting and enhancing our biodiversity. Actions 2D5 to 2D8 address issues related to flood risk management requiring integration of Biodiversity into decision making.

5.2.2 Regional

5.2.2.1 Mid-West Area Strategic Plan (MWASP) 2012-2030

The aim of the strategic plan is to facilitate and inform the implementation of the statutory processes, the constituent Planning Authorities of the Mid-West Region (Clare County Council, Limerick City and County Councils and North Tipperary County Council) and the Mid-West Regional Authority have developed a non-statutory, 20-year, integrated land-use and transport strategy for the region. This will provide evidence base which can inform transport and planning policy and infrastructure investment decisions in the Region to 2030. The MWASP was prepared to secure the following overall objective:

- Prioritisation of investment in the region;
- Strengthening the Limerick/Shannon Gateway;
- Create and support a well-defined hierarchy of settlement;
- Providing economic review and direction of the region.

The plan recognises the corridor of the River Shannon as the most important emerging tourism asset in the region, the three main areas: the Shannon Estuary, Lough Derg, and lower/mid River Shannon. The plan highlights the potential in the corridor from activity-based tourism, including boating, angling, wildlife watching and walking, all supported by a network of small attractive villages with good local roads and access.

5.2.2.2 Regional Spatial & Economic Strategy, (RSES) Southern Region

The RSES supports measures that address climate action, as outlined in the NPF, these will include Renewable Energy, Sustainable Transport and Climate Resilience through Flood Defence.

The following objectives identified within the RSES are of relevance:

RPO 4 Infrastructure Investment:

Infrastructure investment shall be aligned with the spatial planning strategy of the RSES.

RPO 5 Population Growth and Environmental Criteria:

Increased population growth should be planned with regard to environmental criteria, including:

- Assimilative capacity of the receiving environment;
- Proximity of Natura 2000 sites and potential for adverse effects on these sites, and their conservation objectives;
- Areas with flood potential.

RPO 9 Holistic Approach to Delivering Infrastructure:

It is an objective to ensure investment and delivery of comprehensive infrastructure packages to meet growth targets that prioritise the delivery of compact growth and sustainable mobility as per the NPF objectives including: Water services, digital, green infrastructure, transport and sustainable travel, community and social, renewable energy, recreation, open space amenity, climate change adaptation and future proofing infrastructure including flood risk management measures, environmental improvement, arts, culture and public realm.

RPO 89 Building Resilience to Climate Change:

It is an objective to support measures to build resilience to climate change throughout the Region to address impact reduction, adaptive capacity, awareness raising, providing for nature-based solutions and emergency planning;

Local Authorities and other public agencies shall continue to work with the Office of Public Works to implement the Flood Risk Management Plans and address existing

and potential future flood risks arising from coastal, fluvial, pluvial, groundwater and potential sources of flood risk.

RPO 113 Floods Directive:

It is an objective to support, at a regional level, the implementation of the Floods Directive to manage flood risks. It is an objective to encourage collaboration between local authorities, the OPW and other relevant Departments and agencies to implement the recommendations of the Catchment Flood Risk Assessment and Management (CFRAM) programme to ensure that flood risk management policies and infrastructure are progressively implemented.

RPO 114 Flood Risk Management Objectives:

It is an objective to:

Ensure that the flood risk management objectives of the Flood Risk Management Plans are fully considered in the development of planning policy and decision-making by local authorities so that flood risk is a key driver in the identification of suitable locations for new development, considering the CFRAM flood maps and other flood maps as available.

Ensure that developments in upland areas, such as wind farm developments, roadway construction, peatland drainage and forestry proposals, provide sufficient storm water attenuation to avoid the occurrence of river erosion or flooding downstream subject to hydrological and ground/peat stability assessments.

RPO 115 Flood Risk Management Plans:

Development and Local Area Plans in the Region should take account of and incorporate the recommendations of the Flood Risk Management Plans, including planned investment measures for managing and reducing flood risk. Natural Water Retention Measures should be incorporated where appropriate in consultation with the OPW and other relevant stakeholders.

RPO 116 Flood Risk Management and Biodiversity:

It is an objective to avail of opportunities to enhance biodiversity and amenity and to ensure the protection of environmentally sensitive sites and habitats, including where flood risk management measures are planned. Plans and projects that have the

potential to negatively impact on Natura 2000 sites are subject to the requirements of the Habitats Directive.

RPO 117 Flood Risk Management and Capital Works:

It is an objective to support investment in the sustainable development of capital works under the flood capital investment programme and Flood Risk Management Plans developed under the CFRAM process.

RPO 118 Flood Relief Schemes:

It is an objective to:

Support investment in the sustainable development of Strategic Investment Priorities under the National Development Plan 2018-27 and to ensure that flood risk assessment for all strategic infrastructure developments is future-proofed to consider potential impacts of climate change;

Support investment in subsequent projects by capital spending agencies to deliver flood relief schemes under the National Strategic Outcome, Transition to a Low Carbon and Climate Resilient Society. Such projects should be future proofed for adaptation to consider potential impacts of climate change.

Ensure that all infrastructure and energy providers/operators provide for adaptation measures to protect strategic infrastructure (including roads, railways, ports and energy infrastructure) from increased flood risk associated with climate change.

Goal 1 of the MASPs seeks to:

Enhance the quality of our existing places through retrofitting a high standard of infrastructure, services and amenities that improve the liveability and quality of place in existing settlements and communities.

Build resilience to climate change and flooding.

5.2.3 Shannon Catchment Flood Risk Assessment and Management Study (CFRAM)

The study identifies that Castleconnell, County Limerick is at risk of fluvial flooding. The study outlines that in Castleconnell, community level interventions are required, to be progressed through a project level assessment. The study identifies that the

works which may be required in Castleconnell include construction of a new flood defence wall, embankment and floodgates; raising roads in key locations; maintain existing flood forecasting and public awareness campaign operated by the ESB. The Shannon CFRAM study resulted in the preparation and publication on 19/02/2018 of the Flood Risk Management Plan for the Shannon Upper & Lower River Basin (UOM25-26) supported by SEA Statement for Unit of Management 25-26 and the Natura Impact Statement for Unit of Management 25-26 which considered options for and promotes the Flood Relief Scheme which is the subject of the proposal.

5.2.4 Local

5.2.4.1 Limerick City and County Council Draft Climate Adaptation Strategy 2019-2024

The strategy identifies future climate change risks for the County. Objective 6 is To increase the climate resilience of Limerick City and County Council building and housing stock where appropriate and objective 9 seeks to encourage the adoption of green solutions to climate change. With Objective 13 being to work with other Local Authorities and Agencies to ensure a regional response to Climate Change.

5.2.4.2 Limerick City and County Council Development Plan 2022-2028

Castleconnell is a Level 3 Town (Table 2.4 Limerick Settlement Hierarchy). It promotes Level 3 Settlements as development centres for population growth sustaining a wider range of functions, services and employment opportunities supporting its hinterland.

The Limerick City and County Development Plan identifies flooding as a key areas linked to the plans and objectives of the plan in adapting to the future needs of the environs.

Policies and objectives of relevance:

Objective CAF O4 Climate Proofing:

It is an objective of the Council to ensure climate proofing measures are incorporated into the design, planning, layout and orientation and construction of all

developments, including the use of sustainable materials, selection of suitable locations and the use of renewable energy sources.

Objective CAF O9 Achieving Climate Resilience:

It is an objective of the Council to promote climate resilience in development and economic activities that are regulated by planning. It is important to ensure that any developments are climate resilient as they will need to function in a climate altered environment. This means that they will be able to withstand increased intensity of storm events and rainfall and through adequate design, location and drainage elements, would not contribute to problems elsewhere, such as increased run off.

Objective CAF O23 Flood Relief Schemes:

It is an objective of the Council to support and facilitate the development of Flood Relief Schemes as identified in the CFRAM 10 Year Investment Programme and ensure development proposals do not impede or prevent the progression of these measures.

Objective CAF O25 Strategic Flood Risk Assessment

It is an objective of the Council to have regard to the recommendations set out in the Strategic Flood Risk Assessment prepared to support the Plan.

5.2.4.3 Castleconnell Local Area Plan 2023-2029

The Castleconnell Local Area Plan (LAP) came into effect in May of 2023. The Local Area Plan (LAP) sets out the plans and policies which will direct the development of Castleconnell to 2029.

Chapter 3 sets out the **Development Strategy** for Castleconnell

Section 3.2 of the LAP sets out the overall strategic development objectives of the Local Area Plan including to:

4. Protect, conserve and enhance the built environment, through promoting awareness, utilising relevant heritage legislation and ensuring quality urban design principles are applied to all new developments, respecting historic and architectural heritage.

5. Protect, enhance and connect areas of natural heritage, blue green infrastructure and open space for the benefits of quality of life and biodiversity, capitalising on climate action and flood risk measures.

6. Ensure the highest quality of public realm and urban design principles apply to all new developments.

Chapter 8 **Climate Action, Environment and Heritage** includes the following policy and objectives of relevance to the subject proposal:

Policy CH 02 Water Framework Directive Policy: It is a policy of the Council to: Implement changes to the management of water bodies, taking account of all aspects of the Water Cycle in accordance with the Water Framework Directive and the principal objective of the WFD to achieve good status in all waters and to ensure that status does not deteriorate in any waters.

Objective CH 04: Special Control Area: It is an objective of the Council to

a) Protect and maintain the integrity of the Special Control Area and protect the watercourses in Castleconnell providing a buffer zone, in accordance with the Special Control Area zoning designation on the Land Use Zoning Map;

b) Ensure that development including holiday homes and holiday apartments shall not be permitted on land zoned Special Control Area. Ancillary leisure/tourism development that are water compatible may be permitted, where it can be satisfactorily demonstrated that there will be no impact on the integrity of this Special Control Area or on the natural habitat of the River and its designation as part of Lower River Shannon Special Area of Conservation.

Objective CH 05: Tree Protection and Nature Conservation: It is an objective of the Council To Seek to protect natural stone boundary walls, ponds/wetlands, other natural features of local importance and mature trees, where possible. Development that requires the felling or harming of such trees will not generally be permitted, unless supported by a tree survey establishing that the subject trees are of no ecological or amenity value. Such report shall be undertaken by a suitably qualified and competent person.

Objective CH 06: Designated Sites and Nature Conservation: It is an objective of the Council to

- a) Protect the integrity of the Lower River Shannon Special Area of Conservation site, through the establishment of buffer zones along the river.
- b) Ensure that appropriate waste water infrastructure is available to support new developments to safeguard water quality.
- c) No projects which will be reasonably likely to give rise to significant adverse direct or indirect or secondary impacts on the integrity of any Natura 2000 sites, having regard to their conservation objectives arising from reduction in species diversity, shall be permitted on the basis of this plan (either individually or in combination with other plans or projects).

Objective CH 07: Protected Structures: It is an objective of the Council to Resist the demolition of Protected Structures, in whole or in part, the removal or modification of features of architectural importance, and design element that would adversely affect the character or setting of a Protected Structure, unless exceptional circumstances can be clearly demonstrated by a suitably qualified professional.

Objective CH 08: Architectural Conservation Areas (ACA's): It is the objective of the Council to:

- a) Protect, conserve and where appropriate, enhance the ACA's as identified in Map 4.
- b) Proposals for development within the ACA's shall;
 - Reflect and respect the scale and form of existing structures within the ACA's in proportioning, overall scale and use of materials and finishes, particularly with reference to the street frontages and seek to contribute to or enhance the character and streetscape of the ACA's;
 - Seek to retain/incorporate/replicate exterior features which contribute or enhance the character and streetscape of the ACA's such as shop fronts, sash windows, gutters and down pipes, decorative plasterwork etc;
 - Ensure priority is given to the pedestrian, to inclusive access, and to facilitating the improvement of the quality of the public realm: the latter will include for consideration of the planting of trees in the wider public open spaces, benches for sitting and the articulation of uses through appropriate paving.

Objective CH 09: Archaeological Heritage: It is the objective of the Council to:

- a) Seek the preservation (in situ, or at a minimum, preservation by record) of all known sites and features of historical and archaeological interest, including wreck, sites and objects underwater. This is to include all the sites listed in the Record of Monuments and Places as established under Section 12 of the National Monuments (Amendment) Act 1994. In securing such preservation, the Council will have regard to the advice and recommendations of the National Monuments Service, Department of Housing, Local Government and Heritage, the National Museum of Ireland and the Local Authority Archaeologist.
- b) Protect and preserve (in situ, or at a minimum, preservation by record) all sites and features of historical interest discovered subsequent to the publication of the Record of Monuments and Places.
- c) Ensure that any proposed development shall not have a negative impact on the character or setting of an archaeological monument. In assessing proposals for development the Council will take account of the Archaeological potential of rivers and other waterways.
- d) Ensure that the area of a monument and the associated buffer area shall not be included as part of the open space requirement demanded of a specific development, but should be additional to the required open spaces, and if appropriate, where such a monument lies within a development, a conservation and/or management plan for that monument shall be submitted as part of the landscape plan for that development.
- e) Protect and preserve the industrial, military, maritime, riverine and post-medieval archaeological heritage of the plan area. Proposals for refurbishment, works to or redevelopment of these sites should be subject to a full architectural and archaeological assessment, including where appropriate underwater archaeological impact assessment.

Chapter 9 of the LAP, **Infrastructure and Utilities** contains the following policy and objectives relevant to the proposal.

Section 9.3 of the LAP sets out the policies in relation to Flood Risk Management in Castleconnell and Objective IU 05 makes it an objective of the Council to: Support and co-operate with the OPW in delivering the Castleconnell Flood Relief Scheme.

Objective IU 04: Surface Water Management and SuDS: It is an objective of the Council to:

- a) Maintain, improve and enhance the environmental and ecological quality of surface waters and groundwater, including reducing the discharges of pollutants or contaminants to waters in accordance with the River Basin Management Plan for Ireland 2022-2027 (DHPLG) and associated Programme of Measures.
- b) Require all planning applications to include surface water design calculations to establish the suitability of drainage between the site and the outfall point;
- c) Require all new developments to include Sustainable Urban Drainage Systems (SuDS) to control surface water outfall and protect water quality.
- d) Require applicants to investigate the potential for the provision of porous surfaces, where car parking and hard landscaping is proposed.
- e) Protect the surface water resources of the plan area and in individual planning applications request the provision of sediment and grease traps, and pollution control measures, where deemed necessary.

LAP Land use Zoning Objectives

The proposed works are for the most part contained within the Special Control Area Zoning objective which makes it an objective to protect the natural habitat of the river and its designation as part of the Lower River Shannon Special Area of Conservation. Limit future development within Flood Risk Zone A/B to water compatible development.

The lands at Coolbane are subject to an open Space and Recreation Land Use Zoning objective which seeks to protect, provide for and improve open space, active and passive recreational amenities. Limit future development within Flood Risk Zone A/B to water compatible development.

The purpose of this land use zoning objective is to provide for active and passive recreational resources including parks, sports and leisure facilities and amenities including greenways and blueways. The Council will not normally permit development that would result in a substantial loss of open space. Linked green spaces/corridors are encouraged.

Cedarwood stream to which works are proposed appears, as is the case with the River Shannon not to be subject to a land use zoning objective.

LAP supporting assessments

The LAP is accompanied by a Strategic Flood Risk Assessment which informed the preparation of the plan and rationalised the zoning pattern.

The LAP is accompanied by an Appropriate Assessment screening which determined that a Natura Impact Report was required as a result of the policy support for a future greenway along the banks of the Shannon. The NIR takes into consideration many of the issues arising in consideration of the flood relief scheme and concludes with a set of the mitigation measures to be incorporated into the plan.

The amenity and sustainable transport map which forms part of the LAP includes a potential link in the area zoned Open Space and Recreation at Coolbane woods where an embankment is proposed.

Record of Protected Structures (RPS), National Inventory of Architectural Heritage (NIAH), National Monuments Service (NMS) sites and Architectural Conservation Areas (ACA).

The Castleconnell LAP, describes 37 structures in the town as recorded on the Record of Protected Structures. Structures of relevance to the subject proposal include:

RPS Reg No. 1075: Grange House , Country House built 1828;

RPS Reg No. 5056: Bridge, Single-arch sandstone road bridge across the River Shannon, built c. 1815;

RPS Reg No. 1084: Church, Medieval structure – church (in ruins);

RPS Reg No. 1085: Island House, country house, built c. 1840;

RPS Reg No. 1099: Castle Connell, Medieval site – castle (in ruins); and

In addition to the RPS, there are a number of structures which are listed on the National Inventory of Architectural Heritage (NIAH), this includes:

21807037: The Grange, country house;

21807034: Mall House;

21807010: Island House, bridge; and

21807009: Island House.

There are a number of National Monuments Service (NMS) sites adjacent to the proposed works, this includes:

LI001-004005: Cross;

LI001-004003: Cross-slab;

LI001-004002: Cross-inscribed stone;

LI001-004003: Cross-slab;

LI001-004004: Ritual site - holy well; and

LI001-003: Castle.

Proposed works fall within areas of the Northern ACA and Central Core ACA as described in the LAP.

6 Consultations

6.1 Consultees Circulated

The applicant notes that, prior to lodgement of the application a copy of the application including the EIAR was issued to the following bodies which the applicant describes as prescribed authorities as follows:

- An Taisce - The National Trust for Ireland;
- Bat Conservation Ireland;
- Birdwatch Ireland;
- Coillte;
- Dept. of Agriculture, Food, and Marine;
- Dept. of Environment, Climate and Communications;
- Dept. of Housing, Planning, and Local Government;
- Dept. of Transport, Tourism, and Sport (DTTAS);
- Environmental Protection Agency (EPA);

- Electricity Supply Board (ESB);
- Failte Ireland;
- Geological Survey Ireland (GSI);
- Health Service Executive (HSE);
- Inland Fisheries Ireland (IFI);
- Irish Environmental Network;
- Irish Heritage Trust;
- Irish Wildlife Trust;
- Local Authorities Water Programme (LAWPRO);
- National Monuments Service;
- National Parks and Wildlife Service;
- National Transport Authority;
- Office of Emergency Planning;
- Office of Public Works (OPW);
- Sustainable Water Network Ireland (SWAN);
- Teagasc;
- The Heritage Council;
- Transport Infrastructure Ireland:
- Uisce Éireann.

6.2 Responses Received by ACP from Consultees

6.2.1 Transport Infrastructure Ireland. (TII)

No specific observation to make.

6.2.2 Health service Executive (HSE)

All mitigation including CEMP should be implemented in full.

6.2.3 Geological Service Ireland (GSI)

The GSI advise the use of all data sets in in the undertaking of the EIA, a list of data sets is provided.

6.2.4 Development Applications Unit of the Department of Housing Local Government and Heritage (DAU)

The engagement of the Department in pre-planning and scoping of the EIAR with the project proponents including site walkovers is referenced. The submission sets out a review of the proposed works and mitigation measures insofar as they relate to Archaeology only. The submission states that the department broadly concurs with the proposed mitigation measures but nonetheless provide a comprehensive set of draft conditions which it requests are attached in the event of approval.

6.2.5 An Taisce

The submission set out the following:

- An assessment of the proposal against the provisions of Article 4 of the WFD is essential.
- Extent of tree removal may be excessive and may indirectly remove natural flood attenuation. All alternative options must be fully explored. Details of replacement planting have not and should be provided to demonstrate no net loss of flora.
- The ecological importance of Coolbane Wood not assessed by virtue of its occurrence outside of any SAC, requires assessment in undertaking the EIA.
- An assessment of the flood attenuation capacity of Coolbane Wood as an alluvial woodlands vs the proposed embankment be undertaken.
- Assessment to ensure absence of impediments to hydrological links from the Shannon to smaller waterbodies.
- Impacts on Cloon Stream and potential for scour.

- concerns regarding consideration of freshwater pearl mussel, dismissing applicants contention that protection is unnecessary due to it not being known downstream of the proposal. Due to inclusion as a Qualifying Interest for the lower River Shannon SAC it should be considered and protected.
- Net biodiversity gain should be sought .
- Reference to various protections afforded to habitats and species outside of areas specifically designated for their protection.

The submission advocates for the preservation of the character of built heritage as much as possible.

6.3 Public Submissions

A single submission was received. Issues and concerns are summarised as follows:

- Dissatisfaction with the level of engagement.
- Lack of details of the proposal including in relation to proposed finishes to new replacement walls and revised entrance.
- Concern over impact on property boundaries.
- Mall House should be made safe from rising flood waters.
- Objection to works within the subject property.
- Potential for redirection of flood waters into the subject property as a result of the works.
- Objection to removal of trees from the property and the subdivision thereof by the construction of a flood wall.
- Concerns regarding construction related disturbance on an autistic member of the household.
- Flood wall works for the protection of Mall House should be undertaken entirely within the boundary of Mall House with retention of the existing boundary wall.
- The submission states his refusal to allow any works to be undertaken that interfere with the subject property.

- A schedule of correspondence between the submitter the applicant and agents is appended to the submission.

6.4 Response of Applicant to Submissions

6.4.1 TII

No response necessary.

6.4.2 HSE

The applicant welcomes the submission and states that no response necessary.

6.4.3 GSI

The applicant welcomes the submission and states that no response necessary.

6.4.4 DAU (Development Applications Unit of the Department of Housing Local Government and Heritage)

The applicant welcomes the submission and states that no response necessary.

6.4.5 An Taisce

- WFD taken into consideration in the EIAR. The development is not expected to jeopardise the attainment of good surface water status or of good ecological potential and good surface or groundwater chemical status.
- Taking the large catchment and the significant flow volumes, the impact of the relatively small tree removal in context is likely to have negligible impact on flood risk. This has been considered in the context of options development.
- Following a period of ecological lag, approx. 10 years (minimum), the young alluvial woodland in the location of Coolbane woods will have matured to the point where it provides equivalent ecosystem services that it does presently, within a residual medium-term period, this valued woodland will not experience any floral net loss.

- Where scrub and trees are removed throughout the FRS, they will be replaced in adjacent locations wherever practically possible. The selection of tree species when planting new trees will consider their value for wildlife and similarity to the existing native vegetation.
- Coolbane woods have been shown an appropriately high-level of consideration within the EIAR. The residual outcome will ensure alluvial woodland will persist in the long-term alongside the FRS defences.
- The scheme, avoids large-scale instream works which would change the morphology of the river. Operational phase impacts on hydromorphology are assessed to be longterm imperceptible.
- The mechanism of flooding in Castleconnell (that being, inundation of the urban area primarily from the Shannon) does not lend itself to nature-based solutions, however where such opportunities arise, they will be utilised to compliment the pumping infrastructure.
- Potential scour risk post-scheme has not been observed in any of the post-scheme modelling assessments.
- The only record of a Fresh Water Pearl Mussel (FPM) presence within the overarching Shannon catchment to date is within the Mulkear catchment, downstream of Annacotty Weir in 2022. This catchment is present further downstream within the overarching Shannon catchment; and therefore, cannot have acted as a reproductive source for potential establishment of FPM within the Lower Shannon catchment section (060), which contains the watercourses of Castleconnell.
- Biodiversity Chapter of the EIA fundamentally acts as an EclA report with all of the methodology notes provided incorporated therein with the exception of Biodiversity Net Gain (BNG) which the applicant states is not (yet) a statutory requirement. The use of the UK methodologies is discouraged.
- All impacts on Built heritage are assessed in chapter 12 of the EIAR.

6.4.6 Public Submission

- Preference is to reuse existing local stone for purpose of cladding flood walls.

- The applicant states that drawings were presented on screen or in person on a significant number of occasions which included drawings correcting errors highlighted by the author of the submission. The applicant states that drawings specific to the subject property were submitted to him on 22 January 2025 which included corrections, no response has been received by the applicant.
- In order to address concerns that the works will result in increased risk of flooding the applicant states that they have confirmed the principles of the scheme and references dates of correspondence to the author of the submission in that regard. The most recent of which includes a commitment to provide details to confirm that there will be no increased flood risk to the subject property because of the proposed works at a future date.
- There is insufficient space to construct the wall entirely within the garden of Mall House with retention of the existing wall. The alignment of the proposed flood wall will generally follow the alignment of the existing wall to maintain existing boundaries as closely as possible with a similar thickness and finish to the existing wall.
- The proposal for a 500mm rising wall was removed from the scheme prior to planning submission on account of concerns raised by Mr Meskell and subsequent additional hydraulic modelling sensitivity testing.

7 Oral Hearing

No request for an oral hearing was made.

8 Assessment

Having regard to the requirements of the Planning and Development Act, 2000 (as amended), this assessment is divided into three main parts:

- The likely consequences for the proper planning and sustainable development of the area (Planning Assessment)
- The likely effects on the environment (Environmental Impact Assessment);
- The likely significant effects on European site(s) (Appropriate Assessment).

In each assessment, where necessary, reference is made to issues raised by all parties. There is an inevitable overlap between the assessments, for example, with matters raised falling within both the planning assessment and the environmental impact assessment. In the interest of brevity, matters are not repeated but such overlaps are indicated in subsequent sections of the report.

8.1 The likely consequences for the proper planning and sustainable development of the area

I consider the following matters in turn in this Project Assessment:

- Procedural
- Principle
- Biodiversity
- Cultural Heritage Landscape and Visual Impact
- Residential amenity Traffic and transport
- Water and Wastewater

8.1.1 Procedural

The issue of consent for access to undertake works has been raised in a submission with the landowner stating that consent shall not be given. The cover letter submitted with the application states that discussions with landowners are ongoing and that it is likely that the Council may bring forward an application for the compulsory purchase of land(CPO) at a later date. As the applicant has stated the intent to CPO lands where agreement cannot be reached I consider that the issue of authority to undertake the works is addressed.

8.1.2 Principle

The proposal seeks to alleviate an ongoing flood risk, considered in Catchment Flood Risk Assessment and Management (CFRAM) and progressed to a Flood Risk Management Plan (FRMP). Both CFRAM and the FRMP have been incorporated into sectoral and planning policy hierarchy thereby establishing a clear policy context

for the project stage Flood Relief Scheme (FRS) for which consent is being sought. The policy context has been assessed by way of Strategic Environmental Assessment (SEA), Appropriate Assessment (AA) and Strategic Flood Risk Assessment (SFRA).

The proposed Flood relief Scheme (FRS) seeks to protect 50 properties, privately and publicly owned structures and land infrastructure, from various levels of flood risk and in so doing will contribute to climate proofing of the settlement in a manner consistent with the National Adaptation Framework Planning for a Climate Resilient Ireland (NAF) and the Climate Change Sectoral Adaptation Plan for Flood Risk Management, 2019 (currently under review).

Improvements of the viability/sustainability of the urban environment of Castleconnell is in accordance with the principles of sustainable development and spatial policy objectives set out across the policy hierarchy including and in particular the National Planning Framework, the Regional Spatial & Economic Strategy, (RSES) Southern Region (RPO's 89 climate resilience, 113 implementation of CFRAM and 118 deliver flood relief scheme), Limerick City and County Development Plan 2022-2028, (CAF 09 climate resilience) the Castleconnell Local Area Plan 2023-2029 (Objective IU 05 deliver Castleconnell FRS) as well as CFRMS and the Flood Risk Management Plan.

The proposed FRS is for that reason acceptable in principle subject to the assessment below.

8.1.3 Biodiversity

The construction of the proposed flood relief scheme will alter the flood regime and the functioning of wetlands in both construction and operational phases with a consequent impact on biodiversity. Areas subject to protection by designation of habitats and undesignated areas will be affected by direct and indirect impacts. These impacts are considered in detail in consideration of Chapter 8 of the EIAR and in the Appropriate Assessment insofar as they relate to European sites.

The removal of the wall to the west of the Mall Road presents challenges for the protection of biodiversity and cultural heritage. I am satisfied that the full removal of this wall as indicated on drawing 19104-JBB-XX-XX-DR-C-02141 and Figure 8-64 of the EIAR where the replacement is to be set back is unnecessary. Retention of the base of the wall along with any foundations would have the effect of reducing the extent of ground disturbance including a reduced impact on root protection zones within the SAC. Retention of the base of the wall would also retain a physical marker of the boundary of the SAC, and the associated historic townland boundary.

Where the Commission are minded to approve the proposed scheme I recommend a condition be attached, requiring retention of the base of this wall in a manner practical for the construction works. Final detail to be agreed jointly with the accredited conservation architect and project ecologist.

The number of trees to be removed throughout the scheme has been highlighted as a concern in submissions. The retention of a portion of the wall as described may also reduce the extent of tree removal as it will reduce the extent of both excavation and encroachment into the SAC.

The presence of Winter heliotrope (invasive species.) which I observed in the area proposed for access to the riverbank to the north of Rivergrove has not been noted in the application. The specific threat of spread of this invasive species from this location into the SAC in the course of creating the construction access has not been specifically addressed. Where the Commission are minded to approve the proposal I recommend an invasive species management plan be required as part of the CEMP with specific reference to this identified risk as set out in recommended condition 4.

Subject to the consideration of identified impacts and measure mitigations set out above and which are consistent within the EIA and AA in section 8.2 and 9 of this report, I am satisfied that the impacts on biodiversity resulting from the proposal have been given careful consideration in the design of the scheme, are consistent with policy and for that reason are in accordance with the proper planning and sustainable development of the area.

8.1.4 Cultural Heritage, Landscape and Visual Impact

The importance of the character and quality of the built environment in Castleconnell is evident by the protection afforded in policy including strategic development objectives no. 4 to 6 of the LAP.

Impact on Cultural Heritage is considered in chapter 12 of the EIAR which is assessed in section 8.2 below. The proposed works will impact on the character of Castleconnell as a result of removal of longstanding walls, trees and introduction of new structures in the form of flood walls and embankments. The magnitude of the impact on the character is dependant on the success of mitigation measures relating to materials, design and standards of workmanship in the application of finishes to the proposed structures.

Where the Commission are minded to approve the proposed scheme, taking account of the critical importance of the materials and workmanship required to achieve the finishes aspired to in the mitigation measures, I recommend that condition no. 5 as drafted be attached. This requires sample panels to be constructed as early in the project as practically possible prior to application of stone to new walls, for written approval by the accredited conservation architect.

Extensive works as described in appendix 12.9 of the EIAR are proposed to Protected structure Bridge (RPS 5056). I recommend that a final scope and specification of these works be reviewed and be subject to the written agreement of the appointed accredited project conservation architect prior to construction.

8.1.5 Residential amenity and Traffic and transport

The impact on trees of sentimental value within the garden of Dunkineely has been raised as a concern in a submission. In response to these concerns the applicant has proposed a detailed plan for transplantation, with grafts retained as contingency in the event of failure. I consider the proposal of the applicant, to be appropriate and a satisfactory measure within the context of the wider project.

In the event of a flood event being forecast, demountable flood gates are proposed to a number of domestic vehicular entrances to Dunkineely House, Island House,

fisher access on the Mall Road and across the public road at Chapel Hill to the immediate south of the Castleconnell Rock outcrop. For the duration of deployment of the demountable gates there will be an impact on residential amenity restricting use of the road network.

Taking account of the purpose of the gates, the prevailing conditions during which they are to be mobilised and the flood protection they afford I am satisfied that the impact of the demountable gates will not unduly negatively impact on the general and residential amenity of residents of the area. The in operation the demountable gates will yield positive impacts protecting property and infrastructure from flooding and for that reason the proposal is accordance with the proper planning and sustainable development of the area.

8.1.6 Water and Wastewater

Extensive works are proposed to storm, foul, combined and surface water collection systems within and beyond the area subject to flood risk.

Other than works to surface water outfalls which include the fitting of non-return/flap valves, these works are within public roads and will result in improvements to collection and disposal of water in the interest of the water environment.

The proposal includes for separation of several combined sewers. The separation of combined sewers into separate foul and surface water sewers reduces the potential for overcharging of the foul water system resulting in overflow to the Shannon because of overcharging due to rainfall (pluvial) or river flooding (fluvial) events. The separation of combined sewers as proposed will also reduce hydraulic loading of both the waste water collection and treatment infrastructure providing for efficiencies and water environment improvements.

As a result of construction of floodwalls and hydraulic separation of former floodplain from the Shannon, while the Shannon is in flood, surface water will accumulate by way of precipitation up gradient of the flood barriers. This has the potential to result in localised pluvial flooding during a fluvial flooding event. The works proposed to the surface water collection network in the immediate and wider vicinity of the areas subject to flood risk provide for attenuation of flows at higher gradients, slowing

accumulation at lower points whilst also providing for collection sumps at those lower points allowing for controlled pumping of accumulated water out of the area(s) at flood risk.

As previously stated these works are confined to areas below public roads with no potential for negative visual, cultural, biodiversity impacts. Short term low level construction phase impacts on amenity and transport will arise as described in Chapter 6 of the EIAR. I am satisfied that these works are in accordance with the proper planning and sustainable development of the area.

8.2 The likely effects on the environment (Environmental Impact Assessment)

This section of the report deals with the potential environmental impacts of the proposed development during the construction and operational phases.

Decommissioning is not proposed as the development is a flood protection scheme.

This section should be read in conjunction with Section 8.1 (Planning Assessment) and Section 9 (Appropriate Assessment).

In carrying out this EIA, I have examined the information presented by the applicant, including the EIAR, along with the submissions made by the planning authority, prescribed bodies and observers summarised in sections 4 and 5 of this report. I have also had regard to relevant legislation and guidance including, Guidelines on the information to be contained in Environmental Impact Assessment Reports (EPA 2022)

Statutory Provisions

Schedule 5, Part 2, Class 10, requires EIA for infrastructure projects including for canalisation and flood relief works where the contributing sub-catchment exceeds 100-hectares.

The contributing sub-catchment of this stretch of river is on the eastern side of the Shannon and is c. 160 hectares, thereby exceeding this threshold. The proposed development therefore requires EIA.

EIA Structure

This section of the report comprises the environmental impact assessment of the proposed development in accordance with Planning and Development Act 2000 (as amended) and the associated Regulations, which incorporate the European Directives on environmental impact assessment (Directive 2011/92/EU as amended by 2014/52/EU).

Section 171 of the Planning and Development Act, 2000 (as amended) defines EIA as:

- a. consisting of the preparation of an EIAR by the applicant, the carrying out of consultations, the examination of the EIAR and relevant supplementary information by the Board, the reasoned conclusions of the Board and the integration of the reasoned conclusion into the decision of the Board, and
- b. includes an examination, analysis and evaluation, by the Board, that identifies, describes and assesses the likely direct and indirect significant effects of the proposed development on defined environmental parameters and the interaction of these factors, and which includes significant effects arising from the vulnerability of the project to risks of major accidents and/or disasters.

Article 94 of the Planning and Development Regulations, 2001 and associated Schedule 6 set out requirements on the contents of an EIAR.

This EIA is therefore divided into two sections. The first section assesses compliance with the requirements of Article 94 and Schedule 6 of the Regulations. The second section provides an examination, analysis and evaluation of the development and an assessment of the likely direct and indirect significant effects of it on the following defined environmental parameters, having regard to the EIAR and relevant supplementary information:

- population and human health,
- biodiversity, with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive,
- land, soil, water, air and climate,
- material assets, cultural heritage and the landscape,
- the interaction between the above factors, and
- the vulnerability of the proposed development to risks of major accidents and/or disasters.

The assessment provides a reasoned conclusion and allows for integration of the reasoned conclusions into the Coimisiún decision, should they agree with the recommendation made.

8.2.1 Compliance with the Requirements of Article 94 and Schedule 6 of the Regulations 2001

The applicant has submitted an Environmental Impact Assessment Report (EIAR) which is presented in a 'grouped format' whereby each environmental factor (topic) is assessed and presented as a separate chapter. The EIAR comprises three volumes as follows:

- Volume 1: Non-Technical Summary (NTS)
- Volume 2: Environmental Impact Assessment Report (EIAR)
- Volume 3: EIAR Appendices

Volume 2 is split into the following Chapters:

- Chapter 1 – Introduction
- Chapter 2 – Legislation and Planning Policy
- Chapter 3 – Examination of Alternatives
- Chapter 4 – Description of Proposed Development
- Chapter 5 – Consultation
- Chapter 6 – Construction Impacts – Air Quality, Noise and Vibration, and Climate
- Chapter 7 – Population and Human Health
- Chapter 8 – Biodiversity
- Chapter 9 – Land and Soil
- Chapter 10 – Water – Surface and Groundwater
- Chapter 11 – Material Assets
- Chapter 12 – Cultural Heritage

- Chapter 13 – Landscape and Visual Impact Assessment
- Chapter 14 – Interactions
- Chapter 15 – Cumulative Effects

Volume 3 is split into the following sections:

- Introduction
- Consultation appendices
- Construction impacts appendices.
- Biodiversity appendices
- Material assets appendices
- Cultural Heritage Appendices
- Landscape and visual impact assessment appendices

8.2.2 Issues Raised in Respect of EIA

Issues raised in consultations are summarised in section 4 above and at the outset of the assessment of each chapter below. I have taken each into account throughout this report including in undertaking the EIA. Issues raised in respect of EIA in submissions to the application are summarised as follows:

- Alternatives to the extent of tree removal have not been fully explored and are excessive as presented.
- The Ecological importance of Coolbane Wood is not reflected in the EIAR.
- Concern that potential impediments to hydrological connectivity from Shannon to smaller water bodies have not been fully assessed.
- Water framework directive assessment required.
- Inadequate consideration of Freshwater Pearl Mussel and impacts of the proposal thereon.
- Impact on character and built heritage.

A letter from DAU in response to a request to the scoping stage of the EIA highlighted a number of NPWS concerns regarding the project at that stage. These are summarised in section 8.2.7 Biodiversity below.

8.2.3 Compliance with the Requirements of Article 94 and Schedule 6 of the Regulations 2001

Compliance with the requirements of Article 94 and Schedule 6 of the Regulations is assessed below.

Article 94 (a) Information to be contained in an EIAR (Schedule 6, paragraph 1)
A description of the proposed development comprising information on the site, design, size and other relevant features of the proposed development (including the additional information referred to under Article 94(b).
A description of the proposed development is contained in Chapter 1 and Chapter 4 of the EIAR including details for each location where works are proposed. The description includes the, design and size of each element of the proposal, arrangements for access and construction methodology, spoil and waste to be generated and maintenance and operational activities.
A description of the likely significant effects on the environment of the proposed development (including the additional information referred to under Article 94(b).
A methodology is provided and an assessment of the likely significant direct, indirect, and cumulative effects of the development is carried out for each of the technical chapters of the EIAR. I am satisfied that the assessment of significant effects is adequate to draw robust conclusions.
A description of the features, if any, of the proposed development and the measures, if any, envisaged to avoid, prevent or reduce and, if possible, offset likely significant adverse effects on the environment of the development (including the additional information referred to under Article 94(b).

The EIAR includes designed in mitigation measures and measures to address potential adverse effects identified in technical studies. These, and arrangements for monitoring, are set out in individual chapters. Mitigation measures comprise standard good practices and site-specific measures and are largely capable of offsetting significant adverse effects identified in the EIAR.

A description of the reasonable alternatives studied by the person or persons who prepared the EIAR, which are relevant to the proposed development and its specific characteristics, and an indication of the main reasons for the option chosen, taking into account the effects of the proposed development on the environment (including the additional information referred to under Article 94(b).

A description of the alternatives considered is contained in Chapter 3 of the EIAR. The alternatives considered include 8 alternative approaches to Flood risk Management as derived from the standalone, detailed Castleconnell Flood Relief Scheme Options Assessment Report which is summarised in table 3.1 of the EIAR. These alternative approaches were screened against listed criteria. Options which progressed through screening were subject to technical assessment of feasibility. The assessment included do nothing, do minimum, structural and non structural measures. The main reasons for opting for the current proposal were based on effectiveness and minimisation of environmental effects as well as technical, economic, and social considerations. I am satisfied, therefore, that the applicant has studied reasonable alternatives in assessing the proposed development and has outlined the main reasons for opting for the current proposal before the Commission and in doing so the applicant has taken into account the potential impacts on the environment.

Article 94(b) Additional information, relevant to the specific characteristics of the development and to the environmental features likely to be affected (Schedule 6, Paragraph 2).

A description of the baseline environment and likely evolution in the absence of the development.

A description of the baseline environment is included in each technical chapter of the EIAR and an assessment of the likely evolution of it, in the absence of the development.
A description of the forecasting methods or evidence used to identify and assess the significant effects on the environment, including details of difficulties (for example technical deficiencies or lack of knowledge) encountered compiling the required information, and the main uncertainties involved
The methodology employed in carrying out the EIA, including the forecasting methods is set out, in each of the individual chapters assessing the environmental effects. The applicant has indicated in each chapter where difficulties have been encountered (technical or otherwise) in compiling the information to carry out EIA. I comment on these, where necessary in the technical assessment below, I am satisfied that forecasting methods are adequate in respect of likely effects to facilitate the reaching of a reasoned conclusion.
A description of the expected significant adverse effects on the environment of the proposed development deriving from its vulnerability to risks of major accidents and/or disasters which are relevant to it.
This issue is specifically dealt with in chapter 1 of the EIAR. Specific risks have been identified in relation to the project's vulnerability to issues with ESB infrastructure controlling/influencing river water volumes. These risks are reasonable and are assessed in my report.
Article 94 (c) A summary of the information in non-technical language.
This information has been submitted as a separate standalone document (Vol I). I have read this document, and I am satisfied that the document is concise and comprehensive and is written in a language that is easily understood by a lay member of the public.
Article 94 (d) Sources used for the description and the assessments used in the report

The sources used to inform the description, and the assessment of the potential environmental impact are set out within each chapter and/or as appendices to the EIAR. I consider the sources relied upon are generally appropriate and sufficient.

Article 94 (e) A list of the experts who contributed to the preparation of the report

A list of the various experts who contributed to the report are set out in Table 1-1 in Chapter 1 of the Report. Where relevant the introductory section of each of the chapters also sets out details of the individual's expertise and qualifications which demonstrate the competence of the person in preparation of the individual chapters within the EIAR. An exception to this is the absence of details for the author of material relating to Built Heritage see section 8.2.12 below. However I am satisfied that the EIAR has been prepared by experts with sufficient competency in the technical subject areas and/or that sufficient material is available regarding built heritage to facilitate a reasoned conclusion in relation to this aspect of the proposal.

Consultations

The application has been submitted in accordance with the requirements of the Planning and Development Act 2000 (as amended) and the Planning and Development Regulations 2001 (as amended) in respect of public notices. In addition, the applicant has carried out public consultation with events in June 2020 (online as a result of Covid 19) and circulation of brochures, questionnaires and posters. A further consultation events were held in September 2022, and September 2023. Continued liaison with landowners throughout the process is reported. Submissions have been received from statutory bodies and third parties and are considered in this report. I am satisfied, therefore, that appropriate consultations have been carried out and that third parties have had the opportunity to comment on the proposed development advance of decision making.

Compliance

Having regard to the foregoing, I am satisfied that the information contained in the EIAR, and supplementary information provided by the developer is sufficient to comply with article 94 of the Planning and Development Regulations, 2001.

8.2.4 Assessment of Likely Significant Effects

This section of the report sets out an assessment of the likely environmental effects of the proposed development under the following headings, as set out Section 171A of the Planning and Development Act 2000, as amended:

- Population and human health.
- Biodiversity, with particular attention to the species and habitats protected under the Habitats and Birds Directives (Directive 92/43/EEC and Directive 2009/147/EC respectively).
- Land, soil, water, air and climate.
- Material assets, cultural heritage and the landscape.
- The interaction between these factors.
- The vulnerability of the proposed development to risks of major accidents and/or disasters.

In accordance with section 171A of the Act, which defines EIA, this assessment includes an examination, analysis and evaluation of the application documents, including the EIAR and submissions received and identifies, describes and assesses the likely direct and indirect significant effects (including cumulative effects) of the development on these environmental parameters and the interaction of these. Each topic section is therefore structured around the following headings:

- Issues raised in the application.
- Examination of the EIAR.
- Analysis, Evaluation and Assessment: Direct and indirect effects.
- Conclusion: Direct and indirect effects.

8.2.5 Air Quality, Dust Noise and Vibration and Climate

8.2.5.1 Issues Raised

- A public submission raised concerns regarding potential for disturbance during construction, to residents of Dunkineely House.

8.2.5.2 Examination of the EIAR

1. Context

Chapter 6 addresses the topics of air quality and dust, Noise and vibration, and climate. The introduction to the chapter states that these environmental factors are not expected to lead to effects in the operational phase and are therefore combined into a single construction impacts chapter.

The approach to this chapter accords with the Guidelines on the Information to be contained in Environmental Impact Assessment Reports (EPA, 2022), as well as the Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment, 2018 in the selection of issues specifically examined in this chapter.

The chapter notes the absence of Irish statutory or WHO standards or limits for the assessment of dust deposition and its tendency for causing nuisance. References to a range of national yardstick criteria from other countries are provided. The Flood Relief Scheme has been assessed in accordance with the “Guidance on the Assessment of Dust from Demolition and Construction, Institute of Air Quality Management (IAQM) January 2024 (Version 2.2)

ISO 1996-1:2016 Acoustics — Description, measurement and assessment of environmental noise — Part 1: Basic quantities and assessment procedures was utilised for basic quantities used for the description of noise in community environments and describes assessment procedures. BS 5228-1:2009+A1:2014 Code of practice for noise and vibration control on construction and open sites –the ABC method therefrom is utilised as is Good Practice Guidance for the Treatment of Noise during the Planning of National Road Schemes (March 2014).

The following documents are also referenced and utilised in the assessment: British Standards Institution British Standard 7385: Evaluation and measurement for vibration in buildings. Part 1: Guide for measurement of vibration and evaluation of their effects on buildings. 1990 and Part 2: of that BS, Guide for damage levels from ground borne vibration 1993 and British Standard 6472: Guide to evaluation of human exposure to vibration in buildings. Part 1: Vibration sources other than blasting 2008.

The climate impact arising from the proposed flood relief scheme was based on reference to the relevant Transport Infrastructure Ireland (TII) Publications and TII Carbon Tool, for use in the assessment of climate effects for national road schemes

and these are described in the SD and OTD for climate and British Standards Institution (BSI). (2016) PAS 2080: Carbon Management in Infrastructure.

2. Baseline

Air quality baseline is described in section 6.1.2 and was established with reference to EPA monitoring of sites in Limerick City and was determined to be of good status regarding the parameters monitored.

The noise survey was undertaken in accordance with the methodologies outlined in ISO 1996 Description, measurement and assessment of environmental noise and BS 4142.

Climate baseline is presented in the form of national climate data sets and specifically references the Climate Action Plan 2023.

3. Potential Effects

Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	No effect on air quality
Construction	- Medium risk recorded at demolition, earthworks, construction and track out for dust soiling and high risk associated with track out for dust soiling for ecological impacts. - Construction noise limit criteria may be exceeded at the nearest residential properties for short periods during daytime. - Disturbance of Fauna by noise and vibration 829.8952 tonnes CO2 equivalent due to construction phase, calculated to be 0.00119% of annual emissions and for that reason of negligible impact.
Operation	No effect on air quality noise or vibration
Decommissioning	Not considered due to nature of proposal.
Cumulative	None identified

4. Mitigation

Extensive mitigation measures for dust are set out as general measures, specific measures for demolition, earthworks construction and track out. Monitoring is proposed throughout the construction phase.

Mitigation measures for noise and vibration are set out in section 6.2.5 and include work time restrictions, quiet working methods including for piling and quiet plant with monitoring of noise and vibration to be undertaken.

No mitigation is proposed for climate impacts.

No mitigation is proposed for operational phase.

5. Residual Effects

With implementation of the proposed dust and air quality mitigation measures, construction phase activities on the site will not cause exceedance of air quality objectives at receptor locations.

Construction noise limit criteria may be exceeded at the nearest residential properties for short periods during daytime. However construction noise impacts will be short-term and are therefore assessed not to be significant

8.2.5.3 Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated Chapter 6 of the EIAR, all of the associated documentation and submissions on file in respect of construction impacts on air quality, dust, noise, vibration and Climate. I am satisfied that the applicant understanding of the baseline environment, by way of desk and site surveys, is comprehensive and that the key impacts in respect of likely effects on construction impacts on air quality, dust, noise, vibration and climate, as a consequence of the development have been identified. Submissions received to the application have raised issues in relation to disturbance during construction phase. Although the property of specific concern to the submission was not selected as a noise sensitive receptor and the potential for specific impacts thereon was not directly assessed I am satisfied that the measures proposed to be included in the CEMP including liaison with contractor as committed to, will adequately mitigate the potential for significant effects.

Issues relating to sequestered carbon and excavation are addressed in chapter 9 of the EIAR, land and soil and for that reason are assessed in section 8.2.8 of this

report. Climate change adaptation is considered and reported on in the options report outside of the EIAR.

8.2.5.4 Conclusion: Direct and Indirect Effects

I am satisfied that taking account of the specific nature and purpose of the works as well as the short time period of impact in each location relative to the baseline and sensitivity of receptors that mitigation measures including by condition are sufficient to avoid, prevent or reduce and, if possible, offset likely significant effects on the environment of the development insofar as they relate to construction impacts on air quality, dust, noise, vibration and climate.

The flood relief scheme is an adaptation to the effects of climate change, and is as such consistent with the national climate objective, the National Adaptation Framework and the approved sectoral adaptation plan for flood risk management, long term climate action strategy and the Climate Action Plan 2025 (2024).

Potential for cumulative impacts are considered in chapter 15 of the EIAR and in section 8.2.15 below. No cumulative have been identified in the EIAR or are anticipated.

8.2.6 Population and Human Health

8.2.6.1 Issues Raised

- A public submission raised concerns regarding potential for disturbance during construction, to residents of Dunkineely House.

8.2.6.2 Examination of the EIAR

1. Context

Chapter 7 addresses the topic of Population and Human Health including disruptions to the population of Castleconnell and the surrounding area.

The approach to this chapter accords with the Guidelines on the Information to be contained in Environmental Impact Assessment Reports (EPA, 2022), as well as the Guidelines for Planning Authorities and An Bord Pleanála on carrying out

Environmental Impact Assessment, 2018 in the selection of issues specifically examined in this chapter.

The chapter references: Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No. 291 of 2013).

2. Baseline

A desktop study was undertaken to establish the baseline associated with economic activity, employment opportunities, settlement and social patterns. A list of principal potential receptors is presented consisting of residential, Health, Social, Community, and Recreational Facilities.

3. Potential Effects

Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	Flooding will continue to affect the village including up to 50 properties. Assessed to be significant to profoundly negative, long-term
Construction	Negative disruption and disturbance of the community during construction
Operation	- Long-term positive impacts are likely from the operation of the scheme as it will increase the level of flood protection for people's homes and businesses - The operation of flood barriers will result in an intermittent slight negative impact
Decommissioning	Not proposed.
Cumulative	Potential cumulative disruptive effect on population with other construction projects, assessed not to be significant.

4. Mitigation

The requirements of the Safety, Health and Welfare at Work (Construction) Regulations 2013 (S.I. No. 291 of 2013) will be complied with at all times. A Construction Stage Traffic Management Plan will be developed and agreed with Limerick City & County Council and the relevant property owners prior to commencement of the works.

In the operational phase when demountable flood barriers are in operation a traffic management plan will be in place during the road closure at Chapel Hill and warning signage leading up to the closure. The diversion route will be signposted.

5. Residual Effects

The residual impact to population and human health during the operation of the scheme is predicted to be **positive, with long term effects**.

8.2.6.3 Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, Chapter 7 of the EIAR which includes consideration of residential, health, social, community, and recreational facilities. I have analysed and evaluated the direct and indirect effects on economic activity, human health and safety, and on residential, commercial and community amenity in the wider and local study areas as presented in this chapter.

I have assessed the impacts on population and Human Health as presented in the chapter. Whilst acknowledging there is potential for locally significant construction phase effects arising from disruption and disturbance of the community during construction, the effects will be of a temporary and transient nature and with mitigation described in the proposal are not considered to be significant.

In the operational phase some disruption to population and human health is possible arising from deployment of the demountable barriers in advance of a forecast flooding event and after water levels have fallen. However taking account of the future baseline scenario during a flood event, with and without the scheme and with and without on deployment of the barriers the overall effect is significantly positive on population and human health.

I am satisfied that the applicant understanding of the baseline environment, by way of desk and site surveys, is comprehensive and that the key impacts in respect of likely effects on Population and Human Health, both positive and negative as a consequence of the development of a Flood Relief Scheme to protect flooding of property to have been identified.

8.2.6.4 Conclusion: Direct and Indirect Effects

I have examined Chapter 7 of the EIAR which deals with Population and Human Health. Having regard to the survey work carried out, the location of the site and existing environment I am satisfied that there is no potential for any significant negative direct, indirect or cumulative effects on Population and Human Health as a result of the proposed development. A significant positive effect on Population and Human Health is anticipated in the operational phase of the development due to relief from flooding.

8.2.7 Biodiversity

8.2.7.1 Issues Raised

Issues raised in submissions received to the application, as set out in section 6 of this report include:

- Excessive removal of trees.
- Consideration of use of nature based solutions in preference to engineering.
- Ecological value assigned to Coolbane woods and other habitats and species outside designations in EIAR.
- Creation of impediments to hydrological connectivity from Shannon to smaller waterbodies.
- Consideration of Freshwater Pearl Mussel as CO for Shannon SAC.
- Opportunities for Net Biodiversity gain in the proposal.

8.2.7.2 Examination of the EIAR

1. Context

Chapter 8 addresses the topic of Biodiversity. The methodology and the personnel who collected and prepared the baseline data is presented for all terrestrial and aquatic habitats and species. Section 8.1.1 sets out the Methodology, 8.1.2 describes the surveys undertaken which consisted of, Terrestrial and Riparian Edge Habitat Surveys, Annex I Habitats, Tree survey, Bird surveys, including Wintering

bird survey, Breeding bird survey, Terrestrial Mammals, Survey of Cloon Stream - Trail camera surveys 2023, Bat surveys including Preliminary Bat Roost and Habitat Suitability Surveys, Aquatic Habitat Surveys, including Aquatic Macroinvertebrate Surveys, Fish surveys, Juvenile Lamprey surveys, eDNA Sample from Cedarwood stream, Amphibians – Spawn and eDNA surveys, and Terrestrial Invertebrates, with standards and methodologies described for each.

The Zone of influence for ecological receptors is described in section 8.1.3

2. Baseline

Extensive baseline data was collated by way of desktop and site survey by generalist and expert ecologists and is presented under the following headings, Designated Nature Conservation Sites, Habitats, Riparian Habitats, Surface Waterbodies within the Scheme Study Area, Other habitats (to Fossit), Protected Flora and Fauna, and Invasive Species.

Features of particular note within the baseline are:

- The identification Coolbane/ Coolbawn woods as emerging alluvial woods containing ground flora consistent with priority habitat 91E0 indicator species outside of the SAC.
- Tall herb fen (6430) annex habitat has been identified adjacent to the proposed works, inside the SAC but not a QI of the SAC and for that reason not considered in the NIS.
- A Heronry of between 8 and 10 nests was recorded in a Cedar Tree on Cloon island.
- Potential Leisler's bat roost has been identified in 3 mature Beech trees which it was proposed to remove. (Scheme design was amended as a result to retain the subject trees.)

3. Potential Effects

Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
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Do Nothing	Continuation of reactionary remediation of flood events, sand bags and other pollution risks.
Construction	- Habitat loss/disturbance. Including permanent loss of woodlands at Coolbane Wood. Temporary impact on Tall Herb fen at construction access to Riparian zone for works at River Grove and Grange House and on Wet Grasslands as a result of access and machinery. - Loss of potential Bat roosts - Loss of 89 trees. - Disturbance to faunal species including Heronry and bat foraging. - Reduction in water quality. - Release of dust (impacting habitats and water quality) - Spread of invasive species
Operation	- Clearing of Ceaderwood stream will release suspended solids downstream and disturbance to aquatic species including fish. - Spead of invasive species during and following earth works. - Ceasing operation of sluices on Cloon Island causeway, positive effect.
Decommissioning	None
Cumulative	None

4. Mitigation

Mitigation measures have been determined to be required for impacts on the following ecological features.

- Coolbane Woods - Alluvial Forests (91E0) [WN5 - Riparian woodland / WN6 Wet willow-alder-ash woodland]
- Tall-herb fen (6430) [FS2 - Tall-herb swamps / FS1 Reed and large sedge swamps]
- Wet grassland

- Treelines and Mature trees
- Birds –
 - Heron (including 8-10 nests)
 - Kingfisher
 - Dipper and Grey Wagtail
- Badger
- Bats
- Fish – Brown trout, Eel, other coarse fish
- Invasive species

Of particular note are the following measures:

Section 3.3.1.1 states that Impacts on Annex I Hydrophilous tall herb fen [6430] habitat in the River Shannon next to Rivergrove B&B and Grange House will be likely to be mitigated by:

- A stone platform can be installed in this section for machinery to enter into the riparian area, which will be underpinned by terram to ensure the stone can be completely removed after construction and keep release of dusts and small stones from entering the river.
- Seasonal constraint: works should be completed during the summer months and should be finished by the end of September ahead of any anticipated flood. Any machinery would be removed ahead of a flood if flooding is forecast during this season.
- Any concrete should be pumped from the dry side at Grange House.

Rivergrove concrete will be pumped from the stone and terram platform.

The demolition of the Mall Road wall and construction the new flood wall presents particular challenges for mitigation of impacts on the woodland. Specific and non standard mitigation is proposed including the use of light silt fencing secured with stakes and sandbags as necessary during the demolition phase and more

conventional and robust protection between the existing and proposed structures for construction of the new wall, following completion of demolition.

Lightweight silt fencing is proposed for use in each of the sensitive locations where walls and embankments are to be constructed including along Cloon stream, Mahers Pub, Meadowbrook, and Stormont House. Measures to protect the surface water drains in the less constrained area of the proposed Coolbane embankment are more conventional in nature with conventional construction silt traps proposed.

In addition to the site-specific measures a surface water management plan and a pollution control plan are described as a general mitigation measure for the proposed works.

Bat sensitive methods are proposed for tree removal.

The flood wall proposed in the vicinity of the Heronry has been redesigned to protect the relevant tree root protection zone.

Mitigation against soil compaction by machinery by way of, designation of routes construction of platforms and decompaction post construction are proposed.

New culverts to follow best practice, removing existing identified barriers to fish passage.

Detailed methodologies are set out for water control during construction of the proposed culverts and vegetation and silt removal from the Cedarwood stream.

Three mature Beech trees at Grange House, which may be potential Leisler's Bat roosts, will be retained following the decision to divert the proposed culvert slightly to the north.

Operational mitigation is described in section 8.4.2 and includes measures such as facilitating the creation of new Alluvial woodland in the vicinity of Coolbane Wood, remedial tree planting, invasive control measures, and monitoring of protected habitats.

5. Residual Effects

The removal of alluvial woodland at Coolbane Wood for construction of the embankment will result in the permanent loss of this habitat. As new woodland is

proposed the impact is assessed as moderate and medium term until the new area becomes established.

The loss of 87 trees is assessed as locally important with medium term effect.

8.2.7.3 Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated Chapter 8 of the EIAR, all of the associated documentation and submissions on file in respect of impacts on Biodiversity including correspondence dated 2 February 2024 as provided in appendix 5 of EIAR from NPWS to the project team during the EIA scoping phase. This correspondence highlighted the QI status of the woodland adjacent to the western boundary wall of Mall/Elvers Road which forms the boundary of the SAC and the necessity for details of works proposed in this location. The scoping response also requested detail on the relationship between Coolbane Wood and the Shannon Flood plain. I am satisfied that the applicant understanding of the baseline environment, by way of desk and site surveys, is comprehensive and that the key impacts in respect of likely direct and indirect effects of construction and operational impacts on carefully described habitats and species, as a consequence of the development have been identified.

I am satisfied that issues raised in submissions set out in section 8.2.7.1 above are addressed in this chapter.

I am satisfied that the assessment of the ecological importance of Coolbane wood has been adequately assessed and that biodiversity has been incorporated into consideration of alternatives.

I consider the complete and permanent loss of 0.4 Ha of alluvial woodland at Coolbane Wood and the associated ecosystem services to be a significant impact on the biodiversity of the area. I consider that implementation of all of the measures shown on Figure 8-47 of the EIAR entailing establishment of alluvial woodland next to the Coolbane embankment, the felling of the conifer plantation, and the regeneration of the area south of the embankment to alluvial woodland, ensuring connection to the flood plain represents adequate mitigation for the significant biodiversity impacts of the scheme in this area. These mitigation measures will strongly contribute to nature-based solutions to flooding and contribute to delivery of

multiple other policy objectives towards creation of a high quality and connected urban environment.

Coolbane Wood does not form part of the SAC. Although the word compensation is used in the application to describe mitigation measures for impacts on Coolbane wood the Commission should note the terms compensation, compensatory planting and compensation woodland are used by the applicant in the common use of the words and not in relation to, or for consideration of Appropriate Assessment.

Nature based solutions at catchment scale, reach scale and local scale have been considered in the course of undertaking the options study as reported in the options report. Although as a primary design approach they have been discounted as standalone measures, connectivity to smaller water bodies, ecological importance of Coolbane Woods including for protection of water quality have all been addressed. In time, the proposed mitigation measures will result in a biodiversity net gain. Taking account of the particular sensitivities of each element of the receiving environment along with the nature of the construction and operation of the flood relief scheme, I agree with the conclusion that subject to mitigation there will be no long term significant residual impacts on biodiversity as a result of the proposal individually or in combination as a result of residual impacts of the scheme with other projects.

8.2.7.4 Conclusion: Direct and Indirect Effects

Having regard to the foregoing, it is considered that the main significant direct and indirect effects on biodiversity, after application of mitigation measures/residual effect, arise from the loss of 0.4ha Alluvial woodland at Coolbane Wood.

Coolbane Wood is identified in the proposal as Alluvial Forest (Annex I Habitat). Alluvial forest is a Qualifying Interest for Lower River Shannon SAC but Coolbane Wood is outside of the SAC. Coolbane wood has been considered here (EIA) for its high biodiversity value and not in consideration of the SAC or impacts of the project thereon. Notwithstanding the subject location being outside of the SAC boundary I note that it is a conservation objective of the lower Shannon SAC to restore/increase the extent of Alluvial forest.

I consider mitigation to establish an increased extent of Alluvial woodland during construction and operation phases of the flood relief scheme, in the vicinity of the

proposed embankment to be appropriate. I consider that following successful establishment of the alluvial woodland as proposed the residual effect to be not significant. Final details including the sequencing/phasing of works to be agreed prior to commencement. Where the commission are minded to approve the scheme I recommend the attachment of a specific condition in this regard.

I am satisfied that, taking account of the specific nature, location and purpose of the works as well as the short time period of construction impact relative to the baseline that mitigation measures proposed are sufficient to avoid, prevent or reduce and, offset likely significant adverse effects of the development insofar as they relate to impacts on biodiversity.

8.2.8 Land and Soil

8.2.8.1 Issues Raised

- No issues raised regarding Land and Soil.

8.2.8.2 Examination of the EIAR

1. Context

Chapter 9 addresses the topic of Land and Soil. The assessment methodology, sources of information and assessment criteria are described at the start of the chapter which references EPA and (Institute of Geologists of Ireland (IGI) guidance.

2. Baseline

The environmental baseline is set out as results of desktop and site walk over and is presented in tabular format assigning an importance ranking.. The baseline describes the bedrock geology, Quaternary Sediments and Topsoil in the area of the proposed works. Site investigation by a number techniques were undertaken by Priority Geotechnical Ltd.

Evidence of Peat in the vicinity of Coolbane Woods is of note.

3. Potential Effects

Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	Flooding continues alluvial sediment deposited on flood plain.
Construction	- Excavation of material is assessed as short term slight and negative. - Spills and leaks short term, moderate, negative.
Operation	- Excavation and construction of embankments will change the soil environment in the area. - Potential for runoff during and post construction of embankments. - Sheet piling has potential to impact on groundwater flow.
Decommissioning	Scheme not to be decommissioned.
Cumulative	None

4. Mitigation

Proposed mitigation centres on the CEMP which inter alia is to

- Contain a soil management programme,
- Minimise truck movements across the site to avoid soil compaction,
- Re-use suitable material on-site,
- Storage of soil imported fill material to be tested,
- Oil and fuel storage tanks in bunded areas and refuelling in designated areas,
- Risk assessment for wet concreting,
- Waste characterisation of the material to be taken off site
- Surcharge programme (with or without vertical wick drains) to increase the strength of the peat or dig-and-replace option will be used at the Coolbane Embankment.
- Silt fences will remain in place until the soil on the banks has stabilised and grass has rooted.
- Visual monitoring of measures is proposed at construction and operation phases.

5. Residual Effects

The residual effects during the construction phase are assessed and presented as short-term, imperceptible, neutral and during operation as permanent, imperceptible, neutral.

8.2.8.3 Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated Chapter 9 of the EIAR and all of the associated documentation and submissions on file in respect of Land and Soil. I am satisfied that the applicant understanding of the baseline environment, by way of desk and site surveys, is comprehensive and that the key impacts in respect of likely effects on Land and Soil, as a consequence of the development have been identified.

8.2.8.4 Conclusion: Direct and Indirect Effects

Having regard to the examination of environmental information as described above it is considered that by virtue of the nature of the development and the receiving environment, following mitigation there is no potential for significant effects on Land and Soil as a result of the development on its own or in combination with other developments.

8.2.9 Water, Surface and Groundwater

8.2.9.1 Issues Raised

Hydrological relationship between Coolbane woods and the Shannon floodplain should be understood and reported.

Assessment of the proposal against the provisions of Article 4 of the WFD is essential.

Impediments to hydrological links from the Shannon to smaller waterbodies.

8.2.9.2 Examination of the EIAR

1. Context

Chapter 10 addresses the topic of surface water and groundwater. The assessment methodology is set out along with a list of guidance consulted in the preparation of the chapter.

2. Baseline

A desktop assessment and a Biological Water Quality Assessment survey took place. The survey was carried out by Ecofact in accordance with prescribed EPA methodologies, groundwater tests conducted by PGL.

Descriptions of each water body within the FRS area are set out along with a baseline description of flooding and water services infrastructure. Both Water Framework Directive Assessment and EPA Q values and Visual and Biological Water Quality Assessment Q value are described.

The description of the surface water baseline concludes that the surface water bodies are of extremely high importance due to the designation of the Shannon as SAC.

Groundwater baseline is described as good and of moderate vulnerability.

3. Potential Effects

Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	Flooding continues, risk of pollution from inundation of roads and waste water treatment continues. Long term significant negative effect.
Construction	Contaminated water accessing surface and ground water bodies, morphology and flow pattern changes.
Operation	- Risk of pollution as a result of flooding reduced. - River disconnected from parts of natural flood plain.
Decommissioning	Not proposed due to nature of proposal.
Cumulative	None identified

4. Mitigation

Construction Environmental Management Plan (CEMP) sets out best practice to be followed in the construction phase and includes a Storm Water Management Plan, pollution prevention and sediment management measures, site compound and storage locations and topsoil piles and Silt fencing or other appropriate measures. Monitoring is proposed at construction and the operational phases.

5. Residual Effects

The assessment report concludes that there will be no significant residual negative effects following mitigation.

8.2.9.3 Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated Chapter 10 of the EIAR, all of the associated documentation and submissions on file in respect of Water. I am satisfied that the applicant understanding of the baseline environment, by way of desk and site surveys, is comprehensive and that the key impacts in respect of likely effects on water, as a consequence of the development have been identified and mitigated.

Significant positive effects on surface waters will result from implementation of the FRS as it addresses the risks to surface water from uncontrolled wastewater discharge in both flood and non-flood scenarios.

The potential for interactions between water, biodiversity and land and soil are considered and set out in the water Chapter.

I am satisfied that the assessment of the topic of water as presented in this chapter has taken account of the objectives of Article 4 of the Water Framework Directive and that the proposal will not present a risk to surface or groundwater either quantitatively or qualitatively.

8.2.9.4 Conclusion: Direct and Indirect Effects

Having regard to the examination of environmental information relating to the water environment as above, it is considered that by virtue of the nature of the development and the receiving environment, there is no potential for significant negative effects on surface or groundwater as a result of the development on its own or in combination with other developments. There is potential for positive effects on water quality during the operational phase of the development by way of controlling

the impacts of flooding on wastewater infrastructure and preventing uncontrolled introduction of pollutants from the urban area during and following flood events.

8.2.10 Conclusion/determination of Water Framework assessment

Water Framework Directive Assessment is considered as part of Chapter 10 and concludes that the project is compliant with the requirements of the Water Framework Directive (2000/60/EC).

The development site is located within the Lower Shannon catchment, Shannon [Lower]_SC_090 subcatchment and Shannon (Lower)_060 subbasin. The waterbody has a Moderate status.

The underlying groundwater body is Castleconnell (IE_SH_G_052) classified as good status, the hydrological and geological characteristics controlling the ease at which this groundwater body may be contaminated, is classified as “Not at risk”.

No abstraction of groundwater or alteration of drainage patterns is proposed. Based on available data I am content that the quantitative status and the wider flow regime will not be negatively affected by the construction and operation phases of the proposal to any extent that could impact on the achievement of the objective of the Water Framework Directive.

With the application of various mitigation measures to protect surface and groundwaters, I am content that the qualitative status of waters will not be negatively affected by construction and operation phases of the project. I am therefore satisfied that the project will not affect any surface water body or groundwater body and will not cause a deterioration of the status of any such body and nor will it jeopardise the attainment of a ‘Good’ status in any water body.

I have assessed the proposal having regard to the objectives as set out in Article 4 of the Water Framework Directive to protect and, where necessary, restore surface and ground waterbodies in order to reach good status (meaning both good chemical and good ecological), and to prevent deterioration. Having considered the nature, scale and location of the project, I am satisfied that there is no conceivable risk to any surface and/or ground waterbodies.

The reason for this conclusion is as follows:

- The content and conclusions of Chapter 10 of the EIAR submitted by the applicant.
- Extensive baseline data collected relating to surface and groundwaters in the area of the proposed scheme.
- The design of the proposal generally and mitigation proposed relating to surface water control. Protection of surface water bodies in construction and operational phases includes the removal of a direct sewerage discharge, separation of combined sewers, installation of flap valves on outflows, rationalisation of overflows and replacement of culverts with best practice design.
- The project includes no abstraction from, emission to or other significant alteration of any water body or of drainage patterns beyond the protection of existing vulnerable land uses. Potential impacts on hydromorphology once operational are assessed to be long-term imperceptible.

I conclude that on the basis of objective information, that the proposed development will not result in a risk of deterioration on any waterbody (rivers, lakes, groundwaters, transitional and coastal) either on a temporary or permanent basis or otherwise jeopardise any water body in reaching its WFD objectives.

8.2.11 Material Assets

8.2.11.1 Issues Raised

None raised.

8.2.11.2 Examination of the EIAR

1. Context

Chapter 11 addresses the topic of material assets and as described in the EPA Guidelines (2022) covers three separate aspects: roads, traffic, and transport, built services or utilities, and waste management. TII (2014) Traffic and Transport Assessment Guidelines, PE-PDV-02045 was utilised to inform the decision that a Transport Assessment was not required.

2. Baseline

The location of proposed construction compounds and a description of roads traffic and transport is set out, all roads within Castleconnell are classified as local roads. Services in the village are listed and include, gas network, medium and low over and underground electricity cables, watermains, surface, foul and combined sewers, over and underground telephone and broadband cables and ducts.

The baseline describes Castleconnell Pumping Station No. 1, at the Scanlon Park/Island House junction on the Mall Road, as a secondary discharge point for Castletroy WWTP. It notes that emergency and storm water overflows discharge from the same discharge point.

3. Potential Effects

Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	Continued impacts on roads, water services and other material assets during flood events.
Construction	- Site compounds subject to flood risk - HGV movements assessed as intermittent, temporary slight negative impact - Road Closures and impacts on private access. - Temporary disruption to utilities during the construction - Generation of waste from demolition, road works and excavation
Operation	- Demountable Barriers will result in road and access closures. - Loss of parking at Mahers Pub
Decommissioning	Not proposed
Cumulative	None identified

4. Mitigation

Areas of construction compounds subject to flood risk will be utilised accordingly and managed in accordance with flood risk.

Haul route and time restrictions proposed.

Works are to be phased to retain and manage access to properties throughout construction phase.

Advance notice of road closures on placing of demountable barriers will be given, and signage will be erected highlighting the alternative route to be taken.

Disruptions to services will be agreed with the relevant service providers and will be communicated in advance to the relevant property owners.

A Resource Waste Management Plan (RWMP) will be produced by the appointed contractor to help manage, reduce, and dispose of waste arising during the construction phase.

5. Residual Effects

Demountable barriers and associated diversions will have an effect on use of the road network.

8.2.11.3 Analysis, Evaluation and Assessment: Direct and Indirect Effects

I have examined, analysed and evaluated Chapter 11 of the EIAR, and all of the associated documentation and submissions on file in respect of construction impacts on Material Assets. I am satisfied that the applicant understanding of the baseline environment, by way of desk and site surveys, is comprehensive and that the key impacts in respect of likely effects on construction and operational impacts on roads, traffic, and transport, built services or utilities, and waste management, as a consequence of the development have been identified and mitigated.

8.2.11.4 Conclusion: Direct and Indirect Effects

I am satisfied that taking account of the specific nature, location and purpose of the works as well as the short time period of construction impacts arising in each location relative to the baseline, mitigation measures proposed are sufficient to avoid, prevent or reduce and, offset likely significant adverse effects of the development insofar as they relate to impacts on Material Assets.

8.2.12 Cultural Heritage

8.2.12.1 Issues Raised

- General impacts on the character of built heritage.
- Impacts on known and unknown archaeology,
- A comprehensive set of conditions are provided by the Department of Housing Local Government and Heritage which it recommends to be attached to any grant of permission.
- Proposed wall finishes and consistency with the established character of Castleconnell of concern.

8.2.12.2 Examination of the EIAR

1. Context

Chapter 12 addresses the topic of Cultural Heritage including archaeological, architectural heritage and the character of the historic landscape. The chapter states that the methodology used is based on the EPA Guidelines (EPA 2022), and that both direct physical effects, as well as impacts to the setting of individual heritage assets, have been assessed. Archaeology and Flood Relief Schemes: Guidelines' by National Monuments Service 2023 is stated to have guided the production of this chapter.

2. Baseline

Extensive baseline data was collated by archaeological specialists by way of desktop and site survey which included wade surveys, test trenching, trial pits, slit trenches and inspection pits which are presented in their entirety in sections 12.1 to 12.9 of the appendix to the EIAR Volume III. The methodology and definition of the study area are clearly set out. Site survey identified no new material of archaeological interest.

Works are proposed within the Zone of Notification of Castleconnell Castle and of the various monuments on Cloon Island.

A schedule of protected structures and ACA's is presented as part of the cultural heritage baseline. Cloon Island Bridge is noted as a Maritime, Military and Industrial

Heritage Site in addition to being a protected structure. The baseline includes table 12.5 of features described as undesignated.

Both ACAs have been assessed as being of Medium significance.

Grange House RPS 1075, Mall House (NIAH 21807034) regional importance, and Bridge (RPS 5056) have been assessed as being of medium significance.

The existing Mall Road stone wall to the west is assessed as being of low significance.

3. Potential Effects

Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	- Flooding continues with associated potential for damage to built heritage. - Any subsurface archaeology would remain undisturbed.
Construction	- New opening to public road for gateway to original wall of Grange House (RPS 1075) - Removal and placement of original riverside boundary wall of Grange House (RPS 1075) - removal of a modern stone culvert (CH14) and stone lining along the watercourse within the curtilage of RPS 1076 Glenbrook - sheet piling could at River Grove B and B sever potential archaeological features identified in drill cores 3m to the north - loss of structures of historical townland boundaries and along the Mall Road, loss of a physical expression of the townland boundary. Assessed to be Low significance with a High magnitude of effect, resulting in a Slight negative effect. - elements of the proposed with potential to impact on cultural heritage development including but not limited to site investigations, enabling works, services diversion, excavation, drainage and hard and soft landscaping, and the provision of a temporary construction compound - the loss of the structure currently defining the historic townland boundary which may be found to incorporate elements of masonry from the friary or other structures is Medium significance with a Low magnitude of effect, resulting in a Slight negative effect.
Operation	protection of built heritage assets from flood risk.

Decommissioning	not proposed
Cumulative	None identified

4. Mitigation

Extensive archaeological monitoring of works is proposed and has been prescribed by the National Monuments Service with a Project Archaeologist proposed to be engaged throughout the project including post completion.

The Planning Authority as competent authority will continue to liaise with and advise the project team on protection of architectural heritage.

Light machinery and bog mats will be utilised in archaeologically sensitive areas with soft soils to avoid compression / rutting

A cordon shall be placed around the large masonry fragment of Castle Connell in Coolbane Woods.

Retention of the open stone lined culvert feature in the curtilage of Grange House by provision of a new alignment.

All new flood walls to be finished with reclaimed stone with materials, and style consistent with that which is to be demolished, including pointing and capping.

Mall road kerb stones and memorial plaque to be retained and reused. Stone from demolished wall to be retained and reused to clad new flood wall. Capping to match existing detail.

A detailed written and photographic record of the walls on Mall Road will occur in the advance of the dismantling of walls, this will assist in identification and reuse of any decorative masonry fabric in its construction.

5. Residual Effects

Implementation of the scheme will result in the positive effect of a reduction in flooding impacts on built heritage assets.

No significant negative residual impacts on cultural heritage have been identified in the chapter either in the Construction or Operational Phase of the Proposed Scheme.

8.2.12.3 **Analysis, Evaluation and Assessment: Direct and Indirect Effects**

Distinctive built character is evident on visiting Castleconnell and is reflected in the importance afforded to it in the policy and objectives of the Local Area Plan and the City and County Development Plan. There are a significant number of protected structures, Architectural Conservation Areas and recorded archaeology within and around the project area.

The delivery of well-designed and detailed replacement boundaries to the public domain and private property will be critical to the success of protecting the cultural heritage as defined by the distinctive character of the area.

Specifications for masonry, capping and cladding of the new walls, provided in the EIAR appendices are in my opinion inadequate to mitigate the potential for significant loss of character as a such a risk of residual effect on cultural heritage remains following application of mitigation measures proposed. Where the Commission are minded to approve the scheme I recommend further mitigation requiring the selection and approval of preferred options, by use of sample panels of new and repaired stonework to and within the curtilage of protected structures, ACA's and in the public domain generally.

The attachment of hand/guard rails to the masonry parapets of the Island bridge (protected structure) described in the EIAR is in my opinion inappropriate and has potential to impact negatively on the character of the protected structure. Submitted drawing 19104-JBB-XX-XX-DR-C-02129 indicates a ground mounted railing which I consider to be a preferred option as the road surface of the bridge is being replaced. This option minimises impacts on parts of the protected structure more vulnerable to damage and is for that reason consistent with best conservation practice. The ground mounted railing should be demountable for maintenance access.

The proposal for washing out and grouting of voids in the random rubble of this structure as described in the appendices, does not benefit from adequate specification or justification. The implications of this proposal for the protected structure and for the water course below is not considered or provided. Where the

Commission is minded to approve this scheme it should be clarified that these works do not form part of any such consent.

The source of recommendations/author of the architectural heritage section of this chapter and details of their qualifications/expertise is not referenced within this chapter or in section 1.7, EIAR team. However I consider that sufficient information and expertise is available to reach a reasoned conclusion for the purpose of EIA.

8.2.12.4 Conclusion: Direct and Indirect Effects

I am satisfied that taking account of the specific nature, location and purpose of the works in each location relative to the cultural heritage baseline, mitigation measures proposed as augmented by those provided by DAU for Archaeology and as drafted for Architectural Heritage are sufficient to avoid, prevent or reduce and, offset likely significant negative effects of the development insofar as they relate to impacts on Cultural Heritage.

8.2.13 Landscape and Visual Impact Assessment

8.2.13.1 Issues Raised

- Proposed wall finishes and consistency with the established character of Castleconnell.

8.2.13.2 Examination of the EIAR

1. Context

Chapter 13 addresses landscape and visual amenity. The assessment methodology references Environmental Protection Agency (2022) Guidelines, Guidelines for Landscape and Visual Impact Assessment (GLVIA) 3rd Edition, 2013 and the Limerick Development Plan 2022-2028 Landscape Character Assessment. A list of relevant legislation and the guidance is set out at 13.2.10.

2. Baseline

The baseline is set out in the context of Landscape Character, Visual Amenity, and with the establishment of a Zone of Theoretical Visibility.

Visual receptors were identified and categorised and mapped as commercial, community, Town Centre and residential.

3. Potential Effects

The assessment of potential effects include the production and presentation of a set of photomontages of key parts of the proposed scheme.

Summary of Potential Effects

Project Phase	Potential Direct, Indirect and Cumulative Effects
Do Nothing	landscape character and visual amenity of the area would be unchanged
Construction	- construction including compounds will result in temporary landscape effects assessed to be slight, short-term, temporary, negative - visual receptor impacts for Rivergrove b and b are assessed to be Temporary, Moderate, Negative, all other receptors were assessed to result in slight negative to imperceptible effects
Operation	- walls and embankments are to be placed in areas which already contain built features the landscape effect of which is assessed to be long-term negative, imperceptible to neutral - visual receptor impacts for Rivergrove B&B are assessed to be Temporary, Moderate, Negative, all other receptors were assessed to result in slight negative to imperceptible effects.
Decommissioning	no decommissioning proposed due to the nature of the proposal
Cumulative	None identified.

4. Mitigation

Hoarding with viewing windows towards the Shannon where appropriate is proposed.

Flood wall along the Mall will be similar to that of the existing wall.

5. Residual Effects

No residual impacts are expected. Interaction between landscape and visual amenity and cultural heritage will be imperceptible.

8.2.13.3 Analysis, Evaluation and Assessment: Direct and Indirect Effects

The character of Castleconnell is underpinned by its landscape position and its relationship to the Shannon. The structures proposed are within the assimilative capacity of the landscape and visual amenities of the village. As set out in my assessment of the cultural heritage chapter above a key mitigation for landscape and visual amenity is the extent to which proposed walls are executed in compliance with the aspiration of matching existing walls. Where the Commission are minded to approve the flood relief scheme I recommend that conditions be attached as described above and recommended below.

8.2.13.4 Conclusion: Direct and Indirect Effects

I am satisfied that taking account of the specific nature, location, purpose and functional relationship of the FRS works with the Shannon in each location relative to the landscape and visual amenity baseline, mitigation measures are sufficient to avoid, prevent or reduce and, offset likely significant adverse effects of the development insofar as they relate to impacts on Landscape and visual amenity.

8.2.14 Interactions

Interactions are summarised by a means of a matrix, as set out in Table 14.1 with discussion on each identified interaction in subsequent text. Examples with expanded consideration include the interactions between landscape and visual amenity with cultural heritage, noting the impact of replacement of old walls with new on both topics. This consideration concludes the effect of the interaction to be imperceptible. The interaction between, biodiversity and water is determined with mitigation to result in no significant effects. The interaction between water and materials assets determined to have potential without mitigation for a temporary significant negative effect. However, with mitigation, this interaction is determined to be temporary, imperceptible, neutral.

I am satisfied that the applicant understanding, and assessment of interactions is comprehensive, that the key impacts in respect of likely effects have been identified

and that no impacts that could magnify or accumulate effects through interaction are anticipated.

8.2.15 Cumulative Impacts

This chapter presents a summary of the potential cumulative effects which have been assessed throughout the EIAR. Existing, planned and permitted projects of relevant scale, location and duration were considered and are set out in tabular format and are considered in text under each environmental topic.

Projects considered of highest potential to result in cumulative impacts are the Killaloe Bypass/Shannon Bridge Crossing/R494 upgrade and removal of 80,000m³ of aggregate and import of 1,250,000m³ at Gooig quarries.

The works at the Gooig quarries have potential to give rise to interactions off-site with transport/ deliveries which might be using the same strategic road network routes. Transport associated with the Gooig development do not need to travel through Castleconnell therefore any potential interaction will arise on the road network. Regular liaison meetings are proposed as mitigation if construction periods of both developments overlap, to ensure plans are co-ordinated and dust and particulate matter emissions and any other impacts are minimised.

The potential for Killaloe Bypass/Shannon Bridge Crossing/R494 Upgrade to result in a cumulative impact on Biodiversity was examined. NIS and EIAR had both been submitted to Clare County Council as part of the planning application. Potential for cumulative impacts with the FRS were found not to be expected owing to several factors including distance, dilution, and restriction of water movement between each project due to Parteen Weir.

I have reviewed the planning register and confirmed that that no new projects with potential for cumulative impacts have been progressed in the period between preparation of the EIAR and the undertaking of this EIA. The EIAR concludes that no potential cumulative impacts were identified. I am satisfied with this conclusion.

8.2.16 Vulnerability to accidents or disasters

Notwithstanding the absence of explicit reference to vulnerabilities to accidents and disasters in the EIAR I consider that significant effects arising from the vulnerability of the project to risks of major accidents and/or disasters, relevant to the proposed Flood Relief Scheme have been considered in the options report and the reporting of the options report in the EIAR.

The selection of the “504” event as the 1%AEP peak flow, is a scenario where a turbine is out of operation due to mechanical failure and the spillway failsafe is closed. This represents contemplation of the accident or disaster scenario of relevance to the proposal.

The design of the scheme facilitates the possibility of future need for adaptation in terms of alignment and height of defences arising from the impact of climate change on flows, with embankments and walls designed with capacity to be increased in height without the need for rebuilding. The increase in flood level from the FRS as proposed which seeks to protect from the mid-range future scenario (MRFS) to the high-end future scenario (HEFS) is approximately a further 0.2m in height.

8.3 Reasoned Conclusion on Significant Effects

Having regard to the examination of environmental information contained above, and in particular to:

- a. the nature, scale and extent of the proposed development,
- b. the Environmental Impact Assessment Reports (EIAR's) and associated documentation submitted in support of the application,
- c. the Screening for Appropriate Assessment and NIS and associated documentation submitted in support of the application,
- d. reports, and the submissions received from Department of Housing Local Government and Heritage, An Taisce and the public,
- e. the response of the project team to the submissions received in the course of the application

f. the Inspector's report.

I consider that the main significant direct and indirect effects of the proposed development on the environment are construction and operational impacts on:

- **Biodiversity:** A significant impact on biodiversity will result from the loss of 0.4ha Alluvial woodland at Coolbane Wood. This habitat loss is to be mitigated by establishment of new alluvial woodland which over the medium term will result in no residual effect on biodiversity and will provide multiple ecosystem services including nature based flood attenuation.
- **Water:** Significant negative effects on surface water and ground water could occur as a result of accidental spillage of pollutants, increased sedimentation, and any contaminants entering the groundwater or surface water network. Impacts on water quality and aquatic biodiversity are adequately mitigated by measures outlined in the application. These measures are in the form of construction phase and implementation phase water controls designed into the FRS. Following implementation of mitigation measures there will be no residual negative effects on water quality. Positive residual effects on surface water and pollution will accrue on implementation of the FRS. These will be as a result of addressing mis connections, implementation of SUDS measure and redesign of overflows to surface water bodies as well as addressing washing of urban areas into the Shannon during flood events.
- **Cultural/built heritage:** Significant negative effects could potentially arise from demolition and replacement and modification of historic structures of built heritage value in the public domain and within the curtilage of protected structures. Mitigation measures requiring matching of new structures to the existing will ensure replacement/repaired structures shall be of a character appropriate to these settings and therefore reduce the residual negative effects to negligible.
- **Population and human health** by preventing the effects of flooding on private and public property thereby resulting in a significant positive impact in the medium to long term.

- Material assets by removing the risk of inundation of waste water systems, damage to structures and roads thereby resulting in a significant positive impact in the medium to long term.

It is considered that there will be no significant direct and/or indirect negative effects arising from the proposed development on the environment with full implementation of the mitigation measures proposed by the EIAR and as augmented by proposed conditions.

I am, therefore, satisfied that the proposed development would not have any unacceptable direct or indirect effects on the environment.

9 Appropriate Assessment

9.1 Stage 1 AA screening Report

See Appendix 1

Screening Determination

In accordance with Section 177U of the Planning and Development Act 2000 (as amended) and on the basis of the information considered in this AA screening, I conclude that it is not possible to exclude that the proposed development will give rise to significant effects on SAC 002165 Lower River Shannon , SPA 004077 River Shannon and River Fergus Estuaries, SPA 004058 Lough Derg (Shannon), European Site(s) in view of the sites conservation objectives. Appropriate Assessment is required.

This determination is based on:

- Objective information presented in the application including the Screening Report
- The zone of influence of potential impacts
- Distance and connectivity and pathways to Qualifying Interests of European Sites,
- The conservation objectives of each site.

9.2 Stage 2 Appropriate Assessment Conclusion: Integrity Test

In screening the need for Appropriate Assessment, it was determined that the proposed development could result in significant effects on

- SAC [002165](#) Lower River Shannon

- SPA [004077](#) River Shannon and River Fergus Estuaries
- SPA [004058](#) Lough Derg (Shannon)

in view of the conservation objectives of those sites and that Appropriate Assessment under the provisions of 177AE was required.

Following an examination, analysis and evaluation of the NIS all associated material submitted, the NIS of the Flood Risk Management Plan for the SHANNON UPPER & LOWER River Basin (UoM25/26) and taking into account submissions received, I consider that adverse effects on site integrity of the

- SAC [002165](#) Lower River Shannon
- SPA [004077](#) River Shannon and River Fergus Estuaries
- SPA [004058](#) Lough Derg (Shannon)

can be excluded in view of the conservation objectives of these sites and that no reasonable scientific doubt remains as to the absence of such effects.

My conclusion is based on the following:

- Detailed and scientific assessment of the distribution of QI habitats within and surrounding the Lower River Shannon SAC.
- Detailed assessment of construction and operational impacts on QI's
- The proposed development will not affect the attainment of conservation objectives for QI species including Lamprey or prevent or delay the restoration of favourable conservation condition for Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0], 1106 Atlantic Salmon or 1355 Otter.
- Effectiveness of mitigation measures proposed.
- Application of planning conditions to retain the base and foundations of existing flood walls where unnecessary to remove.

10 Recommendation

I recommend that the Commission approve the application for the proposed development for the following reasons and considerations, subject to the conditions set out below.

Environmental Conditions:

Additional environmental conditions are recommended where there is a lack of clarity in the application documents and/or where additional measures are proposed to address specific issues raised in this report.

Condition number 3, is a standard condition requiring implementation of mitigation proposed by the EIAR augmented to address a lack of clarity in the location and extent of the alluvial woodland to be established as mitigation for woodland removal.

This condition provides clarity that woodland is to be established on all 3 locations described and requires the agreement of NPWS on a plan to delivery.

Condition number 4 is a standard condition requiring an Invasive Species Management Plan amended to address a deficiency in data presented and absence of a specific requirement for an Invasive Species Management Plan. Biosecurity measures are set out in the application addressing aquatic invasives but no such coordinated measures are proposed for terrestrial species beyond consideration of giant hogweed. In addition to the data collected and surveys undertaken by the applicant I observed a significant area of winter heliotrope in a location of particular sensitivity not identified in the application. Taking account of the particular sensitivity I identified I have highlighted the location in a modified standard condition requiring an invasive species management plan.

Condition number 5 takes account of the potentially significant negative impacts on the built character of Castleconnell identified in the EIA. Condition number 5(a) provides for an additional stage of approval and monitoring in new construction of and works to existing structures in the public domain and built heritage assets. 5(b) seeks to preserve the physical expression of historic (townland) boundary and the SAC boundary by the retention of the subsurface and base of these walls also reducing the extent of works and disruption inside the SAC.

Reasons and Considerations

The Commission performed its functions in relation to the making of its decision, in a manner consistent with Section 15(1) of the Climate Action and Low Carbon Act 2015, as amended by Section 17 of the Climate Action and Low Carbon Development (Amendment) Act 2021, (consistent with the Climate Action Plan 2025 and Climate Action Plan 2024 and, The National Adaptation Framework; Planning for a Climate Resilient Ireland June 2024 and approved sectoral adaptation plans set out in those Plans and in furtherance of the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State).

And in coming to its decision, the Coimisiún had regard to the following:

(a) European, national, regional and local planning, energy, climate and other policy of relevance, including in particular the following:

European, policy/legislation including:

- Directive 2014/52/EU amending Directive 2011/92/EU (Environmental Impact Assessment Directive)
- Directive 92/43/EEC (Habitats Directive) and Directive 79/409/EEC as amended by 2009/147/EC (Birds Directive);
- Directive 2000/60/EC (Water Framework Directive)
- EU 'Floods' Directive 2007
- European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018

National Policy and Guidance including:

- National Development Plan 2021-2030
- National Planning Framework (first review April 2025)
- National Energy & Climate Action Plan 2021-2030
- National Biodiversity Action Plan 2023-2030 (Actions 2D5 to 2D8)

Regional and local policy support, in particular:

- Mid-West Area Strategic Plan (MWASP) 2012-2030
- Regional Spatial & Economic Strategy, (RSES) Southern Region.
- Shannon Catchment Flood Risk Assessment and Management Study (CFRAM)
- Limerick City and County Development Plan 2022-2028. Objective CAF O23 Flood Relief Schemes which makes it an objective to support and facilitate the development of Flood Relief Schemes as identified in the CFRAM 10 Year Investment Programme and ensure development proposals do not impede or prevent the progression of these measures.

- Castleconnell Local Area Plan 2023-2029 Objective IU 05 which makes it an objective to support and co-operate with the OPW in delivering the Castleconnell Flood Relief Scheme.

- b) The nature, scale, extent and layout of the proposed development,
- c) The pattern of development within the area and context of the receiving environment, including the protection of development sensitive to flooding,
- d) Documentation submitted with the application,
- e) The submissions on file including those from observers, prescribed bodies and the Planning Authority,
- f) Mitigation measures proposed during and post the construction phase and in operational phase.
- g) The report and recommendation of the person appointed by the Commission to make a report and recommendation on the matter

Environmental Impact Assessment Reasoned Conclusion

The Commission completed an environmental impact assessment of the proposed development taking account of:

- a. the nature, scale and extent of the proposed development,
- b. the Environmental Impact Assessment Reports (EIAR's) and associated documentation submitted in support of the application,
- c. the Screening for Appropriate Assessment and NIS and associated documentation submitted in support of the application,
- d. reports, and the submissions received from Department of Housing Local Government and Heritage, An Taisce and the public,
- e. the response of the project team to the submissions received in the course of the application
- f. the Inspector's report.

The Commission considered that the environmental impact assessment report, supported by the documentation submitted by the applicant, adequately considers

alternatives to the proposed development, and identifies and describes adequately the direct, indirect, residual and cumulative effects of the proposed development on the environment.

The Commission agreed with the examination, set out in the Inspector's report, of the information contained in the environmental impact assessment report and associated documentation submitted by the applicant and submissions made in the course of the application.

The Commission considered, and agreed with the Inspectors reasoned conclusions, that the main significant direct and indirect effects of the proposed development on the environment are construction and operational impacts on:

- Biodiversity: A significant impact on biodiversity will result from the loss of 0.4ha Alluvial woodland at Coolbane Wood. This habitat loss is to be mitigated by establishment of new alluvial woodland which over the medium term will result in no residual effect on biodiversity and will provide multiple ecosystem services including nature based flood attenuation.
- Water: Significant negative effects on surface water and ground water could occur as a result of accidental spillage of pollutants, increased sedimentation, and any contaminants entering the groundwater or surface water network. Impacts on water quality and aquatic biodiversity are adequately mitigated by measures outlined in the application. These measures are in the form of construction phase and implementation phase water controls designed into the FRS. Following implementation of mitigation measures there will be no residual negative effects on water quality. Positive residual effects on surface water and pollution will accrue on implementation of the FRS. These will be as a result of addressing mis connections, implementation of SUDS measure and redesign of overflows to surface water bodies as well as addressing washing of urban areas into the Shannon during flood events.
- Cultural/built heritage: Significant negative effects could potentially arise from demolition and replacement and modification of historic structures of built heritage value in the public domain and within the curtilage of protected structures. Mitigation measures requiring matching of new structures to the

existing will ensure replacement/repaired structures shall be of a character appropriate to these settings and therefore reduce the residual negative effects to negligible.

- Population and human health by preventing the effects of flooding on private and public property thereby resulting in a significant positive impact in the medium to long term.
- Material assets by removing the risk of inundation of waste water systems, damage to structures and roads thereby resulting in a significant positive impact in the medium to long term.

The Commission completed an environmental impact assessment in relation to the proposed development and concluded that, subject to the implementation of the mitigation measures proposed as set out in the Environmental Impact Assessment Report, and subject to compliance with the conditions set out below, the effects of the proposed development on the environment, by itself and in combination with other plans and projects in the vicinity, would be acceptable. In doing so, the Commission adopted the report and conclusions of the Inspector.

Appropriate Assessment

The Commission agreed with and adopted the screening assessment and conclusion carried out in the Inspector's report that:

- SAC [002165](#) Lower River Shannon
- SPA [004077](#) River Shannon and River Fergus Estuaries
- SPA [004058](#) Lough Derg (Shannon)

are the only European Sites in respect of which the proposed development has the potential to have a significant effect.

The Commission considered the Natura Impact Statement and associated documentation submitted with the application for approval, the mitigation measures contained therein, the submissions and observations on file, and the Inspector's assessment. The Commission completed an appropriate assessment of the implications of the proposed development for the affected European Sites, namely

- SAC [002165](#) Lower River Shannon
- SPA [004077](#) River Shannon and River Fergus Estuaries
- SPA [004058](#) Lough Derg (Shannon)

in view of the site's conservation objectives. The Commission considered that the information before it was adequate to allow the carrying out of an appropriate assessment. In completing the appropriate assessment, The Commission considered, in particular, the following:

- i. the likely direct and indirect impacts arising from the proposed development both individually or in combination with other plans or projects,
- ii. the mitigation measures which are included as part of the current proposal, and
- iii. the conservation objectives for the European Sites.

In completing the appropriate assessment, The Commission accepted and adopted the appropriate assessment carried out in the Inspector's report in respect of the potential effects of the proposed development on the integrity of the aforementioned European Sites, having regard to the site's conservation objectives.

In overall conclusion, The Commission was satisfied that the development, by itself or in combination with other plans or projects, would not adversely affect the integrity of the European Sites, in view of the site's conservation objectives.

Proper Planning and Sustainable Development/Likely effects on the environment

It is considered that, subject to compliance with the conditions set out below, the proposed development would have significant positive impacts on the environment and the community in a manner consistent with policy whilst not resulting in significant negative effects on the environment or the community. The proposed development, would not give rise to a risk of pollution, would not be detrimental to the visual or landscape amenities of the area, would not seriously injure the amenities of property in the vicinity, would not adversely impact on the cultural, archaeological and built heritage of the area, would not interfere with the existing land uses in the area and would not interfere unduly with traffic and pedestrian

safety. The proposed development would, therefore, be in accordance with the proper planning and sustainable development of the area.

Conditions

1. The development shall be carried out and completed in accordance with the plans and particulars lodged with the application, received by An Bord Pleanála (An Coimisiún Pleanála) on the 27th day of November 2024, except as may otherwise be required in order to comply with the following conditions.

Reason: In the interest of clarity.

2. The mitigation measures contained in the submitted Natura Impact Statement (NIS), shall be implemented.

Reason: To protect the integrity of European Sites

3. The mitigation measures contained in the submitted Environmental Impact Assessment Report (EIAR), shall be implemented including measures to establish alluvial woodland in all 3 areas shown on Figure 8-47 of the EIAR. A plan by the project ecologist for establishment of the alluvial woodland shall be agreed in writing with NPWS prior to commencement of works. The Plan and written agreement shall be placed on the file prior to commencement of development and retained as part of the public record.

Reason: To protect the environment.

4. Prior to commencement of development, Limerick City and County Council and any agent acting on its behalf shall undertake a pre-construction invasive species survey of the entire site. The survey shall include the area of winter heliotrope in the riparian zone to the North of Rivergrove B&B. The plan shall address biosecurity generally and be updated in the course of the project in response to the monitoring proposed in the EIAR. The plan shall be placed on the file prior to commencement of development. Updates shall be placed on file as completed. The Invasive Species Management Plan shall be complied

with in full and be retained as part of the public record.

Reason: In the interest of protecting the environment and in the interest of public health.

5. Limerick City and County Council and any agent acting on its behalf shall:
 - (a) Ensure that a RIAI Grade 1 accredited Conservation Architect, with appropriate expertise and experience, is engaged to issue final written approval of details, specifications and methodologies, including materials, styles of pointing, coursework, and capping of new and existing structures which form part of the scheme. Final approval by the Conservation Architect shall follow inspection of sample panels by the contractor for new walls to public areas and built heritage assets of architectural, artistic, archaeological, historical, cultural, social, technical, and/or scientific interest.
 - (b) In locations where new flood walls are to be offset from existing walls, the base and any subsurface elements of existing walls to be demolished shall be retained as a physical expression of the townland and SAC boundaries and minimise unnecessary disturbance. The extent of material to be retained and final detailing shall be approved by both the appointed Conservation Architect, project ecologist and project archaeologist.
 - (b) Ensure appropriate records are kept of all works undertaken which shall include:
 - (i) Archival Standard Photographs taken before, during and after the completion of each stage of the work;
 - (ii) Specifications agreed and approved; Schedule of Works undertaken; Difficulties encountered and their resolution; Modifications to Method Statements.

The records shall be placed on the file and retained as part of the public record.

Reason: In order to conserve the architectural heritage of the area.

6. Prior to commencement Limerick City and County Council and any agent acting on its behalf shall finalise A Construction and Environmental

Management Plan (CEMP). The CEMP shall include but not be limited to a schedule of all mitigation measures set out in the EIAR, NIS, and conditions, including construction phase controls for dust, noise and vibration, waste management, protection of soils, groundwaters, and surface waters, site housekeeping, emergency response planning, site environmental policy, and project roles and responsibilities. These details shall be placed on the file and retained as part of the public record.

Reason: In the interest of residential amenities, public health and safety and environmental protection.

7.

- a) Compliance with this condition shall require a formal statement in writing from the National Monuments Service of this Department that all mitigation measures have been implemented and approved, which shall be placed on file and retained as part of the public record.
- b) A Project Archaeologist shall be appointed to oversee and advise on all aspects of the Project, including detailed design, construction activities and the management of all archaeological works.
- c) All site investigation works shall be subject to archaeological monitoring and assessment by a suitably qualified and experienced geoarchaeologist. The Developer shall furnish the Project Archaeologist with the results of all site investigation works and shall provide access to site investigation cores and physical samples for archaeological and geoarchaeological review. Where potential submerged palaeolandscape deposits or other anthropogenic materials are identified, they shall be subject to geoarchaeological and palaeoenvironmental analysis and scientific dating, in agreement with the Department and subject to approval of Licences to Alter and Export from the National Museum of Ireland. Following the completion of all geotechnical and archaeological works and any necessary post-excavation specialist analysis, the Department shall be furnished with a final archaeological report describing the results of the works. Compliance with this condition requires a formal statement in writing, from the National Monuments Service of this Department

approving the geoarchaeological report which shall be placed on the file and retained as part of the public record.

- d) The Final Detailed Design for the project shall be the subject of an Archaeological Impact Assessment (AIA), to be submitted to the Department for review and approval, prior to the commencement of any construction works. The AIA report shall contain the following:
 - i. Results of licensed archaeological test-excavations, accompanied by a hand held metal detection survey, of all areas of the proposed development area where ground disturbances will take place. The archaeological test excavations shall be carried out under a Section 26 (National Monuments Act 1930) licence from the National Monuments Service of this Department and in accordance with an approved Method Statement. Licensed metal detection shall be undertaken in tandem with the test excavations and under a Detection Device consent (Section 2 1987 National Monuments Act). All test excavations that have the potential to uncover human skeletal remains shall be undertaken in conjunction with a suitably qualified osteoarchaeologist. Licences should be applied for to the National Monuments Service of this Department and shall be accompanied by a detailed Method Statement. Note a period of 3-4 weeks should be allowed to facilitate processing and approval of the licence application and Method Statement.
 - ii. A detailed Archaeological Impact Assessment that addresses all identified or potential impacts on archaeological heritage, including on archaeological objects, sites and features. The AIA shall make recommendations on measures to avoid or, where necessary, mitigate all identified potential/identified impacts and significant effects on archaeological heritage. The Developer shall be prepared to be advised by the Department in this regard or in regard to any subsequent recommendations that may issue. Mitigation shall prioritise redesign or partial redesign to facilitate full or partial preservation in situ. Mitigation may also include archaeological excavations ('preservation by record'), archaeological test-excavations, stabilisation/conservation works and/or archaeological monitoring, underwater archaeological inspection by means of archaeological diving, underwater archaeological surveys, or any combination of the above or any other

mitigation measures as may be recommended by the Department. No construction works shall be undertaken until formal approval in writing from the Department has been received by the Developer. Compliance with this condition requires a formal statement in writing, from the National Monuments Service, approving the AIA report which shall be placed on the file and retained as part of the public record.

- e) Archaeological monitoring shall be undertaken as follows:
- i. The services of a suitably qualified and experienced, to the satisfaction of the National Monuments Service of this Department, archaeologist shall be engaged to carry out full-time archaeological monitoring of all construction activities that involve ground disturbance or demolition and of any works where materials of archaeological importance may be uncovered.
 - ii. The archaeological monitoring shall be carried out by a suitably qualified and experienced, to the satisfaction of the National Monuments Service of this Department, archaeologist, under a Section 26 (National Monuments Act 1930) excavation licence and in accordance with an approved Method Statement.
 - iii. A Finds Retrieval Strategy shall be implemented and agreed with the Department, as part of the archaeological licence application. This shall include systematic finds retrieval and metal detection of all spoil, which shall be undertaken by a suitably qualified and experienced archaeologist working under a Detection Device consent (Section 2 1987 National Monuments Act). All monitoring works that have the potential to uncover human skeletal remains shall be undertaken in conjunction with a suitably qualified and experienced osteoarchaeologist. Secure finds storage that ensures the protection and conservation of wet and dry finds, including human skeletal remains, shall be provided within the construction site compound.
 - iv. Historical and architectural analysis and analytical assessment and recording of all historic structures (including but not limited to the historic culverts, and mill races) that will be impacted upon by the proposed development all be undertaken as part of the monitoring programme. The assessment shall comprise of buildings archaeology investigations and recordings (annotated

plans, elevations, sections, details of features and interpretative drawings derived from measured surveys, photographic surveys, digital surveys, opening-up works) that secure an understanding of the architectural phasing of all impacted structures and features (including any reused architectural carved stones).

- v. Sufficient, suitably experienced and qualified, to the satisfaction of the National Monuments Service of this Department, archaeologists shall be in place to ensure continuous archaeological monitoring works. An archaeological team shall be on standby to deal with any rescue excavation and may be augmented as required. An archaeological dive team shall be mobilised in the event that underwater archaeological inspection is required by means of archaeological diving. All dive surveys shall be licensed (Section 31987 National Monuments Act) and shall include handheld metal detection survey, which shall also be licensed (Section 2 1987 National Monuments Act). All archaeological diving shall comply with the Health and Safety Authority's Safety, Health and Welfare at Work (Diving) Regulations 2018/2019.
- vi. f In order to ensure full communication is in place between the monitoring archaeologist(s) and the works contractor(s) at all times, a communication strategy shall be implemented that facilitates direct archaeological monitoring of all construction activities that involve ground disturbances or demolitions and of any works where materials of archaeological importance may be uncovered. Adequate notice (minimum four weeks) of all forthcoming works that require the attendance of the monitoring archaeologist(s) shall be provided by the works contractor.
- vii. Should suspected/verified archaeological structures, features, deposits or sites and/or archaeological objects, including wrecks, palaeolandscape materials, be identified during the course of the archaeological monitoring activities, the monitoring archaeologist shall be authorised by the Developer to suspend all construction activities on the affected area (as defined by the monitoring archaeologist). The Developer shall immediately institute a Temporary Archaeological Exclusion Zone (TAEZ) to the proposed find location and its environs (as defined by the monitoring archaeologist) and all

construction activities shall immediately cease within the TAEZ in order to facilitate investigative assessment, protection and prompt notification to the Department and to other statutory authorities, as required.

- viii. Following assessment of the newly discovered archaeological materials, the Developer shall undertake any ensuing mitigating action as is required by the Department. Mitigation shall prioritise redesign or partial redesign to facilitate full or partial preservation in situ. Mitigation may also include archaeological excavations ('preservation by record'), archaeological test-excavations, stabilisation/conservation works and/or archaeological monitoring, underwater archaeological inspection by means of archaeological diving, underwater archaeological surveys, or any combination of the above or any other mitigation measures as may be recommended by the Department. No construction activities shall recommence within the Temporary Archaeological Exclusion Zone until formally agreed in writing with the Department. Where ensuing mitigation is required, no archaeological works shall be undertaken until after an amended Method Statement that describes the mitigation strategy has been submitted, reviewed and agreed in writing by the Department. All resulting and associated archaeological costs shall be borne by the Developer.
- ix. The Department shall be furnished with a final archaeological report describing the results of all archaeological monitoring and any archaeological investigative work/excavation required, following the completion of all archaeological works and any post-excavation analysis, scientific dating programmes, palaeoenvironmental analysis, geoarchaeological analysis, conservation of archaeological objects, as required by the Department and the National Museum of Ireland, with all resulting and associated archaeological costs to be borne by the Developer. Where significant archaeological discoveries are made, they shall be fully published in an appropriate format. Compliance with this condition requires a formal statement in writing, from the National Monuments Service, approving the final report submission which shall be placed on the file and retained as part of the public record.

- f) The Construction Environmental Management Plan (CEMP) shall be updated to include the location of any and all archaeological or underwater cultural heritage constraints relevant to the proposed development as set out in the Final Design AIA and EIAR. The CEMP shall clearly describe all identified likely archaeological impacts, both direct and indirect, and all mitigation measures to be employed to protect the archaeological or underwater cultural heritage environment during all phases of site preparation and construction activity.
- g) In default of agreement on any requirements of the Department, the matter shall be referred to An Coimisiún Pleanála for determination.

Hugh O'Neill

Inspectorate

20 August 2025

Appendix 1 Screening for Appropriate Assessment

Screening for Appropriate Assessment	
Test for likely significant effects	
Step 1: Description of the project and local site characteristics	
Brief description of project	Flood relief scheme for Castleconnell with various measures including flood walls, embankments, road raising, demountable flood barriers, and associated works and infrastructural changes see detailed description at section 3 of the inspectors report.
Brief description of development site characteristics and potential impact mechanisms	The application boundary is described in the EIAR as extending to 19,904.5 m2 comprises the village centre with residential areas stretching outwards to the east of the river. Works are proposed to a number of locations across the study area. There are works to existing urban infrastructure including to surface and foul water systems located within and below roads. New embankments and new and replacement flood walls are proposed the purpose of which are to change the hydrology of areas subject to flood risk. A number of locations where works are proposed are adjacent to and within the SAC.
Screening report	Yes by JBA
Natura Impact Statement	Yes by JBA
Relevant submissions	An Taisce.
Details of consultation and reported engagement with NPWS are reported by the applicant however there is no submission to ACP from NPWS on file.	
Step 2. Identification of relevant European sites using the Source-pathway-receptor model.	
3 European sites potentially within the zone of influence of the development.	

European Site (code)	Qualifying interests ¹ Link to conservation objectives (NPWS, date)	Distance from proposed development (km)	Ecological connections ²	Consider further in screening ³ Y/N
Lower River Shannon SAC 002165	Site specific cons obj August 2012 [1110] Sandbanks [1130] Estuaries [1140] Tidal Mudflats and Sandflats [1150] Coastal Lagoons* [1160] Large Shallow Inlets and Bays [1170] Reefs [1220] Perennial Vegetation of Stony Banks [1230] Vegetated Sea Cliffs [1310] Salicornia Mud [1330] Atlantic Salt Meadows [1410] Mediterranean Salt Meadows [3260] Floating River Vegetation [6410] Molinia Meadows [91E0] Alluvial Forests* [1029] Freshwater Pearl Mussel (Margaritifera margaritifera) [1095] Sea Lamprey (Petromyzon marinus) [1096] Brook Lamprey (Lampetra planeri) [1099] River Lamprey (Lampetra fluviatilis) [1106] Atlantic Salmon (Salmo salar) [1349] Bottle-nosed Dolphin (Tursiops truncatus)	0	Direct, indirect and hydrological	Yes

	[1355] Otter (<i>Lutra lutra</i>)			
River Shannon and River Fergus Estuaries SPA 004077	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] Teal (<i>Anas crecca</i>) [A052] Pintail (<i>Anas acuta</i>) [A054] 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]	C. 15km hydrological, 10 km straight line	Indirect Hydrological, ex situ. SPA downstream of project.	Y

	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] Wigeon (<i>Mareca penelope</i>) [A855] Shoveler (<i>Spatula clypeata</i>) [A857] Wetland and Waterbirds [A999]			
Lough Derg (Shannon) SPA 004058	Cormorant (<i>Phalacrocorax carbo</i>) [A017] Tufted Duck (<i>Aythya fuligula</i>) [A061] Goldeneye (<i>Bucephala clangula</i>) [A067] Common Tern (<i>Sterna hirundo</i>) [A193] Wetland and Waterbirds [A999]	C. 15km hydrological, 10 km straight line	Indirect ex situ Hydrological, SPA upstream of project	Y

Step 3. Describe the likely effects of the project (if any, alone or in combination) on European Sites

The project will primarily affect the site only, but a wider area of influence is used for impacts relating to:

- noise disturbance (1km),
- air pollution (1km),
- surface water (all Natura 2000 sites downstream of the site, and upstream where migratory species are QI's), and
- any supporting habitat for SAC/SPA species (10km).

Therefore, the QI Habitats and species likely to be impacted by the works are:
Lower River Shannon SAC

- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0]
- Sea Lamprey (*Petromyzon marinus*) [1095]
- Brook Lamprey (*Lampetra planeri*) [1096]
- River Lamprey (*Lampetra fluviatilis*) [1099]
- Atlantic Salmon (*Salmo salar*) [1106]
- Otter (*Lutra lutra*) [1355]
- River Shannon and River Fergus Estuaries SPA and Lough Derg (Shannon) SPA
 - Wintering water birds, but in particular Cormorant *Phalacrocorax carbo* [A017] and Black-headed Gull *Chroicocephalus ridibundus* [A179]

Note: Freshwater pearl mussels were screened out for consideration at this stage as they are considered to fall outside of the Zone of Influence on application of the Source Path Receptor Model with the source FPM in the Mulkear catchment, downstream of Annacotty Weir and with no viable pathway to/from the project for any effect.

AA Screening matrix

Site name Qualifying interests	Possibility of significant effects (alone) in view of the conservation objectives of the site*	
	Impacts	Effects
Site 1: SAC 002165 Lower River Shannon	Direct and Indirect	Significant adverse effects from construction within the boundary of the SAC are likely to occur as a result of the proposed project. Mitigation is required to limit direct impacts from construction phase.
	Construction works along the boundary of the River Shannon/ SAC will generate noise and disturbance as a result of machinery operation including piling and workforce movement during the 18-month phase of the project	Otter that are feeding and commuting up and down the River Shannon at Castleconnell may be disturbed by machinery noise and increased presence of humans and machinery during construction over the 18 months. This may lower their preference to hunt and move past the area of construction for this period.

		Two QI birds of the neighbouring SPAs, Cormorant <i>Phalacrocorax carbo</i> [A017] and Black-headed Gull <i>Chroicocephalus ridibundus</i> [A179] were recorded during surveys. Based on these surveys and best scientific judgement it is considered that these birds could be part of the wintering waterbirds populations of the River Shannon and River Fergus SPA and / or Lough Derg (Shannon) SPA. Construction works along the boundary of the Lower River Shannon SAC will generate noise and disturbance as a result of machinery operation and workforce movement during the 18-month construction phase of the project. These two QI birds may be impacted by the construction of the FRS through noise, disturbance and general increase in human presence and machinery. Any work within 50m of Black-headed gull and work within 100m of Cormorant will cause disturbance (distances based on Ryan Hanley (2014)). Pile driving has the potential to disturb fish species through intense vibrations and can even result in injury/mortality where vibration levels are high, and barotrauma occurs. There are varying degrees of sensitivity to sound in different fish species dependent on fish physiology. Fish species with swim bladders are sensitive
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		to barotraumatic stress. Where the swim bladder is connected to/close proximity to the inner ear, high levels of sensitivity to barotraumatic stress is observed and a lower threshold to disturbance is observed. The impact of sound on fish species is summarised in a technical assessment published by AECOM (2021), which reviews guidelines published by American National Standards Institute (ANSI) (Popper et al. 2014).
	The construction of a cofferdam/sheet piling	The construction of a cofferdam/sheet piling has the potential to result in the disturbance of these juvenile lamprey as well as entrapment and mortality as a result. There is also a possibility of juvenile salmon entrapment and mortality if they are present in the area during the construction of the cofferdam/sheet piling.
	Dust could smother Alluvial Woodland Habitat adjacent to the works. There is also a potential impact that any dust settling in the river or watercourses could introduce pollutants which could impact QI Fish species.	In the absence of mitigation, significant adverse effects from dusts are likely to occur as a result of the proposed project on QIs of Lower River Shannon SAC, River Shannon and River Fergus Estuaries SPA and Lough Derg (Shannon) SPA during the construction phase of the FRS
	a small construction area of 1m into the Alluvial woodland will be required	in the absence of mitigation, significant adverse effects from direct habitat disturbance are likely to occur as a result of the proposed project on QI Alluvial Forests of Lower River Shannon SAC, during construction phase of the FRS.

	Construction access and works in/on Hydrophyllous tall herb habitat	Annex habitat but not QI for the SAC. Contribution/supporting function
	Release of suspended solids, dust, hydrocarbons from construction activities could impact through changes in water quality, turbidity, smothering etc.	adverse impact on the Sea Lamprey (<i>Petromyzon marinus</i>) [1095], Brook Lamprey (<i>Lampetra planeri</i>) [1096], River Lamprey (<i>Lampetra fluviatilis</i>) [1099], Atlantic Salmon (<i>Salmo salar</i>) [1106]. Indirect impacts to Otter and Cormorant from reduced water quality could result in reduction of prey biomass, as described above for fish, are anticipated.
	addition of sheet piling will impact hydrology and riverbank morphology	
	suspended solids as the vegetation will be cleared from Cedarwood stream, and there is a lot of silt in this stream from being trapped by the vegetation	adverse impact on the Sea Lamprey (<i>Petromyzon marinus</i>) [1095], Brook Lamprey (<i>Lampetra planeri</i>) [1096], River Lamprey (<i>Lampetra fluviatilis</i>) [1099], Atlantic Salmon (<i>Salmo salar</i>) [1106].
	Cement within the concrete is highly toxic to Salmon and Lamprey species and can result in mortality where levels are concentrated.	
	Accidental release of hydrocarbons associated with construction machinery can also result in mortality of these QIs	
	Spread of Invasive Non-native Species	Invasive Non-native Species have the potential to spread during construction works and have significant effects on habitats including Annex I Alluvial forest habitat
	Likelihood of significant effects from proposed development (alone): γ	
	Possibility of significant effects (alone) in view of the conservation objectives of the site*	

	Significant adverse effects from disturbance, noise and vibration are likely to occur as a result of the proposed project on QIs of Lower River Shannon SAC, River Shannon and River Fergus Estuaries SPA and Lough Derg (Shannon) SPA during the construction phase of the FRS. significant adverse effects from reduced water quality are likely to occur as a result of the proposed project on QIs of Lower River Shannon SAC, River Shannon and River Fergus Estuaries SPA and Lough Derg (Shannon) SPA during the construction phase of the FRS.
	Likelihood of significant effects from proposed development (alone): y
	If No, is there likelihood of significant effects occurring in combination with other plans or projects?
* Where a restore objective applies it is necessary to consider whether the project might compromise the objective of restoration or make restoration more difficult.	
Step 4 Conclude if the proposed development could result in likely significant effects on a European site	
Following initial screening and based upon best scientific judgement, it is concluded that likely significant effects are anticipated from the project on the following Natura 2000 sites either alone or in combination with any other plans or projects: • SAC 002165 Lower River Shannon SAC • SPA 004077 River Shannon and River Fergus Estuaries SPA • SPA 004058 Lough Derg (Shannon) SPA It is not possible to exclude the possibility that proposed development alone would result significant effects on • SAC 002165 Lower River Shannon • SPA 004077 River Shannon and River Fergus Estuaries • SPA 004058 Lough Derg (Shannon) from effects associated with habitat loss, disturbance, noise and vibration and reduced water quality.	

An appropriate assessment is required on the basis of the possible effects of the project 'alone'. Further assessment in-combination with other plans and projects is not required at screening stage.

Proceed to AA.

Screening Determination

Significant effects cannot be excluded

- In accordance with Section 177U of the Planning and Development Act 2000 (as amended) and on the basis of the information considered in this AA screening, I conclude that it is not possible to exclude that the proposed development will give rise to significant effects on Lower River Shannon SAC 002165, River Shannon and River Fergus Estuaries SPA 004077, Lough Derg (Shannon) SPA 004058, European Site(s) in view of the sites conservation objectives. Appropriate Assessment is required.

This determination is based on:

- Objective information presented in the application including the Screening Report
- The zone of influence of potential impacts
- Distance and connectivity and pathways to European Sites,
- The conservation objectives of each site.

Appropriate Assessment. Stage 2

The Natura Impact Statement

The application includes a Natura Impact Statement (NIS) prepared by JBA Consulting Engineers and Scientists Ltd dated on the title page as October 2024. The NIS included a summary of the Screening for Appropriate Assessment which was reported under separate cover. (see determination above).

Appropriate Assessment

The requirements of Article 6(3) as related to appropriate assessment of a project under part XAB, sections 177AE of the Planning and Development Act 2000 (as amended) are considered fully in this section.

Taking account of the preceding screening determination, and the NIS of the Flood Risk Management Plan for the SHANNON UPPER & LOWER River Basin (UoM25/26), the following is an appropriate assessment of the implications of the proposed development of the proposed Castleconnell Flood relief Scheme in view of the relevant conservation objectives of

- SAC [002165](#) Lower River Shannon
- SPA [004077](#) River Shannon and River Fergus Estuaries
- SPA [004058](#) Lough Derg (Shannon)

based on scientific information provided by the applicant [and considering expert opinion set out in observations on nature conservation].

The information relied upon includes the Natura Impact Statement (NIS) prepared by JBA Consulting Engineers and Scientists Ltd dated October 2024, the EIAR including appendices. Of these appendices the most consequential for consideration of AA are three survey reports at 8.2 of EIAR Volume III conducted by Dr Jo Denyer which collectively address the matter of when is an annex habitat not an annex habitat within the subject proposal:

- Assessment of Potential Annex 1 habitats (Denyer Ecology report – DE2179_M01a_Castleconnell_FRS_Annex_habitats)
- Alluvial Woodland survey report (Denyer Ecology report - DE2179 R01a Castleconnell_FRS_wet woodland)
- Tall Herb Swamp survey report (Denyer Ecology report DE2179 R02a Castleconnell_FRS_tall-herb swamp)

I am satisfied that the information provided is adequate to allow for a carefully procedural Appropriate Assessment. I am satisfied that all aspects of the project which could result in significant effects are considered and assessed in the NIS and mitigation measures designed to avoid or reduce any adverse effects on site integrity are included and assessed for effectiveness.

Submissions/observations A submission from An Taisce set out the concerns regarding impediments to hydrological links from the Shannon to smaller waterbodies and consideration of freshwater pearl mussel. No submission received from NPWS. No submission on file from IFI.				
Summary of Key issues that could give rise to adverse effects (from screening stage): See section 6 of the NIS and Tables 6.2 to 6.8 therein.				
Qualifying Interest features likely to be affected.	Conservation Objectives	Potential adverse effects	Mitigation measures (summary)	
SAC 002165 Lower River Shannon				
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]	To restore the favourable conservation condition Area stable or increasing, subject to natural processes, at least c.8.5ha for sites surveyed. Area stable or increasing. Where topographically possible, "large" woods at least 25ha in size and "small" woods at least 3ha in size No decline. Native trees cover not less than 95% Negative indicator species, particularly nonnative invasive species, absent or under control	27m2 of the edge of Affinity to Alluvial Woodland (4) will be permanently lost at Island House to accommodate the flood wall at this location.	Avoidance of work in Woodland 1 and 2 has been achieved i.e., mitigation through design. This ensures that there will be no direct impact to the structure and function of the woodlands. Some work in Woodland 4 is unavoidable. 27m2 of the edge of Affinity to Alluvial Woodland (4) will be permanently lost at Island House to accommodate the flood wall at this location. This area has affinity to Alluvial forest but does not meet the criteria due to the proportion of non indicator tree species. Some loss of mature trees at the fringes of the	
		Some trees within Affinity to Alluvial Woodland 4 will be removed to accommodate the construction of a flood wall. Mitigation is required		

			woodland is unavoidable, but an overall change in habitat will not occur, and replacement regeneration will be of native composition (via planting or monitoring of natural regeneration).	
		Movement of soil may encourage seedlings of native trees but also negative indicator species such as Sycamore or Invasive species. Mitigation required.	Biosecurity measures outlined in Section 7.1.4 of the NIS will be adhered to, to prevent introduction of invasive species to the area.	
		Spread of non-native invasive species present, notably Giant Hogweed, may be further spread without mitigation. This may occur via disturbance to the ground flora during construction of scheme beside the Alluvial woodland which may facilitate the spread of the non-native species.		
		Construction of 'upgraded outfall for new pumping station' at Scanlon park with in Annex I habitat. Which will require mitigation.	Adherence to the mitigations outlined in Sub-sections 7.1.1, pertaining to the protection of Alluvial woodland during construction phase.	
		Release of suspended solids, dust hydrocarbons during construction could impact on this habitat.		

Otter (<i>Lutra lutra</i>) [1355]	No significant decline in Coughing sites and holts	using the precautionary principle, dense vegetation around the Cloon Stream section of the Scheme may have otter present in the future. Pre-construction check is advised (detailed in Mitigation section).	Pre-construction survey for Otter will be required prior to works starting on the Cloon Stream as advised in Section 7.1.3 of the NIS	
	No significant decline in Fish biomass available	Impacts on water quality from discharges have the potential to impact on populations of fish and juvenile lamprey and therefore could impact the availability of prey items for Otter. Mitigation required.	Indirect impacts to fish biomass availability will be mitigated via the protection of water quality during construction, as set out in Section 7.3 of the NIS.	
Sea Lamprey (<i>Petromyzon marinus</i>) [1095]	At least three age/size groups present	Construction phase: release of pollutants may result in mortality. Mitigation required. Operational phase: None	Mitigation to prevent sediments and pollutants and dusts from entering watercourses is outlined in Section 7.3 of the NIS including but not limited to silt fencing around work areas and unvegetated areas to prevent silt release, use of bunding and spill kits and appropriately location site compounds, appropriate stockpiling of spoil, working in the dry, water quality monitoring, and protection of water from cement leachate, use of	

			geotextiles to create sealed work areas. Surface Water Management Plans (Section 7.3.7), Pollution Control Plans (Section 7.3.8), and dust management plan (Section 7.3.9) are also set out in the NIS.	
	Juvenile density in fine sediment at least 1/m ²	Construction phase: Instream piling and/or cofferdams may result in entrapment of juveniles and mortality. Mitigation required. Operational phase: None	Appointment of ECoW with experience in riverine infrastructure works and should have a high-level knowledge of fisheries to manage works within, or in proximity to the watercourses (Cedarwood Stream, Rivergrove/Grange House Walls). Translocation of ammocetes and entrapped fish as set out in the NIS (Section 7.1.3.1 and 7.3.3.2).	
	No decline in extent and distribution of spawning beds.	Released fine sediment may settle on spawning beds reducing quality. Mitigation required.		
	Availability of juvenile habitat	Construction phase: Instream piling and/or cofferdams will temporarily reduce juvenile habitat. Mitigation required.		
Brook Lamprey (<i>Lampetra planeri</i>) [1096]	At least three age/size groups of brook/river lamprey present	Construction phase: release of pollutants may result in mortality. Mitigation required.	Appointment of ECoW with experience in riverine infrastructure works and should have a high-level knowledge of fisheries to manage works within, or in proximity to the watercourses (Cedarwood Stream,	
	Mean catchment juvenile density of brook/river lamprey at least 2/m ²	Construction phase: Instream piling and/or cofferdams may result in entrapment of juveniles and mortality. Mitigation required.		

	No decline in extent and distribution of spawning beds	Construction phase: Instream piling and/or cofferdams may result in entrapment of juveniles and mortality. Mitigation required.	Rivergrove/Grange House Walls). Mitigation to prevent sediments and pollutants from entering watercourses is outlined in Section 7.3 including but not limited to silt fencing around work areas and unvegetated areas to prevent silt release, use of bunding and spill kits and appropriately location site compounds, appropriate stockpiling of spoil, working in the dry, water quality monitoring, and protection of water from cement leachate, use of geotextiles to create sealed work areas. Translocation of ammocetes and entrapped fish as set out in the NIS (Section 7.1.3.1 and 7.3.3.2).	
	Availability of juvenile habitat	Construction phase Released fine sediment may settle on spawning beds reducing quality. Mitigation required.		
River Lamprey (Lampetra fluviatilis) [1099]	At least three age/size groups of river/brook lamprey present	Construction phase: release of pollutants may result in mortality. Mitigation required.	Appointment of ECoW with experience in riverine infrastructure works and should have a high-level knowledge of fisheries to manage works within, or in proximity to the watercourses (Cedarwood Stream, Rivergrove/Grange House Walls).	
	Juvenile density in fine sediment	Construction phase: Instream piling and/or cofferdams may result in entrapment of juveniles and mortality. Mitigation required.		

	No decline in extent and distribution of spawning beds	Construction phase Released fine sediment may settle on spawning beds reducing quality. Mitigation required.	Mitigation to prevent sediments and pollutants from entering watercourses is outlined in Section 7.3 including but not limited to silt fencing around work areas and unvegetated areas to prevent silt release, use of bunding and spill kits and appropriately location site compounds, appropriate stockpiling of spoil, working in the dry, water quality monitoring, and protection of water from cement leachate, use of geotextiles to create sealed work areas. Translocation of ammocetes and entrapped fish as set out in the NIS (Section 7.1.3.1 and 7.3.3.2).	
Atlantic Salmon (<i>Salmo salar</i>) [1106]	Number of Adult spawning fish	Released fine sediment, cement and/or hydrocarbons may adversely impact on fish. Mitigation required.	Appointment of ECoW with experience in riverine infrastructure works and should have a high-level knowledge of fisheries to manage works within, or in proximity to the watercourses (Cedarwood Stream, Rivergrove/Grange House Walls). Mitigation to prevent sediments and pollutants from entering	
	Salmon fry abundance			

			watercourses is outlined in Section 7.3 including but not limited to silt fencing around work areas and unvegetated areas to prevent silt release, use of bunding and spill kits and appropriately location site compounds, appropriate stockpiling of spoil, working in the dry, water quality monitoring, and protection of water from cement leachate, use of geotextiles to create sealed work areas. Translocation of ammocetes and entrapped fish as set out in the NIS (Section 7.1.3.1 and 7.3.3.2)	
	Out-migrating smolt abundance	The Cedarwood stream is not considered an important habitat for young salmon before migration, however it may provide some supporting habitat for a low abundance of fish. Improper culvert design may result in a very small reduction in migrating smolts in the range of one or two less fish every couple of years. Mitigation required.	The construction of these culverts should follow best practice guidance including but not limited to: • OPW (2021) 'Design guidance For Fish Passage On Small Barriers'. Fish salvage and translocation efforts will ensure that there will be no entrapment as a result of the dry cell dewatering during works in the Cedarwood.	
	Number and distribution of redds	Release of fine sediment may result in deterioration of	Mitigation to prevent sediments and pollutants from	

		spawning redds when fine sediment settles in the main channel. Mitigation required.	entering watercourses is outlined in Section 7.3.	
	Water quality	Released fine sediment, cement and/or hydrocarbons may adversely impact on fish. Mitigation required.	Surface Water Management Plans (Section 7.3.7), and Pollution Control Plans (Section 7.3.8), dust management plan (Section 7.3.9) are also in place.	
SPA 004077 River Shannon and River Fergus Estuaries				
Cormorant <i>Phalacrocorax carbo</i> [A017]	Long term population trend stable or increasing	Noise disturbance from construction may cause temporary displacement	Mitigation to prevent sediments and pollutants from entering watercourses is outlined in Section 7.3. Surface Water Management Plans (Section 7.3.7), and Pollution Control Plans (Section 7.3.8), dust management plan (Section 7.3.9) are also in place.	
	Prey biomass available	Impacts on water quality from discharges have the potential to impact on populations of fish that Cormorant feed on. Reduced prey availability may impact on distribution. Mitigation required.		
Black-headed Gull <i>Chroicocephalus ridibundus</i> [A179]	There should be no significant decrease in the range, timing or intensity of use of areas by black-headed gull other than that occurring from natural patterns of variation	Noise disturbance from construction may cause temporary displacement but this is not expected to be significant.	None required	
The above table is based on the documentation and information provided on the file and I am satisfied that the submitted NIS has identified the relevant attributes and targets of the Qualifying Interests. In particular, I note those relating to underwater sound thresholds for fish in relation to impulsive sound sources (AECOM 2021) and the finding derived from this data of no adverse effects as a result of pile driving. The survey work and reporting undertaken by Dr. Jo Deyner which carefully categorises Annex Habitats for the purpose of the subject proposal including the rationale of allocating specific boundaries to QI habitats. Freshwater Pearl Mussel and the importance of its protection was highlighted by An Taisce, section 4.1.4.3 of the NIS				

addresses issues relating to species range, in combination with the measures for protection of water quality I am satisfied the issues has been adequately addressed and the proposal could not impact on FPM as a QI of the SAC.	
In-combination effects I am satisfied that in-combination effects has been assessed adequately in the NIS. The applicant has demonstrated satisfactorily that no significant residual effects will remain post the application of mitigation measures and there is therefore no potential for in-combination effects.	
Findings and conclusions The applicant determined that following the implementation of mitigation measures the construction and operation of the proposed development alone, or in combination with other plans and projects, will not adversely affect the integrity of this European site. Based on the information provided, I am satisfied that adverse effects arising from aspects of the proposed development can be excluded for the European sites considered in the Appropriate Assessment. Monitoring measures are proposed to ensure compliance and effective management of measures. I am satisfied that the mitigation measures proposed to prevent adverse effects have been assessed as effective and can be implemented. Reasonable scientific doubt I am satisfied that no reasonable scientific doubt remains as to the absence of adverse effects. Site Integrity The proposed development will not affect the attainment of the Conservation objectives of the • SAC 002165 Lower River Shannon • SPA 004077 River Shannon and River Fergus Estuaries • SPA 004058 Lough Derg (Shannon). Adverse effects on site integrity can be excluded and no reasonable scientific doubt remains as to the absence of such effects.	

Appropriate Assessment Conclusion: Integrity Test

In screening the need for Appropriate Assessment, it was determined that the proposed development could result in significant effects on

- SAC [002165](#) Lower River Shannon
- SPA [004077](#) River Shannon and River Fergus Estuaries
- SPA [004058](#) Lough Derg (Shannon)

in view of the conservation objectives of those sites and that Appropriate Assessment under the provisions of 177AE was required.

Following an examination, analysis and evaluation of the NIS all associated material submitted, the NIS of the Flood Risk Management Plan for the SHANNON UPPER & LOWER River Basin (UoM25/26) and taking into account submissions received, I consider that adverse effects on site integrity of the

- SAC [002165](#) Lower River Shannon
- SPA [004077](#) River Shannon and River Fergus Estuaries
- SPA [004058](#) Lough Derg (Shannon)

can be excluded in view of the conservation objectives of these sites and that no reasonable scientific doubt remains as to the absence of such effects.

My conclusion is based on the following:

- Detailed and scientific assessment of the distribution of QI habitats within and surrounding the Lower River Shannon SAC
- Detailed assessment of construction and operational impacts on QI's
- The proposed development will not affect the attainment of conservation objectives QI species including Lamprey or prevent or delay the restoration of favourable conservation condition for Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0], 1106 Atlantic Salmon or 1355 Otter.
- Effectiveness of mitigation measures proposed.
- Application of planning conditions to retain the base and foundations of existing flood v where unnecessary to remove.