SEA STATEMENT

FOR

VARIATION NO. 3
TO THE
LIMERICK DEVELOPMENT PLAN
2022-2028
(AS VARIED)

for: Limerick City and County Council

Comhairle Cathrach & Contae Luimnigh
Limerick City & County Council

by: CAAS Ltd.

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Section 1 Introduction

1.1 Introduction and Legislative Context

This is the Strategic Environmental Assessment (SEA) Statement for Variation No. 3 to the Limerick Development Plan 2022-2028.

SEA is a systematic process of predicting and evaluating the likely environmental effects of implementing a plan, or other strategic action, in order to ensure that these effects are appropriately addressed at the earliest appropriate stage of decision-making on a par with economic and social considerations.

Directive 2001/42/EC of the European Parliament and of the Council of Ministers, of 27th June 2001, on the Assessment of the Effects of Certain Plans and Programmes on the Environment, referred to hereafter as the SEA Directive, introduced the requirement that SEA be carried out on plans and programmes which are prepared for a number of sectors, including land use. The SEA Directive was transposed into Irish Law through regulations including the European Communities (Environmental Assessment of Certain Plans and Programmes) Regulations 2004 (SI No. 435 of 2004), as amended, and the European Union (Land Use Planning – Strategic Environmental Assessment) Regulations 2025 (SI No. 456 of 2025)..

1.2 Content of the SEA Statement

Where SEA is undertaken, the Regulations require that a Statement is made available to the public and the competent environmental authorities after the making of the Variation.

This Statement is referred to as an SEA Statement.

The SEA Statement is required to include information summarising:

a) how environmental considerations have been integrated into the Variation;
b) how the following have been taken into account during the preparation of the Variation:
   - the environmental report,
   - submissions and observations made to the planning authority on the Variation and Environmental Report, and
   - any transboundary consultations (these are not relevant to this SEA).
c) the reasons for choosing the Variation in the light of the other reasonable alternatives dealt with; and
d) the measures decided upon to monitor the significant environmental effects of implementing the Variation.

1.3 Implications of SEA for the Variation

SEA has been undertaken on the Variation and the findings of the SEA are expressed in an Environmental Report, the first published version of which accompanied the Proposed Variation on public display. The Environmental Report was updated in order to take account of changes to the original Proposed Variation that were made on foot of submissions and recommendations in the submissions.

Limerick City and County Council have been provided with the findings of SEA output during their consideration of the Variation and before the Variation was made.

Section 2 How Environmental Considerations were integrated into the Variation

2.1 Overview

Environmental considerations were presented to the Council for its consideration through:

1. Consultations;
2. Communication of environmental sensitivities throughout the SEA process;
3. Appropriate Assessment;
4. Strategic Flood Risk Assessment;
5. Consideration of alternatives;
6. Strategic work undertaken by the Council to ensure evidence-based planning;
7. Integration of environmental considerations into the Variation's Zoning provisions; and
8. Integration of individual SEA, AA and SFRA provisions into the Variation and the existing, already in force, Development Plan, as varied.

All parts of the Variation-preparation process were informed by the SEA, AA and SFRA processes.

2.2 Consultations

As environmental authorities identified under the SEA Regulations the following authorities were sent SEA scoping notices indicating that submissions or observations in relation to the scope and level of detail of the information to be included in the environmental report could be made: Environmental Protection Agency; Minister for Climate, Energy and the Environment; Minister for Housing, Local Government and Heritage; Minister for Agriculture, Food and the Marine; Clare County Council; Cork County Council; Kerry County Council; and Tipperary County Council.

Detail on submissions made on foot of the SEA scoping notice is provided under Section 3.2.

Detail is also provided on submissions that were made on the Proposed Variation and/or the SEA Environmental Report while they were on public display (see Section 3.3).

2.3 Communication of environmental sensitivities throughout the SEA process

Environmental considerations were integrated into the Variation before it was placed on public display. Individual sensitivities that were considered by the Planning Team preparing the Variation included the following:

- European Sites (Special Areas of Conservation and Special Protection Areas);
- Other Ecological Designations;
- Status of Surface and Ground Waters;
- Various entries to the Water Framework Directive's Register of Protected Areas;
- Groundwater Vulnerability;
- Water Services Capacity, Performance and Demand;
- Cultural heritage (archaeological and architectural) sensitivities; and
- Landscape Designations.

A number of these sensitivities are mapped on Figures 2.1 to 2.3.

2.4 Appropriate Assessment

Appropriate Assessment (AA) Screening has been undertaken alongside the making of the Variation. The requirement for AA is provided under the EU Habitats Directive (Directive 1992/43/EEC). The Screening for AA for the Variation has concluded that the any likelihood for significant effect to any European site as a result of the Variation can be ruled out. The preparation of the Variation, SEA and Screening for AA has taken place concurrently and the findings of the Screening for AA have informed the SEA.

2.5 Strategic Flood Risk Assessment

A Strategic Flood Risk Assessment (SFRA) has been undertaken as part of the preparation of the Variation. Requirements in relation to SFRA are provided under 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (Department of Environment and Office of Public Works, 2009) and associated Department of the Environment, Community and Local Government Circular PL2/2014. The SFRA has informed both the land use zoning and the written provisions of the Variation.

2.6 Consideration of Alternatives

Consideration of the environmental effects arising from a variety of different alternatives for the Variation (see Section 4) has contributed towards the protection and management of the environment.

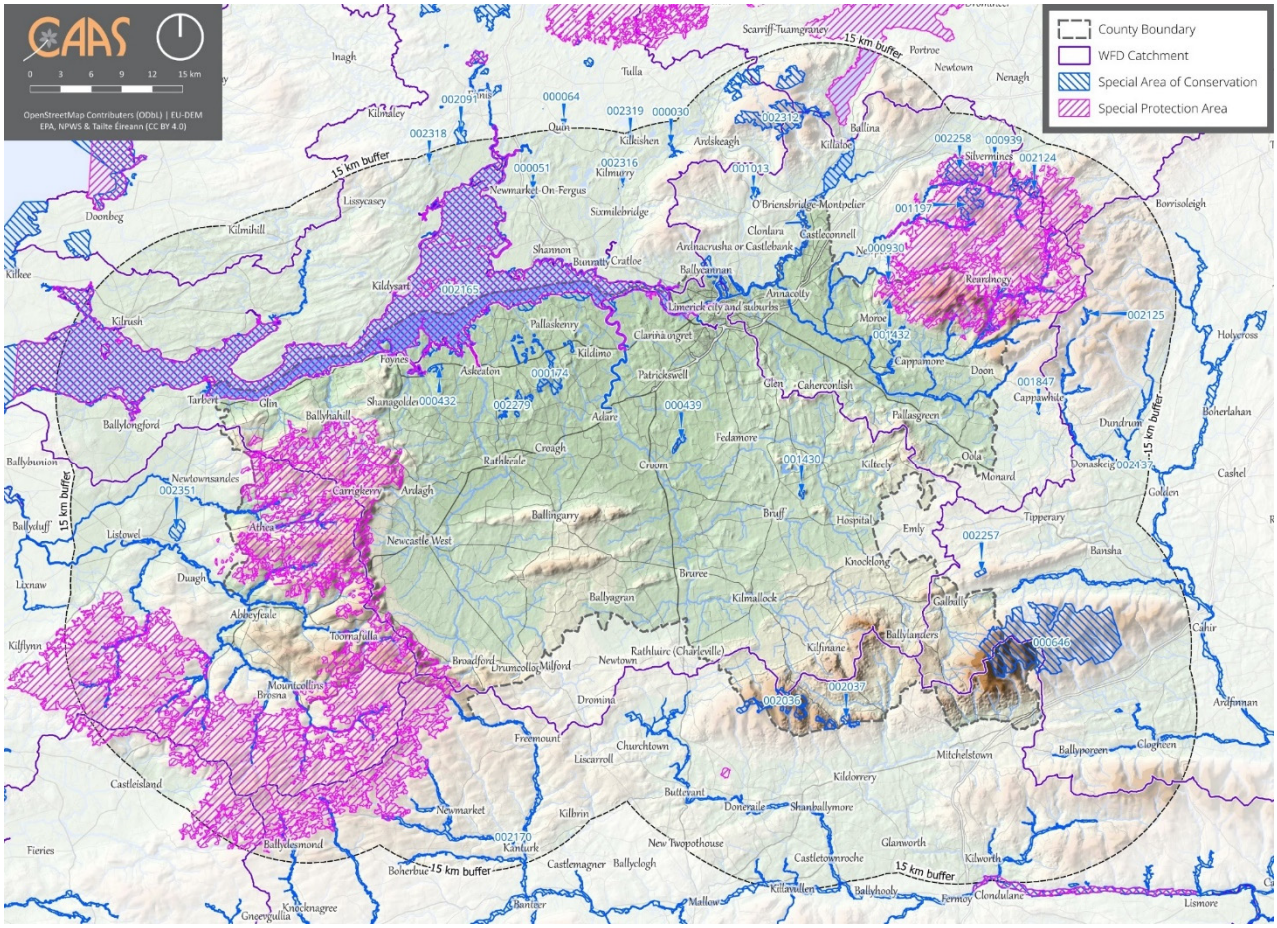
2.7 Integration of environmental considerations into the Variation's Zoning provisions

The land use zoning and objectives provided for by the Variation have taken into account environmental considerations, including those relating to ecology, cultural heritage, landscape/topography, infrastructural requirements and water. Zoning has been applied in a way that considers sustainable and compact growth, taking into account the various requirements set out in the higher-level Revised National Planning Framework, Southern RSES and existing Limerick Development Plan. Flood risk management and drainage provisions are already in force through the Development Plan. In addition, land use zoning contained within the Variation has been informed by an iterative SFRA process, including both: the delineation of flood risk zones; and future climate scenario risk areas (mid-range as well as high end). The detailed Variation preparation process undertaken by the Planning Department combined with specialist input from the SFRA process facilitated zoning that helps to avoid inappropriate development being permitted in areas of elevated flood risk.

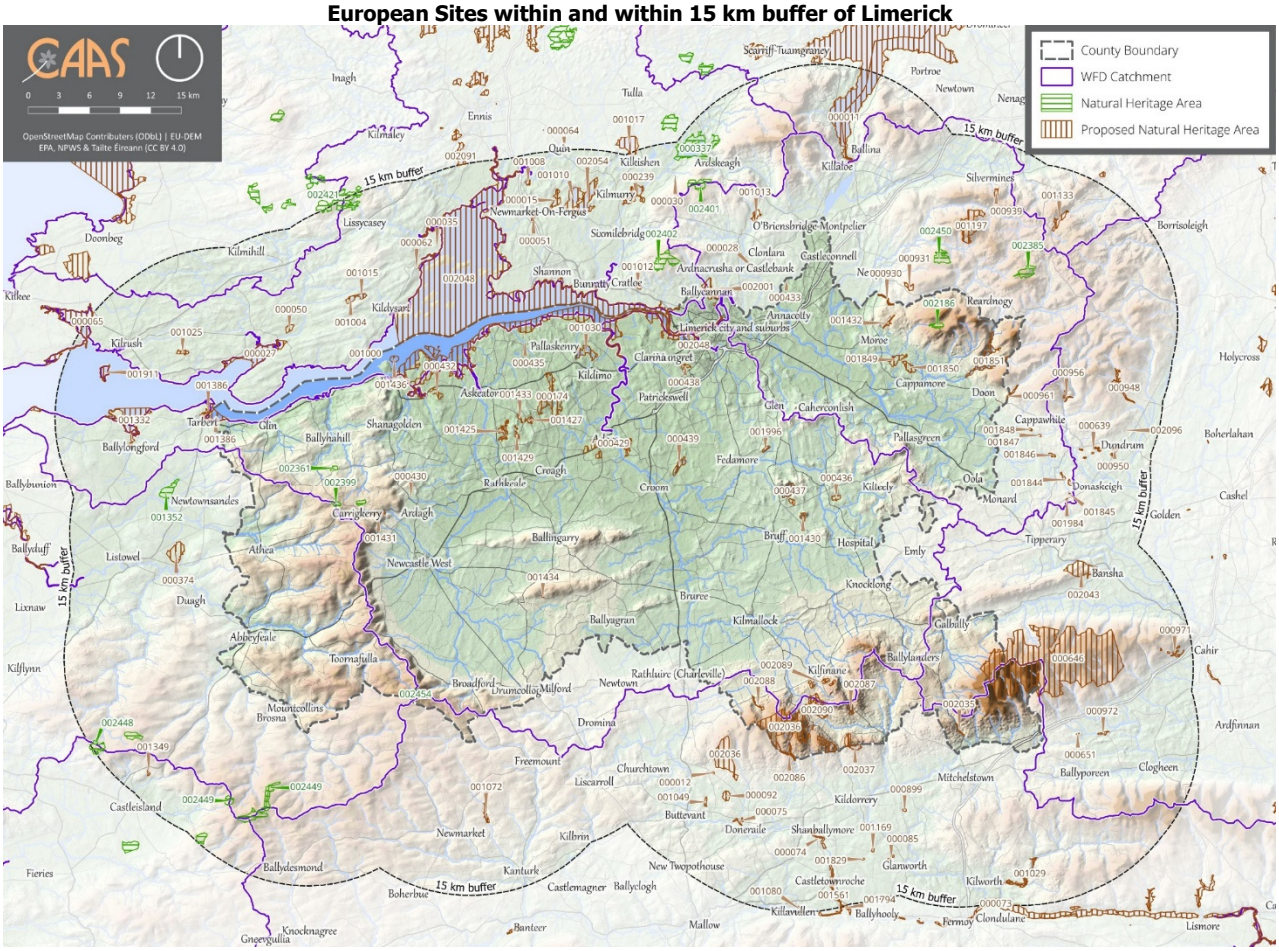
2.8 Integration of individual provisions into the text of the Variation and the Plan

Various provisions have been integrated into the text of the Variation through the Variation-preparation and SEA, SFRA and AA processes. Both the Planning and the assessment teams contributed towards the mitigation which was developed over multiple iterations and was informed by, inter alia, various communications through the SEA, AA and SFRA processes. In addition to the individual provisions integrated into the text of the Variation, individual provisions relating to environmental protection and management have been integrated into the existing, already in force, Limerick Development Plan.

Table 2.1 links key mitigation measures (from both the Variation and the Plan) to the likely significant effects of implementing the Variation, if unmitigated. The effects are consistent with those identified by the SEA for the Limerick Development Plan 2022-2028. The measures generally benefit multiple environmental components i.e. a measure providing for the protection of biodiversity, flora and fauna could beneficially impact upon the minimisation of flood risk and the protection of human health, for example.

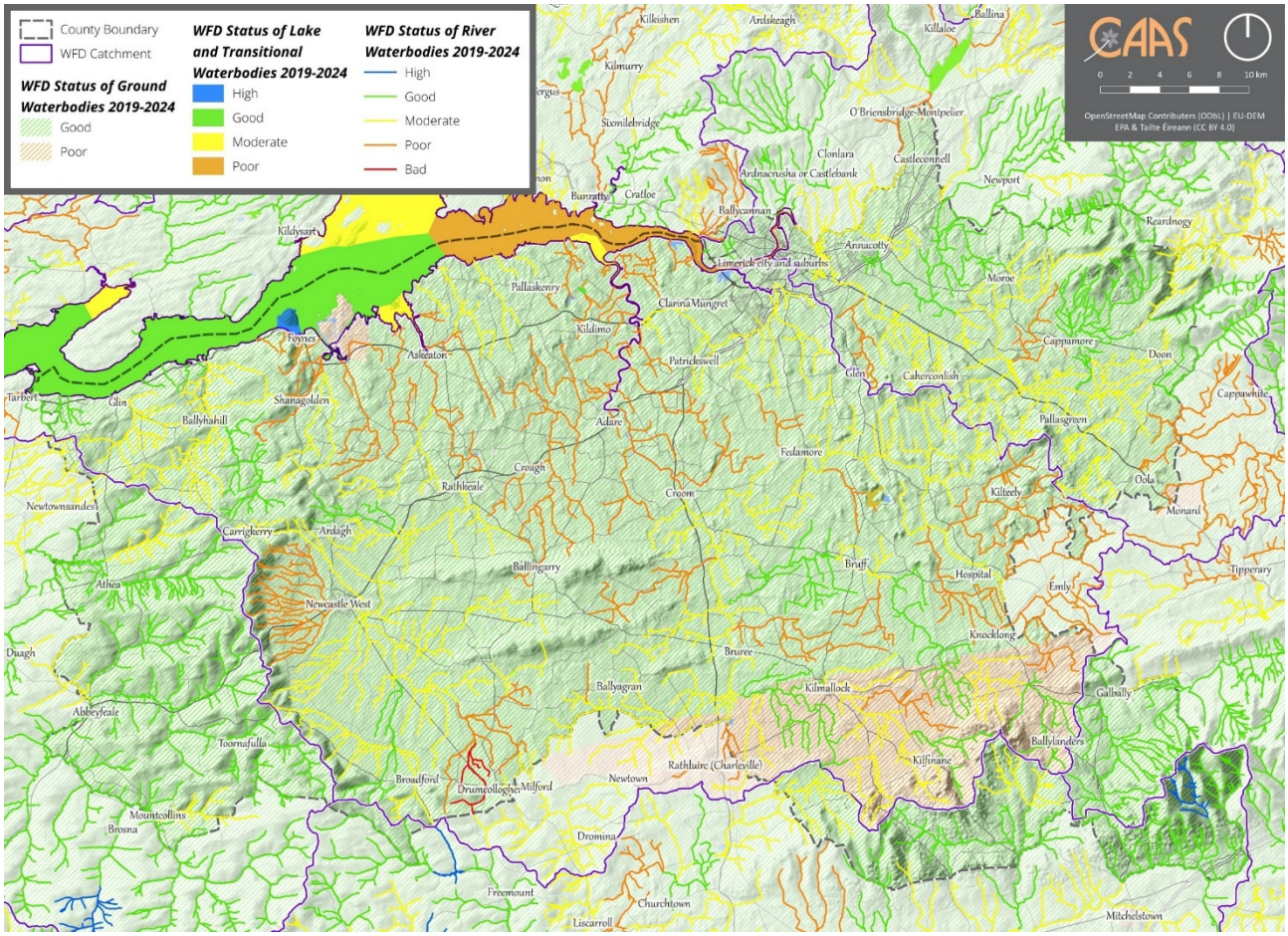


European Sites within and within 15 km buffer of Limerick

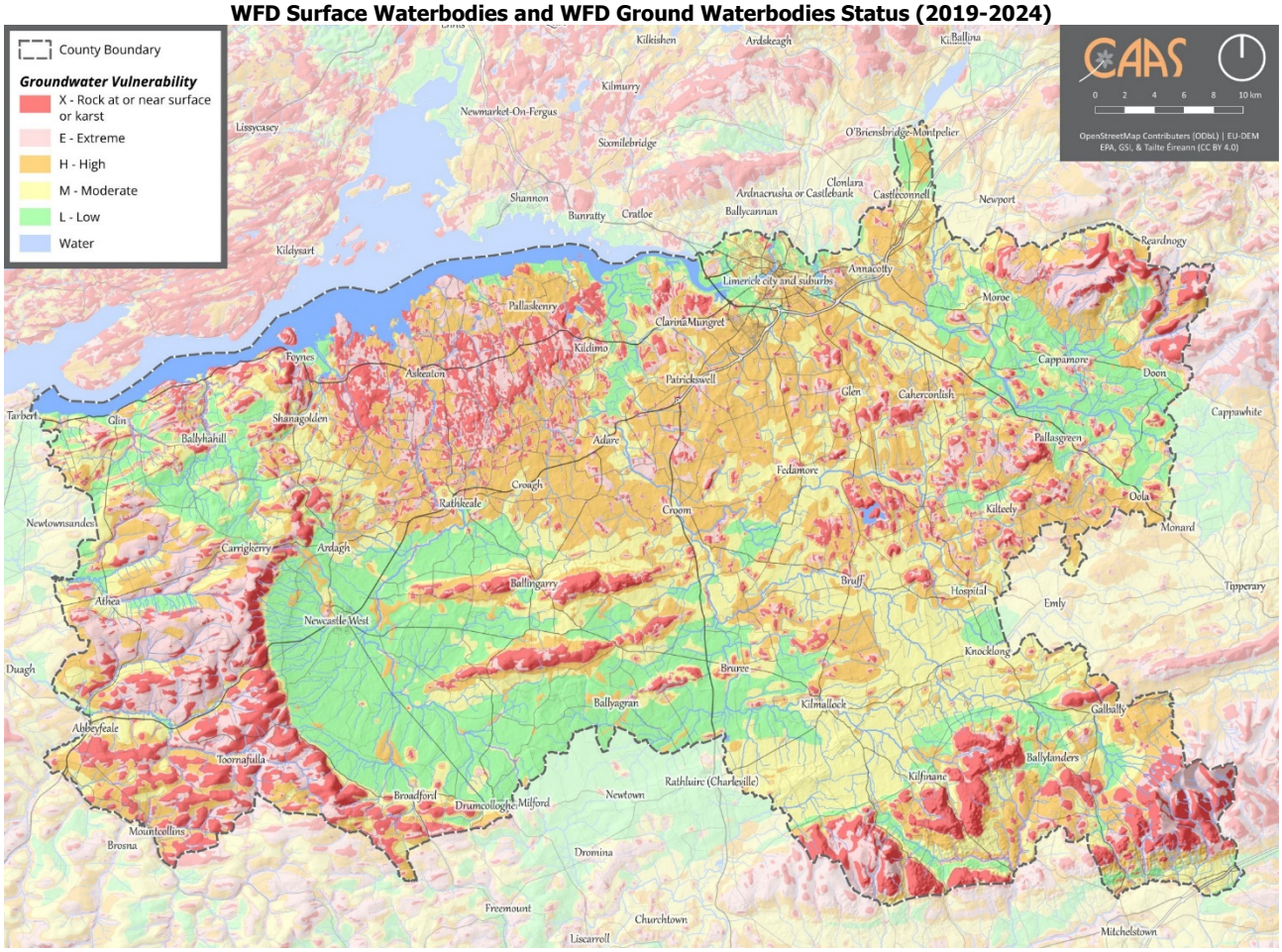


NHAs and pNHAs within and within 15 km buffer of Limerick

Figure 2.1 Selection of Individual Environmental Sensitivities taken into account (1 of 3)

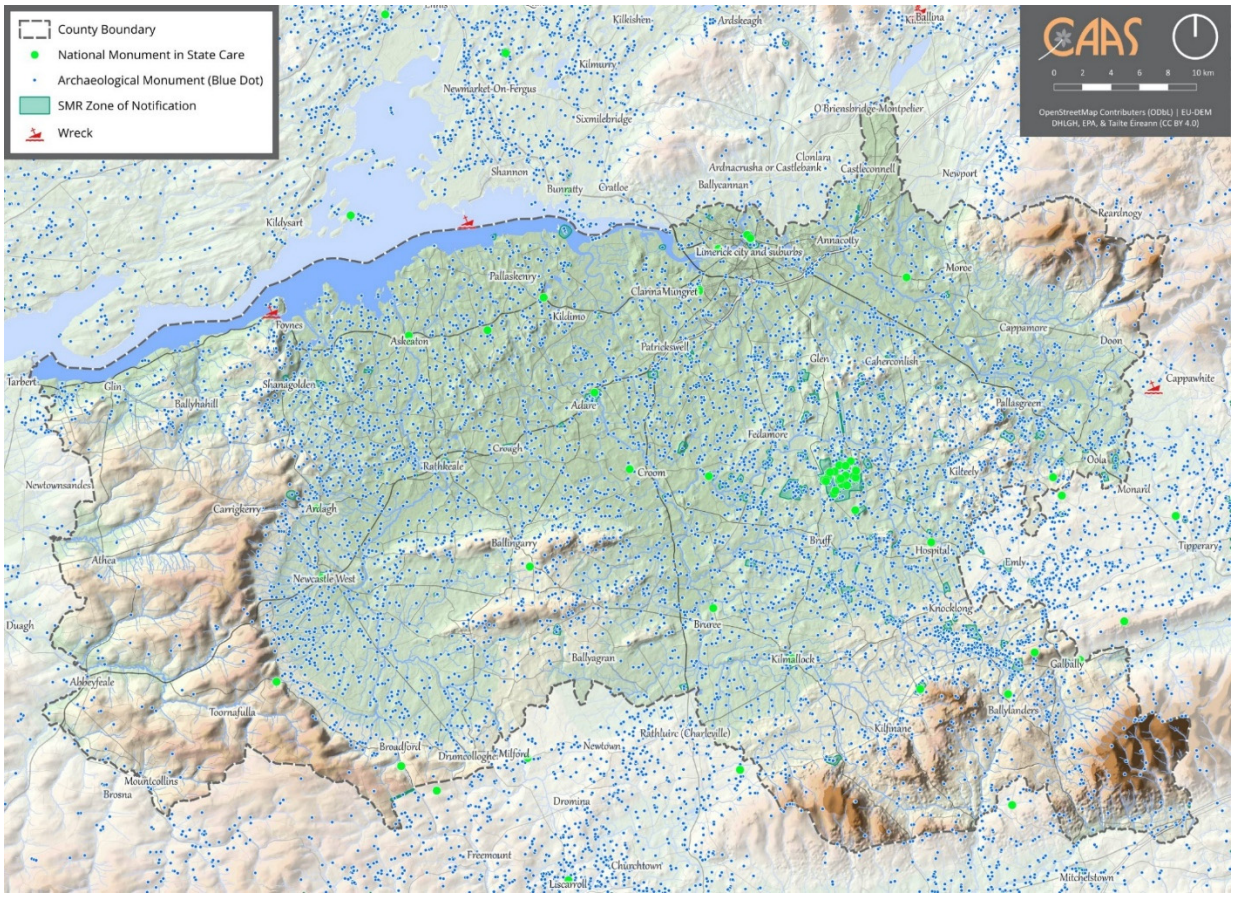


WFD Surface Waterbodies and WFD Ground Waterbodies Status (2019-2024)

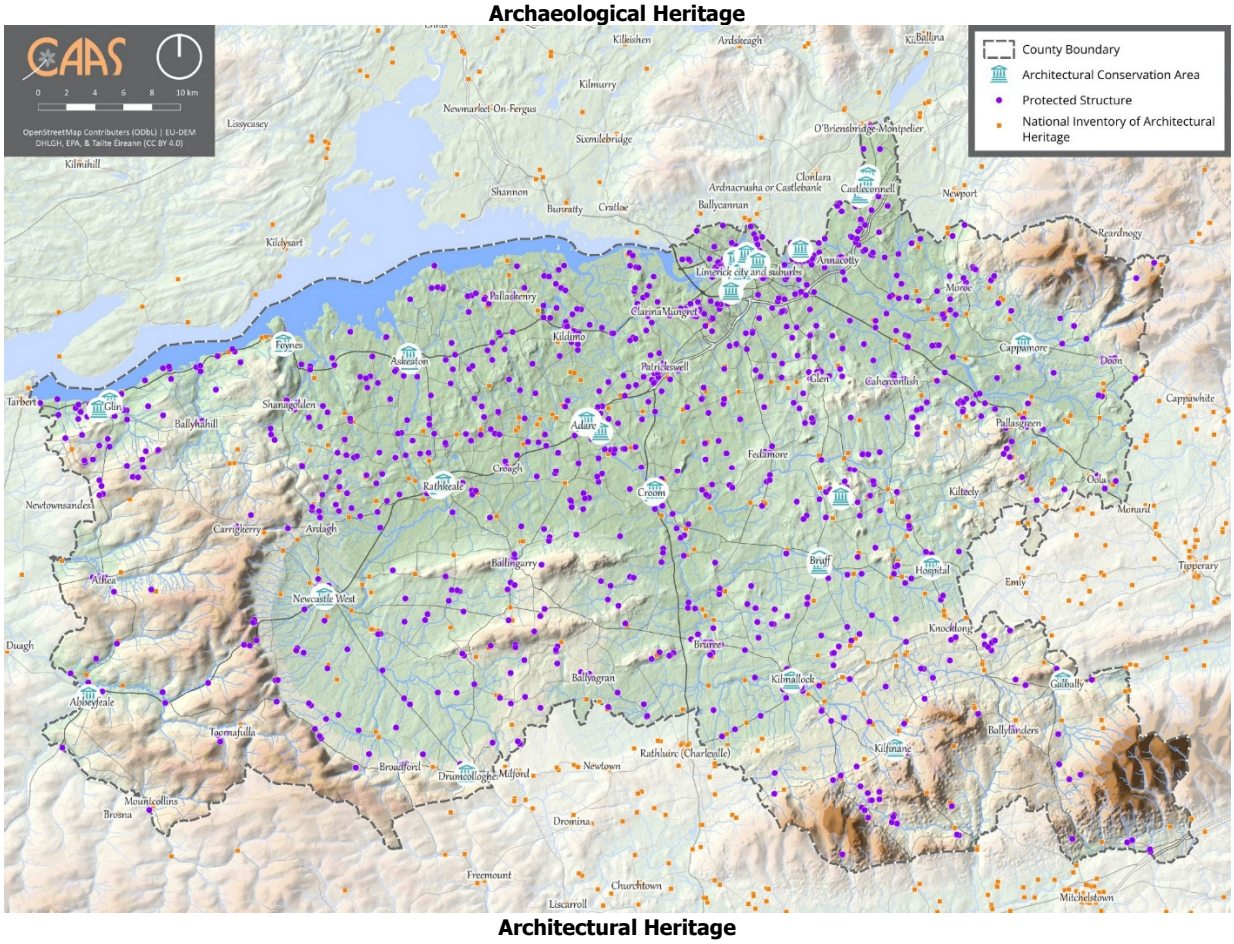


Groundwater Vulnerability

Figure 2.2 Selection of Individual Environmental Sensitivities taken into account (2 of 3)



Archaeological Heritage



Architectural Heritage

Figure 2.3 Selection of Individual Environmental Sensitivities taken into account (3 of 3)

Table 2.1 Integration of Environmental Considerations into the Variation[1]

Topic	Potentially Significant Adverse Effect, if Unmitigated	Mitigating measures including:
Various – see below	Various – see below	**Variation No. 3 measures** Integration throughout of adherence to national housing policy guidelines: • NPF Implementation: Housing Growth Requirements, Guidelines for Planning Authorities (2025); • Planning Design Standards for Apartments, Guidelines for Planning Authorities (2025); and • Sustainable Residential Development and Compact Settlements Guidelines for Planning Authorities (2024). Various updates to Development Plan Standards
Biodiversity and flora and fauna	Arising from both construction and operation of development and associated infrastructure: • Loss of/damage to biodiversity in designated sites (including European Sites and Wildlife Sites) and Annexed habitats and species, listed species, ecological connectivity and non-designated habitats; and disturbance to biodiversity and flora and fauna; • Habitat loss, fragmentation and deterioration, including patch size and edge effects; and • Disturbance (e.g. due to noise and lighting along transport corridors) and displacement of protected species such as birds and bats.	**Limerick Development Plan 2022-2028, as varied** Also refer to measures under other environmental components including Soil, Water and Air and Climatic Factors and Landscape. Policy EH P1 Protection of Natural Heritage and Biodiversity It is a policy of the Council to: a) Protect and conserve Limerick's natural heritage and biodiversity, in particular, areas designated as part of the European Sites Natura 2000 network, such as Special Protection Areas (SPAs) and Special Areas of Conservations (SACs), in accordance with relevant EU Directives and national legislation and guidelines. b) Maintain the conservation value of all Natural Heritage Areas and proposed Natural Heritage Areas (pNHAs) for the benefit of existing and future generations. Policy EH P2 Sustainable Management and Conservation It is a policy of the Council to ensure the sustainable management and conservation of areas of natural environmental and geological value within Limerick and to protect, enhance, create and connect, where ecologically suitable, natural heritage, green spaces and high-quality amenity areas for the benefit of biodiversity. Policy EH P3 Climate Action and the Natural Environment It is a policy of the Council to take into account the contents of the National Biodiversity Action Plan and the Biodiversity Climate Adaptation Plan and any forthcoming guidance or legislation on climate action, whether adaptation or mitigation that will emerge during the course of the Plan. Policy EH P4 Compliance with Limerick's Heritage Plan It is a policy of the Council to place ecological and environmental issues at the centre of planning policies and decisions and in doing so, will adhere to the objectives set out in Limerick's Heritage Plan 2017-2030. Policy EH P6 Water and Air Quality It is a policy of the Council to ensure that water and air quality shall be of the highest standard, to ensure the long term economic, social and environmental well-being of Limerick's resources. The World Health Organisation Air Quality Guidelines will be the basis for the air quality guidance in Limerick. Policy EH P7 Environmental Noise It is a policy of the Council to proactively manage environmental noise, where it may have a significant adverse impact on the health and quality of life of communities in Limerick and to support the aims of the Environmental Noise Regulations, through the development and implementation of Noise Action Plans. Objective EH O1 Designated Sites and Habitats Directive It is an objective of the Council to ensure that projects/plans likely to have significant effects on European Sites (either individually or in combination with other plans or projects) are subject to an appropriate assessment and will not be permitted under the Plan unless they comply with Article 6 of the Habitats Directive. The Council, will through the planning enforcement process where applicable, seek to restore the ecological functions of designated sites, where they have been damaged through inappropriate development. Objective EH O2 Lesser Horseshoe Bat It is an objective of the Council to require all developments in areas where there may be Lesser Horseshoe Bats, to submit an ecological assessment of the effects of the development on the species. The assessment shall include mitigation measures to ensure that feeding, roosting or hibernation sites for the species are maintained. The assessment shall also include measures to ensure that landscape features are retained and that the development itself will not cause a barrier or deterrent effect on the species. Objective EH O3 Ecological Impact Assessment It is an objective of the Council to require all developments where there are species of conservation concern, to submit an ecological assessment of the effects of the development on the site and nearby designated sites, suggesting appropriate mitigation measures and establishing, in particular, the presence or absence of the following species: Otter, badger, bats, lamprey and protected plant species such as the Triangular Club Rush, Opposite Leaved Pond Weed and Flora Protection Order Species generally. Objective EH O4 Creation of New Habitats It is an objective of the Council to: a) Seek the creation of new habitats by encouraging wild green areas and new water features such as, pools and ponds in new developments. b) Encourage management plans for green areas to use the minimum of pesticides and herbicides. c) The creation of areas that are not subject to public access in order to promote wildlife use is strongly encouraged. Objective EH O5 New Infrastructure Projects It is an objective of the Council to require new infrastructure and linear developments in particular, to demonstrate at design stage sufficient measures to assist in the conservation of and dispersal of species and to demonstrate a high degree of permeability for wildlife, to allow the movement of species and to prevent the creation of barriers to wildlife and aquatic life in the wider countryside. Objective EH O6 Barn Owl Conservation It is an objective of the Council to require road developments to incorporate from the design stage, elements that will assist in the conservation of the Barn owl.

[1] Note that non-material changes to individual Plan provisions referenced in this report may be updated during the finalisation of the Plan, including numbering, formatting and graphic design.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Mitigating measures including:
		Objective EH O7 All Ireland Pollinator Plan It is an objective of the Council to: a) Continue to actively support the aims and objectives of the All Ireland Pollinator Plan 2021 – 2025, by encouraging measures to protect and increase the population of bees and other pollinating insects in Limerick. b) Support the aims of the National Bio- Diversity Action Plan and succeeding plans, in emphasising the importance of ecological issues in planning. Objective EH O8 Roosting Habitats It is an objective of the Council to require the provision of alternative roosting or settlement facilities for species, such as bird or bat boxes, swift boxes, artificial holts (for otters), or other artificially created habitats in proposed developments, where considered appropriate. Objective EH O9 Geological Sites It is an objective of the Council to: a) Protect from inappropriate development, the County Geological Sites contained in the Limerick Geological Heritage Survey 2021. b) Seek the conservation and protection of features of geological interest within Limerick, particularly those that would have been recognised in the past as Areas of Scientific Interest or by the Geological Survey of Ireland as being of particular value. c) Undertake a survey of such sites during the lifetime of the Plan. Objective EH O10 Trees and Hedgerows It is an objective of the Council to: a) Retain and protect amenity and biodiversity value of the County and City by preserving as far as possible trees, woodlands and hedgerows, having regard to the significant role that trees and hedgerows play in local ecology, climate change and air quality and their contribution to quality place making and the associated health and wellbeing benefits. b) Require, in the event that mature trees or extensive mature hedgerow is proposed to be removed, that a comprehensive tree and hedgerow survey be carried out by a suitably qualified tree specialist to assess the condition, ecological and amenity value of the tree stock/ hedgerow proposed for removal and to include mitigation planting and a management scheme. The Council will seek in all cases to ensure when undertaking development, or when permitting development, that the loss of, or damage to, existing trees is minimised. c) Require the planting of native trees, hedgerows and vegetation and the creation of new habitats in all new developments and public realm projects. The Council will avail of tree planting schemes administered by the Forest Service, in ecologically suitable locations, where this is considered desirable. d) To identity and prepare TPO's where trees of exceptional amenity, cultural or environmental value are identified which warrant a high level of protection. e) To implement the Limerick City and County Tree Policy when completed and review as appropriate. Objective EH O11 Invasive Species It is an objective of the Council to: a) Work with and facilitate the work of agencies addressing the issue of terrestrial and aquatic invasive alien species (IAS), by implementing biosecurity measures, selected control measures and surveys, where appropriate. b) Address the presence of invasive alien species on derelict sites under the provisions of the Derelict Sites Act through the preparation of a management and eradication plan for these species. c) Require the submission of a control and management program for the particular invasive species as part of the planning process, if developments are proposed on sites where invasive species are present. d) Employ biosecurity measures to prevent the spread of invasive alien species and disease and to insist that all such measures are employed on all development sites. Objective EH O12 Blue and Green Infrastructure It is an objective of the Council to: a) Promote a network of blue and green infrastructure throughout Limerick. b) Promote connecting corridors for the movement of species and encourage the retention and creation of features of biodiversity value, ecological corridors and networks that connect areas of high conservation value such as woodlands, hedgerows, earth banks, watercourses, wetlands and designated sites. In this regard, new infrastructural projects and linear developments in particular, will have to demonstrate at design stage, sufficient measures to assist in the conservation of and dispersal of species. Projects which would be detrimental to existing blue and green infrastructure features will not be permitted. c) Ensure the integration and strengthening of green infrastructure into the preparation of Local Area Plans. d) Where possible remove barriers to species movement, such as the removal of in-stream barriers to fish passage for example. e) Seek to advance the use of an ecosystem services approach and ecosystem services valuation as a decision-making tool in plans and projects, subject to appropriate ecological assessment. Objective EH O14 Nature Based Solutions It is an objective of the Council to increase the use of Nature Based Solutions (NBS) throughout Limerick. Development Management Standards, including under 11.3.8 "Landscaping", 11.3.9 "Trees". **Variation No. 3 measures** From Amendment No. 27 of Chapter 3 Spatial Strategy d) Integrate the portion of land zoned Groody Valley Green Wedge into any future residential scheme, ensuring its protection, enhancement, and appropriate incorporation as part of the wider green infrastructure network. From Amendment No.28 of Chapter 3 Spatial Strategy (h) Enhance the quality, connectivity, and usability of the public realm across Moyross by delivering safe, attractive, and inclusive streets, open spaces, and community amenities that support social interaction, active travel, local identity, and long-term neighbourhood regeneration. (i) Establish Moyross as a connected, walkable neighbourhood by prioritising active travel and public transport, reducing reliance on private vehicles, and ensuring that daily services and amenities are easily accessible. (i) Prioritise enhanced north-south and east-west permeability, including new crossings over the rail line alongside a legible urban network bringing together the northern, central and southern areas of

Topic	Potentially Significant Adverse Effect, if Unmitigated	Mitigating measures including:
		Moyross and reconnecting the neighbourhood to TUS, Thomond Park, the Cratloe Road and the wider city From Amendment No. 32 of Chapter 3 Spatial Strategy d) The masterplan shall incorporate a high-quality, connected network of public open spaces and green infrastructure, including the provision of usable and accessible open space and play and recreation facilities which incorporates the strategic Blue-Green Infrastructure corridor route in accordance with the objectives and Development Management Standards of the Limerick Development Plan. Sustainable Urban Drainage Systems (SuDS) shall be fully integrated into the layout and design of the development and shall contribute to surface water management, biodiversity enhancement, climate resilience and placemaking. From Amendment No. 33 of Chapter 3 Spatial Strategy e) The masterplan shall provide for high-quality public open space and recreational facilities and shall incorporate design measures that integrate with and complement the adjoining lands zoned for Open Space and Recreation, respond sensitively to any archaeological features on site, and deliver a coherent, high-quality environment. Sustainable Urban Drainage Systems (SuDS) shall be fully integrated into the layout and design of the development, contributing to effective surface water management, enhanced biodiversity, climate resilience and placemaking.
Population and human health	• Potential adverse effects arising from flood events. • Potential interactions if effects arising from environmental vectors.	Also refer to measures under other environmental components including Soil, Water and Air and Climatic Factors. **Limerick Development Plan 2022-2028, as varied** Objective EH O20 Noise and Vibration during Construction and at Open Sites It is an objective of the Council to protect the quality of the environmental against the effects of noise and vibration, by implementing site appropriate mitigation measures during the construction and demolition phases of development. Objective EH O21 Commercial and Industrial Noise It is an objective of the Council to prevent members of the public being significantly adversely effected by environmental noise from commercial and industrial noise activities. Objective EH O22 Entertainment Noise It is an objective of the Council to manage entertainment noise from venues and music events, so as not to have an adverse effect on the public. Objective EH O25 Air Pollution It is an objective of the Council to implement the provisions of national and EU Directives on air pollution and other relevant legislative requirements in conjunction with other agencies as appropriate. Objective EH O26 Improvement of Air Quality It is an objective of the Council to improve air quality and help prevent people being exposed to unacceptable levels of pollution in Limerick, through the support of sustainable modes of transport, renewable energy, promotion of energy efficient buildings and homes and urban greening. Objective EH O27 Air Quality Monitoring It is an objective of the Council to monitor and provide access to the public on the air quality in Limerick and support the EPA in the expansion and management of the national air quality monitoring network. Objective EH O28 Air Quality during Construction It is an objective of the Council to protect environmental quality and implement site appropriate mitigation measures during construction and demolition phases of a development, with respect to air quality, including dust. Objective EH O29 Odour It is an objective of the Council to protect the public from odour nuisance issues through odour abatement solutions. Policy EH P7 Environmental Noise It is a policy of the Council to proactively manage environmental noise, where it may have a significant adverse impact on the health and quality of life of communities in Limerick and to support the aims of the Environmental Noise Regulations, through the development and implementation of Noise Action Plans. Policy EH P6 Water and Air Quality It is a policy of the Council to ensure that water and air quality shall be of the highest standard, to ensure the long term economic, social and environmental well-being of Limerick's resources. The World Health Organisation Air Quality Guidelines will be the basis for the air quality guidance in Limerick. Objective TR O53 Noise and Transportation It is an objective of the Council to identify appropriate mitigation measures to reduce noise levels from traffic where they are potentially harmful, in accordance with Limerick's Noise Action Plan. Objective TR O54 Noise Sensitive Development It is an objective of the Council to require noise sensitive developments in close proximity to heavily trafficked roads to be designed and constructed to minimise noise disturbance, follow a good acoustic design process and clearly demonstrate that significant adverse noise impacts will be avoided in accordance with Professional Practice Guidance on Planning and Noise (2017) and based on the guidance and recommendations of the World Health Organisation. Objective IN O21 Hazardous Waste and Contaminated Sites It is an objective of the Council to: a) Implement the EPA's National Hazardous Waste Management Plan (NHWMP) 2014-2020 and any subsequent plans. b) Collaborate and seek guidance from the Environmental Protection Agency (EPA), the Health and Safety Authority (HAS), Health Service Executive (HSE) and Southern Region Waste Management Office, on the technical requirements for clearance and redevelopment of any contaminated lands when dealing with planning applications at these locations. Development Management Standards, including under 11.3.12 "Noise"
Soil	• Potential adverse effects on the hydrogeological and ecological function of the	Also refer to measures under other environmental components including Water. **Limerick Development Plan 2022-2028, as varied** Objective SS O1 Compact Growth It is an objective of the Council to strengthen the core of settlements and encourage compact growth, through the development of infill sites, brownfield lands, under-utilised land/buildings, vacant sites and derelict sites, within the existing built-up footprint of the settlements and develop outwards from the centre in a sequential manner.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Mitigating measures including:
	soil resource, including as a result of development on contaminated lands. • Potential for riverbank and coastal erosion.	Objective SS O4 Prevention of Urban Sprawl It is an objective of the Council to prevent linear roadside frontage development on roads leading out of towns and villages in order to retain the identity of towns/villages, to prevent sprawl and to ensure a distinction in character between built up areas and the open countryside. Objective EH O9 Geological Sites It is an objective of the Council to: a) To protect from inappropriate development, the County Geological Sites contained in the Limerick Geological Heritage Survey 2021. b) Seek the conservation and protection of features of geological interest within Limerick, particularly those that would have been recognised in the past as Areas of Scientific Interest or by the Geological Survey of Ireland as being of particular value. c) Undertake a survey of such sites during the lifetime of the Plan. Objective IN O21 Hazardous Waste and Contaminated Sites It is an objective of the Council to: a) Implement the EPA's National Hazardous Waste Management Plan (NHWMP) 2014-2020 and any subsequent plans. b) Collaborate and seek guidance from the Environmental Protection Agency (EPA), the Health and Safety Authority (HAS), Health Service Executive (HSE) and Southern Region Waste Management Office, on the technical requirements for clearance and redevelopment of any contaminated lands when dealing with planning applications at these locations.
Water	• Potential adverse effects upon the status of water bodies and entries to the WFD Register of Protected Areas (ecological and human value), arising from changes in quality, flow and/or morphology. • Increase in flood risk and associated effects associated with flood events.	Also refer to measures under other environmental components including Soil and Material Assets. **Limerick Development Plan 2022-2028, as varied** Objective EH O15 Ground Water, Surface Water Protection and River Basin Management Plans It is an objective of the Council to: a) Protect ground and surface water resources and to take into account the requirement of the Water Framework Directive when dealing with planning and land use issues. b) Implement the provisions of the River Basin Management Plan 2022-2028 and any succeeding plan. The filling of wetlands, surface water features and modifications and drainage of peatlands shall generally be prohibited. c) Implement the measures put forward in the Limerick Groundwater Protection Plan, in assessing planning applications and their consequences for ground d) The Blue Dot Catchments programme is a key action under the River Basin Management Plan for Ireland 2022-2028. The aim of the programme is to protect and restore high ecological status to a network of rivers and water bodies in Limerick. In Limerick, the following rivers and water bodies are Blue Dot Catchments Bleach Lough, the Ogeen River and the Behanagh River. The Council will take a precautionary approach to development which might affect water quality in these areas in line with requirements of the Water Framework Directive. Objective EH O17 Water Quality It is an objective of the Council to support commitments to achieve and maintain 'At Least Good' status, except where more stringent obligations are required. There shall be no deterioration of status for all water bodies under the Marine Strategy Framework Directive and its programme of measures, the Water Framework Directive and the River Basin Management Plan. Key challenges include, inter alia, the need to address significant deficits in urban waste-water treatment and water supply, addressing flooding and increased flood risks from extreme weather events and increased intense rainfall because of climate change. Policy EH P6 Water and Air Quality It is a policy of the Council to ensure that water and air quality shall be of the highest standard, to ensure the long term economic, social and environmental well-being of Limerick's resources. The World Health Organisation Air Quality Guidelines will be the basis for the air quality guidance in Limerick. Objective IN O10 Surface Water and SuDS It is an objective of the Council to: a) Ensure the separation of foul and surface water discharges in new developments through the provision of separate networks within application site boundaries. b) Work in conjunction with other public bodies towards a sustainable programme of improvement for riverbanks, back drains, etc. c) 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 National River Basin Management Plan for Ireland 2018-2021 (DHPLG) and the associated Programme of Measures and any subsequent River Basin Management Plan. d) Ensure adequate storm water infrastructure to accommodate the planned levels of growth within the Plan area and to ensure that appropriate flood management measures are implemented to protect property and infrastructure. e) Cater for the future developments through public and private driven initiatives where discharge capacity permits. f) Address the issue of disposal of surface water generated by existing development in the area, through improvements to surface water infrastructure, including for example attenuation ponds, the application of sustainable urban drainage techniques, or by minimising the amount of hard surfaced areas, or providing porous surfaces as the opportunity arises. g) 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. h) Require all planning applications to include surface-water design calculations to establish the suitability of drainage between the site and the outfall point and require all new developments to include SuDS, to control surface water outfall and protect water quality in accordance with the requirements of Chapter 11: Development Management Standards of the Plan. i) Promote SuDS and grey water recycling in developments and responsible use of water by the wider community, to reduce the demand for water supply. j) Require SuDS schemes to be designed to incorporate the four pillars of water quality, water quantity, biodiversity and amenity to the greatest extent possible within the constraints of a given site. k) Allow sufficient land take for SuDS when planning the site and consider the region as a whole, in association with adjoining lands and their requirements in designing SuDS. Developers may be required to set aside lands to cater for not only their own SuDS but also regional SuDS. l) Promote the provision of suitable Blue/Green Infrastructure (BGI) and Nature Based Solutions to the surface water disposal in new development, as a means to provide urban flood resilience. This approach capitalises on the potential of urban green spaces and natural water flows, subject to the other planning considerations such as amenity, maintenance, traffic safety, proper planning and sustainable development and environmental requirements.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Mitigating measures including:
		m) To prohibit the discharge of additional surface water to combined (foul and surface water) sewers in order to maximise the capacity of existing collection systems for foul water. n) Encourage green roofs for the following types of development: -Apartment developments; -Employment developments; -Retail developments; -Leisure facilities; -Education facilities. Objective CAF O11 Nature Based Solutions It is an objective of the Council to promote integration and delivery of nature based solutions and infrastructure in new developments, including surface water management, public realm and community projects as a means of managing flood risk and enhancing the natural environment. Policy CAF P5 Managing Flood Risk It is a policy of the Council to protect Flood Zone A and Flood Zone B from inappropriate development and direct developments/land uses into the appropriate lands, in accordance with The Planning System and Flood Risk Management Guidelines for Planning Authorities 2009 (or any superseding document) and the guidance contained in Development Management Standards. Where a development/land use is proposed that is inappropriate within the Flood Zone, then the development proposal will need to be accompanied by a Development Management Justification Test and site specific Flood Risk Assessment in accordance with the criteria set out under The Planning System and Flood Risk Management Guidelines for Planning Authorities 2009 and Circular PL2/2014 (as updated/superseded). In Flood Zone C, the developer should satisfy themselves that the probability of flooding is appropriate to the development being proposed and should consider the implications of climate change. Objective CAF O20 Flood Risk Assessments It is an objective of the Council to require a Site-specific Flood Risk Assessment (FRA) for all planning applications in areas at risk of flooding (coastal/tidal, fluvial, pluvial or groundwater), where deemed necessary. The detail of these Site-specific FRAs (or commensurate assessments of flood risk for minor developments) will depend on the level of risk and scale of development. A detailed Site-specific FRA should quantify the risks, the effects of selected mitigation and the management of any residual risks. The assessments shall consider and provide information on the implications of climate change with regard to flood risk in relevant locations. Objective CAF O21 Identified Flood Risk (as amended by Variation No. 3) It is an objective of the Council to: a) Ensure that no development shall commence on the lands identified as being at flood risk adjacent to the Raheen Business Park in the townlands of Ballycummin/ Rootiagh, zoned for High Tech/ Manufacturing, until a Site-specific Flood Risk Assessment, including hydraulic model has been prepared for the lands, which demonstrates that the flood risk for the lands can be mitigated or that a less vulnerable use can be accommodated on site. b) Ensure that on the Enterprise and Employment lands located to the northwest of the M20/M7/N18 junction to the south of Toppin's field, that no encroachment onto, or loss of the flood plain occurs at this location and that only water compatible development should be permitted for the lands that are identified as being at risk of flooding. c) Ensure any planning application, including proposals for water compatible uses, on the lands in Flood Zones A and B adjacent to the Coonagh TUS campus, zoned for Education and Community, shall include a comprehensive Site-Specific Flood Risk Assessment, incorporating a drainage assessment for the lands, which demonstrates that the flood risk can be mitigated and that water compatible uses can be accommodated without adversely impacting on the flood risk of neighbouring residential properties. d) No works including the undertaking of ground level changes shall commence on the lands in the National Technology Park subject to flood risk, until all flood mitigation measures proposed on the site to facilitate future development of the IDA lands have been put in place. These measures shall form part of a project-specific flood risk assessment being completed as part of any planning application. e) Implement the flood mitigation measures included under the Justification Test including to ensure that vulnerable uses, including that of a residential nature, shall not be permitted at ground floor level on the District Centre zoned lands at Jetland/Ennis Road/ Ennis Road Retail Park, at Caherdavin/Moyross. f) New or more intensive permissible uses not covered by part (g) below on Variation No. 3 lands including Sites Z10 and Z11 that overlap with Flood Zones A or B or with Future Climate Scenario Flood Risk Areas (as identified in Appendix I of the accompanying SFRA Addendum) shall be limited to water compatible uses. This limitation shall take primacy over any other related land use zoning provision including the City Centre zoning applicable to Sites Z10 and Z11. Proposals for developments within these areas shall be accompanied by a Site-Specific Flood Risk Assessment. (g) Extensions of existing uses or minor development on Variation No. 3 lands including Sites Z10 and Z11 that overlap with Flood Zones A or B or with Future Climate Scenario Flood Risk Areas (as identified in Appendix I of the accompanying SFRA Addendum) shall comply with requirements of the Planning System and Flood Risk Assessment Guidelines, and associated circular, including providing detailed design specifications as may be required to facilitate the impact of development. Extensions of existing uses or minor development within flood risk areas shall not: obstruct important flow paths; introduce a number of people into flood risk areas; entail the storage of hazardous substances; have adverse impacts or impede access to a watercourse, floodplain or flood protection and management facilities; or increase the risk of flooding elsewhere. 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 O24 Minor Flood and Mitigation Works and Coastal Protections Schemes It is an objective of the Council to support and facilitate the Office of Public Works Minor Flood and Mitigation Works and Coastal Protections Schemes 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. Development Management Standards, including under 11.3.8 "Landscaping", 11.3.11 SuDS (Sustainable Drainage Systems).

Topic	Potentially Significant Adverse Effect, if Unmitigated	Mitigating measures including:
		Variation No. 3 measures f) New or more intensive permissible uses not covered by part (g) below on Variation No. 3 lands including Sites Z10 and Z11 that overlap with Flood Zones A or B or with Future Climate Scenario Flood Risk Areas (as identified in Appendix I of the accompanying SFRA Addendum) shall be limited to water compatible uses. This limitation shall take primacy over any other related land use zoning provision including the City Centre zoning applicable to Sites Z10 and Z11. Proposals for developments within these areas shall be accompanied by a Site-Specific Flood Risk Assessment. (g) Extensions of existing uses or minor development on Variation No. 3 lands including Sites Z10 and Z11 that overlap with Flood Zones A or B or with Future Climate Scenario Flood Risk Areas (as identified in Appendix I of the accompanying SFRA Addendum) shall comply with requirements of the Planning System and Flood Risk Assessment Guidelines, and associated circular, including providing detailed design specifications as may be required to facilitate the impact of development. Extensions of existing uses or minor development within flood risk areas shall not: obstruct important flow paths; introduce a number of people into flood risk areas; entail the storage of hazardous substances; have adverse impacts or impede access to a watercourse, floodplain or flood protection and management facilities; or increase the risk of flooding elsewhere.From Amendment No. 32 of Chapter 3 Spatial Strategy d) The masterplan shall incorporate a high-quality, connected network of public open spaces and green infrastructure, including the provision of usable and accessible open space and play and recreation facilities which incorporates the strategic Blue-Green Infrastructure corridor route in accordance with the objectives and Development Management Standards of the Limerick Development Plan. Sustainable Urban Drainage Systems (SuDS) shall be fully integrated into the layout and design of the development and shall contribute to surface water management, biodiversity enhancement, climate resilience and placemaking. From Amendment No. 33 of Chapter 3 Spatial Strategy c) A Site-Specific Flood Risk Assessment which shall provide detail on the most suitable point of access to this site in line with the provision of the Flood Risk Management Guidelines for Planning Authorities, 2009. e) The masterplan shall provide for high-quality public open space and recreational facilities and shall incorporate design measures that integrate with and complement the adjoining lands zoned for Open Space and Recreation, respond sensitively to any archaeological features on site, and deliver a coherent, high-quality environment. Sustainable Urban Drainage Systems (SuDS) shall be fully integrated into the layout and design of the development, contributing to effective surface water management, enhanced biodiversity, climate resilience and placemaking. From Amendment No. 42 of Chapter 8: Infrastructure d) Consider the provision of developer-led and bridging infrastructure at appropriate locations having regard to Circular NSP 01-2026 Developer Led Infrastructure (DLI) Initiative for Wastewater Services to support Housing Delivery and any subsequent revisions where the proposed development is subject to appropriate environmental assessment. Such a solution will only be considered where it is environmentally sustainable and would not affect the quality status of receiving waters. e) Support Uisce Éireann in the upgrade of Limerick Wastewater Treatment Plant, Corcanree pumpstation and the development of the Regional Bioresource Centre, in line with the appropriate and necessary environmental and ecological assessments, as required, to support both the existing and future growth and development of Limerick City into the future and to comply with the National Wastewater Sludge Management Plan.
Air and Climatic Factors	• Potential conflict between development under the Variation and aiming to reduce carbon emissions in line with local, national and European environmental objectives. • Potential conflicts between transport emissions, including those from cars, and air quality. • Potential conflicts between increased frequency of noise emissions and protection of sensitive receptors. • Potential conflicts with climate	**Limerick Development Plan 2022-2028, as varied** Objective IN O1 Climate Action in Infrastructure Planning It is an objective of the Council to: a) Require all infrastructure development, whether above ground or subterranean, to avoid flood risk areas and areas at risk of coastal erosion. b) Require site selection, location, design and materials to have regard to and be resilient to the changing climate (high winds, temperature fluctuations, increased storm intensity and changes in rainfall). c) Collaborate with utility and service providers to ensure their networks are resilient to the impacts of climate change, both in terms of design and ongoing maintenance. Policy EH P3 Climate Action and the Natural Environment It is a policy of the Council to take into account the contents of the National Biodiversity Action Plan and the Biodiversity Climate Adaptation Plan and any forthcoming guidance or legislation on climate action, whether adaptation or mitigation that will emerge during the course of the Plan. Air Quality and Noise Objective EH O25 Air Pollution It is an objective of the Council to implement the provisions of national and EU Directives on air pollution and other relevant legislative requirements in conjunction with other agencies as appropriate. Objective EH O26 Improvement of Air Quality It is an objective of the Council to improve air quality and help prevent people being exposed to unacceptable levels of pollution in Limerick, through the support of sustainable modes of transport, renewable energy, promotion of energy efficient buildings and homes and urban greening. Objective EH O27 Air Quality Monitoring It is an objective of the Council to monitor and provide access to the public on the air quality in Limerick and support the EPA in the expansion and management of the national air quality monitoring network. Objective EH O28 Air Quality during Construction It is an objective of the Council to protect environmental quality and implement site appropriate mitigation measures during construction and demolition phases of a development, with respect to air quality, including dust. Objective EH O29 Odour It is an objective of the Council to protect the public from odour nuisance issues through odour abatement solutions. Policy EH P7 Environmental Noise It is a policy of the Council to proactively manage environmental noise, where it may have a significant adverse impact on the health and quality of life of communities in Limerick and to support the aims of the Environmental Noise Regulations, through the development and implementation of Noise Action Plans. Objective EH O20 Noise and Vibration during Construction and at Open Sites It is an objective of the Council to protect the quality of the environmental against the effects of noise and vibration, by implementing site appropriate mitigation measures during the construction and demolition phases of development.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Mitigating measures including:
	adaptation measures including those relating to flood risk management.	Policy EH P6 Water and Air Quality It is a policy of the Council to ensure that water and air quality shall be of the highest standard, to ensure the long term economic, social and environmental well-being of Limerick's resources. The World Health Organisation Air Quality Guidelines will be the basis for the air quality guidance in Limerick. Objective TR O53 Noise and Transportation It is an objective of the Council to identify appropriate mitigation measures to reduce noise levels from traffic where they are potentially harmful, in accordance with Limerick's Noise Action Plan. Objective TR O54 Noise Sensitive Development It is an objective of the Council to require noise sensitive developments in close proximity to heavily trafficked roads to be designed and constructed to minimise noise disturbance, follow a good acoustic design process and clearly demonstrate that significant adverse noise impacts will be avoided in accordance with Professional Practice Guidance on Planning and Noise (2017) and based on the guidance and recommendations of the World Health Organisation. Sustainable Mobility and Transport Policy TR P3 Integration of Land Use and Transport Policies It is a policy of the Council to support and facilitate the integration of land use and transportation policies, to ensure the delivery of sustainable compact settlements, which are served by sustainable modes of transport. Policy TR P4 Promotion of Sustainable Patterns of Transport Use It is a policy of the Council to seek to implement in a positive manner, in cooperation with other relevant authorities and agencies, the policies of the NPF, RSES and the Department of Transport's Smarter Travel, A Sustainable Transport Future 2009 – 2020 (and any subsequent updates), to encourage more sustainable patterns of travel and greater use of sustainable forms of transport, including public transport, cycling and walking. Policy TR P5 Sustainable Mobility and Regional Accessibility It is a policy of the Council to support sustainable mobility, enhanced regional accessibility and connectivity within Limerick, in accordance with the National Strategic Outcomes of the National Planning Framework and the Regional Spatial and Economic Strategy for the Southern Region. Policy TR P6 Sustainable Travel and Transport It is a policy of the Council to support, facilitate and co-operate with relevant agencies to secure sustainable travel within Limerick and seek to implement the 10 minute city/town concept, promote compact growth and reduce the need for long distance travel, as a means to reduce the impact of climate change. Objective TR O1 Climate Proofed Transport Infrastructure It is an objective of the Council to ensure that all future and retrofitted transport infrastructure is climate proofed, through design and construction, to function in a climate altered future and would, where possible, be multifunctional e.g. provide accessible routes for other services such as fibre optics or water, energy connections or other services and technologies that might come about during the lifetime of the infrastructure. Objective TR O3 Delivery and Servicing Strategy It is an objective of the Council to: a) Reduce the amount of 'last mile trips' being made by motorised vehicles; b) Facilitate the transition to zero emission delivery vehicles such as cargo bikes, solar powered and electric vehicles; and c) Support local 'Click and Collect' facilities where appropriate to minimise trips to individual homes and workplaces. Objective TR O4 Universal Design It is an objective of the Council to ensure that all transport schemes incorporate high-quality urban realm design that is attractive, safe, comfortable and accessible for all individuals. Objective TR O6 Delivering Modal Split It is an objective of the Council to: a) Promote a modal shift away from the private car towards more sustainable modes of transport including walking, cycling, carpool and public transport in conjunction with the relevant transport authorities; b) Support investment in sustainable transport infrastructure that will make walking, cycling, carpool and public transport more attractive, appealing and accessible for all. Objective TR O8 Walking and Cycling Infrastructure It is an objective of the Council to: a) Improve and provide clear, safe and direct pedestrian linkages, cycle networks, including the greenways and primary segregated cycle routes, between the employment zones, shopping areas and residential areas throughout Limerick; b) Maintain and expand the pedestrian route network, infrastructure and where possible retrofit cycle and pedestrian routes into the existing urban road network, to provide for accessible safe pedestrian routes within Limerick. Objective TR O9 Limerick Cycle Network It is an objective of the Council to implement in full, the Cycle Network, which will be set out in the final LSMATS, with priority given in the short term to delivering the primary cycle network and cycle routes serving schools. Objective TR O10 Limerick Regeneration Areas Sustainable Travel Infrastructure It is an objective of the Council to support LSMATS in the identification and delivery of improvements to walking/cycling infrastructure and improvements to public transport, based on those measures identified in the Limerick Regeneration Framework Implementation Plan. Objective TR O11 Enhanced Public Transport It is an objective of the Council to support and encourage public transport providers to enhance the provision of public transportation and frequency of services in Limerick, including the provision of enhanced accessibility from the City Centre to Shannon Airport.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Mitigating measures including:
		Objective TR O15 Transport Interchange It is an objective of the Council to facilitate the provision of quality transport interchanges, in order to facilitate focussed access to multiple public transport modes and to maximise the movement of people via sustainable modes. Objective TR O16 Rail Network a) Explore a pathway to rail-based development in the review of the RSES and MASP in conjunction with the National Transport Authority and the Southern and Western Regional Assemblies; b) Support and facilitate new and upgrading of existing rail networks, railway stations and services across Limerick as identified in LSMATS and protect, as required, lands necessary for the upgrading of existing railway lines or stations, which would improve journey times and enable an increase in the frequency of services and connections. Objective TR O17 Electric Vehicles It is an objective of the Council to: a) Encourage the switch to Electric Vehicles and e-bikes through the roll-out of additional electric charging points at appropriate locations, throughout Limerick, in association with relevant agencies and stakeholders; b) Facilitate the provision of electricity charging infrastructure for electric vehicles, both on street and in new developments, in accordance with the Development Management Standards set out in Chapter 11. Objective TR O23 Mobility Management It is an objective of the Council to require the submission of Mobility Management Plans, subject to the guidance provided in the Toolkit for School Travel, Safe Routes to School Programme, Workplace Travel Plans – A Guide for Implementers and Achieving Effective Workplace Travel Plans – Guidance for Local Authorities, for any development that the Council consider will have significant trip generation and attraction rates, at peak hours or throughout the day and where existing or proposed public transport may be utilised. Climate Action and Transition to Low Carbon Economy Policy CAF P1 Climate Action Policy It is a policy of the Council to implement international and national objectives, to support Limerick's transition to a low carbon economy and support the climate action policies included in the Plan. Objective CAF O1 Compliance with Higher Tier Climate Legislation and Guidance It is an objective of the Council to support the National Adaptation Framework 2018 and the National Climate Change Strategy, including the transition to a low carbon future, taking account of flood risk, the promotion of sustainable transport, soil conservation, the importance of green infrastructure, improved air quality, the use of renewable resources and the re-use of existing resources. Support the implementation of the Limerick Climate Change Adaptation Strategy (2019) and any revised or forthcoming adaptation, mitigation or climate action strategies or plans at local, regional and national level in the formulation of any plans or policies. Objective CAF O2 Partnership with Service Providers It is an objective of the Council to work in partnership with existing service providers to facilitate required enhancement and upgrading of existing infrastructure and networks (subject to appropriate environmental assessment and the planning process) while cognisance shall be had to support the safeguarding of strategic energy corridors from encroachment by other developments, that could compromise the delivery of energy networks. Objective CAF O3 Sustainable Development It is an objective of the Council to support sustainable travel, energy efficient projects, provision of green spaces and open space and sustainable residential development projects, as a means of addressing climate change. 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 05 Energy Efficiency in Existing Development It is an objective of the Council to support the retrofitting of existing buildings over their demolition and the integration of renewables into existing buildings, thereby ensuring a fabric first approach is taken. Objective CAF O6 Energy Efficiency in New Developments It is an objective of the Council to ensure that all developments are designed to take account of the impacts of climate change. This will include the installation of rainwater harvesting systems, sustainable urban drainage systems and nature based solutions for water management. Energy efficiency and renewable energy measures should be incorporated, in the cases of large industrial, commercial or newly constructed public buildings. The incorporation of renewable technologies, such as solar energy in the design will be encouraged, subject to compliance with all relevant planning criteria. Objective CAF O7 Near Zero Energy Buildings It is an objective of the Council to support and promote climate smart and the Near Zero Energy Building (NZEB) standard of building, or equivalent, for all new developments. Objective CAF O8 Renewable Energy Objective It is an objective of the Council to promote and support development of renewable energy sources, which will achieve low carbon outputs including on-land and off-shore renewable energy production, which support tidal turbine, PV, community energy companies and battery technology, subject to adequate environmental and ecological protection. 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 O12 Urban Greening It is an objective of the Council to support urban greening and planting initiatives across the city, towns and villages. Policy CAF P2 Transition to a Low Carbon Economy It is a policy of the Council to support the transition to a low carbon climate resilient economy, by way of reducing greenhouse gases, increasing renewable energy and improving energy efficiency and will future proof policies and objectives to deliver on this approach, in so far as possible.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Mitigating measures including:
		Policy CAF P3 Promote Awareness and Behavioural Change It is a policy of the Council to promote awareness and support behavioural change in relation to climate change and transition to a low carbon economy. Policy CAF P4 Co–operation with Relevant Stakeholders It is a policy of the Council to cooperate with the Climate Action Regional Office (CARO) and other relevant stakeholders, in respect of adaptation and mitigation of greenhouse gas emissions and future climate change adaptation strategies. Objective CAF O14 Energy Generation It is an objective of the Council to support the local production of renewable energy and connection to gas network. Where electricity is being generated locally, the Council will support the provision of infrastructure for its transmission to the grid, subject to it fulfilling technical and environmental requirements. Objective CAF O15 Local Energy Production It is an objective of the Council to support localised renewable and carbon friendly means of heating and energy provision, including district heating systems. New technologies such as air to water and geothermal may have a role to play in this regard. Objective CAF O16 Circular Economy It is an objective of the Council to encourage the adoption of the circular economy through promotion of the reuse, recycling and reduction of the use of raw materials and resources. Objective CAF O17 Low Energy Building Materials It is an objective of the Council to encourage the use of low energy building materials and design in all developments. Objective TLC O18 Energy and Emissions Balance It is an objective of the Council to support the Energy and Emissions Balance Report and updates of the report as they are prepared. The Council will also support the preparation of a Local Authority Climate Action Plan as outlined in the report. Objective CAF O19 Decarbonising Zones It is an objective of the Council to support the identification of a Decarbonising Zone by designating a spatial area, in which a range of climate mitigation, adaptation and biodiversity measures and action owners are identified, to address local low carbon energy, greenhouse gas emissions and climate needs, to contribute to national climate action targets and work with statutory agencies and stakeholders as appropriate. Objective CAF O22 Cooperation with Other Agencies It is an objective of the Council to work with other bodies and organisations, as appropriate, to help protect critical infrastructure, including water and wastewater, within Limerick, from risk of flooding. Any subsequent plans shall consider, as appropriate any new and/or emerging data, including, when available, any relevant information contained in the CFRAM Flood Risk Management Plans and as recommended in the SFRA for the Plan. Policy CAF P6 Renewable Energy It is a policy of the Council to support renewable energy commitments outlined in national and regional policy, by facilitating the development and exploitation of a range of renewable energy sources at suitable locations throughout Limerick, where such development does not have a negative impact on the surrounding environment landscape, biodiversity, water quality or local amenities, to ensure the long term sustainable growth of Limerick. Policy CAF P7 Atlantic Green Digital Basin (GDB) It is a policy of the Council to support the development of Atlantic Green Digital Basin (GDB) proposals within Limerick and the wider region, subject to appropriate levels of environmental assessment and planning considerations and to work with relevant stakeholders to realise its potential. Policy CAF P8 Community Based Renewable Energy It is a policy of the Council to support the development of community based renewable energy projects, subject to appropriate levels of environmental assessment and planning considerations. Policy CAF P9 Renewable Energy Technologies It is a policy of the Council to consider all emerging renewable energy technologies, such as hydrogen electrolysis, pumped storage and small scale anaerobic digestion and any other source of renewable energy technologies that are viable as a means of energy security, subject to the relevant level of necessary environment and ecological assessments. Objective CAF O26 Bio Energy It is an objective of the Council to support the development of bio energy and projects in suitable locations and subject to adequate assessment. The development of grid injection, where this is necessary for renewable energy input will also be supported. Objective CAF O27 Renewable Energy Production It is an objective of the Council to encourage and facilitate the production of energy from renewable sources, such as from bioenergy, solar, hydro, tidal, geothermal and wind energy, subject to appropriate levels of environmental assessment and planning considerations. Objective CAF O28 Assessment of Renewable Energy Projects It is an objective of the Council to encourage the development of wind energy, in accordance with Government policy and having regard to the principles and planning guidance set out in the Department of Housing, Planning and Local Government publications relating to Wind Energy Development and the DCCAE Code of Practice for Wind Energy Development in Ireland and any other relevant guidance, which may be issued in relation to sustainable energy provisions during the course of the Plan. Objective CAF O35 Community Based Energy Initiatives It is an objective of the Council to support community energy-based initiatives, subject to adequate assessment, to help achieve low carbon communities. Objective CAF O36 Geothermal Energy It is an objective of the Council to facilitate geothermal energy generating developments, both standalone and in conjunction with other renewable energy projects in suitable locations. Objective CAF O40 Community Renewable Energy It is an objective of the Council to support and strengthen sustainable local/community renewable energy networks, micro renewable generation, climate smart countryside projects and connections from such initiatives to the grid. The potential for sustainable local/community energy projects and micro generation to both mitigate climate change and to provide for local fuel need is also supported.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Mitigating measures including:
		Development Management Standards, including under 11.7 "Climate Action". **Variation No. 3 measures** From Amendment No. 27 of Chapter 3 Spatial Strategy c) Ensure that new development incorporates high levels of accessibility, providing safe and convenient connections for pedestrians, cyclists, and public transport users, where feasible, and contributing to a permeable and well-connected urban structure. d) Integrate the portion of land zoned Groody Valley Green Wedge into any future residential scheme, ensuring its protection, enhancement, and appropriate incorporation as part of the wider green infrastructure network. e) Require all development proposals to be accompanied by a Mobility Management Plan, Traffic and Transport Assessment, and Road Safety Audit, prepared in accordance with Chapter 3 of the DoECLG Spatial Planning and National Roads Guidelines, to support sustainable movement patterns and safeguard road safety and to assess cumulative impact of development in the area and incorporate measures to safeguard the continued capacity, safety and efficiency of the national road networks and associated junctions. g) Locate car parking underground or to the rear of buildings, with any necessary surface parking adequately screened, landscaped, and fully integrated into the site design in line with high-quality urban design and placemaking principles. From Amendment No.28 of Chapter 3 Spatial Strategy (h) Enhance the quality, connectivity, and usability of the public realm across Moyross by delivering safe, attractive, and inclusive streets, open spaces, and community amenities that support social interaction, active travel, local identity, and long-term neighbourhood regeneration. (i) Establish Moyross as a connected, walkable neighbourhood by prioritising active travel and public transport, reducing reliance on private vehicles, and ensuring that daily services and amenities are easily accessible. (i) Prioritise enhanced north-south and east-west permeability, including new crossings over the rail line alongside a legible urban network bringing together the northern, central and southern areas of Moyross and reconnecting the neighbourhood to TUS, Thomond Park, the Cratloe Road and the wider city From Amendment No. 30 of Chapter 3 Spatial Strategy Support the continued use and any potential future expansion of the Kilmallock Road Campus (formerly St. Enda's) as a key educational facility and promote the consideration of its reuse for enhanced education, training and sports-related projects. Facilitate the potential development of new sports infrastructure and associated facilities on the campus, ensuring the site's long-term role as a strategic centre for learning, community development and sporting activity. Support the provision of high-quality pedestrian and cycle connectivity through the site, facilitating safe and direct links between Banemore Road and Kilmallock Road. From Amendment No. 32 of Chapter 3 Spatial Strategy f) Any proposal shall require a Transport and Traffic Assessment and Road Safety Audit to assess cumulative impact of development in the area and incorporate measures to safeguard the continued capacity, safety and efficiency of the national road networks and associated junctions. g) The masterplan shall also address: the integration of the site with surrounding lands and communities; permeability, legibility and prioritisation of walking, cycling and public transport; appropriate phasing to ensure infrastructure and amenities are delivered concurrently with residential development; and a high standard of urban design, layout and place-making, consistent with national and local planning policy. From Amendment No. 33 of Chapter 3 Spatial Strategy d) A Transport and Traffic Assessment shall be undertaken to assess the impact of the proposed development and setting out mitigation measures, including the delivery by the developer of a continuous footpath to include active travel measures along the full Rossbrien Road site frontage and the provision of safe, accessible, and permeable pedestrian connections within the site. Amendment No. 74 Objective TF 01 - Local Transport Framework - It is an objective of the Council to: Prepare a local transport framework for the wider lands at Rosbrien (taking account of the Area Based Transport Assessment methodology or similar) in consultation with National Transport Authority, Transport Infrastructure Ireland and Iarnród Éireann to include the following; (i) appropriate provision of sustainable transport options to serve future residents of the area in consultation. (ii) Pedestrian and cycle linkages through the area and over the railway line towards Dooradoyle to provide greater connections to retail and community facilities.
Material Assets	• Failure to provide adequate and appropriate waste water treatment (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to adequately treat surface water run-off that is discharged to water bodies	Also refer to measures under other environmental components including Population and Human Health, Cultural Heritage, Soil, Water, Air, various Land Use and Phasing provisions. **Limerick Development Plan 2022-2028, as varied** Policy IN P1 Strategic Infrastructure It is a policy of the Council to: a) Secure investment in the necessary infrastructure (including digital technology, ICT, telecommunications networks, water services, surface water management, waste management, energy networks), which will allow Limerick to grow and realise its full potential. b) Fulfil Limerick's ambition as a contemporary City and County in which to live, work, invest and visit, with supporting infrastructure, whilst complying with the relevant EU Directives and national legislation, including the protection of the environment. Blue/Green Infrastructure Objective EH O12 Blue Green Infrastructure a) Promote a network of Green and Blue infrastructure throughout Limerick. b) Promote connecting corridors for the movement of species and encourage the retention and creation of features of biodiversity value, ecological corridors and networks that connect areas of high conservation value such as woodlands, hedgerows, earth banks, watercourses, wetlands and designated sites. In this regard, new infrastructural projects and linear developments in particular, will have to demonstrate at design stage, sufficient measures to assist in the conservation of and dispersal of species. Projects which would be detrimental to existing Blue – Green Infrastructure features will not be permitted. c) Ensure the integration and strengthening of green infrastructure into the preparation of Local Area Plans.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Mitigating measures including:
	(water services infrastructure and capacity ensures the mitigation of potential conflicts). • Failure to comply with drinking water regulations and serve new development with adequate drinking water (water services infrastructure and capacity ensures the mitigation of potential conflicts). • Increases in waste levels. • Potential impacts upon public assets and infrastructure. • Interactions between agriculture and soil, water, biodiversity and human health - including phosphorous and nitrogen deposition as a result of agricultural activities and the production of secondary inorganic particulate matter.	d) Where possible remove barriers to species movement, such as the removal of in-stream barriers to fish passage for example. Objective EH O13 Blue Green Infrastructure Strategy It is an objective of the Council to prepare and implement a Green and Blue Infrastructure Strategy for Limerick City and Environs. e) Seek to advance the use of an ecosystem services approach and ecosystem services valuation as a decision-making tool in plans and projects, subject to appropriate ecological assessment. Water Services Objective IN O5 Water Services It is an objective of the Council to: a) Support Irish Water in the provision of water and wastewater infrastructure and services in accordance with the Service Level Agreement, until such time as the Agreement is terminated. b) Collaborate with Irish Water in the protection of water supply sources to avoid water quality deterioration and reduce the level of treatment required in the production of drinking water, in accordance with Article 7(2) of the WFD. Protection and restoration of drinking water at the source can have co-benefits for biodiversity and climate change. c) Liaise with Irish Water during the lifetime of the Plan to secure investment in the pro-vision, extension and upgrading of the piped water distribution network and wastewater pipe network across Limerick City and County, to serve existing population and future population growth and sustain economic growth, in accordance with the requirements of the Core and Settlement Strategies. d) Collaborate with Irish Water to resolve the existing water services infrastructural constraints in Newcastle West – a Key Town designated by the RSES. e) Ensure that development proposals connecting to the public water and/or wastewater networks comply with Irish Water Standard Details and Codes of Practice. Where relevant ensure developments comply with the EPA Code of Practice for Domestic Waste Water Treatment Systems 2021. f) Require future developments to connect to public water services and wastewater if available to the site. Combined water and wastewater systems will not be permitted. Consent to connect to Irish Water assets will be requested as part of the planning application process. g) Have regard to Section 28 Guidelines – Draft Water Services Guidelines for Planning Authorities, DHPLG, 2018 and any subsequent guidelines when carrying out the forward planning and development management functions of the Planning Authority. Objective IN O6 Drinking Water Source Protection It is an objective of the Council to protect both ground and surface water sources, to avoid water quality deterioration and reduce the level of treatment required in the production of drinking water, in accordance with Article 7(2) of the Water Framework Directive. i. New developments which could pose an unacceptable risk to drinking water sources will not be permitted. ii. New development should not conflict with the protection guidelines set out in the Limerick Groundwater Protection Scheme and/ or Groundwater Source Protection Zone reports. Objective IN O8 Public Waste Water It is an objective of the Council to: a) Ensure adequate and appropriate wastewater infrastructure is available to cater for existing and proposed development, in collaboration with Irish Water, to avoid any deterioration in the quality of receiving waters and to ensure that discharge meets the requirements of the Water Framework Directive. b) Require all new developments to connect to public wastewater infrastructure, where available and to encourage existing developments that are in close proximity to a public sewer to connect to that sewer. These will be subject to a connection agreement with Irish Water and evidence of this agreement will be required as part of any planning application. c) Require all new development to provide separate foul and surface water drainage systems, to maximise the capacity of existing collection systems for foul water. d) Apply a presumption against any development that requires the provision of private wastewater treatment facilities (i.e. Developer Provided Infrastructure) other than single house systems and in very exceptional circumstances. Objective IN O10 Surface Water and SuDS It is an objective of the Council to: a) Ensure the separation of foul and surface water discharges in new developments through the provision of separate networks within application site boundaries. b) Work in conjunction with other public bodies towards a sustainable programme of improvement for riverbanks, back drains, etc. c) 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 National River Basin Management Plan for Ireland 2018-2021 (DHPLG) and the associated Programme of Measures and any subsequent River Basin Management Plan. d) Ensure adequate storm water infrastructure to accommodate the planned levels of growth within the Plan area and to ensure that appropriate flood management measures are implemented to protect property and infrastructure. e) Cater for the future developments through public and private driven initiatives where discharge capacity permits. f) Address the issue of disposal of surface water generated by existing development in the area, through improvements to surface water infrastructure, including for example attenuation ponds, the application of sustainable urban drainage techniques, or by minimising the amount of hard surfaced areas, or providing porous surfaces as the opportunity arises. g) 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. h) Require all planning applications to include surface-water design calculations to establish the suitability of drainage between the site and the outfall point and require all new developments to include SuDS, to control surface water outfall and protect water quality in accordance with the requirements of Chapter 11: Development Management Standards of the Plan. i) Promote SuDS and grey water recycling in developments and responsible use of water by the wider community, to reduce the demand for water supply. j) Require SuDS schemes to be designed to incorporate the four pillars of water quality, water quantity, biodiversity and amenity to the greatest extent possible within the constraints of a given site. k) Allow sufficient land take for SuDS when planning the site and consider the region as a whole, in association with adjoining lands and their requirements in designing SuDS. Developers may be required to set aside lands to cater for not only their own SuDS but also regional SuDS. l) Promote the provision of suitable Blue/Green Infrastructure (BGI) and Nature Based Solutions to the surface water disposal in new development, as a means to provide urban flood resilience. This approach capitalises on the potential of urban green spaces and natural water flows, subject to the other planning considerations such as amenity, maintenance, traffic safety, proper planning and sustainable development and environmental requirements.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Mitigating measures including:
		m) To prohibit the discharge of additional surface water to combined (foul and surface water) sewers in order to maximise the capacity of existing collection systems for foul water. n) Encourage green roofs for the following types of development: -Apartment developments; -Employment developments; -Retail developments; -Leisure facilities; -Education facilities. Traffic Objective TR O44 Traffic Management It is an objective of the Council to require the submission of Mobility Management Plans and Traffic and Transport Assessments in accordance with the requirements of Traffic and Transport Assessment Guidelines (2014), for developments with the potential to create significant additional demands on the traffic network by virtue of the nature of their activity, the number of employees, their location or a combination of these factors and for significant developments affecting the national and non-national road network. Waste Management Objective IN O15 Waste Management and the Circular Economy It is an objective of the Council to: a) Support innovative, smart solutions and processes, based on the principles of the circular economy to implement the Regional Waste Management Plan for the Southern Region 2015 – 2021 and any subsequent plan, including any targets contained therein. b) Collaborate with the Regional Waste Management Office and other agencies to implement the EU Action Plan for the Circular Economy – Closing the Loop, 2015, its successor the Circular Economy Action Plan: A New Circular Economy Action Plan for a Cleaner More Competitive Europe, 2020 and the Resource Opportunity-Waste Management Policy, DECLG, 2012 and any subsequent plans. c) Promote sustainable patterns of consumption and production in the areas of product design, production processes and waste management. d) Implement the provisions of the Waste Action Plan for a Circular Economy – Ireland's National Waste Policy 2020 - 2025, DECC, 2020 in the assessment of planning applications. e) Protect existing civic amenity sites and bring sites throughout Limerick and support the development of additional sites in accordance with the Southern Regional Waste Management Plan 2015 – 2021 and any subsequent plans. Objective IN O19 Construction and Demolition It is an objective of the Council to: a) Require construction Waste Management Plans to be submitted as part of planning applications, to address waste management on site during construction and mitigation measures to address waste generation, in accordance with the principles of the circular economy and the principles of prevention, renewal and recycle. b) Require a Refurbishment/Demolition Asbestos Survey (RDAS) with full details of disposal of the asbestos to be submitted with any planning application. The RDAS should be carried out in accordance with Section 8 of the Health and Safety Authority, Asbestos Guidelines (Practical Guidelines on ACM Management and Abatement) by a suitable qualified professional with expertise in asbestos disposal. Objective IN O21 Hazardous Waste and Contaminated Sites It is an objective of the Council to: a) Implement the EPA's National Hazardous Waste Management Plan (NHWMP) 2014-2020 and any subsequent plans. b) Collaborate and seek guidance from the Environmental Protection Agency (EPA), the Health and Safety Authority (HAS), Health Service Executive (HSE) and Southern Region Waste Management Office, on the technical requirements for clearance and redevelopment of any contaminated lands when dealing with planning applications at these locations. Development Management Standards, including under 11.8 "Transport and Infrastructure" and 11.10 "Environmental Infrastructure" From Amendment No. 42 of Chapter 8: Infrastructure d) Consider the provision of developer-led and bridging infrastructure at appropriate locations having regard to Circular NSP 01-2026 Developer Led Infrastructure (DLI) Initiative for Wastewater Services to support Housing Delivery and any subsequent revisions where the proposed development is subject to appropriate environmental assessment. Such a solution will only be considered where it is environmentally sustainable and would not affect the quality status of receiving waters. e) Support Uisce Éireann in the upgrade of Limerick Wastewater Treatment Plant, Corcanree pumpstation and the development of the Regional Bioresource Centre, in line with the appropriate and necessary environmental and ecological assessments, as required, to support both the existing and future growth and development of Limerick City into the future and to comply with the National Wastewater Sludge Management Plan.
Cultural Heritage	• Potential effects on protected and unknown archaeology and protected architecture arising from construction and operation activities.	**Limerick Development Plan 2022-2028, as varied** Policy EH P5 Protection of the Built Environment It is a policy of the Council to promote high standards for conserving and restoring the built environment and promote its value in improving living standards and its benefits to the economy. Objective EH O21 Commercial and Industrial Noise It is an objective of the Council to prevent members of the public being significantly adversely effected by environmental noise from commercial and industrial noise activities. Objective EH O22 Entertainment Noise It is an objective of the Council to manage entertainment noise from venues and music events, so as not to have an adverse effect on the public. Objective EH O35 Preservation of the Archaeological Heritage It is an objective of the Council to seek the preservation of all known sites and features of historical and archaeological interest. 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. The preferred option is preservation in situ, or at a minimum preservation by record. Objective EH O36 Preservation of unrecorded/newly discovered Archaeological Heritage It is an objective of the Council to protect and preserve the preservation in situ (or at a minimum by record) of all sites and features of historical and archaeological interest, discovered subsequent to the publication of the Record of Monuments and Places.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Mitigating measures including:
		Objective EH O38 Protection of the setting of Archaeological Monuments It is an objective of the Council to ensure that no development shall have a negative impact on the character or setting of an archaeological monument. Objective EH O39 Proper procedures during the planning process It is an objective of the Council to: a) Ensure early engagement at preplanning stage in undertaken with the Local Authority Archaeologist to promote the 'preservation in situ' of archaeological remains and settings in development. b) Adopt a policy of archaeological monitoring on developments where the scale and nature of such developments may, in the opinion of the Planning Authority, have a negative impact on previously unknown archaeological features/artefacts. c) Require the preparation of an Archaeological Heritage Assessment in cases where it is deemed that Archaeological Heritage would be affected by a proposed development (due to their location, size or nature). The report shall be prepared by a suitably qualified archaeologist on the archaeological implications, if any, of the proposed development either prior to a decision on a planning application or prior to commencement of development on site. Objective EH O40 Archaeological Monuments in Local Authority ownership/guardianship It is an objective of the Council to preserve and enhance as appropriate and as funding allows monuments vested in the Local Authority. Objective EH O42 Industrial Archaeology It is an objective of the Council to: a) Seek the preservation of buildings and infrastructure associated with former industrial sites; b) Ensure detailed recording of these remains; promote knowledge and interpretation of these sites among the general public; c) Support the work of the Interreg Atlantic Coast Area project, (MMIAH) The recovery and valorisation of Maritime Military and Industrial Heritage. Objective EH O44 Raise public awareness and encourage active participation It is an objective of the Council to generally raise public awareness of the archaeological and historic heritage and to assist and encourage active participation by the public, following consultation with National Monuments Service, in the conservation, consolidation and presentation of landmark sites, where this is appropriate and subject to available resources. Objective EH O45 Heritage Plan 2017-2030 It is an objective of the Council to support the archaeological objectives in the Heritage Plan. Objective EH O46 Increase access to Archaeological Monuments It is an objective of the Council to facilitate public access to National Monuments in State or Local Authority care. Objective EH O48 Work to Protected Structures It is an objective of the Council to: a) Protect structures included on the RPS from any works that would negatively impact their special character and appearance. b) Ensure that any development proposals to Protected Structures, their curtilage and setting, shall have regard to the 'Architectural Heritage Protection Guidelines for Planning Authorities' published by the Department of the Arts, Heritage and the Gaeltacht. c) Ensure that all works are carried out under the supervision of a qualified professional with specialised conservation expertise. d) Ensure that any development, modification, alteration, or extension affecting a Protected Structure and/or its setting, is sensitively sited and designed and is appropriate in terms of the proposed scale, mass, height, density, layout and materials. e) Ensure that the form and structural integrity of the Protected Structure is retained in any redevelopment and that the relationship between the Protected Structure and any complex of adjoining buildings, designed landscape features, or views and vistas from within the grounds of the structure are respected. f) Respect the special interest of the interior, including its plan form, hierarchy of spaces, architectural detail, fixtures and fittings and materials. g) Support the re-introduction of traditional features on protected structures where there is evidence that such features (e.g. window styles, finishes etc.) previously existed. h) Ensure that new and adapted uses are compatible with the character and special interest of the Protected Structure. i) Protect the curtilage of protected structures and to refuse planning permission for inappropriate development within the curtilage and attendant grounds, that would adversely impact on the special character of the Protected Structure. j) Protect and retain important elements of built heritage including historic gardens, stone walls, entrance gates and piers and any other associated curtilage features. k) Ensure historic landscapes and gardens associated with Protected Structures are protected from inappropriate development. Objective EH O49 Energy Efficiency of Protected Structures It is an objective of the Council to have regard to the Department of Environment, Heritage and Local Government's publication on Energy Efficiency in Traditional Buildings (2010) and the Irish Standard IS EN 16883:2017 Conservation of Cultural Heritage – Guidelines for Improving the Energy Performance of Historic Buildings (2017) and any future advisory documents in assessing proposed works on Protected Structures. Objective EH O50 National Inventory of Architectural Heritage (NIAH) It is an objective of the Council to review and update the RPS on foot of any Ministerial recommendations including the NIAH and any future updates. The Ministerial Recommendations, made under Section 53 of the Planning Act, will be taken into account when the Planning Authority is considering proposals for development that would affect the historic or architectural interest of these structures. Objective EH O51 Architectural Conservation Areas a) Protect the character and special interest of an area, which has been designated as an Architectural Conservation Area (ACA) as set out in Volume 3. b) Ensure that all development proposals within an ACA be appropriate to the character of the area having regard to the Character briefs for each area. c) Ensure that any new development or alteration of a building within an ACA or immediately adjoining an ACA, is appropriate in terms of the proposed design, including scale, height, mass, density, building lines and materials.

Topic	Potentially Significant Adverse Effect, if Unmitigated	Mitigating measures including:
		d) Seek a high quality, sensitive design for any new development(s) that are complementary and/or sympathetic to their context and scale, whilst simultaneously encouraging contemporary design which is in harmony with the area. Direction can also be taken from using traditional forms that are then expressed in a contemporary manner, rather than a replica of a historic building style. e) Seek the retention of all features that contribute to the character of an ACA, including boundary walls, railings, soft landscaping, traditional paving and street furniture. f) Seek to safeguard the Georgian heritage of Limerick. Objective EH O52 Shopfronts within an ACA It is an objective of the Council to: a) Ensure that all original and traditional shopfronts, which contribute positively to the appearance and character of a streetscape, within an ACA are retained and restored. b) Ensure that new shopfronts are well designed, through the sympathetic use of scale, proportion and materials. **Variation No. 3 measures** From Amendment No. 31 of Chapter 3 Spatial Strategy Support the sustainable development of Barry's Field for residential purposes and associated community development, including the delivery of high-quality playing pitches. Ensure that any future residential development positively interacts with Carew Park in order to promote permeability, natural surveillance, and a positive interface with the residential and recreational area. All proposals shall give due consideration to the historic landscape character of the site, with regard to the protection of key views and the avoidance of adverse visual impacts on the setting of Southill House. Higher residential densities will be considered at this location in recognition of its strategic location, supporting compact growth and maximising the site's integration with existing and future community and leisure amenities. From Amendment No. 32 of Chapter 3 Spatial Strategy f) A Design Statement shall be prepared demonstrating how Protected Structure RPS 1639 (Hurley's House), including its curtilage and setting, is to be integrated into the overall development, ensuring that the masterplan appropriately responds to and safeguards the building's special interest and setting. From Amendment No. 33 of Chapter 3 Spatial Strategy e) The masterplan shall provide for high-quality public open space and recreational facilities and shall incorporate design measures that integrate with and complement the adjoining lands zoned for Open Space and Recreation, respond sensitively to any archaeological features on site, and deliver a coherent, high-quality environment. Sustainable Urban Drainage Systems (SuDS) shall be fully integrated into the layout and design of the development, contributing to effective surface water management, enhanced biodiversity, climate resilience and placemaking.
Landscape	• Occurrence of adverse visual impacts and conflicts with the appropriate protection of designations relating to the landscape.	Also refer to measures under Biodiversity and Flora and Fauna and Cultural Heritage. **Limerick Development Plan 2022-2028, as varied** Policy EH P8 Landscape Character Areas It is a policy of the Council to promote the distinctiveness and where necessary safeguard the sensitivity of Limerick's landscape types, through the landscape characterisation process in accordance with the 'Draft Guidelines for Landscape and Landscape Assessment' (2000) as issued by the Department of Environment and Local Government, in accordance with the European Landscape Convention (Florence Convention) and with 'A National Landscape Strategy for Ireland – 2015- 2025'. The Council shall implement any relevant recommendations contained in the Department of Arts, Heritage and the Gaeltacht's National Landscape Strategy for Ireland, 2015 – 2025. LCA 07 Southern Uplands a) Where housing is permitted, encourage appropriate scale and high-quality design for this landscape area, combined with sensitive site location and landscaping. Respect traditional scale particularly on elevated or locally prominent sites. b) Strongly encourage use of landscaping plans, taking into account existing topography and landforms, in efforts to blend developments into the surrounding landscape. Retention of existing landscape features and their integration and use in helping development to blend into the landscape, is of great importance in any upland area. c) Not permit further forestry developments that are subject to planning permissions over 280m above sea level. d) Encourage development within existing settlements. e) This area is open to consideration for wind energy development. f) Where wind farms are permitted, a random spacing with random layout shall be considered in proposed wind farm developments, to limit the visual and landscape impact. LCA O10 Western Uplands (Western Hills/Barnagh Gap/Sugar Hill) a) Where housing is permitted, encourage appropriate scale and high-quality design for this landscape area, combined with sensitive site location and landscaping. Respect traditional scale particularly on elevated or locally prominent sites. b) Discourage the selection of locally prominent sites. c) Encourage the use of local landform and landscape features, combined with sensitive landscaping in order to screen development. d) Ensure that forestry that is subject to planning permission, is confined to below 280m above sea level to protect intact remnants of peatland habitat. e) This area is open to consideration for wind energy development. f) Where wind farm development is permitted, a random spacing layout shall be considered to limit the visual and landscape impact. **Variation No. 3 measures** From Amendment No. 27 of Chapter 3 Spatial Strategy d) Integrate the portion of land zoned Groody Valley Green Wedge into any future residential scheme, ensuring its protection, enhancement, and appropriate incorporation as part of the wider green infrastructure network. f) Ensure that building heights and finishes respect the established character of the surrounding area.

Section 3 Environmental Report and Submissions/ Observations

3.1 Introduction

This section details how both the Environmental Report and submissions and observations made to Limerick City and County Council on the Environmental Report and SEA process have been taken into account during the preparation of the Variation and the SEA.

3.2 SEA Scoping Notices and Submissions

As part of the SEA scoping process for preparation of the Variation, environmental authorities[2] were notified that a submission or observation in relation to the scope and level of detail of the information to be included in the Environmental Report could be made to the Council.

Detailed submissions were received from the following:

- Environmental Protection Agency; and
- Clare County Council.

The issues raised in this submission and how these issues have been taken into account during preparation of the Variation and the SEA are provided on Table 3.1 below. Taking into account both submissions, environmental considerations were integrated into the Variation, including through the selection of Plan provisions identified on Table 2.1.

[2] The following authorities were notified: Environmental Protection Agency; Minister for Climate, Energy and the Environment; Minister for Housing, Local Government and Heritage; Minister for Agriculture, Food and the Marine; Clare County Council; Cork County Council; Kerry County Council; and Tipperary County Council.

Table 3.1 Taking into account SEA Scoping Submissions

No.	Submission text	Response
1	**Submission from Environmental Protection Agency**	
A	We acknowledge your notice, dated 20th February 2026 in relation to the Proposed Variation No. 3 to the Limerick Development Plan 2022-2028 and associated Strategic Environmental Assessment (SEA) screening. In our role as an SEA environmental authority under the SEA Regulations, we focus on promoting the full and transparent integration of the findings of the Environmental Assessment into plans and programmes and advocating that the key environmental challenges for Ireland are addressed as relevant and appropriate to the plan or programme. Our functions do not include approving or enforcing SEAs or plans or programmes.	Noted.
B	As a priority, we focus our efforts on reviewing and commenting on key sector plans. For land use plans at county and local level, we provide a 'self-service approach' via our guidance document 'SEA of Local Authority Land Use Plans – EPA Recommendations and Resources'. This document is updated regularly and sets out our key recommendations for integrating environmental considerations into Local Authority land use plans. In finalising your SEA screening determination, we suggest that you take this guidance document into account and incorporate the relevant recommendations as relevant and appropriate to the plan or programme.	The 'SEA of Local Authority Land Use Plans – EPA Recommendations and Resources' document has been considered in the preparation of the SEA Scoping Report and will be kept on file for reference throughout the SEA process.
C	SEA Determination If a proposed SEA determination hasn't been made regarding the plan or programme, you should determine whether implementing the plan or programme would be likely to have significant effects on the environment. The SEA Regulations, Schedule 2 (S.I. No. 456 of 2025) or Schedule 1 (S.I. No. 435 of 2004, as amended), as appropriate, set out the 'Criteria for determining whether a Plan is likely to have significant effects on the environment' to use to determine whether the plan or programme would be likely to have significant effects on the environment. Guidance on the SEA process, including an SEA pack and checklist, is available on our website at: https://www.epa.ie/our-services/monitoring--assessment/assessment/strategic-environmental-assessment/sea-resources-and-guidance-/ . We recommend that you take the available guidance into account in making your SEA Screening Determination and incorporate the relevant recommendations as relevant and appropriate to the plan or programme. EPA SEA Screening Guidance Our Good Practice Guidance for Strategic Environmental Assessment (SEA) Screening (EPA, 2021) provides specific stand-alone guidance to assist plan or programme makers and SEA practitioners. It focuses primarily on plans/programmes in the non-land use sector in Ireland and includes an elaboration of the steps needed for screening, the legislative landscape underpinning SEA screening, and step-by-step process and templates to assist in preparing the required documentation.	SEA Scoping was undertaking following the making of an SEA Determination, in compliance with the requirements of the Regulations and taking into account available guidance including the EPA's screening guidance.
D	Strategic Environmental Assessment: Guidelines for Planning Authorities The Strategic Environmental Assessment: Guidelines for Regional Assemblies and Planning Authorities (DHLGH, 2022) provides advice on carrying out SEA in the land-use planning sector. These plans comprise regional, county and local plans, including Regional Spatial and Economic Strategies, County or City Development Plans, variations of Development Plans, Local Area Plans and Planning Schemes for Strategic Development Zones. The Guidelines replace previous guidance for Regional Authorities and Planning Authorities published in 2004.	The cited guidelines were taken into account throughout the SEA process.
E	Alignment with the National Planning Framework First Revision National Policy Objective 1 of the National Planning Framework (NPF) First Revision requires that all plans, projects and activities requiring consent arising from the revised NPF are subject to the relevant environmental assessment requirements including SEA, EIA, SFRA and AA as appropriate. Where existing zoning in the County Development Plan (CDP) does not accommodate the proposed increase in housing targets, as set out in the revised NPF for the county and has not been previously assessed under SEA, AA, and SFRA at an appropriate level, then consideration should be given to these assessments for additional zoning and/or rezoning of lands that have potential for significant environmental effects. In particular, we highlight potential for significant negative effects on population and human health, water quality (see Water Action Plan) and flood risk, biodiversity, flora and fauna, landscape and soil. In addition, climatic factors should be considered with reference to the most up to date Climate Action Plan and relevant Flood Risk Management Plan. The availability and capacity of existing critical infrastructure including wastewater and water supply should be considered in the context of the likely population increase	The Variation aligns with the National Planning Framework First Revision and the SEA undertaken for the Variation has taken account of the National Planning Framework SEA outputs.

No.	Submission text	Response
	associated with the prosed housing target being accommodated. You're also referred to the Environmental Monitoring set out in Table 7.1 of the revised NPF's SEA Statement. This monitoring should be reflected, where relevant and appropriate, in the context of future, environmental monitoring and related reporting associated with the revised CDP implementation.	
F	Sustainable Development In proposing and in implementing the plan or programme, you should ensure that the plan or programme is consistent with the need for proper planning and sustainable development. Adequate and appropriate critical service infrastructure should be in place, or required to be put in place, to service any development proposed and authorised during the lifetime of the plan or programme. In considering the plan or programme, you should take into account the need to align with national commitments on climate change mitigation and adaptation, as well as incorporating any relevant recommendations in sectoral, regional and local climate adaptation plans. You should also ensure that the plan or programme aligns with any key relevant higher-level plans and programmes and is consistent with the relevant objectives and policy commitments of the National Planning Framework and the relevant Regional Spatial and Economic Strategy. The Plan should also align with the OPW's 'The Planning System and Flood Risk Management Guidelines for Planning Authorities' (OPW, 2009), as relevant and appropriate, in the zoning and development of lands.	The Variation will help to facilitate sustainable development, including the timely provision of adequate and appropriate critical service infrastructure. The Variation has taken into account the need to align with national commitments on climate change mitigation and adaptation. The Plan as varied aligns with higher-level plans and programmes and is consistent with the relevant objectives and policy commitments of the National Planning Framework and the relevant Regional Spatial and Economic Strategy. The Variation has been subject to SFRA and complies with the Flood Risk Management Guidelines.
G	Ireland's State of the Environment Report 2024 In October 2024, the EPA published the latest iteration of our 4-yearly State of the Environment Report. This report should be considered, and relevant aspects integrated as appropriate, in implementing the Plan outputs/ recommendations. It is available at: https://www.epa.ie/our-services/monitoring--assessment/assessment/state-of-environment-report-/. Available Guidance & Resources Our website contains various SEA resources and guidance, including: - SEA process guidance and checklists; - Inventory of spatial datasets relevant to SEA; - Topic and sector specific SEA guidance (including SEA and Integration Guidance (EPA, 2025), Good practice note on Cumulative Effects Assessment (EPA, 2020), Developing and Assessing Alternatives in SEA (EPA, 2015), and Integrated Biodiversity Impact Assessment (EPA, 2012)). You can access these guidance notes and other resources at: https://www.epa.ie/our-services/monitoring--assessment/assessment/strategic-environmental-assessment/sea-topic-and-sector-specific-guidance-/ EPA SEA WebGIS Tool Our SEA WebGIS Tool has been updated recently and is now available at https://gis.epa.ie/EPAMaps/SEA. It allows an indicative report on key aspects of the environment in a specific geographic area to be produced. It is intended to assist public authorities in SEA screening and scoping exercises. Catchments.ie Our https://www.catchments.ie/maps/ website provides a single point of access to water quality and catchment data from the National WFD monitoring programme.	The cited guidelines/guidance and resources were taken into account throughout the SEA processes.
H	Future amendments to the plan or programme Where changes to the plan or programme are made prior to finalisation, or where modifications to the plan or programme are proposed following its adoption, these should be screened for potential for likely significant effects in accordance with the criteria set out in Schedule 2 (S.I. No. 456 of 2025) or Schedule 1 (S.I. No. 435 of 2004, as amended) of the SEA Regulations, as appropriate.	All amendments to the Variation were considered with respect to the cited legislative requirements.
I	Appropriate Assessment You should ensure that the plan or programme complies with the requirements of the Habitats Directive where relevant. Where an Appropriate Assessment is required, the key findings and recommendations should be incorporated into the SEA and the plan or programme. EPA AA GeoTool Our AA GeoTool application has been developed in partnership with the National Parks and Wildlife Service. It allows users to a select a location, specify a search area and gather available information for each European Site within the area. It is available at: https://gis.epa.ie/EPAMaps/AAGeoTool .	Screening for Appropriate Assessment (AA) was undertaken for the Variation and it was determined that Stage 2 AA was not required.
J	Environmental Authorities Under the SEA Regulations, prior to making your SEA determination you should consult with: • Environmental Protection Agency; • Minister for Housing, Local Government and Heritage, • Minister for Climate, Energy and the Environment; and,	Notice has been given to relevant environmental authorities as part of the SEA scoping process.

No.	Submission text	Response
	• Minister for Agriculture, Food, and the Marine. For land use plans covered under S.I. No. 456 of 2025, you should also consult with: • any adjoining planning authority whose area is contiguous to the area of a planning authority which prepared a draft plan, proposed variation or local area plan.	
K	SEA Determination As soon as practicable after making your determination as to whether SEA is required or not, you should make a copy of your decision, including, if appropriate, the reasons for not requiring an environmental assessment, available for public inspection in your offices and on your website. You should also send a copy of your determination to the relevant environmental authorities consulted.	The SEA determinations and associated documentation were made available as required.
L	If you have any queries or need further information in relation to this submission, please contact me directly. I would be grateful if you could send an email confirming receipt of this submission to: sea@epa.ie.	Noted.
2	**Submission from Department of Housing, Local Government and Heritage**	
A	As you will be aware Clare County Council are also in the process of preparing a Variation to the Clare County Development Plan 2023-2029 to accelerate housing delivery and give effect to Ministerial Guidelines published in accordance with Section 28 of the Planning and Development Act 2000 (as amended). In this regard the proposed Variation will provide additional zoned land suitable for residential use which I note also forms part of the emerging content of the proposed Variation to the Limerick Development Plan. As outlined in your Screening for SEA Determination there is a potential for cumulative effects to arise with regards to the implementation of the Variation in combination with other plans or programmes such as the Development Plan and the Regional Spatial and Economic Strategy. In this regard, I would draw your attention to the draft proposed Variation as published on the Clare County Council website today for consultation and in particular the additional zoning for residential development within the settlements of; • Ballycannon North • Parteen • Athlunkard • Ardnacrusha to a lesser extent. These settlements and the lands which are the subject of the proposed Variation add an additional quantum of lands to those already zoned for development in the Clare County Development Plan 2023-2029 and therefore represent a risk of cumulative and in-combination effects in terms of the following environmental effects; • Human health and water quality • Human health and air quality • Human health and flood risk • Ecology and water quality This is in the context of the proximity to Limerick City and therefore the potential for cumulative and in-combination effects to arise given the settlements are upstream of the River Shannon, in proximity to the urban footprint, requiring services in terms of water and wastewater treatment, are affected by climate change and impacted by flood risk together with the potential for impacts on traffic and associated infrastructure which can further impact on air quality and therefore human health. It is recommended that the content of the draft proposed Variation as published today (March 6th), and in particular the findings of the Environmental Assessments prepared as part of the proposed Variation to the Clare County Development Plan 2023-2029 are taken into consideration by Limerick City and County Council in preparing the draft SEA Environmental Report together with the Appropriate Assessment.	The preparation of the Variation and the associated SEA process have taken into account relationships with other plans and programmes, including land use plans in force and emerging in the administrative area of Limerick City and County Council (including the overarching Limerick Development Plan 2022-2028) and in other adjoining planning authorities (including development plans for Local Authorities in: Cork; Tipperary; Clare; and Kerry; and local plans for settlements). The cited cumulative and in-combination effects were taken into account by the SEA.

3.3 Submissions on the Environmental Report for the Proposed Variation

Various submissions were made on the Proposed Variation, Proposed Material Alterations and/or associated environmental assessment documents, including the SEA Environmental Report and AA/SFRA documents, while these documents were on public display.

Submissions on the SFRA resulted in updates being made to the SFRA recommendations for integration into the Variation and updates to the SFRA report. Updates to the SFRA report included:

- Inclusion of Justification Tests at a new subsection 2.4 of the report, "Justification Tests";
- Inclusion of a new subsection 2.3 "Sustainable Drainage Systems and Surface Water Guidance and Strategy";
- New text on the absence of Flood Zones A and B at sites U-34 and Z-23.

For further information on how submissions were considered, refer to the Mayor's Report on submissions received on the Proposed Variation and associated documents and the Mayor's Report on submissions received on the Proposed Material Alterations and associated documentation – both available at https://www.limerick.ie/

All parts of the Variation-preparation process were informed by the SEA, AA and SFRA processes. The mitigation integrated into the final, adopted Plan includes that identified at Table 2.1 of this report.

3.4 SEA documents including SEA Environmental Report

The Proposed Variation and accompanying documents (including SEA Environmental Report and AA and SFRA documents) were placed on public display, having integrated various recommendations arising from the SEA, AA and SFRA processes. Responses to submissions made during the public display of the Proposed Variation and associated SEA, AA and SFRA documents were integrated into a Mayor's Report and considered by Limerick City and County Council.

A number of material alterations were proposed after public display of the Proposed Variation. The Proposed Material Alterations were subject to Screening for SEA and Screening for AA.

On making the Variation, the Environmental Report that had been placed on public display alongside the Proposed Variation was updated to become a final Environmental Report that is consistent with the Variation as made, taking into account all changes that were made to the original Proposed Variation that was placed on public display.

Section 4 Summary of Alternatives considered

4.1 Introduction

The SEA Directive requires that reasonable alternatives (taking into account the objectives and the geographical scope of the plan or programme, or variation to these) are identified, described and evaluated for their likely significant effects on the environment. Summaries of the alternatives for the Variation and their assessment are provided below.

4.2 Limitations in Available Alternatives

The alternatives available for the Variation are significantly limited by the provisions of higher-level planning objectives, including those of Ministerial Guidelines, the Revised National Planning Framework, the Regional Spatial and Economic Strategy for the Southern Region and the existing Development Plan which set out various requirements for the content of the Variation. Notwithstanding these higher-level policy constraints and the limited scope of the Variation, alternatives to the land use zoning approach are identified and assessed.

4.3 Alternatives Description and Assessment Summary

Two alternatives (with associated components) for the approach to land use zoning for Variation No. 3 were identified and assessed:

Land Use Zoning Approach Alternative 1: "More Compact Development, More Transport Orientated, More Infrastructure-Led"

Under this Alternative, Limerick would be facilitated in meeting the revised population targets, resulting in balanced, orderly development and implementation of the varied Core Strategy.

The approach under this alternative would allow for capacity/delivery with respect to existing and planned infrastructure and services to be integrated into the Plan as varied to the highest degree.

The infrastructure required to be in place to achieve the growth targets is largely already in place or planned under this alternative.

The development of Limerick City would be more compact and sustainable under this scenario and would better support its longer-term viability. A higher number of residential units, in comparison with Alternative 2, would be expected to take place within the existing built-up footprint on brownfield, infill and under-utilised sites at appropriate densities, with a greater focus on use of consolidation and regeneration sites, with potential for wider regeneration benefits to central areas, including housing provision. Regeneration, reuse and redevelopment of more central and brownfield and infill lands and optimising the use of vacant, derelict, and underutilised sites and buildings would be more likely to be achieved. Giving a strong preference to lands that have both greater capacity to satisfy the principles of active travel and a more realistic opportunity of being developed over the lifetime of the Plan, would provide for the proper planning and sustainable development of Limerick City as envisaged by the wider planning framework to a greater degree.

There would be greater potential for transport orientated development, including proximate development patterns linked by active travel infrastructure and public transport. Associated benefits and improvements to the public realm and appearance of the built environment, including liveability and quality of life improvements, would be more likely.

This Alternative would make the greatest contribution towards the protection and management of the environment by facilitating development of lands (including those within the existing built-up footprint of Limerick City, both city centre and suburbs) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services, thereby helping to avoid the need to develop more sensitive, less well-serviced lands elsewhere in Limerick City and beyond. This Alternative would be considered the most effective out of both alternatives considered in the delivery of a sustainable, low carbon and climate resilient future for Limerick.

The approach under Alternative 1 would benefit the protection of various environmental components. Although potentially adverse effects associated with land use development would exist, they would be mitigated to a significant degree. Less residual environmental effects would result.

Under this alternative there would be:

- More optimum use of land and resources, with positive role for addressing climate change, such as potential for reduced carbon heavy travel patterns.
- Greater potential for modal shift to sustainable travel such as walking, cycling and public transport, with resultant benefits for climate resilience.
- Use of already serviced lands within the existing built-up footprint of Limerick City, both city centre and suburbs could lead to potential reduced costs for delivery of new supporting infrastructure.
- Creation of more liveable built environments, with greater accessibility to services and amenities for local communities.

Land Use Zoning Approach Alternative 2: "Less Compact Development, Less Transport Orientated, Less Infrastructure-Led"

Under this Alternative, Limerick would be facilitated in meeting the revised population targets, resulting in balanced, orderly development and implementation of the varied Core Strategy.

The approach under this alternative would not allow for capacity/delivery with respect to existing and planned infrastructure and services considerations to be integrated into the Plan as varied to the highest degree.

Additional significant infrastructure would be required to accommodate sporadic/outer fringe development, more than would be required for Alternative 1 'More Compact Development, More Transport Orientated, More Infrastructure-Led'.

The development of Limerick City would be less compact and less sustainable under this scenario and would not optimally support its longer-term viability. A lower number of residential units, in comparison with Alternative 1, would be expected to take place within the existing built-up footprint on brownfield, infill and under-utilised sites at appropriate densities. Under this alternative there would be potential for greater proportion of housing to be delivered outside of the built-up areas, including on urban fringe and outer areas, creating unsustainable travel patterns with a greater reliance on the private car. Giving less of a preference to lands that have both greater capacity to satisfy the principles of active travel and a more realistic opportunity of being developed over the lifetime of the Plan, would provide for the proper planning and sustainable development of Limerick City as envisaged by the wider planning framework to a lesser degree.

There would be greater potential for negative impacts on the vitality and viability of built-up areas, due to under use of infill sites. This alternative would be likely to result in increased outer fringe development, that would be more difficult to serve with active travel infrastructure and public transport.

This Alternative would make less of a contribution towards the protection and management of the environment by facilitating development of lands (including those within the existing

built-up footprint of Limerick City, both city centre and suburbs) that have relatively low levels of environmental sensitivities and are served (or can be more easily served) by infrastructure and services. Development of more sensitive, less well-serviced lands in Limerick City would be provided for. This Alternative would be considered the least effective out of both Alternatives considered in the delivery of a sustainable, low carbon and climate resilient future for Limerick City.

The approach under Alternative 2 would benefit the protection of various environmental components to a lesser degree. Although potentially adverse effects associated with land use development would exist, they would be mitigated to in many cases; however, more residual environmental effects would result.

Under this alternative there would be:

- An increase in car dependency and associated carbon heavy travel patterns, which would undermine efforts aimed at securing climate resilience.
- Increased peripheral pattern of residential development with potential for self-contained and disconnected built environments.
- Reduced potential for modal shift to sustainable travel options such as walking, cycling and public transport.
- Potential for increased costs associated with the delivery on new supporting infrastructure (roads, footpaths etc.) in more peripheral areas.
- Increased costs for the delivery of necessary supporting infrastructure for a higher level of urban fringe and outer areas.

The selected land use zoning approach for the Variation is Alternative 1. This compact development approach performed more favourably across multiple Strategic Environmental Objectives, including those relating to climate, human health, material assets and landscape. This approach would facilitate Limerick in meeting the revised population targets and would enable the rapid activation of available and housing delivery in the interests of providing housing for people.

4.4 Reasons for Choosing the Selected Alternatives in light of Other Reasonable Alternatives Considered

The selected alternative for the Variation that emerged from the planning/SEA process is indicated above.

This alternative has been integrated into the Variation as made having regard to both:

1. The environmental effects which were identified by the SEA and are detailed above; and
2. Planning – including social and economic – effects that also were considered.

Section 5 Monitoring Measures

5.1 Introduction

The SEA Directive requires that the significant environmental effects of the implementation of plans and programmes are monitored. This section details the measures which will be used in order to monitor the likely significant effects of implementing the Variation. Monitoring will be undertaken as part of reporting on the Development Plan (to which the Variation has been made) monitoring programme.

Monitoring can both demonstrate the positive effects facilitated by the Variation and can enable, at an early stage, the identification of unforeseen adverse effects and the undertaking of appropriate remedial action. Monitoring will enable the early identification of any unforeseen adverse environmental effects arising from implementation of the Variation and will facilitate the timely undertaking of remedial action where required.

The occurrence of significant adverse environmental effects not predicted and mitigated by this assessment, which are directly attributable to the implementation of the Variation, would necessitate consideration of these effects in the context of the Variation and potential remediation action(s) and/or review of part(s) of the Variation.

5.2 Indicators and Targets

Monitoring is based around indicators which allow quantitative measures of trends and progress over time relating to the Strategic Environmental Objectives identified in the SEA Environmental Report and used in the evaluation. Each indicator to be monitored is accompanied by the target(s) which were identified with regard to the relevant strategic actions. The monitoring measures identified below as part of the Variation SEA are consistent with the measures that were identified by the Limerick Development Plan 2022-2028 SEA. This consistency across the hierarchy of land use plans will improve the efficiency and effectiveness of future monitoring.

Table 5.1 overleaf shows the indicators and targets which have been selected for monitoring the likely significant environmental effects of implementing the Variation, if unmitigated. Monitoring is an ongoing process and the programme allows for flexibility and the further refinement of indicators and targets. The Monitoring Programme may be updated to deal with specific environmental issues – including unforeseen effects – as they arise.

5.3 Sources

The Variation forms part of the wider land use planning framework comprising a hierarchy of policies, plans, programmes, etc. This wider framework, including the National Planning Framework, Southern RSES, and Limerick Development Plan is subject to its own SEA (and associated monitoring) requirements. Individual projects will be subject to their own monitoring requirements as relevant.

In implementing the Monitoring Programme, the Council will take into account this hierarchy of planning and environmental monitoring.

Sources for indicators may include existing monitoring databases (including those maintained by planning authorities and national/regional government departments and agencies) and the output of lower-tier environmental assessment and decision making (including a review of project approvals granted and associated documents and the output of any EIA monitoring programmes).

Internal monitoring of the environmental effects of grants of permission in the Council would provide monitoring of certain indicators on a *grant of permission*[3] basis. Where significant adverse effects as a result of the development to be permitted are identified, such effects could be identified, recorded and used to inform monitoring evaluation.

[3] The likely significant effects of development proposals on environmental sensitivities are further determined during the development management process. Documenting any identified effects as a result of a development to be permitted can help to fulfill monitoring requirements.

5.4 Reporting

Reporting will be undertaken as part of reporting on the Development Plan monitoring programme.

A stand-alone Monitoring Report on the significant environmental effects of implementing the Plan as varied will be prepared in advance of the beginning of the review of the Development Plan. This report should address the indicators set out on Table 5.1.

The results of monitoring will directly inform future statutory reviews and variations of the Development Plan, ensuring an adaptive and evidence-based approach to environmental management.

The Council is responsible for the ongoing review of indicators and targets, collating existing relevant monitored data, the preparation of monitoring evaluation report(s), the publication of these reports and, if necessary, the carrying out of remedial action.

Table 5.1 Indicators, Targets, Sources and Remedial Action

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action[4]
Biodiversity, Flora and Fauna	**BFF**	• Condition of European sites	• Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species • Implement and review, as relevant, the Limerick Biodiversity Plan 2025-2030 • Confirmation of compliance with Plan provisions relating to the protection of European Sites and sustaining resources	• DHLGH report of the implementation of the measures contained in the Habitats Directive - as required by Article 17 of the Directive (every 6 years) • DHLGH National Birds Directive Monitoring Report for the under Article 12 (every 6 years) • Internal review of local land use plans, e.g. framework plans. • Internal review of development management / grants of permission	• Where condition of European sites is found to be deteriorating this will be investigated with the Regional Assembly and the DHLGH to establish if the pressures are related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance.
		• Number of spatial plans that have included ecosystem services content, mapping and policy to protect ecosystem services when their relevant plans are either revised or drafted	• Require all local level land use plans to include ecosystem services and green/blue infrastructure provisions and as a minimum, to have regard to the required targets in relation to the conservation of European sites, other nature conservation sites, ecological networks, and protected species • Implement and review, as relevant, the Limerick Biodiversity Plan 2025-2030	• Internal review of local land use plans, e.g. framework plans.	• Review internal systems
		• SEAs and AAs as relevant for new Council policies, plans, programmes etc. under the Development Plan	• Screen for and/or undertake SEA and AA as relevant for new Council policies, plans, programmes etc. under the Development Plan	• Internal review of preparation of new Council policies, plans, programmes etc. under the Development Plan	• Review internal systems
		• Status of water bodies	• Included under Water below	• Included under Water below	• Included under Water below
		• Compliance of planning permissions with Plan measures providing for the protection of Biodiversity and flora and fauna – see Chapter 6 "Environment, Heritage, Landscape and Green Infrastructure"	• For planning permission to be only granted when applications demonstrate that they comply with all Plan measures providing for the protection of biodiversity and flora and fauna – see Chapter 6 "Environment, Heritage, Landscape and Green Infrastructure"	• Internal review of development management / of grants of permission[5]	• Review internal systems
Population and Human Health	**PHH**	• Implementation of Plan measures relating to the promotion of economic growth as provided for by Chapter 5 "A Strong Economy"	• Progress in successfully implementing Plan measures relating to the promotion of economic growth as provided for by Chapter 5 "A Strong Economy"	• Internal review of progress on implementing Plan objectives	• Review internal systems • Consultations with DCEE
		• Number of spatial concentrations of health problems arising from environmental factors resulting from development permitted under the Plan	• No spatial concentrations of health problems arising from environmental factors as a result of implementing the Plan	• Review of published information from the Health Service Executive and EPA • Internal consultations with the	• Consultations with the Health Service Executive and EPA

[4] Where remedial action is required, consultations with government agencies (e.g. DCEE, DT, EPA, HSE, NPWS, Regional Assembly, Uisce Éireann) may be undertaken in order to confirm causes of any identified changes in the environment and in order to develop appropriate responses.

[5] Including confirmation with development management that the following impacts have been considered and including use of monitoring data, where available: biodiversity/habitat loss; nitrogen deposition impacts on Natura 2000 sites; recreational disturbance resulting from implementation of tourism and recreation policies and objectives particularly in riparian areas; biodiversity enhancement; and disturbance /visitor pressure impacts of recreation, amenity and tourism development.

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action[4]
				Council's Environment Department	
		• Proportion of people reporting regular cycling / walking to school and work above previous CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above previous CSO figures • Progress in successfully implementing Plan measures relating to active travel	• CSO data • Internal review of progress on implementing Plan objectives	• Where proportion of population shows increase in private car use above previous CSO figures, the Council will coordinate with the Regional Assembly, the DHLGH, DCEE and NTA to develop a tailored response.
		• Number of spatial plans that include specific green infrastructure mapping	• Require all local level land use plans to include specific green infrastructure mapping	• Internal review of local land use plans, e.g. framework plans.	• Review internal systems
Soil (and Land)	**S**	• Proportion of population growth occurring on infill and brownfield lands compared to greenfield (also relevant to Material Assets)	• Contribute towards NPF target of maintaining built surface cover nationally to below the EU average of 4% • In accordance with the 'NPF Implementation: Housing Growth Requirements - Guidelines for Planning Authorities July 2025 a target of at least 40% of all new housing to be delivered within the existing built up areas of cities, towns and villages on infill and/or brownfield sites • To map brownfield and infill land parcels	• EPA Geoportal • Compilation of greenfield and brownfield development for the DHLGH • Internal review of development management / grants of permission	• Where the proportion of growth on infill and brownfield sites is not keeping pace with the targets set in the NPF and the RSES, the Council will liaise with the Regional Assembly to establish reasons and coordinate actions to address constraints to doing so.
		• Instances where contaminated material generated from brownfield and infill must be disposed of	• Dispose of contaminated material in compliance with EPA guidance and waste management requirements	• Internal review of development management / grants of permission where contaminated material must be disposed of	• Consultations with the EPA and Development Management
		• Environmental assessments and AAs as relevant for applications for brownfield and infill development prior to planning permission	• Screen for and undertake environmental assessments and AA as relevant for applications for brownfield and infill development prior to planning permission	• Internal review of development management / grants of permission	• Review internal systems
Water	**W**	• Status of water bodies as reported by the EPA Water Monitoring Programme for the WFD	• Subject to exemptions provided for by Article 4 of the Water Framework Directive, not to cause deterioration in the status of any surface water or affect the ability of any surface water to achieve 'good status' • Implementation of the objectives of the River Basin Management Plan	• EPA Monitoring Programme for WFD compliance [6]	• Where water bodies are failing to meet at least good status this will be investigated with the DHLGH Water Section, the EPA Catchment Unit, the Regional Assembly and, as relevant, Uisce Éireann to establish if the pressures are related to Plan actions / activities. A tailored response will be developed in consultation with these stakeholders in such a circumstance. • Where planning applications are rejected due to insufficient capacity in the WWTP or failure of the WWTP to meet Emission Limit Values, the Council will consider whether it is necessary to coordinate a response with the Regional Assembly, EPA and Uisce Éireann to achieve the necessary capacity.
		• Number of incompatible developments permitted within flood risk areas	• Minimise developments granted permission on lands which pose - or are likely to pose in the future - a significant flood risk	• Internal review of development management / grants of permission	• Where planning applications are being permitted on flood zones, the Council will ensure that such grants are in compliance with the Flood Risk

[6] Including monitoring of water quality and nitrogen deposition due to bioenergy and agricultural projects where available.

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action[4]
					Management Guidelines and include appropriate flood risk mitigation and management measures.
Material Assets	MA	• Programmed delivery of Uisce Éireann infrastructure for all key growth towns in line with Uisce Éireann Investment Plan and prioritisation programme to ensure sustainable growth can be accommodated • Number of new developments granted permission which can be adequately and appropriately served with waste water treatment over the lifetime of the Plan	• All new developments granted permission to be connected to and adequately and appropriately served by waste water treatment over the lifetime of the Plan • Where individual on-site wastewater treatment systems are proposed, for planning permission to be only granted when applications demonstrate that the outfall from the individual on-site wastewater treatment system will not – in-combination with other septic tanks – contribute towards any surface or ground water body not meeting the objective of good status under the Water Framework Directive • Facilitate, as appropriate, Uisce Éireann in developing water and wastewater infrastructure • See also targets relating to greenfield and brownfield development of land under Soil	Internal review of development management / grants of permission	• Where planning applications are rejected due to insufficient capacity in the WWTP or failure of the WWTP to meet Emission Limit Values, the Council will consider whether it is necessary to coordinate a response with the Regional Assembly, EPA and Uisce Éireann to achieve the necessary capacity.
		• Proportion of people reporting regular cycling / walking to school and work above previous CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above previous CSO figures • Progress in successfully implementing Plan measures relating to active travel	• CSO data • Internal review of progress on implementing Plan objectives	• Where proportion of population shows increase in private car use above previous CSO figures, the Council will coordinate with the Regional Assembly, the DHLGH, DCEE and NTA to develop a tailored response.
Air	A	• Proportion of journeys made by private fossil fuel-based car compared to previous levels • NO_2 (Nitrogen Dioxide), PM10 (particulate matter with diameter of 10 microns or less) and O_3 (Ozone) as part of Ambient Air Quality Monitoring	• Decrease in proportion of journeys made by car compared to previous levels • Improvement in Air Quality trends, particularly in relation to transport related emissions • Progress in successfully implementing Plan measures relating to sustainable mobility and travel	• CSO data • EPA Air Quality Monitoring • Internal review of progress on implementing Plan objectives	• Where proportion of population shows increase in private car use above previous CSO figures, Council will coordinate with the Regional Assembly, DHLGH, DCEE and NTA to develop a tailored response. See also entry under Population and human health above.
Climatic Factors	C	• Implementation of Plan measures relating to climate reduction targets	• For review of progress on implementing Plan objectives to demonstrate successful implementation of measures relating to climate reduction targets	Internal review of development management / grants of permission	• Review internal systems
		• A competitive, low-carbon, climate-resilient and environmentally sustainable economy	• Contribute towards transition to a competitive, low-carbon, climate-resilient and environmentally sustainable economy by 2050	• Confirmation of progress in implementing of Limerick City and County Council's Climate Change Adaptation Strategy 2019-2024 and Climate Action Plan 2024-2029 • EPA Greenhouse Gas Emissions reporting • Internal review of implementation of Plan provisions	• Where targets are not achieved, the Council will liaise with the Regional Assembly and the Eastern and Midlands Climate Action Regional Office to establish reasons and develop solutions.
		• Share of renewable energy in transport	• Contribute towards the National Energy and Climate Plan 2021-2030 sectoral target for transport (RES-T) of 14%, by 2030 (this may be increased following a provisional European agreement on 30 March 2023 for a binding overall RES target of at least		

Environmental Component	SEO Code	Indicators	Targets	Sources	Remedial Action[4]
			42.5% by 2030)	relating to renewable energy in transport, including facilitating the development of electricity charging and transmission infrastructure	
		• Greenhouse gas emissions	• Contribute towards the target of aggregate reduction in carbon dioxide (CO_2) emissions of at least 51% (compared to 1990 levels) by 2030 (helping to set Ireland on a path to reach net-zero emissions by 2050)		
		• Energy consumption, the uptake of renewable options and solid fuels for residential heating	• To promote reduced energy consumption and support the uptake of renewable options and a move away from solid fuels for residential heating		
		• Proportion of journeys made by private fossil fuel-based car compared to previous levels	• Decrease in the proportion of journeys made by residents of Limerick using private fossil fuel-based car compared to previous levels • Progress in successfully implementing Plan measures relating to sustainable mobility and travel	• CSO data • Internal review of progress on implementing Plan objectives	• Where trends toward carbon reduction are not recorded, the Council will liaise with the Regional Assembly and the Eastern and Midlands Climate Action Regional Office to establish reasons and develop solutions.
		• Proportion of people reporting regular cycling / walking to school and work above previous CSO figures	• Increase in the proportion of people reporting regular cycling / walking to school and work above previous CSO figures • Progress in successfully implementing Plan measures relating to active travel	• CSO data • Internal review of progress on implementing Plan objectives	• Where proportion of population shows increase in private car use above previous CSO figures, the Council will coordinate with the Regional Assembly, the DHLGH, DCEE and NTA to develop a tailored response.
Cultural Heritage	CH	• Percentage of entries to the Record of Monuments and Places, and the context these entries within the surrounding landscape where relevant, protected from adverse effects resulting from development which is granted permission under the Plan	• Protect entries to the Record of Monuments and Places, and the context of these entries within the surrounding landscape where relevant, from adverse effects resulting from development which is granted permission under the Plan	• Internal review of development management / grants of permission	• Where monitoring reveals visitor or development pressure is causing negative effects on designated archaeological or architectural heritage, the Council will work with the Regional Assembly, Fáilte Ireland and the National Monuments Service and other stakeholders, as relevant, to address pressures through additional mitigation.
		• Percentage of entries to the Record of Protected Structures and Architectural Conservation Areas and their context protected from significant adverse effects arising from new development granted permission under the Plan	• Protect entries to the Record of Protected Structures and Architectural Conservation Areas and their context from significant adverse effects arising from new development granted permission under the Plan	• Internal review of development management / grants of permission	
Landscape	L	• Number of developments permitted that result in avoidable adverse visual impacts on the landscape, especially with regard to landscape designations, resulting from development which is granted permission under the Plan	• No developments permitted which result in avoidable adverse visual impacts on the landscape, especially with regard to landscape designations, resulting from development which is granted permission under the Plan	• Internal review of development management / grants of permission	• Where monitoring reveals developments permitted which result in avoidable adverse visual impacts on the landscape, the Council will re-examine Plan provisions and the effectiveness of their implementation.