



Ecological Impact Assessment (EclA) of Athlone Town Centre Public Realm Enhancement, Co. Westmeath

October 2020

For: McAdam Design



Ecological Assessment | Ecological Clerk of Works | Bat Surveys | Badger Surveys
Biodiversity Checklists | Ornithological Assessment | Preliminary Ecological Appraisal



Document history

Author	Erfan Fadaei	22/10/2020
Checked	Brian Sutton	24/10/2020
Approved	Cormac Loughran	26/10/2020

Client Details

Contact	Carlin Planning
Client Name	McAdam Design
Address	1c Montgomery House 478 Castlereagh Road Belfast, BT5 6BQ Northern Ireland

Issue	Date	Revision Details
A	22/10/2020	DRAFT Issue
B	11/02/2021	Minor changes to site layout and relevant changes to report
C	19/02/21	Final version



Copyright © 2021 BLACKSTAFF ECOLOGY LTD.

Registered Office:
Blackstaff Ecology Ltd
Suite 4A
Adelaide House
Hawthorn Business Centre
1 Falcon Road
Belfast
BT12 6SJ

Reg No: NI 616090

VAT No: 152 5823 15

Contents

Executive Summary.....	3
1. Introduction	4
1.1. Statement of Authority.....	4
1.2. Background.....	4
1.3. Relevant Legislation and Policy	5
2. Review of Relevant Guidance and Source of Consultation.....	6
3. Methodology.....	7
3.1. Setting the Zone of Influence	7
3.2. Desk Study	7
3.3. Field survey.....	8
3.4. Assessment.....	8
3.5. Assessing potential effects and identifying mitigation and enhancement measures.....	9
3.6. Assessing the significance of effects	10
4. Baseline ecological conditions	11
4.1. Designated Sites	11
4.2. Habitats	13
4.3. Species.....	13
5. Description of the proposed development.....	19
6. Assessment of potential effects.....	19
6.1. General	19
6.2. Habitats	20
6.3. Birds.....	20
6.4. Bryophytes.....	20
6.5. Fish.....	20
6.6. Invertebrates	20
6.7. Otter	21
6.8. Vascular Plants.....	21
6.9. Other taxa.....	21
6.10. Invasive species	21
6.11. Designated sites.....	21
6.12. Impacts of maintenance and decommissioning.....	22
7. Mitigation Measures	22
7.1. General	22

7.2. Habitats	22
7.3. Birds.....	22
7.4. Fish.....	22
7.5. Otters.....	23
7.6. Designated sites.....	23
8. Cumulative Effects	25
9. Compensation	25
10. Avoidance.....	25
11. Enhancement	25
12. Conclusions	25
13. References.....	26
Appendix 1	27
Appendix 2	28

Executive Summary

- Westmeath County Council plans to develop Athlone town centre through provision of upgraded footpaths, enhanced public realm and landscape improvements, priority signalised junction, and upgraded public lighting. This will involve development of approximately 0.6ha of the town centre.
- Blackstaff Ecology Ltd was commissioned by McAdam Design to undertake an Ecological Impact Assessment of the potential impacts on the features of conservation interest within the site, and within the wider landscape. A desk study was undertaken to assess the ecological baseline of the site, prior to development.
- The site is characterised by roads and pavements, and these artificial surfaces are considered to be of negligible ecological value habitat.
- The site is likely to be hydrologically linked to the River Shannon and thus several designated sites, including River Shannon Callows SAC and Middle Shannon Callows SPA.
- Several species of conservation concern have been recorded in close proximity to the site, including otter, which likely uses the River Shannon for foraging and commuting, and the critically endangered European eel. It is highly unlikely that there are any species of conservation concern within the site itself given the urban character of the site, with the exception of robin and starling.
- In the absence of mitigation, there may be significant negative effects on habitats or protected species at both the national and international levels. Mitigation measures have thus been identified, and if implemented will avoid adverse impacts on sensitive features of conservation value within the wider zone of influence.
- Overall, the proposed development will not result in any adverse impacts on sensitive features – subject to mitigation measures – and there will be not net loss of biodiversity arising from the proposed development.

1. Introduction

1.1. Statement of Authority

- 1.1.1. This report has been prepared by Dr. Erfan Fadaei (B.Sc., PhD), reviewed and approved by Cormac Loughran (M.Sc., CEnv, MCIEEM). A desk study was completed between 20/10/20 and 23/10/20.
- 1.1.2. Dr. Erfan Fadaei has a BSc (Hons) in Zoology from the University of Manchester and a PhD in deer ecology and management from Queen's University Belfast. Erfan is a Qualifying member of CIEEM and has several years' experience conducting a broad range of flora (Phase 1 Habitat, NVC) and fauna (bat, otter, newt, badger, deer, freshwater macroinvertebrates) surveys. He has completed several Appropriate Assessments and Ecological Impact Assessments.
- 1.1.3. Cormac Loughran is a Chartered Environmentalist (CEnv), and a full member of the Chartered Institute of Ecology and Environmental Management (MCIEEM). Cormac has worked professionally as a Consultant Ecologist for the past eleven years. He holds an MSc (Distinction) in Environmental Management from the University of Ulster, and has extensive experience in a broad range of flora and fauna surveys. He has undertaken and coordinated the EclAs for numerous infrastructure developments. Cormac is also an experienced field naturalist and prior to his consultancy work, he worked as a warden/ranger for The National Trust on a number of important nature reserves between 1995 and 2004. These included Crom Estate in County Fermanagh and Murlough NNR and Slieve Donard in County Down. Cormac therefore also has a wide range of habitat management experience including; broadleaved woodland, wetland, dune grassland, wet and dry heathland and blanket bog.

1.2. Background

- 1.2.1. Blackstaff Ecology Ltd was commissioned by McAdam Design to provide an assessment of the potential ecological impacts relating to a proposed development within the town centre of Athlone, Co. Westmeath.
- 1.2.2. The proposed development site is part of the Public Realm of the town centre and focusses on several streets including Pump Lane, and Mardyke and Sean Costello streets. The development site consists of an area of approximately 0.6ha of urban land use, consisting entirely of artificial surfaces, predominantly as roads and pavement (Appendix 1). The development plan is to regenerate the site and unify the disparate commercial areas of the town through the application of high-quality urban design to remedy the disconnect between the east and west banks of the River Shannon. See Appendix 2 for a rendering of the recommended scenario.
- 1.2.3. An Appropriate Assessment Screening of the likely impacts of the development on nearby designated sites has also been completed.
- 1.2.4. The aim of this Ecological Impact Assessment (EclA) is to ensure that elements of the proposed project that may potentially affect features of conservation value, including

protected sites, habitats or species are adequately assessed. This assessment quantifies any potential impacts relating to flora and fauna and identifies the mitigation or design measures required to avoid, reduce and mitigate any potential impacts.

- 1.2.5. The information provided in this assessment describes the baseline ecological environment, provides a prediction of the likely ecological impacts of the proposed development, and describes the residual ecological impacts.

1.3. Relevant Legislation and Policy

National Legislation

- 1.3.1. The Wildlife Act, 1976-2017 (S.I. No. 166 of 2017), is the principal mechanism for the legislative protection of wildlife in Ireland. The Wildlife Act provides strict protection for species of conservation value. The Wildlife Act protects species from injury, disturbance and damage to breeding and resting sites. These species are therefore considered in this report as ecological receptors. Natural Heritage Areas (NHAs) and Proposed Natural Heritage Areas (pNHAs) are heritage sites that are designated for the protection of flora, fauna, habitats and geological sites. Only NHAs are designated under the Wildlife (Amendment) Act 2017. These sites do not form part of the Natura 2000 network of European sites and the Appropriate Assessment process does not apply to NHAs or pNHAs. Proposed Natural Heritage Areas (pNHAs) were published on a non-statutory basis and have no statutory protection. However, these sites are considered to be of significance for wildlife and habitats as they may form statutory designated sites in the future (NPWS, 2018).
- 1.3.2. The Flora (Protection) Order 2015 provides protection to a wide variety of protected plant species in Ireland including vascular plants, mosses, liverworts, lichens and stoneworts. Under the Flora Protection Order, it is illegal to cut, uproot or damage species listed in any way or to alter, damage or interfere in any way with their habitats.

National Policy

- 1.3.3. The National Biodiversity Action Plan 2017-2021 is a framework for the conservation and protection of biodiversity in Ireland. The main objective of the plan is to conserve and restore biodiversity and ecosystem services. Objective 1 of the National Biodiversity Action Plan identifies the following relevant measures in relation to future developments:
 - “Mainstreaming biodiversity into decision-making across all sectors”.
 - “All Public Authorities and private sector bodies move towards no net loss of biodiversity through strategies, planning, mitigation measures, appropriate offsetting and/or investment in Blue-Green infrastructure”.
- 1.3.4. Such policies have informed the evaluation of ecological features recorded within the study area and the ecological assessment process.

European Legislation

- 1.3.5. The Habitats Directive (together with the Birds Directive) forms the cornerstone of Europe's nature conservation within the EU. It is built around two pillars: the Natura 2000 network of protected sites and a strict system of species protection. The Directive protects over 1,000 animal and plant species and over 200 "habitat types" (e.g. special types of forests, meadows,

wetlands, etc.), which are of European importance. The EU Habitats Directive (92/43/EEC) and Birds Directive (79/409/EEC), which were transposed into Irish law as S.I. No. 94/1997 European Communities (Birds and Natural Habitats) Regulations 1997, recognise the significance of protecting rare and endangered species of flora and fauna, and their habitats. The amended Birds Directive was codified as Directive 2009/147/EC of the European Parliament and of the Council on the conservation of wild birds. The 1997 Regulations and their amendments were subsequently revised and consolidated in S.I. No. 477/2011- European Communities (Birds and Natural Habitats) Regulations 2011. This legislation requires the establishment and conservation of a network of sites of particular conservation value that are to be termed 'European Sites'.

- 1.3.6. Annex I of the Habitats Directive lists habitat types the conservation of which requires the designation of Special Areas of Conservation (SAC). Priority habitats, such as Turloughs, which are in danger of disappearing within the EU territory are also listed in Annex I. Annex II of the Directive lists animal and plant species (e.g. marsh fritillary, Atlantic salmon, and Killarney fern) whose conservation also requires the designation of SACs. Annex IV lists animal and plant species in need of strict protection, such as lesser horseshoe bat and otter, and Annex V lists animal and plant species whose taking in the wild and exploitation may be subject to management measures. In Ireland, species listed under Annex V include Irish hare, common frog and pine marten. Species can be listed in more than one Annex, as is the case with otter and lesser horseshoe bat which are listed in both Annex II and Annex IV.
- 1.3.7. Council Directive 2009/147/EC (the Birds Directive) on the conservation of wild birds instructs Member States to take measures to maintain populations of all bird species naturally occurring in the wild state in the EU (Article 2). Such measures may include the maintenance and/or re-establishment of habitats in order to sustain these bird populations (Article 3). A subset of bird species has been identified in the Directive and these are listed in Annex I as requiring special conservation measures in relation to their habitats. These species have been listed on account of *inter alia*: their risk of extinction; vulnerability to specific changes in their habitat; and/or due to their relatively small population size or restricted distribution. Special Protection Areas (SPAs) are to be identified and designated for these Annex I listed species and for regularly occurring migratory species, paying particular attention to the protection of wetlands (Article 4).
- 1.3.8. In summary, the species and habitats provided with national and international protection under these legislative and policy documents have been considered in this Ecological Impact Assessment.

2. Review of Relevant Guidance and Source of Consultation

- 2.1. The assessment methodology is based primarily upon the Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2019).
- 2.2. The survey methodology is based on the NRA Guidelines on Ecological Surveying Techniques for Protected Flora and Fauna on National Road Schemes (NRA, 2009). Although these survey

methodologies relate to road schemes, these standard guidelines are recognised survey methodologies that ensure good practice regardless of the development type.

3. Methodology

3.1. Setting the Zone of Influence

- 3.1.1. In accordance with the CIEEM (2019) guidelines, the locations of ecological receptors identified in the desk study which could be affected by the biophysical changes resulting from the development of the site have been used to set the zone of influence for the proposed development. The zone of influence will vary for different ecological features depending on their sensitivity to an environmental change, thus for this assessment two different zones of influence for different features were identified.
- 3.1.2. For the majority of the site features, the zone of influence was set to include the area within the red line boundary, and up to 1km from this boundary. The area within the redline boundary was the focus of the detailed desk study including search for ecological records, to establish the ecological baseline, and to inform the evaluation of ecological resources and the selection of key ecological receptors.
- 3.1.3. Due to the hydrological link with the River Shannon, a second zone of influence was identified to describe potential impacts on designated areas of international and national importance for nature conservation (i.e. Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Natural Heritage Areas (NHAs) and Proposed Natural Heritage Areas (pNHAs)). This zone encompassed the site and up to 15km beyond this.

3.2. Desk Study

- 3.2.1. A desk study was completed to identify potential ecological receptors within the site, and within the wider area of potential influence.
- 3.2.2. Several resources were used to search for relevant data, including:
 - National Parks and Wildlife Service – for designated sites
 - BirdWatch Ireland – for Birds of Conservation Concern in Ireland (BoCCI) 2014-2019 Red and Amber lists
 - National Biodiversity Data Centre and associated Biodiversity Maps – for birds, protected and invasive species
 - The Bird Atlas 2007-2011 Breeding and Wintering Birds of Britain and Ireland
 - Inland Fisheries Ireland – for fish within local watercourses
 - New Atlas of the British and Irish Flora – species of conservation concern within the hectad
 - Flora Protection Order Map Viewer – for protected bryophytes

3.3. Field survey

3.3.1. This Ecological Impact Assessment is based on a desk study only as the site is entirely urban and therefore a field visit to conduct a survey of habitats and species present was not considered necessary. Additionally, due to the ongoing COVID-19 pandemic, a lockdown and travel restrictions at the time of survey prevented the possibility of a site visit.

3.4. Assessment

3.4.1. The evaluation of ecological resources is necessary in order to determine the presence of 'Key Ecological Receptors', which are sufficiently valuable for a significant effect upon them to be material in decision-making.

3.4.2. It is not necessary to "carry out detailed assessment of features that are sufficiently widespread, unthreatened and resilient to project impacts and will remain viable and sustainable", although this does not mean that efforts should not be made to safeguard wider biodiversity, and national policy documents emphasise the need to achieve no net loss of biodiversity and enhancement of biodiversity (CIEEM, 2019).

3.4.3. Ecological features can be of value for a variety of reasons and the rationale used should be explained to demonstrate a robust selection process. Various characteristics contribute to the importance of ecological features, including:

- naturalness
- rare or uncommon species or habitats in the local, national or international context
- endemic species or locally distinct sub-populations of a species
- ecosystems and their component parts, which provide the habitats required by important species, populations and/or assemblages
- habitat diversity
- size of habitat or species population
- habitat connectivity and/or synergistic associations
- habitats and species in decline
- rich assemblages of plants and animals
- large populations of species or concentrations of species considered uncommon or threatened in a wider context
- plant communities (and their associated animals) that are considered to be typical of valued natural/semi-natural vegetation types, including examples of naturally species-poor communities

- species on the edge of their range, particularly where their distribution is changing as a result of global trends and climate change.
- 3.4.4. The value of ecological features within the Zone of Influence has been determined within the following geographical frame of reference:
- International – Europe
 - National – Ireland
 - Regional – Leinster
 - County – Westmeath
 - District/Borough – Athlone
 - Local/Neighbourhood – Loughanaskin/Athlone
 - Within Zone of Influence of the site – Site
- 3.4.5. The ecological receptors classified as of importance at the District/Borough level and above are considered to be sufficiently valuable for a significant effect upon them to be material in decision making. All features on site have been assessed for their importance, and only those features assessed as ecologically important will be discussed in further detail.
- 3.4.6. The assessment of impacts has been conducted for the site during the construction, operation, and decommissioning phases of the development, with the baseline conditions referring to the site as of April 2020.

3.5. Assessing potential effects and identifying mitigation and enhancement measures

- 3.5.1. The potential impacts of the proposed development have been determined from the likely key activities and associated biophysical changes that may arise during construction, operation and decommissioning. The assessment of impacts has been undertaken in relation to the baseline conditions, with reference to aspects of ecological structure and function on which each receptor depends. Impacts can include direct loss of habitats, fragmentation and isolation of habitats, disturbance to species, changes to key habitat features and changes to the local hydrology and/or water quality. Impacts have been characterised in consideration of the following parameters:
- Positive or negative;
 - Extent (area over which the impact occurs);
 - Magnitude (size or amount of an impact);
 - Duration (time over which the impact is expected to last prior to recovery or replacement);
 - Timing and frequency (particularly in relation to critical life-stages or seasons); and

- Reversibility (whether an impact is permanent i.e. no recovery is possible, or temporary i.e. where spontaneous recovery is possible or where mitigation is possible and enforceable).

3.6. Assessing the significance of effects

- 3.6.1. Potential impacts on relevant ecological features are assessed and a judgement reached on whether or not the resultant effect on conservation status or structure and function is likely to be significant. This process takes into consideration the characteristics of the impact, the sensitivity of the ecological receptor concerned, and the geographic scale at which the feature is considered important.
- 3.6.2. CIEEM EclA Guidelines (2019) state that: “For the purpose of EclA a ‘significant effect’ is an effect that either supports or undermines biodiversity conservation objectives for ‘important ecological features’ or for biodiversity in general ... In broad terms, significant effects encompass impacts on the structure and function of defined application sites, habitats or ecosystems and the conservation status of habitats and species (including extent, abundance and distribution).”
- 3.6.3. For designated/defined sites and ecosystems, the assessment considers what effect the potential impacts are likely to have on conservation objectives or interest/qualifying features. For ecosystems, consideration is given to whether a change in ecosystem structure and/or function is likely that would substantively alter its ecological integrity.
- 3.6.4. For habitats and species, the assessment considers what effect the potential impacts will have on “conservation status”, and whether or not the effect is likely to substantively alter the ecological integrity of the habitat or species under consideration. Further guidance on how to assess conservation status is provided in the CIEEM Guidelines (2019) as follows:
- For habitats: “*conservation status is determined by the sum of the influences acting on the habitat that may affect its extent, structure and functions as well as its distribution and its typical species within a given geographical area*”; and
 - For species: “*conservation status is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.*”
- 3.6.5. In considering effects on conservation status, reference is made to relevant available guidance on the current conservation status of the ecological feature under consideration. Effects can be both positive or negative (effects in this report are negative unless otherwise stated) and will either be:
- Not significant (i.e. no ecologically meaningful effect on conservation status); or
 - Significant (i.e. an ecologically meaningful effect on conservation status).

4. Baseline ecological conditions

4.0. Assessing the impacts of any project and associated activities requires an understanding of the ecological baseline conditions prior to and at the time of the project proceeding, with the ecological baseline conditions being “those existing in the absence of proposed activities” (CIEEM, 2019). The following sections outline the baseline ecological conditions of the proposed development site.

4.1. Designated Sites

4.1.1. Using the GIS software QGIS (Version 3.10.8), designated sites within a radius of 15 kilometres of the proposed development were identified. The designated sites considered are listed in Table 1. The location of EU and Nationally Designated Sites in relation to the site are displayed in Figure 1. The proposed development lies 405m north east of River Shannon Callows pNHA, and 435m north east of Middle Shannon Callows SPA and River Shannon Callows SAC. Further designated sites in the vicinity include Lough Ree SAC and pNHA 1.5km to the north west, and Lough Ree SPA situated 1.6km to the north west.

Table 1 – Designated sites within 15 kilometres of the proposed development site

Designated Site	Distance from proposed development	Reason for designation
Special Area of Conservation (SAC)		
River Shannon Callows	0.44km	[6410] Molinia Meadows [6510] Lowland Hay Meadows [8240] Limestone Pavement [91E0] Alluvial Forests [1355] Otter (<i>Lutra lutra</i>)
Lough Ree	1.52km	[3150] Natural Eutrophic Lakes [6210] Orchid-rich Calcareous Grassland [7110] Active Raised Bog [7120] Degraded Raised Bog [7230] Alkaline Fens [8240] Limestone Pavement [91D0] Bog Woodland [91E0] Alluvial Forests [1355] Otter (<i>Lutra lutra</i>)
Crosswood Bog	3.4km	[7110] Raised Bog (Active) [7120] Degraded Raised Bog
Carn Park Bog	6.0km	[7110] Raised Bog (Active) [7120] Degraded Raised Bog
Castlesampson Esker	9.0km	[3180] Turloughs [6210] Orchid-rich Calcareous Grassland

Ballynamona Bog and Corkip Lough	9.5km	[3180] Turloughs [7110] Raised Bog (Active) [7120] Degraded Raised Bog [7150] Rhynchosporion Vegetation [91D0] Bog Woodland
Pilgrim's Road Esker	9.6km	[6210] Orchid-rich Calcareous Grassland
Mongan Bog	9.9km	[7110] Raised Bog (Active) [7120] Degraded Raised Bog [7150] Rhynchosporion Vegetation
Fin Lough	11.5km	[1013] Geyer's Whorl Snail <i>Vertigo geyeri</i> [7230] Alkaline fens
Lough Funshinagh	12.9km	[3180] Turloughs [3270] Rivers with muddy banks with <i>Chenopodium rubri</i> p.p. and <i>Bidention</i> p.p. vegetation
Special Protection Area (SPA)		
Middle Shannon Callows	0.28km	[A038] Whooper Swan (<i>Cygnus cygnus</i>) [A050] Wigeon (<i>Anas penelope</i>) [A122] Corncrake (<i>Crex crex</i>) [A140] Golden Plover (<i>Pluvialis apricaria</i>) [A142] Lapwing (<i>Vanellus vanellus</i>) [A156] Black-tailed Godwit (<i>Limosa limosa</i>) [A179] Black-headed Gull (<i>Chroicocephalus ridibundus</i>) [A999] Wetland and Waterbirds
Lough Ree	0.72km	[A004] Little Grebe (<i>Tachybaptus ruficollis</i>) [A038] Whooper Swan (<i>Cygnus cygnus</i>) [A050] Wigeon (<i>Anas penelope</i>) [A052] Teal (<i>Anas crecca</i>) [A053] Mallard (<i>Anas platyrhynchos</i>) [A056] Shoveler (<i>Anas clypeata</i>) [A061] Tufted Duck (<i>Aythya fuligula</i>) [A065] Common Scoter (<i>Melanitta nigra</i>) [A067] Goldeneye (<i>Bucephala clangula</i>) [A125] Coot (<i>Fulica atra</i>) [A140] Golden plover (<i>Pluvialis apricaria</i>) [A142] Lapwing (<i>Vanellus vanellus</i>) [A193] Common Tern (<i>Sterna hirundo</i>) [A999] Wetland and Waterbirds
Natural Heritage Area (NHA)		
Carrickynaghtan Bog	2.8km	[4] Peatlands
Clonnydonnin Bog	10.2km	[7110] Raised Bog
Proposed Natural Heritage Area (pNHA)		

River Shannon Callows	0.28km	
Lough Ree	0.72km	
Crosswood Bog	4.2km	
Carn Park Bog	6.4km	
Waterstown Lake	6.6km	
Castlesampson Esker	7.0km	
Mongan Bog	10.3km	
Doon Esker Wood	11.1km	
Clonfinlough Esker	11.4km	
Fin Lough	11.5km	
Lough Nanang Esker	12.6km	
Lough Funshinagh	12.9km	
Feacle Turlough	12.9km	
Ballynagarbry	13.1km	
Clonlyon Glebe Bog	13.3km	
Cranberry Lough	14.9km	

4.2. Habitats

- 4.2.1. A desk survey of the proposed development site was conducted to identify the habitat types present, due to the entirely urban character of the site. Habitats were identified in accordance with the Heritage Council's '*Guide to Habitats in Ireland*' (Fossitt, 2000).
- 4.2.2. A review was carried out of available NPWS Article 17 habitats datasets and the National Survey of Native Woodlands 2003-2008, Ancient and Long-Established Woodland, and Irish Semi-Natural Grassland Survey datasets were consulted. Shapefile data were downloaded from the NPWS website (<https://www.npws.ie/maps-and-data/habitat-and-species-data>) and overlaid onto a map of the study area. No EU Annex I habitats are present within or immediately adjacent to this urban proposed development site.
- 4.2.3. The surveyed development site comprises of several streets, predominantly Mardyke Street and Sean Costello Street, and small parts of, Gleeson Street, St Mary's Square, Pump Lane, John Broderick Street, and Griffith Street. Paved areas and a small area of off-street parking are also present. These were readily identifiable using Google Maps aerial imagery and Street View, and it is considered that a comprehensive and accurate assessment of the habitats was achieved.
- 4.2.4. The single habitat type in this urban setting is **Buildings and artificial surfaces (BL3)**. Figure 2 provides a habitat map of the proposed development site.

4.3. Species

- 4.3.1. A desk-based survey of the site assessed that the species present would be those able to live in urban areas, including various bird species, such as rock dove (*Columba livia*), starling

(*Sturnus vulgaris*), and house sparrow (*Passer domesticus*), and mammals including fox (*Vulpes vulpes*) and rat (*Rattus norvegicus*). The plant species present are likely to be ruderal weeds, and grasses such as annual meadow grass (*Poa annua*).

Species of conservation concern

- 4.3.2. A search of the National Biodiversity Data Centre (NBDC) records for the relevant hectad, N04, provided details on a number of fauna species of conservation concern. These are provided in Table 2. Bird species reported in the following section are not included in this table.

Table 2 – Species of conservation concern recorded within the hectad N04.

Common Name	Latin Name	Conservation Status
Brown long-eared bat	<i>Plecotus auritus</i>	HD, WA
Common frog	<i>Rana temporaria</i>	HD, WA
Common pipistrelle	<i>Pipistrellus pipistrellus</i>	HD, WA
Daubenton's bat	<i>Myotis daubentonii</i>	HD, WA
Irish hare	<i>Lepus timidus subsp. hibernicus</i>	HD, WA
Leisler's bat	<i>Nyctalus leisleri</i>	HD, WA
Otter	<i>Lutra lutra</i>	HD, WA
Pine marten	<i>Martes martes</i>	HD, WA
Soprano pipistrelle	<i>Pipistrellus pygmaeus</i>	HD, WA
Marsh fritillary	<i>Euphydryas aurinia</i>	HD, WA; Ireland Red Status: Vulnerable
Small blue	<i>Cupido minimus</i>	Ireland Red Status: Endangered
Dingy skipper	<i>Erynnis tages</i>	Ireland Red Status: Near threatened
Small heath	<i>Coenonympha pamphilus</i>	Ireland Red Status: Near threatened
Wood white	<i>Leptidea sp.</i>	Ireland Red Status: Near threatened
European eel	<i>Anguilla anguilla</i>	IUCN status: Critically endangered
Badger	<i>Meles meles</i>	WA
Common lizard	<i>Zootoca vivipara</i>	WA
Hedgehog	<i>Erinaceus europaeus</i>	WA
Pygmy shrew	<i>Sorex minutus</i>	WA
Red squirrel	<i>Sciurus vulgaris</i>	WA
Smooth newt	<i>Lissotriton vulgaris</i>	WA

HD = EU Habitats Directive; WA = Wildlife Acts (Ireland)

Amphibians

- 4.3.3. The hectad contains numerous records of common frog and smooth newt, however there is only a single record of a newt within the 1km grid of the proposed site, dating back to 1976, and there is no suitable habitat within the development site that could support either species.

Badgers

- 4.3.4. The hectad contains numerous records of badger, however there are none within the 1km grid of the proposed site, and there is no suitable habitat within the development site that could support badgers.

Bats

- 4.3.5. Poor foraging opportunities and high levels of light pollution in the proposed site make it unlikely for bats to be present in the site, and there are no records of bats in the 1km grid enveloping the site.

Birds

- 4.3.6. A number of sources were assessed to determine the likely usage of the site by both breeding and wintering bird species, including The Bird Atlas 2007-2011, National Biodiversity Data Centre (NBDC), and BirdWatch Ireland. The Bird Atlas 2007-2011 Breeding and Wintering Birds of Britain and Ireland (Balmer et al., 2013) provides the most up-to-date information regarding the distribution and relative abundance of bird species in the British Isles, based on surveys conducted between 2007 and 2011. The NBDC shows records from an extensive range of surveys conducted in Ireland, while BirdWatch Ireland provided the list of Birds of Conservation Concern in Ireland 2014-2019 (BoCCI).
- 4.3.7. The Bird Atlas shows data for breeding and wintering birds respectively in individual 10km x 10km squares (hectads). Table 3 lists those species found in the relevant hectad (N04), which are recorded as breeding and/or wintering in the most recent atlas. It also notes species that have been recorded within the relevant hectad on National Biodiversity Data Centre datasets as well as those listed in Annex I of the EU Birds Directive and the BoCCI Red and Amber Lists. Birds listed under Annex I are offered special protection by the EU Birds Directive. Those listed on the (BoCCI) Red List meet one or more of the following criteria:
- IUCN: Global Conservation Status (Critically Endangered (CE), Endangered (E), or Vulnerable (V), but not Near Threatened (NT). These species are recognised as the highest priorities for action at a global scale and are thus priorities at an all-Ireland level.
 - European conservation status: The conservation status of all European species was assessed most recently by Birdlife International (2004), one of the main changes in the revision being to include the IUCN criteria. These species are those of global conservation concern (including those classified as Near Threatened) and are Red-listed.
 - The Irish breeding population has undergone a large and widespread decline since 1800.
 - The Irish breeding population has declined by 50% or more in the 13 years from 1998-2011, or the 25 years from 1980-2013.

- The Irish non-breeding population has undergone a significant decline of 50% or more in the 16 years from 1994-2010, or about 25 years from the mid-1980s.
- The Irish breeding range has undergone a decline of 70% or more in the last 25 years.

4.3.8. Those listed on the (BoCCI) Amber List meet one or more of the following criteria:

- Species not of global concern but have unfavourable conservation status in Europe.
- The Irish breeding population has undergone a moderate decline in abundance of between 25% and 49% over 13 years from 1998-2011, or longer-term declines over about 25 years from 1980-2013.
- The Irish non-breeding population has undergone a moderate decline in abundance of 25% to 49% in the 17 years from 1994-2010, or about 25 years from the mid-1980s.
- The Irish breeding range has undergone a moderate decline of 35% to 69% in the last 25 years.
- Species with fewer than 100 breeding pairs in Ireland and for which breeding was proven, or at least probable, during the period 2004-2012.
- Species with localised breeding or wintering populations, where 50% or more of the total Irish breeding population is concentrated into ten or fewer sites.
- Species of international importance because the Irish population represents more than 20% of the European population in either the breeding or wintering seasons.

Table 3 – Birds of conservation concern recorded within the hectad N04.

Common Name	Latin Name	Conservation Status
Corncrake***	<i>Crex crex</i>	EU Birds Directive Annex I
Hen harrier	<i>Circus cyaneus</i>	
Kingfisher	<i>Alcedo atthis</i>	
Merlin**	<i>Falco columbarius</i>	
Whooper swan	<i>Cygnus cygnus</i>	
Barn owl	<i>Tyto alba</i>	Birds of Conservation Concern Red List (Ireland)
Black-headed gull	<i>Chroicocephalus ridibundus</i>	
Common redshank	<i>Tringa totanus</i>	
Eurasian curlew	<i>Numenius arquata</i>	
Eurasian widgeon	<i>Anas penelope</i>	
Northern Pintail	<i>Anas acuta</i>	
Northern Shoveler	<i>Anas clypeata</i>	
Common Pochard	<i>Aythya ferina</i>	
Tufted duck	<i>Aythya fuligula</i>	
Common goldeneye	<i>Bucephala clangula</i>	

Golden plover	<i>Pluvialis apricaria</i>	
Grey wagtail	<i>Motacilla cinerea</i>	
Herring gull**	<i>Larus argentatus</i>	
Meadow pipit	<i>Anthus pratensis</i>	
Northern lapwing	<i>Vanellus vanellus</i>	
Red grouse*	<i>Lagopus lagopus</i>	
Yellowhammer**	<i>Emberiza citronella</i>	
Woodcock	<i>Scolopax rusticola</i>	
Common sandpiper	<i>Actitis hypoleucos</i>	Birds of Conservation Concern Amber List (Ireland)
Common tern	<i>Sterna hirundo</i>	
Cormorant	<i>Phalacrocorax carbo</i>	
Goldcrest	<i>Regulus regulus</i>	
Grasshopper warbler	<i>Locustella naevia</i>	
Great black-backed gull	<i>Larus marinus</i>	
Great crested grebe	<i>Podiceps cristatus</i>	
House martin	<i>Delichon urbicum</i>	
House sparrow	<i>Passer domesticus</i>	
Kestrel	<i>Falco tinnunculus</i>	
Lesser black-backed gull	<i>Larus fuscus</i>	
Linnet	<i>Carduelis cannabina</i>	
Little grebe	<i>Tachybaptus ruficollis</i>	
Merlin**	<i>Falco columbarius</i>	
Mute swan	<i>Cygnus olor</i>	
Oystercatcher	<i>Haematopus ostralegus</i>	
Robin	<i>Erithacus rubecula</i>	
Sand martin	<i>Riparia riparia</i>	
Skylark	<i>Alauda arvensis</i>	
Snipe	<i>Gallinago gallinago</i>	
Sparrowhawk	<i>Accipiter nisus</i>	
Spotted flycatcher	<i>Muscicapa striata</i>	
Starling	<i>Sturnus vulgaris</i>	
Stock dove	<i>Columba oenas</i>	
Stonechat	<i>Saxicola rubicola</i>	
Swallow	<i>Hirundo rustica</i>	
Swift	<i>Apus apus</i>	

Teal	<i>Anas crecca</i>	
Water rail	<i>Rallus aquaticus</i>	

* The First Atlas of Breeding Birds in Britain and Ireland: 1968-1972

** The First Atlas of Wintering Birds in Britain and Ireland: 1981/82-1983/84

*** The Second Atlas of Breeding Birds in Britain and Ireland: 1988-1991

Bryophytes

- 4.3.9. A search of the Flora Protection Order Map Viewer for Bryophytes was also undertaken. No protected bryophytes have been recorded within or adjacent to the proposed development site.

Fish

- 4.3.10. The Inland Fisheries Ireland Water Framework Directive map was consulted on 21/10/2020. The closest survey location was Bunaribba on the River Shannon approximately 2km downstream of the proposed development. This section of the river was surveyed in 2010 and received a species richness score of 4 having recorded European eel, perch, pike, and roach. Another site, on the Cross river, approximately 300m away, was surveyed in 2008 and recorded 5 species, namely brown trout, gudgeon, perch, pike and roach. Both sites were assigned an ecological status of moderate.
- 4.3.11. Lough Ree was surveyed in 2010 and assigned an ecological status of poor despite recording 8 species of fish including: bream, brown trout, European eel, perch, pike, pollan, roach, roach x bream hybrid, and tench.

Invertebrates

- 4.3.12. There are records of several protected butterfly species in the hectad, including marsh fritillary and small blue; however, these are located outside the site, which does not support habitat suitable for these species.

Otter

- 4.3.13. There are three records of otter (*Lutra lutra*) in hectad N04, with several more records of spraint. The closest records of live sightings are 840m and 1.3km from the site, and the closest record of spraint is 340m from the site. It is likely therefore, that otters use this stretch of the river for foraging and commuting, and may even have holts in the vicinity of the site.

Vascular Plants

- 4.3.14. A search was made of the NBDC records of vascular plants to investigate whether any rare or unusual plant species listed under Annex I of the EU Habitats Directive, The Irish Red Data Book: 1 Vascular Plants (Curtis & McGough, 1988) or the Flora (Protection) Order (1999, as amended 2015) had been recorded in hectad N04. Only the Narrow-leaved helleborine (*Cephalanthera longifolia*) was recorded in the hectad, and this species of open woodland is therefore unlikely to be present in the urban site.

Other taxa

- 4.3.15. Other species, including pine marten, hedgehog (*Erinaceus europaeus*) and Eurasian pygmy shrew (*Sorex minutus*) are present in the wider area based on the results of the NBDC data search, but are unlikely to be present on the site.

Invasive species

- 4.3.16. There are eleven records of Japanese knotweed (*Fallopia japonica*) in Athlone town, with the closest approximately 375m away. The derelict area with colonizing vegetation may support this invasive species.

5. Description of the proposed development

- 5.1. The Development of Public Realm Enhancement Works, encompassing approximately 0.6HA at Mardyke St, Pump Lane and Sean Costello St, Athlone, Co. Westmeath, including the following public realm improvements:

- Provision of upgraded footpaths and realignment of existing carriage way along Mardyke Street, including 120m of a shared surface and pedestrianisation of 90m of Sean Costello Street, from its junction with Pump Lane to its junction with Mardyke Street, to take account of the access needs of pedestrians, mobility impaired persons and service vehicles.
- Provision of an enhanced public realm and landscape improvements, including street furniture, incidental play equipment, cycle parking, trees, and soft landscaping to enhance biodiversity.
- Provision of a priority signalised junction, including enhanced pedestrian facilities, at the junction of Mardyke Street, Gleeson Street, Pump Lane, and St Mary's Square.
- Upgrade to public lighting, including focal lighting to Sean Costello Street.
- And all necessary accommodation works, including utility provision, drainage, signage, and other ancillary works.

6. Assessment of potential effects

6.1. General

- 6.1.1. This section of the report considers the potential for effects on ecological receptors. This assessment has been undertaken in relation to the baseline conditions, with reference to aspects of ecological structure and function on which each receptor depends. Impacts can include direct loss of habitats, fragmentation and isolation of habitats, disturbance to species, changes to key habitat features and changes to the local hydrology and/or water quality.
- 6.1.2. The determination of the significance of the predicted ecological impacts in this EclA has been based on professional judgement. It is made with reference to the impact characteristics and the likely effect on integrity and favourable conservation status of the ecological receptor. The value assigned to the ecological receptor that will be significantly affected has been used to determine the geographical scale at which the impact is significant. However, if an impact is found not to be significant at the level at which the receptor has been valued, it may be significant at a more local level.

6.2. Habitats

6.1.1. Building and artificial surfaces (BL3)

6.1.1.1. This habitat type is of **site value** to nature conservation, given it is widespread in the locality, is subject to regular maintenance and/or disturbance, and is of negligible biodiversity interest. This habitat is therefore assessed to be of less than local biodiversity importance and any potential effects on it are not considered to be ecologically significant.

Construction

6.1.1.2. There will be no change to the extent of artificial surfaces within the site, only the change from tarmac roads to pedestrianised areas with paving materials and pavements. Due to its negligible value for conservation, **no significant effects** on these habitats are expected from the construction of the development and no mitigation is required.

6.3. Birds

6.3.1. The proposed development site may provide limited foraging and nesting habitat for several bird species, such as house sparrow and robin, both of which are on the BOCCI Amber List.

Construction

6.3.2. As there will be no removal of buildings on site, the development is unlikely to result in local losses of birds. Provision of planted trees within the pedestrianised zone may provide a limited increase in foraging and nesting opportunities on site. However, given the small area of the habitat to be affected and the species likely impacted, overall, the construction and operation of the proposed development will have **no significant effects**.

6.4. Bryophytes

6.4.1. No protected bryophytes have been recorded within or adjacent to the proposed development site, thus the development will have **no significant effect** on these species.

6.5. Fish

6.5.1. The site is likely to be connected to the River Shannon through surface water drains. The construction phase of the proposal has the potential to cause **significant negative effects** on fish species, through potential pollution of local watercourses, including the critically endangered European eel (*Anguilla anguilla*). Use of construction machinery and the refuelling of excavation machinery may lead to a deterioration in surface water quality due to the release of pollutants including suspended solids and hydrocarbons, with potential impacts for invertebrate prey and fish themselves.

6.6. Invertebrates

6.6.1. No protected invertebrates have been recorded within or adjacent to the proposed development site, and are not likely to be present owing to the absence of suitable habitat, therefore, the development will have **no significant effect** on these species.

6.7. Otter

- 6.7.1. This species is strictly protected under EU legislation (Habitats Directive Annexes II & IV), and it is one of the qualifying features of both River Shannon Callows SAC and Lough Ree SAC. This species is thus of **International** value to nature conservation.

Construction

- 6.7.2. Watercourses are a vital habitat for this species, thus adverse impacts from construction works on the water quality of the nearby and hydrologically connected River Shannon may potentially affect the foraging opportunities of the local otter population, thus potentially having **significant effects at an international level**. Lough Ree is upstream of the site and there is no pathway for effects from the site to Lough Ree, therefore the proposed development is unlikely to have any impacts on otters.
- 6.7.3. Disturbance arising from construction works is unlikely to impact otters given the distance of the site from the river and the level of background activity already present within the town centre. Thus, the predicted disturbance impacts are considered to be **not significant**.

Operation

- 6.7.4. There will be **no significant effect** of the operation of the site on otters.

6.8. Vascular Plants

- 6.8.1. This site is unlikely to support any protected flora species, thus there will be **no effect** on such species arising from the proposed development.

6.9. Other taxa

- 6.9.1. Other species present in the wider landscape include common frog, smooth newt, badger, pine marten, hedgehog (*Erinaceus europaeus*), Eurasian pygmy shrew (*Sorex minutus*), and common lizard (*Zootoca vivipara*). None of these species are likely to be present on the site due to the lack of suitable habitat. Therefore, development of the site will not have **no effect** on these species.

6.10. Invasive species

- 6.10.1. The proposed development is unlikely to support invasive species, and the development is not likely to have **any significant effects** on invasive species.

6.11. Designated sites

- 6.11.1. Two European Designated Sites are within close proximity to the site, and may have hydrological connectivity via surface water drains that likely discharge into the River Shannon. River Shannon Callows pNHA is also likely to be linked hydrologically to the site. There are no likely pathways for effects on the other designated sites within 15km arising from the development and they are not considered further.

Construction

- 6.11.2. The construction phase of the proposal has the potential to cause deterioration in surface water quality, due to the release of pollutants including suspended solids and hydrocarbons.

This may have **significant effects at an International level** by affecting the water quality, and habitat and species listed as qualifying interest features of River Shannon Callows SAC and Middle Shannon Callows SPA, and **significant effects at a national level** by affecting the water quality and aquatic habitats and species of River Shannon Callows pNHA.

6.12. Impacts of maintenance and decommissioning

- 6.12.1. Any potential maintenance of the site is unlikely to have any significant effects on ecological receptors, and as the development is intended to be permanent, there will not be any decommissioning of the site.

7. Mitigation Measures

7.1. General

- 7.1.1. Potential ecological effects will be managed during construction through the implementation of a Construction Environmental Management Plan (CEMP). This will set out best practice construction methods and safe working practices to be followed so as to limit construction impacts, along with appropriate mitigation and management measures to avoid pollution of local watercourses, and the incidental injury or mortality of nesting birds.

7.2. Habitats

7.2.1. Building and artificial surfaces (BL3)

- 7.2.1.1. No mitigation measures are required to prevent impacts that the proposed development will have on this habitat which is of negligible conservation value.

7.3. Birds

- 7.3.1. If construction works are carried during the bird breeding season (1st March to 31st August, inclusive) and a bird nest is identified which may be impacted, the nest should be left until chicks have fledged. With this measure in place, there should be **no residual effects at a site level**.

7.4. Fish

- 7.4.1. In order to mitigate against negative effects on local fish populations, the following mitigation measures will protect watercourses protected from pollution from surface water runoff during the construction phase of the development:

- Works shall not take place during periods of high rainfall and shall be scaled back or suspended if an Red warning for rainfall is forecast. No works will be undertaken during periods of flooding or if floods are forecast.
- Stockpiles of excavated materials will be sealed with a digger to reduce the potential for sediment runoff. These areas will be surrounded with fencing to prevent any pathway to any sensitive receptor. Polyethylene sheeting will also be placed over stockpiles if required.
- Excavations will be carried out using a suitably sized excavator and, in all circumstances, excavation depths and volumes will be minimised.

- Any excess construction material shall be immediately removed from the area and sent to an authorised waste recovery facility.
- No refuelling of machinery or overnight parking of machinery in areas adjacent to drainage infrastructure.
- On-site re-fuelling will only take place at distances greater than 20 metres from the nearest site drainage infrastructure.
- Mobile storage tanks such as fuel bowsers will be banded to 110% capacity to prevent spills. Tanks for bowsers and generators shall be double skinned. When not in use, all valves and fuel trigger guns from fuel storage containers will be locked.
- All plant refuelling will take place using mobile fuel bowsers. Only dedicated trained and competent personnel will carry out refuelling operations. A spill kit and drip tray shall be on site at all times and available for all refuelling operations. Equipment shall not be left unattended during refuelling. All pipework from containers to pump nozzles will have anti-siphon valves fitted.

7.4.2. These proposed extensive mitigation measures will ensure **no significant residual effects** of the development on the adjacent hydrological systems and the fish species they contain.

7.5. Otters

7.5.1. If the mitigation measures detailed in section 7.4 above are implemented, the development of this site will not local hydrology and there will be **no residual effects** on otter.

7.6. Designated sites

7.6.1. Pathways for effect in the form of surface water pollution of nearby designated sites were identified, and thus there is a requirement for mitigation to be incorporated into the proposal for the protection of downstream water quality and ecological receptors. These are outlined above in Section 7.4 above. These measures ensure that the construction of the proposed development do not adversely affect the integrity of protected sites.

7.6.2. **No significant residual effects** are anticipated following these mitigation measures.

Table 4 - Summary of residual effects on Key Ecological Receptors during the construction phase

Key Ecological Receptor	Ecological Value	Characterisation of unmitigated impact	Potential unmitigated effect	Mitigation	Residual effect	Scale at which effect is significant
Nesting birds	Site	Removal of potential nesting habitat	Destruction of nests and chick mortality – minor effect on local bird population	Avoid removal or disturbance to nest during breeding season	None	Not significant
Fish	Potentially International	Contamination of local watercourses from construction materials, excavated silt and hydrocarbons	Adverse impacts on water quality, invertebrate prey, or directly on local fish populations	Extensive pollution and silt control measures, detailed in Section 7.4	None	Not significant
Otter	International	Contamination of local watercourses from construction materials, excavated silt and hydrocarbons	Adverse impacts on otter prey	Extensive pollution and silt control measures, detailed in Section 7.4	None	Not significant
European Designated sites	International	Contamination of local watercourses from construction materials, excavated silt and hydrocarbons	Adverse impacts on water quality, and qualifying habitats and species	Extensive pollution and silt control measures, detailed in Section 7.4	None	Not significant

8. Cumulative Effects

- 8.1. This development is part of a larger regeneration scheme to reinforce the physical definition of Athlone town centre through the development of high-quality public realm enhancements that respect and showcase the unique character of Athlone Town Centre and its extant medieval urban grain. This scheme is to be undertaken either through sequential or perhaps simultaneous regeneration of distinct sections of the town centre. However, all future proposals will be of a similar nature to the current proposal and involve the development of land already urban in character. The same ecological receptors are likely to be impacted, and with implementation of mitigation measures, there will be no significant residual effects on any ecological receptor.
- 8.2. Therefore, there is no potential for the proposal to contribute to any potential for cumulative impacts in this regard when considered in combination with other plans and projects.

9. Compensation

- 9.1. There will be no compensation of land under the current proposal.

10. Avoidance

- 10.1. There is no requirement to avoid any part of the development due to the presence of sensitive or protected habitats or species.

11. Enhancement

- 11.1. The proposed development will involve the planting of semi-mature trees and plants along the streets in order to raise the aesthetic appeal of the town centre. This will provide some, albeit little, habitat for invertebrates and birds.

12. Conclusions

- 12.1. The entire site consists of artificial surfaces, namely tarmac and concrete of roads and pavements, and has negligible value for nature conservation. The development will have a neutral effect through upgrading the site with no net loss of biodiversity.
- 12.2. No significant residual effects are anticipated on any faunal population following measures to avoid and mitigate against adverse effects on sensitive ecological receptors, including birds, fish, and otter.
- 12.3. The proposed development will not result in any negative effects on the European designated sites for nature conservation hydrologically linked to the site, through use of sensitive construction methods and implementation of mitigation measures outlined in Section 7.4.

13. References

Balmer, D.E., Gillings, S., Caffrey, B.J., Swann, R.L., Downie, I.S., & Fuller, R.J (eds.) (2013) *Bird Atlas 2007–11: The Breeding and Wintering Birds of Britain and Ireland*. BTO Books, Thetford.

CIEEM (2019) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine*.

Curtis, T.G.F. & McGough, H.N. (1988) *The Irish Red Data Book: 1 Vascular Plants*. Stationery Office, Dublin

Fossitt, J. A. (2000). *A guide to habitats in Ireland*. The Heritage Council.

NPWS (2018) Flora Protection Order Map Viewer – Bryophytes. [<https://www.npws.ie/maps-and-data/flora-protection-order-map-viewer-bryophytes>] Accessed 22/10/2020.

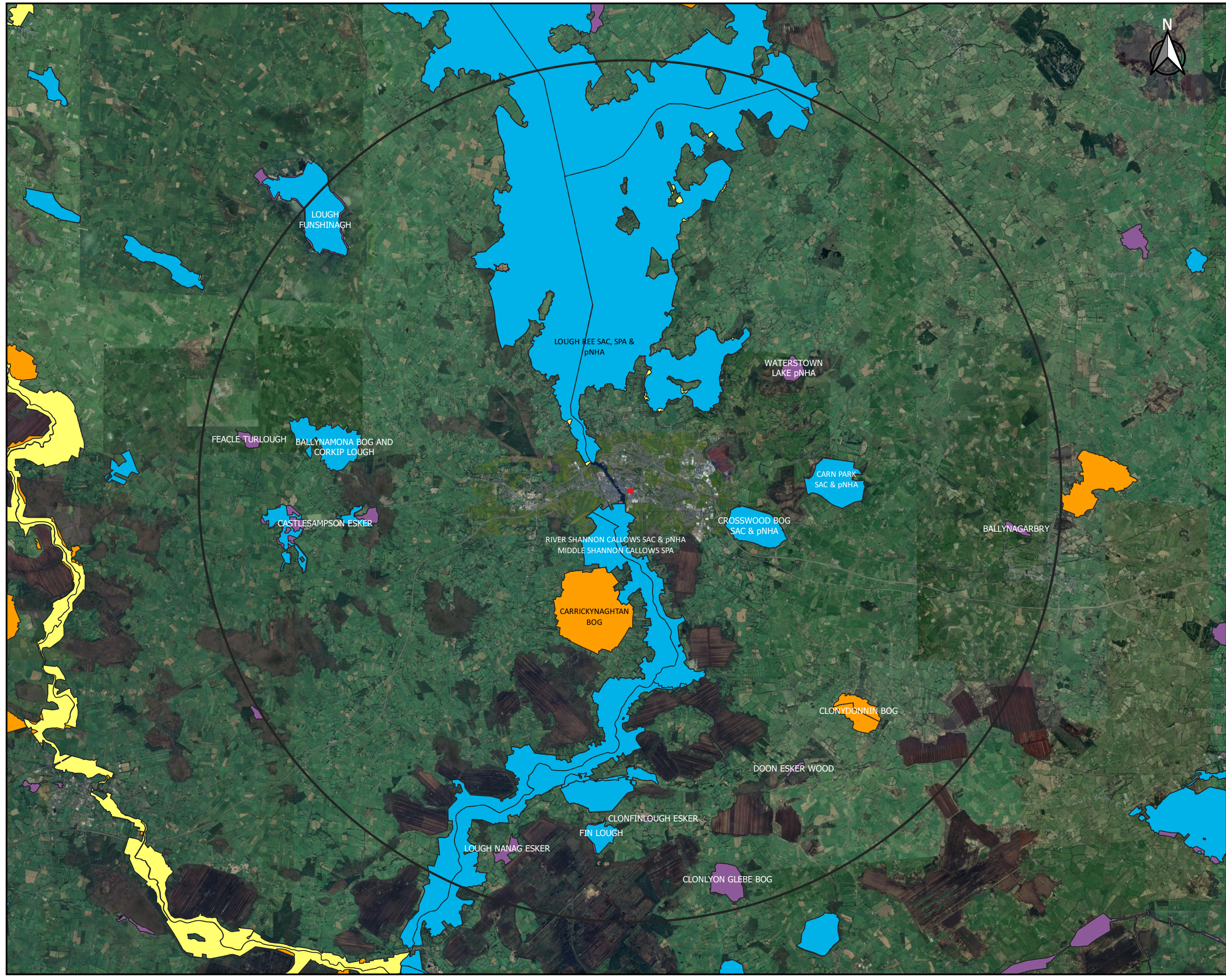
NRA (2009) *Guidelines on ecological surveying techniques for protected flora and fauna on national road schemes*. National Roads Authority, Dublin.

**ATHLONE TOWN CENTRE
PUBLIC REALM
ENHANCEMENT**

FIGURE 1

DESIGNATED SITES

- KEY**
- SITE
 - 1KM BUFFER
 - 15km buffer
 - SPECIAL AREA OF CONSERVATION
 - SPECIAL PROTECTION AREA
 - NATURAL HERITAGE AREA
 - PROPOSED NATURAL HERITAGE AREA



DRAWING INDICATIVE ONLY AND NOT TO SCALE. HABITAT BOUNDARIES ARE ONLY REPRESENTATIVE DUE TO THE LACK OF IDENTIFIABLE FEATURES (I.E. FENCES) AGAINST WHICH TO MAP THE SITUATION ON THE GROUND.

LAYOUT DWG: _____ LAYOUT NO.: _____

DRAWING NUMBER: _____

SCALE - 1: 120000 @ A3

ECOLOGICAL IMPACT ASSESSMENT



THIS DRAWING IS THE PROPERTY OF BLACKSTAFF ECOLOGY LIMITED AND NO REPRODUCTION MAY BE MADE IN WHOLE OR IN PART WITHOUT PERMISSION



**ATHLONE TOWN CENTRE
PUBLIC REALM
ENHANCEMENT**

FIGURE 2

HABITAT SURVEY RESULTS

- KEY**
-  SITE BOUNDARY
 -  BUILDING AND ARTIFICIAL SURFACES

DRAWING INDICATIVE ONLY AND NOT TO SCALE. HABITAT BOUNDARIES ARE ONLY REPRESENTATIVE DUE TO THE LACK OF IDENTIFIABLE FEATURES (I.E. FENCES) AGAINST WHICH TO MAP THE SITUATION ON THE GROUND.

LAYOUT DWG: _____ LAYOUT NO.: _____

DRAWING NUMBER: _____

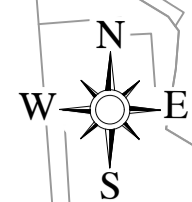
SCALE - 1: 600 @ A3

ECOLOGICAL IMPACT ASSESSMENT

THIS DRAWING IS THE PROPERTY OF BLACKSTAFF ECOLOGY LIMITED AND NO REPRODUCTION MAY BE MADE IN WHOLE OR IN PART WITHOUT PERMISSION



Appendix 1



NOTES

1. All measurements shown are in metres, and all levels are to ordnance datum unless otherwise indicated
2. All Coordinates are to ITM, unless otherwise noted.

LEGEND

Red Line Boundary
 Area = 5740m² = 0.574 Ha
 Site Location = 604265, 741440 (ITM)

Ordnance Survey Ireland mapping data used with permission: in association with Westmeath County Council - OS License CCMA-9602. Copyright Ordnance Survey Ireland, Government of Ireland.

Rev	Date	Description	App
P02	24.02.21	Red Line Amended	KOS
P01	09.02.21	First Issue	KOS

Landscape Architects

open
 optimised environments

Optimised Environments Ltd
 Quartermile two, 2 Lister Square
 Edinburgh, EH3 9GL
 T 0131 221 5920
 www.op-en.co.uk | info@op-en.co.uk

Project Manager, Civil & Structural Engineers

McADAM
 DESIGN

McAdam Design Ltd
 1c Montgomery House
 478 Castlereagh Road
 Belfast, BT5 6BQ
 T 028 9040 2000
 admin@mcadamdesign.co.uk
 www.mcadamdesign.co.uk

Client

WESTMEATH COUNTY COUNCIL
 Comhairle Chontae na hIarmhí

Project Ireland 2040
 Building Ireland's Future

Project Status: **STAGE 2 - CONCEPT DESIGN**

Project: **Athlone Public Realm**

Drawing: **LOCATION PLAN**

Scale: **1:1000 @ A1**

Drawn: DSA, Checked: CM, Approved: KOS
 Date: 09.02.21, Date: 09.02.21, Date: 09.02.21

Project: - Organisation - Zone - Level - Type - Role - Number - Revision
 ATRP - MCA - Z1 - XX - DR - CE - 1000 - P02

Project Number: **E2251**, Status code & Description: -

All dimensions are in metres. Figured dimensions to be taken in preference to scaled dimensions. Dimensions to be checked on site. © 2021 McAdam Design Ltd.

Appendix 2

