Eire Ecology

Environmental Consultants

Ecological Impact Statement

West Square Parklet

at Askeaton, Co. Limerick

DOCUMENT DETAILS

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1 INTRODUCTION

Eire Ecology was commissioned by Limerick City and County Council to carry out an Ecological Impact Assessment with regard to the proposed development of a Parklet in Askeaton, Co. Limerick.

The present report was compiled by Karolina Illien (MSc) and reviewed by John Curtin of Eire Ecology providing information on flora and fauna. John Curtin B.Sc. is the principal ecologist with Eire Ecology and has over 10 years of experience in ecological impact assessment.

The report concentrates on ecological features within the development area of particular significance, primarily designated habitats and species, including habitats/species listed in Annex I, II and IV of the EU Habitats Directive, rare flora listed in the Flora Protection Order along with other semi-natural habitats of conservational value.

The report has been compiled in compliance with the European Communities Legal requirements and follows guidance outlined in the following documents:

- EPA Revised Guidelines on the Information to be contained in Environmental Impact Statements Draft September 2015.
- EPA Advice Notes on for Preparing Environmental Impact Statements Draft September 2015.

The European Habitats Directive 92/43/EEC (Article 6) indicates the need for plans and projects to be subject to Habitats Directive Assessment (also known as Appropriate Assessment) if the plan or project is not directly connected with or necessary to the management of a Natura 2000 site (which includes SACs and SPAs) but which has the potential to have implications on a site's conservation objectives. These implications can be significant effects either individually or in combination with other plans or projects.

An Appropriate Assessment Screening Report was prepared for this project and is presented as a separate report to the planning application. This report fulfils the following commitment made as part of the Masterplan/Variation and associated SEA/AA processes:

"The Appropriate Assessment for the parklet development shall be informed by an ecological impact assessment which shall consider issues including ecological connectivity and species. The ecologist working on AA for the project shall be consulted at the start of the project so that any necessary mitigation or design changes can be incorporated early in the project."

2 ASSESSMENT METHODOLOGY

2.1 POLICY & GUIDANCE

2.1.1 EU Habitats Directive

The "Habitats Directive" (Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna) is the main legislative instrument for the protection and conservation of biodiversity within the European Union and lists certain habitats and species that must be protected within wildlife conservation areas, considered to be important at a European as well as at a national level. A "Special Conservation Area" or SAC is a designation under the Habitats Directive. The Habitats Directive sets out the protocol for the protection and management of SACs.

The Directive sets out key elements of the system of protection including the requirement for "Appropriate Assessment" of plans and projects. The requirements for an Appropriate Assessment are set out in the EU Habitats Directive. Articles 6(3) and 6(4) of the Directive.

2.2 EU Birds Directive

The "Birds Directive" (Council Directive 79/409/EEC as codified by 2009/147/EC) provides for a network of sites in all member states to protect birds at their breeding, feeding, roosting and wintering areas. This directive identifies species that are rare, in danger of extinction or vulnerable to changes in habitat and which need protection (Annex I species). Appendix I indicates Annex I bird species as listed on the Birds Directive. A "Special Protection Area" or SPA, is a designation under The Birds Directive.

SACs and SPAs form a pan-European network of protected sites known as Natura 2000 sites and any plan or project that has the potential to impact upon a Natura 2000 site requires Appropriate Assessment (AA). As outlined previously, an AA Screening Report was prepared for this project and is presented as a separate report to the planning application.

2.2.1 Wildlife Acts 1976 – 2012

The primary domestic legislation providing for the protection of wildlife in general, and the control of some activities adversely impacting upon wildlife is the Wildlife Act of 1976, as amended. The aims of the wildlife act according to the National Parks and Wildlife Service are "… to provide for the protection and conservation of wild fauna and flora, to conserve a representative sample of important ecosystems, to provide for the development and protection of game resources and to regulate their exploitation, and to provide the services necessary to accomplish such aims." All bird species are protected under the act. The Wildlife (Amendment) Act of 2000 amended the original Act to improve the effectiveness of the Act to achieve its aims.

2.3 SURVEY METHODOLOGY

The assessment was carried out in three stages, firstly through desktop assessment to determine existing records in relation to habitats and species present in the study area. This included research on the NPWS metadata website, the National Biodiversity Data Centre (NBDC) database and a literature review of published information on flora and fauna occurring in the development areas.

The second phase of the assessment involved site visits to establish the existing environment in the footprint of the proposed development. Areas which were highlighted during desktop assessment were investigated in closer detail according to the Heritage Council Best Practice Guidance for Habitat Survey and Mapping (Smith et al., 2011). Habitats in the proposed development areas were classified according to the Heritage Council publication "A Guide to Habitats in Ireland" (Fossitt, 2000). This publication sets out a standard scheme for identifying, describing and classifying wildlife habitats in Ireland. This form of classification uses codes to classify different habitats based on the plant species present. Species recorded in this report are given in both their Latin and English names. Latin names for plant species follow the nomenclature of "An Irish Flora" (Parnell & Curtis, 2012).

Habitats were surveyed in December 2022 by conducting a preliminary site walkover covering the area under the footprint of the proposed development. The survey date is considered outside the botanical survey period, however it considered appropriate for the purposes of this assessment as the development is on built land and was previously cleared of vegetation.
Signs of mammals were searched while surveying the study area noting any sights, signs or any activity in the vicinity especially along adjacent boundaries. The potential to host bat roosts was examined at the time of the walkover survey. A photographic record was made of the main features of interest. The final part of the assessment involves an evaluation of the proposed development area and determination of the potential impacts on the flora and fauna of the area. This part of the assessment forms the basis for Impact Assessment and is based on the following guidelines and publications:

- Assessment of plans and projects significantly affecting Natura 2000 sites (EC, 2002);
- Managing Natura 2000 Sites (EC, 2000);
- Guidance document on Article 6(4) of the Habitats Directive 92/43/EEC (EC, 2007);
- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DEHLG, December 2009, Rev 2010);
- Guidelines for Planning Authorities & An Bord Pleanala on carrying out Environmental Impact Assessments (March 2013)
- EPA Revised Guidelines on the Information to be contained in Environmental Impact Statements Draft September 2015.
- EPA Advice Notes on for Preparing Environmental Impact Statements Draft September 2015.
- Best Practice Guidance for Habitat Survey and Mapping (Heritage Council, 2011);

- Bat Mitigation Guidelines for Ireland V2 (National Parks and Wildlife Service, Department of Housing, Local Government and Heritage, 2022).
- Irish Wetland Bird Survey (I-WeBS) Report
- Institute of Ecology and Environmental Management's Guidelines for Ecological Impact Assessment (2006)
- Natura Scheme for evaluating ecological sites (Nairn & Fossitt, 2004)

The location of the proposed development in the town of Askeaton, Co. Limerick is presented in Figure 2-1 below.

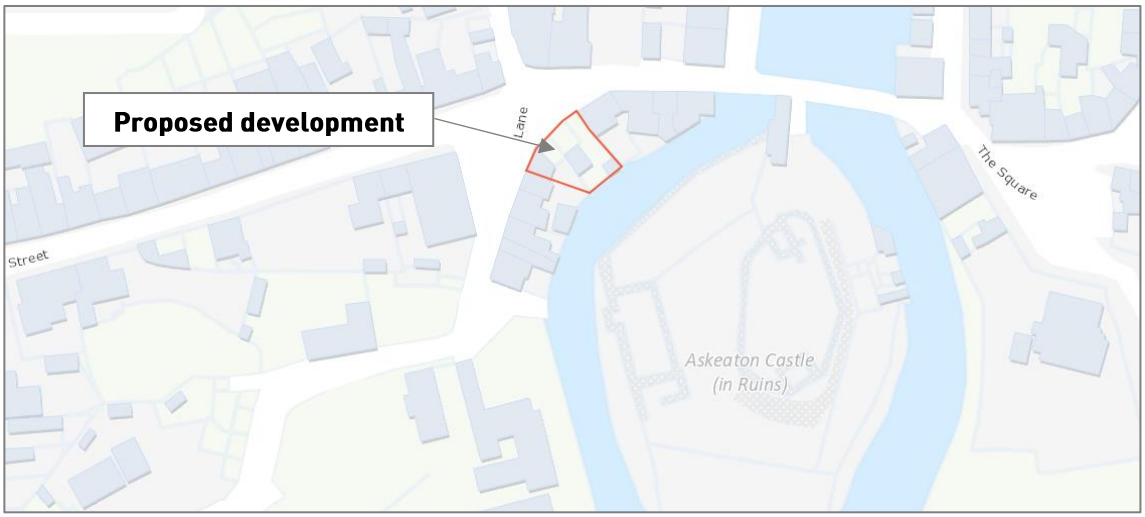

Figure 2-1 Showing the indicative site location at Askeaton, Co. Limerick.

3 PROJECT DESCRIPTION

The site in question is a disused site containing a derelict terraced house and partial natural stone walls located within the town of Askeaton. The site is adjacent to the river Deel to the rear and main street to the front. The proposed development will consist of the Demolition of end of terrace two-storey derelict House (V94 DHH9) and adjacent vacant site. The proposed construction consists of 288m2 (0.0288 Hectare) Parklet. The works include demolition of the existing boundary onto West Square, the construction of end of terrace 1.5m wide two-storey abutment, feature walls/seats built from existing stone walls and associated works comprising of services, boundary treatment and hard and soft landscaping works. The site is within an Architectural Conservation Area (ACA). **No works will occur within 1m of the rear boundary wall.**

Figure 3-1 Showing the indicative site layout for the project.

4 EXISTING ENVIRONMENT

4.1 DESIGNATED CONSERVATION AREAS

The proposed site lies approximately 0.4km from the River Shannon and River Fergus Estuaries SPA (site code: 004077) and approximately 2.2km from the Lower River Shannon SAC (site code: 002165) see Figure 4-1.

The estuaries of the River Shannon and River Fergus form the largest estuarine complex in Ireland. The site comprises the entire estuarine habitat from Limerick City westwards as far as Doonaha in Co. Clare and Dooneen Point in Co. Kerry. The River Shannon and River Fergus Estuaries SPA is an internationally important site that supports an assemblage of over 20,000 wintering waterbirds. It holds internationally important populations of four species, i.e. Light-bellied Brent Goose, Dunlin, Black-tailed Godwit and Redshank. In addition, there are 17 species that have wintering populations of national importance. The site also supports a nationally important breeding population of Cormorant. Of particular note is that three of the species which occur regularly are listed on Annex I of the E.U. Birds Directive, i.e. Whooper Swan, Golden Plover and Bar-tailed Godwit. Parts of the River Shannon and River Fergus Estuaries SPA are Wildfowl Sanctuaries.

The Lower River Shannon is a very large site stretching along the Shannon valley from Killaloe in Co. Clare to Loop Head/ Kerry Head, a distance of some 120 km. The site thus encompasses the Shannon, Feale, Mulkear and Fergus estuaries, the freshwater lower reaches of the River Shannon (between Killaloe and Limerick), the freshwater stretches of much of the Feale and Mulkear catchments and the marine area between Loop Head and Kerry Head. Rivers within the sub-catchment of the Feale include the Galey, Smearlagh, Oolagh, Allaughaun, Owveg, Clydagh, Caher, Breanagh and Glenacarney. Rivers within the sub-catchment of the Mulkear include the Killeenagarriff, Annagh, Newport, the Dead River, the Bilboa, Glashacloonaraveela, Gortnageragh and Cahernahallia.

This site is of great ecological interest as it contains a high number of habitats and species listed on Annexes I and II of the E.U. Habitats Directive, including the priority habitats lagoon and alluvial woodland, the only known resident population of Bottle-nosed Dolphin in Ireland and all three Irish lamprey species. A good number of Red Data Book species are also present, perhaps most notably the thriving populations of Triangular Club-rush. A number of species listed on Annex I of the E.U. Birds Directive are also present, either wintering or breeding. Indeed, the Shannon and Fergus Estuaries form the largest estuarine complex in Ireland and support more wintering wildfowl and waders than any other site in the country. Most of the estuarine part of the site has been designated a Special Protection Area (SPA), under the E.U. Birds Directive, primarily to protect the large numbers of migratory birds present in winter.

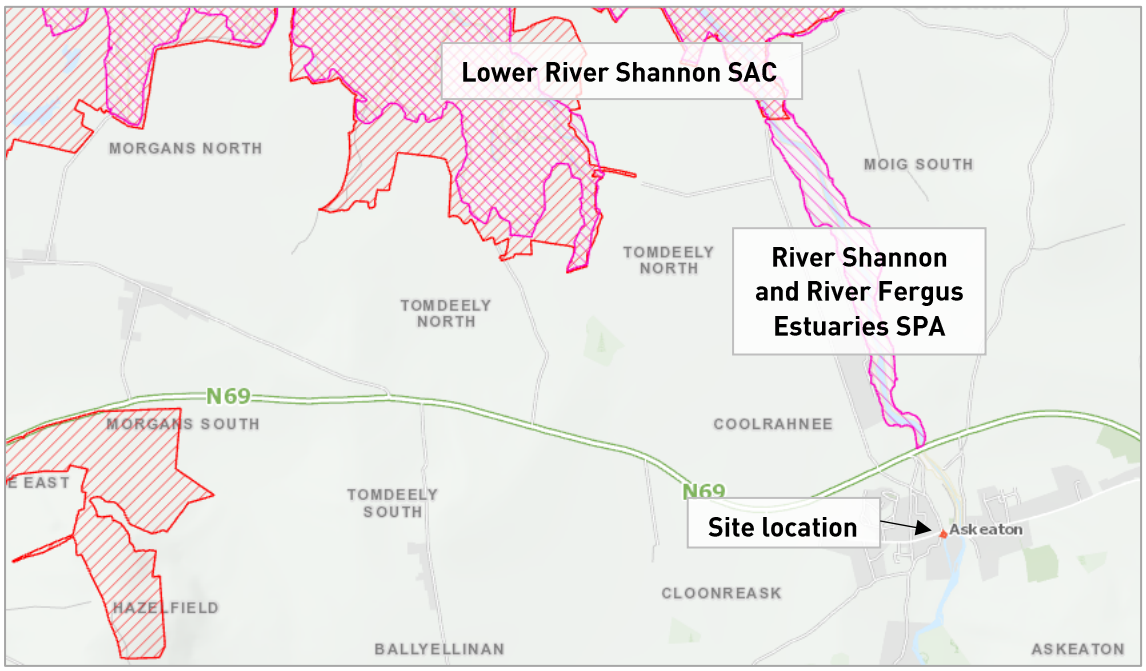

Figure 4-1: Indicative site location in relation to the River Shannon and River Fergus Estuaries SPA and Lower River Shannon SAC

4.2 HABITAT DESCRIPTION

Habitats within the site outline are a combination of artificial surfaces (concrete) and bareground and stonewalls. The site sits above a canal which forms part of the River Deel. The site is currently disused and contains a derelict house. By the outer wall is an accumulation of soil and stones. The remains of a small shed are located to the north of the site by the River/Canal. The base of the shed remains is cast concrete. A retaining wall runs along the River bank boundary. No works are proposed within 1m of this boundary wall.

Table 4-1 Habitats recorded within site boundary

Classification (Fossitt)					
B	Cultivated & Built Land	**BL**	Built Land	**BL1**	Stone walls
				BL3	Buildings and artificial surfaces
E	Exposed Rock & Disturbed Ground	**ED**	Disturbed ground	**ED2**	Spoil and bare ground
				ED3	Recolonising bare ground

Table 4-2 Habitats surrounding the site

Classification (Fossitt)					
F	Freshwater	**FW**	Watercourses	**FW3**	Canal
		FS	Swamps	**FS2**	Tall Herb Swamps
W	Woodland & Scrub	**WS**	Scrub / transitional woodland	**WS1**	Scrub

Figure 4-2 Satellite view of Subject site with surrounding habitats

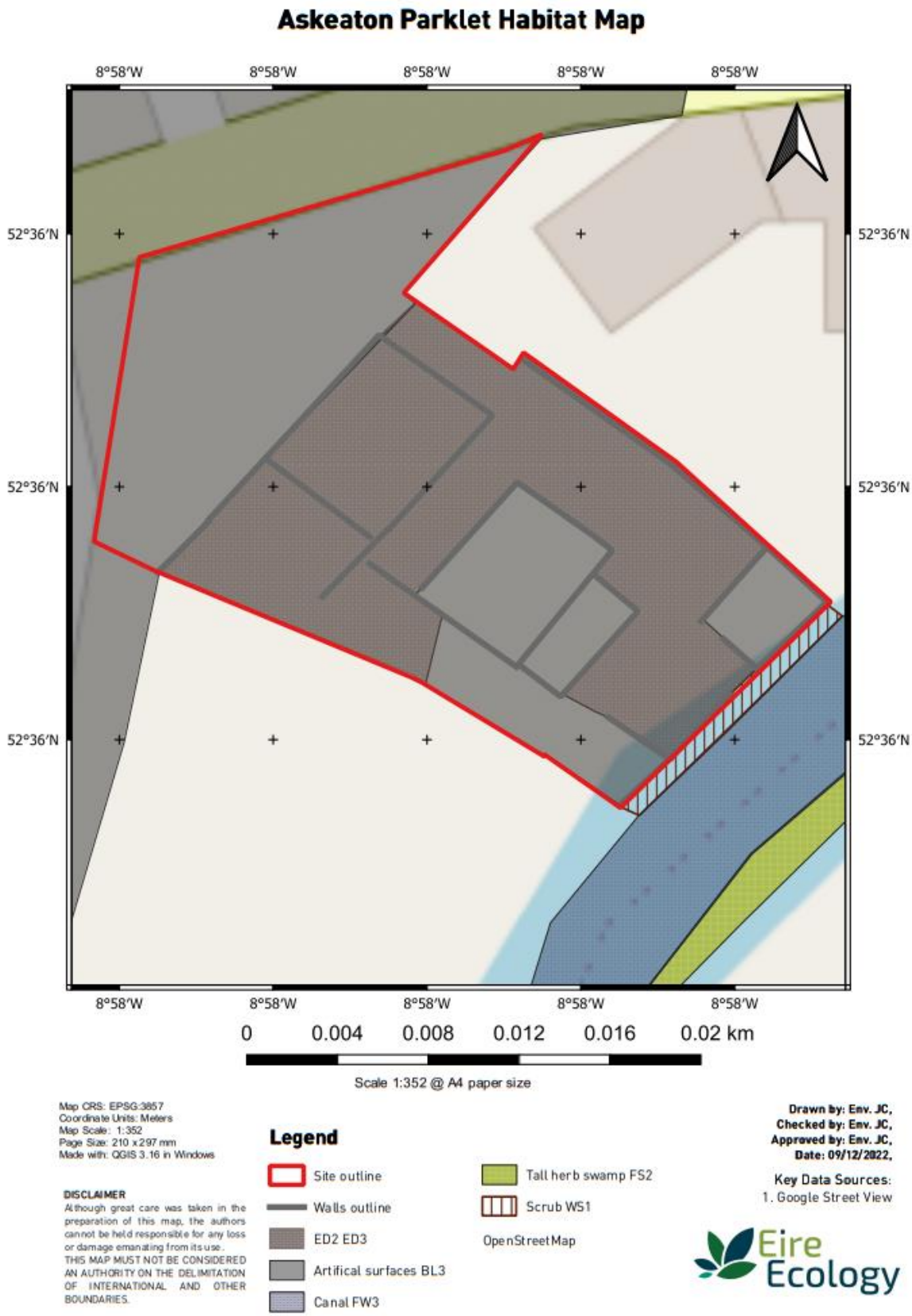

Figure 4-3 Habitat map

4.2.1 Within site

The subject site consists of built land and bare ground within a town. A canal which forms part of the River Deel borders the site to one side and main street Askeaton form the other border. A derelict house and the stone wall and concrete base of a shed remain on the site.

4.2.1.1 BL1 Stone walls

A section of stone wall is present on site. Species found growing on the walls included: ivy (*Hedera helix*) , ivy leaved toadflax (*Cymbalaria muralis*), hard fern (*Blechnum spicant*), smooth sow thistle (*Sonchus oleraceu*), elder (*Sambucus nigra*) and Yorkshire fog (*Holcus lanatus*).

Plate 4-1: Stone wall on site

4.2.1.2 BL3 Buildings and artificial surfaces

Built structures found on site include a derelict house, stone and cast concrete ruins. Occasional areas of sparse moss, ivy, bramble (*Rubus fructicosus* agg) and Polypody fern (*Polypodium agg.*) can be found growing on the walls of these buildings.

Plate 4-2: Derelict house to be demolished

Plate 4-3: Shed remains

4.2.1.3 ED2 Spoil and bare ground / ED3 Recolonising bare ground

Areas around the concrete base of the shed and house consist of recently cleared bare ground and recolonising bare ground. Species found here included broad leaved dock (*Rumex obtusifolius*), herb Robert (*Geranium robertianum*), nettle (*Urtica dioica*), common figworth (*Scrophularia nodosa*), cleavers (*Galium aparine*), ivy (*Hedera hibernica*) and bramble.

Plate 4-4 Recolonising bare ground

Plate 4-5 Recolonising bare ground

4.2.2 Outside site boundary

Freshwater habitats found beyond the south boundary wall include a narrow strip of Scrub along the canal boundary. Across the canal from the site is an area of tall herb swamp.

4.2.2.1 WS Scrub

This refers to the habitat adjacent to the site boundary on the river bank. Species found here consist predominantly of elder, ivy and bramble.

4.2.2.2 FW3 Canal

This stretch of water is diverted from the River Deel and surrounds the eastern side of the Desmond Castle / Hellfire club building. The substrate is gravelly thus similar to eroding stream.

4.2.2.3 FS2 Tall Herb Swamp

An area of tall-herb swamp can be seen across the water on the opposite bank. The area is comparatively species-rich stands of herbaceous vegetation in an wet area where water levels fluctuate regularly due to the river. Tall and robust broadleaved herbs such as dock (Rumex sp), nettle, and willowherb (Epilobium sp) dominate the vegetation.

Plate 4-6: Adjoining habitat to the south of site

Plate 4-7 Canal forming an offshoot of the River Deel lies adjacent to the site.

4.3 FAUNA

4.3.1 Mammals

There are no badger setts on site and no evidence of otters were seen. The site is unsuitable habitat for badgers. The site lies within a town with a high retaining wall along the river at this location. There is a historical evidence of otter scat at Askeaton bridge, some 50 metres from the site. This development will not change the suitability of the site for otters as the riverbank will stay unchanged by the parklet, therefore it will not affect accessibility for otters.

Bats

Bats are protected by law (Wildlife Act (1976), Wildlife (Amendment) Act 2000 and the Habitats Directive (Council Directive No. 97/62/EC of 27 October 1997 (amending Council Directive No. 92/43/EEC of 21 May 1992). In order to comply with legislation that bats are not killed or injured, it is essential to ensure that measures to reduce risk to bats are undertaken or that the presence of bats can be ruled out. This area is not designated for Lesser Horseshoe bats and there is no records of Lesser horse shoe bats within the 10km square of the site.

A search was made of the NDBC for historical records of bat and other mammal species recorded within 2 kilometres of the site of the proposed development. Datasets used in compiling the list below include National Bat Database of Ireland, Badger Setts of Ireland Database, Irish Squirrel Survey 2012, Mammals of Ireland 2016-2025 and Atlas of Mammals in Ireland 2010-2015.

Table 4-3 Designated bat species and other mammals recorded within the 2km squares; R35K and R35F surrounding the site

Name	Last recorded	Designation
Brown Long-eared Bat (Plecotus auritus)	01/06/2008	Protected Species: EU Habitats Directive |Annex IV | Wildlife Acts
Daubenton's Bat (Myotis daubentonii)	29/06/2011	Protected Species: EU Habitats Directive |Annex IV | Wildlife Acts
Soprano Pipistrelle (Pipistrellus pygmaeus)	29/06/2011	Protected Species: EU Habitats Directive |Annex IV | Wildlife Acts
Pipistrelle (Pipistrellus pipistrellus sensu lato)	29/06/2011	Protected Species: EU Habitats Directive |Annex IV |Wildlife Acts
Lesser Noctule (Nyctalus leisleri)	29/06/2011	Protected Species: EU Habitats Directive |Annex IV | Wildlife Acts
European Otter (Lutra lutra)	22/10/2013	Protected Species: EU Habitats Directive |Annex II |Annex IV |Wildlife Acts
Eurasian Red Squirrel (Sciurus vulgaris)	31/12/2012	Protected Species: Wildlife Acts
West European Hedgehog (Erinaceus europaeus)	12/09/2011	Protected Species: Wildlife Acts
Eurasian Badger (Meles meles)	31/12/2006	Protected Species: Wildlife Acts

A preliminary walkover survey was carried out by John Curtin in December 2022 to examine the potential for any features suitable to host a bat roost. The aim was to compile information on actual and potential bat roosting locations. This was done by searching for evidence of bats including live and dead specimens, droppings, feeding remains, urine splashes, fur oil staining and noises.

The derelict house (plate 4-2 above) was inspected first from ground level, with the aid of binoculars. The search included the ground, window/door openings, walls, eaves, roof slates, Ivy, crevices and the attic. Searches were carried out with the aid of binoculars, torches, an endoscope, thermal imaging device and a ladder and focused on walls, floors, beams, crevices, lintels, shelves, etc. **No evidence of bats was noted from the building.**

A single Pipistrelle dropping was found in a crevice in one of the external ruin walls (plate 4-8) on site showing the wall is used as a bat roost. Given the presence of a bat roost the removal of the stone wall will take place under the supervision of a licenced bat handler and after a derogation licence has been obtained by the NPWS. The application proposed creating new section of walls to the sides of the development adjacent to neighbouring gables. Suitable cavities will be constructed within these walls providing alternative roost sites for bats.

Plate 4-8: Location of roost where a single pipistrelle dropping was found

Plate 4-9: Pipistrelle dropping

4.3.2 Birds

All species of birds are protected under the Wildlife Act 1976/Wild life Amendment Act 2000. As previously mentioned in the accompanying NIS, The River Shannon and River Fergus Estuaries SPA is an internationally important site that supports an assemblage of over 20,000 wintering waterbirds. It holds internationally important populations of four species, i.e. Light-bellied Brent Goose, Dunlin, Black-tailed Godwit and Redshank. In addition, there are 17 species that have wintering populations of national importance. The site also supports a nationally important breeding population of Cormorant. In order to ascertain whether any of these waterbird species – the qualifying features for the River Shannon and River Fergus Estuaries SPA, are present in the vicinity of the proposed development, a bird survey was conducted within the wintering season.

Table 4-4: Protected habitats with ornithological value in the vicinity of the proposed development

Name of Site: River Shannon and River Fergus Estuaries SPA (004077)	
Distance to proposed development: 0.39km	
Has the designated site a high ornithological value?	**Has the site ornithological connectivity to the subject site?**
Yes. Wintering and breeding site for; • Cormorant (Phalacrocorax carbo) [A017] • Whooper Swan (Cygnus cygnus) [A038] • Light-bellied Brent Goose (Branta bernicla hrota) [A046] • Shelduck (Tadorna tadorna) [A048]	SPA is located to the north of the site. Hydrological connectivity can be found via The Deel River. Baring Black-headed gulls, the conservation objective species do not typically roost and feed within the town,

• Wigeon (Anas penelope) [A050] • Teal (Anas crecca) [A052] • Pintail (Anas acuta) [A054] • Shoveler (Anas clypeata) [A056] • Scaup (Aythya marila) [A062] • Ringed Plover (Charadrius hiaticula) [A137] • Golden Plover (Pluvialis apricaria) [A140] • Grey Plover (Pluvialis squatarola) [A141] • Lapwing (Vanellus vanellus) [A142] • Knot (Calidris canutus) [A143] • Dunlin (Calidris alpina) [A149] • Black-tailed Godwit (Limosa limosa) [A156] • Bar-tailed Godwit (Limosa lapponica) [A157] • Curlew (Numenius arquata) [A160] • Redshank (Tringa totanus) [A162] • Greenshank (Tringa nebularia) [A164] • Black-headed Gull (Chroicocephalus ridibundus) [A179]	however they may use the river / canal adjacent to the site.

4.3.2.1 Historical Review of Data

A search was made of the NDBC for records of bird species recorded within 2 kilometres of the site of the proposed development. Datasets used in compiling the list below include The Atlas of Breeding and Wintering Birds 2007-2011) (Balmer et al 2013) and the Irish Wetland Birds Survey (I-WeBS). A total of twenty two records for designated bird species was noted. It should be noted that I-WeBS records from the surrounding wetlands will have also been uploaded to the NBDC

Table 4-5 Designated bird species recorded within the 2km squares; R35K and R35F

Name	Last recorded	Designation
Barn Swallow (Hirundo rustica)	31/07/1991	Wildlife Acts | Birds of Conservation Concern - Amber List
Black-headed Gull (Larus ridibundus)	13/07/2017	Wildlife Acts | Birds of Conservation Concern - Red List
Little Egret (Egretta garzetta)	13/01/2018	Wildlife Acts | Annex I Bird Species
Common Greenshank (Tringa nebularia)	31/12/2011	Wildlife Acts | Birds of Conservation Concern - Amber List
Common Kingfisher (Alcedo atthis)	10/08/2016	Wildlife Acts | Annex I Bird Species | Birds of Conservation Concern - Amber List
Common Pheasant (Phasianus colchicus)	31/12/2011	Wildlife Acts | Annex III, Section I Bird Species
Common Linnet (Carduelis cannabina)	31/12/2011	Wildlife Acts | Birds of Conservation Concern - Amber List

Name	Last recorded	Designation
Common Sandpiper (Actitis hypoleucos)	10/08/2016	Wildlife Acts | Birds of Conservation Concern - Amber List
Common Swift (Apus apus)	10/08/2016	Wildlife Acts | Birds of Conservation Concern - Amber List
Common Wood Pigeon (Columba palumbus)	31/07/1991	Wildlife Acts | Annex II, Annex III, Section I Bird Species
Dunlin (Calidris alpina)	31/12/2011	Wildlife Acts | Birds of Conservation Concern - Amber List
Northern Lapwing (Vanellus vanellus)	31/12/2011	Wildlife Acts | Birds of Conservation Concern - Red List
Common Starling (Sturnus vulgaris)	31/12/2011	Wildlife Acts | Birds of Conservation Concern - Amber List
Great Black-backed Gull (Larus marinus)	31/12/2011	Wildlife Acts | Birds of Conservation Concern - Amber List
Lesser Black-backed Gull (Larus fuscus)	13/01/2018	Wildlife Acts | Birds of Conservation Concern - Amber List
Mew Gull (Larus canus)	31/12/2011	Wildlife Acts | Birds of Conservation Concern - Amber List
Stock Pigeon (Columba oenas)	31/07/1991	Wildlife Acts | Birds of Conservation Concern - Amber List
Common Redshank (Tringa totanus)	31/12/2011	Wildlife Acts | Birds of Conservation Concern - Red List
House Martin (Delichon urbicum)	31/07/1991	Wildlife Acts | Birds of Conservation Concern - Amber List
House Sparrow (Passer domesticus)	31/07/1991	Wildlife Acts | Birds of Conservation Concern - Amber List
Mallard (Anas platyrhynchos)	13/07/2017	Wildlife Acts | Annex III, Section I Bird Species
Sky Lark (Alauda arvensis)	31/07/1991	Wildlife Acts | Birds of Conservation Concern - Amber List
Yellowhammer (Emberiza citrinella)	31/07/1991	Wildlife Acts | Birds of Conservation Concern - Red List

4.3.3 Bird Survey Results

In order to ascertain the presence of wintering waterbirds, a point count bird survey was conducted on site and surrounding area on 8th December 2022.

The surveyor: John Curtin has over 10 years' experience surveying birds including at large windfarm and solar sites. A Zeiss conquest HD 10x42 binoculars and a Zeiss Conquest Gavia 85 30-60x spotting scope were used to scan the area. Particular attention was focused on species such as waders, waterbirds, gulls, raptors, and red listed species, however all bird sightings were recorded.

Table 4-6 Timing and weather conditions during survey

Survey type	Date	Visit No.	Visibility	Precipitation
Point Hinterland	08/12/2022	1	good	No rain

Table 4-7 Bird survey results

Species	Scientific name	BoCCI4	Season	No. of Birds	Note
Mallard	*Anas platyrhynchos*	*Amber*	*Breeding/Wintering*	4	Canal south of site
Redshank	*Tringa totanus*	*Red*	*Breeding/Wintering*	2	Feeding by edge of canal to south of site
Black-headed Gull	*Larus ridibundus*	*Amber*	*Breeding/Wintering*	3	Flying around quarry lake
Grey Heron	*Ardea cinerea*	*Green*		2	River Deel, NE of site
Black-headed Gull	*Larus ridibundus*	*Amber*	*Breeding/Wintering*	1	River Deel
Herring Gull	*Larus argentatus*	*Amber*	*Breeding/Wintering*	1	River Deel
Mallard	*Anas platyrhynchos*	*Amber*	*Breeding/Wintering*	2	River Deel
Herring Gull	*Larus argentatus*	*Amber*	*Breeding/Wintering*	1	Perched on post adjacent to River
Grey Wagtail	*Motacilla cinerea*	*Red*	*Breeding*	1	River Deel, NE of site
Black-headed Gull	*Larus ridibundus*	*Amber*	*Breeding/Wintering*	4	River Deel, NE of site
Mallard	*Anas platyrhynchos*	*Amber*	*Breeding/Wintering*	3	River Deel, NE of site
Black-headed Gull	*Larus ridibundus*	*Amber*	*Breeding/Wintering*	9	perched on wire within town
Mallard	*Anas platyrhynchos*	*Amber*	*Breeding/Wintering*	7	Perched on canal just to the NE of site
Kingfisher	*Alcedo atthis*	*Amber*	*Breeding*	1	Flying on canal near site
Redshank	*Tringa totanus*	*Red*	*Breeding/Wintering*	1	Feeding to NE of site where canal meets river
Little Egret	*Egretta garzetta*	*Green*		1	By canal, NE of site
Dunnock	*Prunella modularis*	*Green*		1	Canal behind site
Blue Tit	*Cyanistes caeruleus*	*Green*		2	By castle
Robin	*Erithacus rubecula*	*Green*		1	Within site
Peregrine Falcon	*Falco peregrinus*	*Green*			Staff member of adjacent factory stated Peregrine have been breeding within the castle ruins
Redshank	*Tringa totanus*	*Red*	*Breeding/Wintering*	6	On estuary north of N69 bridge
Mallard	*Anas platyrhynchos*	*Amber*	*Breeding/Wintering*	4	On estuary north of N69 bridge
Black-headed Gull	*Larus ridibundus*	*Amber*	*Breeding/Wintering*	4	On estuary north of N69 bridge
Little Egret	*Egretta garzetta*	*Green*		1	On estuary north of N69 bridge

Figure 4-4: Bird survey results: Points are graduated by number of birds

The only bird recorded within the site was a Robin. Two barn swallows nests, were noted within one of the sheds. It is proposed to remove this structure thus the proposal will result in a loss of nesting habitat for this species (without mitigation).

Two species listed under the SPA conservation objectives were found during the bird survey: Black-headed Gull and Redshank. Two Redshank were seen on the riverbank near the site feeding at the water's edge. (Lewis, 2017) states the threshold for Nationally Important numbers of Redshank is 240 birds. The report states the Shannon and Fergus Estuaries no longer hosts nationally Important numbers. (Lewis, 2017) shows Black headed gull counts within the Shannon Fergus estuaries occurred on 3 occasions between 2009 – 2016 with highest count of 4,661. Black headed gulls were seen throughout the town, mostly along the river perched on telephone poles. Both Redshank and Black headed gulls were seen in small numbers in the hinterland surveys, primarily along the river, both within the town and the adjacent countryside indicating these individuals are accustomed to anthropological activity and the small-scale construction project in question is not expected to disturb these birds. In addition, the proposed site footprint is not associated with feeding or roosting activity from any listed species in the River Shannon and River Fergus Estuaries SPA. In addition to these species Mallard and kingfisher; both Amber listed in BoCCI4 (Gilbert G, 2021) were noted along the canal to the rear of the site. Kingfisher create nest burrows into stone - free sandy soil of a low stream bank, usually about 0.5m from the top (RSPB, 2023). The birds choose a vertical bank clear of vegetation, since this provides a reasonable degree of protection from predators. No suitable nest sites were found along the canal adjacent to the site Mallard typically nest near water and can exploit a variety of habitats. Nests for this species have been found on top of stone walls adjacent to canals. Although no evidence of former nests were found within the site it is possible for this species to nest within the site. Should a nest for this species be found within the breeding season works in this area will not progress until after fledging.

In conclusion, low numbers of wintering waterbirds were seen around the site. No wintering birds were seen to use the site. The proposed site is on built land in a town. The project will slightly alter the use of the site, however the birds found in the town are used to anthropological activity and a slight increase in human activity on site will not have a impact on birds. The site itself is not being used as a feeding or roosting site at present. It is the surveyor's opinion that the proposed development is highly unlikely to have any impact on the qualifying interests or conservation objectives of the River Shannon and River Fergus Estuaries SPA, alone or in combination with the other plans and projects in the area.

4.4 HABITAT EVALUATION

The ecological value of the parklet location was assessed following the guidelines set out in the Institute of Ecology and Environmental Management's Guidelines for Ecological Impact Assessment (CIEEM, 2019) and according to the Natura Scheme for evaluating ecological sites (after Nairn & Fossitt, 2004). Judgements on the evaluation were made using geographic frames of reference, e.g. European, National, Regional or Local.

The subject site is of low value for wintering birds given the suburban nature of the area and high levels of local disturbance. There are no rare or protected habitats recorded in the subject site. The development area is generally of relatively Low Local Ecological Value. The habitats adjacent to the site (the river Deel), Tall Herb Swamp and Scrub is of high ecological value while the River Deel and downstream estuaries are of international importance. The development is of low magnitude as it refers to a small area within a town. No extensive excavation is required. There will be a short-term negative effect during construction, with increased noise and activity on site.

5 ASSESSMENT OF IMPACTS

5.1 DIRECT IMPACTS

There will be no direct impact on Natura 2000 sites. The potential for impacts on these sites was considered in the Appropriate Assessment Screening Report and compiled for the project. It was concluded from screening that no mitigation measures were necessary in order to protect the Conservation Objectives of the surrounding Natura 2000 sites. **Mitigation and enhancement measures outlined below have no bearing on the surrounding Natura sites and are to protect and enhance local biodiversity features only**. Bird surveys carried out to ascertain wintering birds using the area, showed low numbers of these species surrounding the site. The built land site is not suitable habitat for breeding or feeding waterbirds (baring the unlikely event a mallard nests on top of an existing stone wall). Similarly, Peregrine have been breeding within the castle ruin to the south east off the site. Given the small-scale nature of the works and the location; set within an area of high human activity, no disturbance impacts are expected. Therefore, it is not expected that the development will result in loss of qualifying interest habitat or supporting habitat.

Impacts on the local bat population will be minor given mitigation measures are proposed to offset change to roosting features in stonewall.

5.2 INDIRECT IMPACTS

Impacts on the local wintering waterbird population will be minor given no impacts on roosting features will occur. The location of the site is within a town; therefore this area already has anthropogenic influences. The nature of the development does not require deep excavation and the addition of native planting, bat feature wall and bird nest boxes will enhance biodiversity of the area. The proposed parklet is on a site adjacent to main street, therefore there will not be a major change in human activity in the area.

Deterioration of water quality of the Deel river which would affect salmonids or food sources of otters or Kingfisher in the river has been deemed not a risk as the proposal will not result in any works along the edge of the site closest to the canal.

5.3 CUMULATIVE IMPACTS

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

As part of the Screening for an Appropriate Assessment, in addition to the proposed works, other relevant projects and plans in the region were considered. This step aims to identify at this early stage any possible significant in-combination or cumulative effects / impacts of the proposed development with other such plans and projects on the Natura 2000 sites.

Any new applications for the project area will be assessed on a case by case basis by Limerick County Council which will determine the requirement for AA Screening as per the requirements of Article 6(3) of the Habitats Directive.

6 MITIGATION MEASURES

6.1.1 Bats

A section of stone wall on site will be reconstructed as its unstable at present. Given the presence of a bat roost the reconstruction of the stone wall will take place under the supervision of a licenced bat handler and after a derogation licence has been obtained by the NPWS.

- A derogation licence will be obtained from the National Parks and Wildlife Service before the proposed works commence.
- A lux diagram and lighting plan is being commissioned for the project, to ensure no lights are shining on the water. A dark zone will be maintained along the river and on the wall.
- Demolition of the stone wall ruin should occur outside the bat active season from 01st of October to 31st of March inclusive. A suitably qualified ecologist with bat handling training should be on hand to complete a pre-demolition daylight survey and oversee demolition works. Removal of stones and rubble should be completed by hand. Should bats be found the ecologist will remove and place into a pre-erected bat box.
- To mitigate against the loss of roost it is proposed to erect a Ecostyrocrete bat box.
- No signs of bats were recorded from the derelict house. This building can be removed during the bat active season without impacting the local bat population.
- 6 bat cavities will be built into the stone wall following guidance from Natural England leaflet (Appendix 1). The entrance to each roost will be 25mm wide and 30 mm high with entrance sloping upwards to avoid rain ingress. The cavity will widen inside (50mm x 50mm in vertical section) and include vertical sections. Cavities will be positioned at a minimum of 3m high.
- Post construction bat monitoring in form of static bat detector survey and night-time walked survey will be completed during the bat active season.

6.1.2 Birds

- Three Swift boxes will be erected on the gable wall of the adjacent property at a height of 4m. the removal of the stone building is unlikely to impact on swifts as it's too low for ideal nesting behaviour. It is likely swifts are nesting in the castle. Swift populations are reported to have significantly declined in the last decade and much of this is attributed to the loss of natural breeding sites.
- Additional bird boxes will be placed within the site to offset any loss of nesting habitat. It is proposed to install;
    - 2 x double house martin nests

  - 4 x swallow nests
  - 6 x nest boxes
- Vegetation cutting will be carried out only outside the bird-nesting season March 1st – August 31st in order to avoid impacts on nesting birds.

A suitably qualified ecologist will be employed to review the relevant accompanying reports and will visit the site during site preparation and during the construction works to meet the contractor and review how the plan measures are being implemented.

7 ENHANCEMENT

It is important that development is sustainable and, where possible, projects produce a net gain for biodiversity and nature conservation. A number of enhancement features will be implemented into the construction of the parklet as outlined in the mitigation section above. The following measures should result in a net incre4ase in the biodiversity value of the locality.

- Creation of cavities within stone wall providing bat roost features.
- Swift boxes erected on gable wall of neighbouring house
- Native Irish planting borders will be put in place for aesthetics reasons but also to enhance the site for pollinators.

8 RESIDUAL IMPACTS

Residual impacts are those that occur after the mitigation measures have taken effect. If the mitigation measures listed above are employed during construction, then there will be no residual impact on the surrounding semi-natural habitats.

9 REFERENCES

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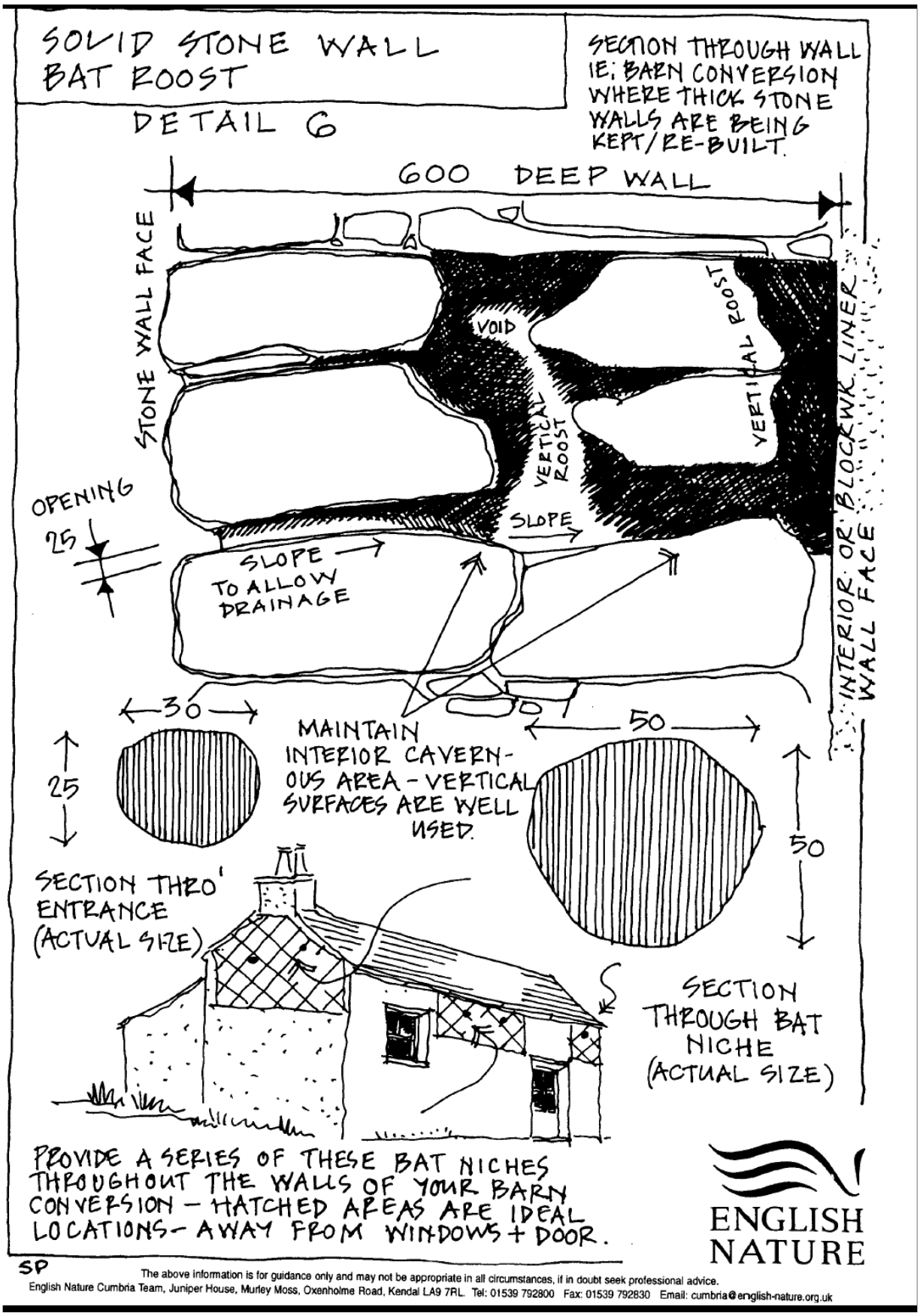
Appendix 1 English Nature; Stone wall bat roost