



The Causeway, Scotlandwell  
Preliminary Ecological Assessment (PEA)  
*For 56three Architects*

12<sup>th</sup> August 2021

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## Version

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CIC v1.0	11/08/2021	Stewart Parsons	Emma Parsons	12/08/2021

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The report, and the information contained in it, is intended to be valid for a maximum of 12 months from the date of the survey, providing no significant alterations to the site have occurred.



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# 1. Executive Summary

Ellendale Environmental Limited was commissioned by 56three Architects to undertake a Preliminary Ecological Assessment (PEA) for an area of land south of Friar Place in Scotlandwell ('the site'). It is proposed to develop 22 residential properties on the site ('the proposed development').

Surveys undertaken at the site as part of the PEA included an Extended Phase 1 Habitat survey and a Preliminary Protected Species walkover.

The Extended Phase 1 Habitat survey was undertaken following the Phase 1 survey methodology (JNCC, 2010) to list the plant species associated with each habitat. A preliminary protected species walkover was conducted for the site and the immediate surrounding area.

The site is located to the south of Friar Place in Scotlandwell, Kinross. It is accessed off the B920, The Causeway, from a track at the north-west of the site. The site is approximately one and a half hectares in size and comprises a poor semi-improved grassland field bordered by a hedge on the eastern and western boundaries, broadleaved trees to the south, and wall and hedgerow to the north. There is also a wet ditch on the eastern and southern boundaries.

The poor semi-improved grassland within the site provides suitable habitat for ground nesting birds; the eastern and western hedge boundaries also provide foraging and nesting habitat for birds. No nests were identified during the survey. Evidence of dog walking was noted that would reduce the suitability for ground nesting birds.

The poor semi-improved grassland has a tall sward and provides suitable cover for foraging common reptiles, amphibians and small mammals. The site is however isolated, restricting the movement of



animals into and out of the site. No refugia or hibernacula were noted and no animals were found during the survey.

The broadleaved trees present on the southern and northern boundaries of the site are immature and are not suitable to support roosting bats, as no features such as cracks, crevices or dead limbs were found where bats could roost. They have therefore been identified as having Negligible Roost Potential. The trees and hedgerows may provide suitable habitat for foraging and commuting bats.

The habitat may be used for foraging by badger, but no field signs such as runs, foraging activity or badger setts were noted during the survey. A rabbit burrow was identified on the eastern boundary within the hedgerow.

No evidence of water vole such as droppings, burrows or feeding remains was found along the ditch at the eastern and southern site boundaries, and water vole are not considered to be present.

Overall, the site is assessed as providing low suitability to support protected species and no evidence was found during the survey.



## 2. Introduction

### 2.1 Commission

Ellendale Environmental Limited was commissioned by 56three Architects to undertake a Preliminary Ecological Assessment (PEA) for an area of land south of Friar Place in Scotlandwell ('the site'). A development of 22 residential properties is proposed for the site ('the proposed development').

The survey and report have been undertaken considering previous surveys at the site, namely:

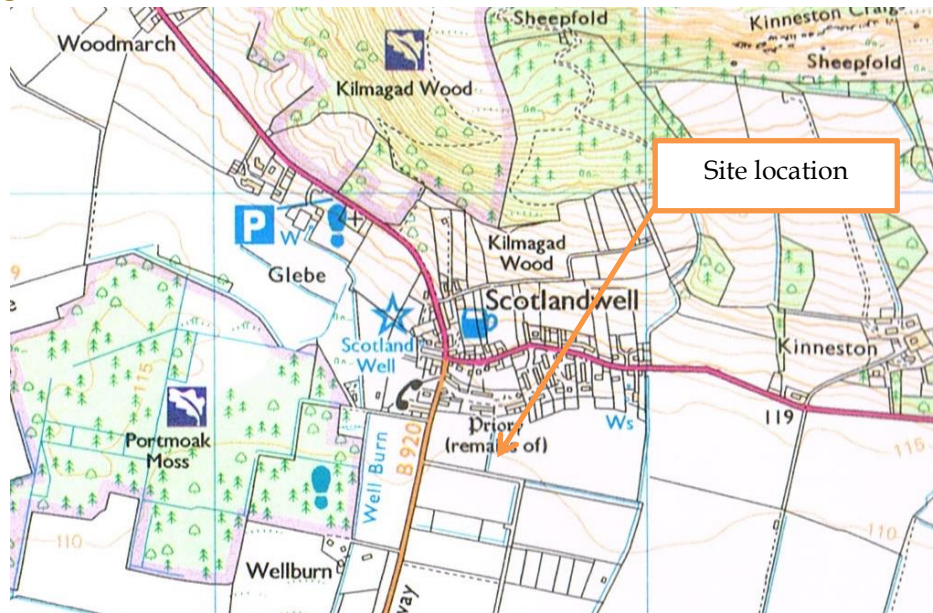
- *EEL337R210210SM The Causeway, Scotlandwell Preliminary Ecological Assessment (PEA) CIC v1.0* – Ellendale Environmental, February 2021.

### 2.2 Site Details

The site is located south of Friar Place in Scotlandwell, a village in Portmoak, Kinross-shire, east of Loch Leven, at the junction of the A977 and B920 roads. The site is approximately four miles west of Glenrothes and four miles east of Kinross, at OS grid reference NO 1856 0142.



Figure 1: Site location



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### 2.3 Survey Objectives

On the basis of the brief provided by the client, Ellendale Environmental conducted an ecological survey to fulfil the following needs:

- ☛ Obtain baseline information on the current habitats and ecological features in and around the site;
- ☛ Identify any further specialist surveys that may be required;
- ☛ Identify the presence (or potential presence) of any protected species whose disturbance may require consent under the Wildlife and Countryside Act, 1981 (as amended); and
- ☛ Identify any species or habitats which may require special mitigation during the development of the site.



## 3. Methodology

### 3.1 Data Search

Publicly available databases, including MAGIC and the NBN Atlas, were consulted for historical evidence of:

- ☛ Statutory Land-Based Designations;
- ☛ Non-Statutory Land-Based Designations; and
- ☛ Protected Species.

The data search was conducted within a 2km radius of the site boundaries.

### 3.2 Phase 1 Habitat Survey

An Extended Phase 1 Habitat survey of the site area was undertaken, and the habitats present on the site were mapped following the Phase 1 survey methodology (JNCC, 2010), listing the plant species associated with each habitat. This methodology was an extended Phase 1 habitat survey, whereby all habitats were surveyed and recorded onto a base plan, and any habitats that were considered to be of potential interest to nature conservation were recorded through the use of target notes to annotate a Phase 1 habitat map.

### 3.3 Preliminary Protected Species Survey

The site and immediate vicinity were examined for signs of protected species, particularly bats and nesting birds, as it was considered that the site had the greatest potential to support these species or groups of animals.

The presence/potential presence of protected or notable species of conservation concern was recorded using target notes, following the Chartered Institute of Ecological and Environmental Management guidance (CIEEM, 2012).





### 3.4 Survey Area

The survey covered the entire site and areas within 30m (where accessible).

### 3.5 Survey Limitations

The aim of this survey was not to record every species present on the site, as one survey acts as a snap-shot, recording only those species which are present at the time or whose presence can be indicated through the occurrence of field signs, such as feeding remains, droppings or places used for shelter or foraging.

Evidence collected has been used to draw conclusions about the flora and fauna within the boundary of the site and to provide an assessment of their ecological and nature conservation value.

Weather was not a limiting factor to the survey. The prevailing conditions at the time of the survey are summarised in Table 1.

*Table 1: Survey weather conditions*

SURVEY DATE	TEMPERATURE (°C)	WIND SPEED (MPH)	CLOUD COVER / PRECIPITATION
11/08/21	17.7	Avg. 2.5 Max. 3.6	100% cloud cover, humid with light rain and a light breeze.

### 3.6 Surveyor

The survey was undertaken by Stewart Parsons, Director and Principal Ecologist of Ellendale Environmental, who is a full member of CIEEM and a Chartered Environmentalist (CEnv). Stewart has over 18 years' professional experience of undertaking ecological surveys across the UK.



## 4. Results

### 4.1 Desk Study

A 2km data search for existing biological records was undertaken from publicly available databases. There are no non-statutory designated sites within 2km of the site; however, there are two statutory designated sites within 2km, namely:

- ☛ Loch Leven is designated as a National Nature Reserve, RAMSAR site, Site of Special Scientific Interest (SSSI) and Special Protection Area (SPA) and is just under 2km to the west of the site; and
- ☛ Bishop Hill is designated as a SSSI and is located approximately 1km to the north of the site.

The following protected species were identified within 2km of the site boundaries by the data search:

- ☛ Daubenton's bat *Myotis daubentonii*;
- ☛ Eurasian red squirrel *Sciurus vulgaris*;
- ☛ European badger *Meles meles*;
- ☛ European otter *Lutra lutra*;
- ☛ Nathusius' pipistrelle *Pipistrellus nathusii*;
- ☛ Common pipistrelle *Pipistrellus pipistrellus*; and
- ☛ Soprano pipistrelle *Pipistrellus pygmaeus*.

Approximately 138 bird species have been recorded within 2km of the site and are shown on the NBN Atlas; however, none of these records are for within the site boundaries.

### 4.2 Extended Phase 1 Habitat Survey

The site is located to the south of Friar Place in Scotlandwell, Kinross. It is accessed off the B920, The Causeway, from a track at the north-west



of the site. The site is approximately one and a half hectares in size and comprises a field bordered by a hedge on the eastern and western boundaries, broadleaved trees to the south, and a wall and hedgerow to the north. There is also a wet ditch on the eastern and southern boundaries.

*Photograph 1: showing a view of the site*



The site consists of poor semi-improved grassland which has a long sward height and includes the species Yorkshire fog *Holcus lanatus*, Cocksfoot grass *Dactylis glomerata*, bent grasses *Agrostis spp.*, broadleaved dock *Rumex obtusifolius*, creeping thistle *Cirsium arvense*, cleavers *Galium aparine*, hogweed *Heracleum sphondylium*, common vetch *Vicia sativa*, timothy grass *Phleum pratense*, common nettle *Urtica dioica* and willowherb *Epilobium spp.*



A wall is present on the north-west boundary and there are three immature birch *Betula spp.* To the north-east there is a section of hedgerow with hawthorn *Crataegus monogyna* and elder *Sambucus nigra* present. A vehicle track providing access to the adjacent agricultural fields is present along the north of the site. The vegetation along the track is shorter than the remainder of the site.

*Photograph 2: showing a view of the access track to the north of the site*



The western and eastern boundaries of the field consist of a blackthorn *Prunus spinosa* hedge with some holly *Ilex aquifolium*, and a barbed wire fence which is in bad condition. The hedge has some gaps and is almost defunct. There are some areas of dense bramble *Rubus fruticosus* adjacent to the hedge at the south-west and north-east corners of the field. Beyond the eastern boundary there is an arable field and beyond the western boundary there is the B920, The Causeway.



*Photograph 3: showing a view of the hedge on the western boundary*



There is also a narrow ditch present along the eastern boundary with flowing water originating from a culvert to the north of the site which has a brick headwall. The ditch is less than a metre wide and continues along the southern boundary where the vegetation was dominated by soft rush *Juncus effuses*.

A line of immature broadleaved trees is present along the southern boundary and consists of the species beech *Fagus sylvatica*, wild cherry *Prunus avium*, common ash *Fraxinus excelsior*, hawthorn and birch. Beyond the southern boundary there is an unnamed road and an arable field.



*Photograph 4: showing a view of the southern boundary*



#### 4.3 Preliminary Protected Species Survey

The poor semi-improved grassland provides suitable habitat for ground nesting birds; the eastern and western hedge boundaries also provide foraging and nesting habitat for birds. No nests were identified during the survey and no ground nesting bird species were identified or flushed from the vegetation as the survey was undertaken. Some paths were noted within the vegetation, suggesting that the site is used for walking/dog walking. This would therefore reduce the suitability for ground nesting birds to be present.

The poor semi-improved grassland within site has a tall sward and provides suitable cover for foraging common reptiles, amphibians and small mammals. The site is however isolated, with hard standing (roads and buildings) on three sides and arable farmland on the east, restricting the movement of animals into and out of the site.



No refugia or hibernacula were noted during the survey and the site is likely to be wet seasonally, reducing the suitability of the site to support these species.

The broadleaved trees present on the southern and northern boundaries are immature and are not suitable to support roosting bats, as no features such as cracks, crevices or dead limbs were found where bats could roost. They have therefore been identified as having Negligible Roost Potential. The trees and hedgerows may provide suitable habitat for foraging and commuting bats.

The ditch running around the eastern and southern boundaries of the site was searched for signs of European water vole *Arvicola amphibius*. Previous surveys of the site indicated some limited potential for water vole to be present. No evidence of water vole was found during the survey (such as droppings, burrows or feeding remains) and water vole are therefore not considered to be present.



*Picture 5: showing the ditch on the eastern boundary*



The habitat may be used for foraging by badger, but no field signs such as runs, foraging activity or badger setts were noted during the survey. A rabbit *Oryctolagus cuniculus* burrow was identified on the eastern boundary within the hedgerow.

Overall, the site is assessed as providing low suitability to support protected species and no evidence was found during the survey.





## 5. Conclusions

### 5.1 Conclusion

The site is located to the south of Friar Place in Scotlandwell, Kinross. It is accessed off the B920, The Causeway, from a track at the north-west of the site. The site is approximately one and a half hectares in size and comprises a poor semi-improved grassland field bordered by a hedge on the eastern and western boundaries, broadleaved trees to the south, and wall to the north. There is also a wet ditch on the eastern and southern boundaries.

The poor semi-improved grassland provides suitable habitat for ground nesting birds; the eastern and western hedge boundaries also provide foraging and nesting habitat for birds. No nests were identified and no birds were flushed from the vegetation during the survey. Evidence of walking/dog walking is present within the site and this would therefore reduce the suitability of the site for ground nesting birds.

The poor semi-improved grassland within site has a tall sward and provides suitable cover for foraging common reptiles, amphibians and small mammals. The site however is isolated, which restricts the movement of animals into and out of the site. No refugia or hibernacula were found and the site is likely to be seasonally wet, reducing the suitability for these animals.

The broadleaved trees present on the southern and northern boundaries are immature and are not suitable to support roosting bats, as no features such as cracks, crevices or dead limbs were found where bats could roost. They have therefore been identified as having Negligible Roost Potential. The trees and hedgerows may provide suitable habitat for foraging and commuting bats.



No evidence of mammals, such as badger or otter, were found during the survey and they are not considered to be present.

No evidence of water vole, such as burrows, feeding remains or latrines, was found on the ditch at the eastern and southern boundaries of the site and they are not considered to be present.

Overall, the site is assessed as providing low suitability to support protected species and no evidence was found during the survey.

## 5.2 Main Recommendations

The following recommendations are made for modest post-construction ecological enhancements at the site that are proportionate with the low level of environmental impact from the proposed development.

Perth and Kinross Council have specifically requested that a minimum of 10 dwellings should have either a swift *Apus apus* or a bat brick/box incorporated into their design. Recommendations are therefore made below on the products which could be used and where they should be located within the development to achieve maximum benefit to biodiversity.

- ☛ As part of any eventual construction, it is recommended that any vegetation clearance is undertaken outside of the bird breeding season, i.e., March to July, as all nesting birds are protected under the Wildlife and Countryside Act 1981 (as amended). If nesting birds are found, these areas of the site will need to be protected from disturbance until the young have fledged naturally.
- ☛ As part of any eventual construction, it is recommended that any vegetation clearance is undertaken to dissuade reptiles, amphibians and small mammals, if present, from the habitat.
- ☛ As part of the building design, a minimum of five dwellings should have an integrated swift nesting bricks installed. The nest box is designed to be incorporated into the side of a building,



sitting flush with the outside bricks and can be purchased in a wide range of colours and styles to blend into the surrounding masonry, and so provides an aesthetically pleasing look which makes it ideal for inclusion in new buildings. The bricks are designed to last the lifetime of the building and not require any maintenance. Swift bricks are not expensive, some are in the region of £30 each, such as the S Model brick and the Manthorpe which are suitable for swifts. The bricks should be built in at a height of at least 5m. Swifts are colonial and therefore it is better to deploy two bricks in every other house, or three in every third dwelling. They are best placed in north, west and east gable ends or under the eaves away from windows and doors and with clear flight access. The location of the bricks should be clearly detailed on elevation plans as part of any formal application. This will fulfil the requirement of the planning principles set out by Perth & Kinross Council and create new nesting opportunities for a range of small bird species, particularly swifts, as part of the overall design.

- As part of the building design, a minimum of five dwellings should have an integrated bat brick installed. A brand such as the 1FR Bat Tube would be ideal as it is designed to be installed flush on the external walls of buildings. This makes it ideal for new buildings as it is discrete and only the entrance hole will be visible. The 1FR is specifically designed to meet the characteristic behavioural requirements of the types of bats that inhabit buildings. It has an integrated wooden panel onto which bats can cling and a ridged entrance slope which makes it easy for them to enter and leave the box safely. The design maintains excellent climatic conditions inside providing bats with a safe and stable environment in which to roost and it requires no maintenance because droppings fall out of the entrance ramp. The box should be positioned at least 2m above ground level and away from artificial light sources. This will fulfil the requirement of the



planning principles set out by Perth & Kinross Council and create new roosting opportunities for a range of bat species as part of the overall design.

- ☛ As part of the design and layout, the Bat Conservation Trust guidance on bats and artificial lighting should be considered. Lighting should avoid the boundary features to create dark corridors through which nocturnal animals can commute and forage.
- ☛ As part of the design and layout considered, hedgerows could be infilled and enhanced with native species such as hazel *Corylus avellana* and hawthorn to increase biodiversity within the site. This would retain habitat connectivity within the site, allowing wildlife to move between gardens and other spaces and provide feeding and breeding opportunities.



## 6. Target Notes

### 6.1 Botanical Target Notes (TN)

TN1 - The site is accessed from the north-western corner of the field through a gap in the hedge. There is a vehicle track where vegetation is shorter.

TN2 - Three immature birch trees adjacent to a wall separating the site from a row of residential properties to the north.

TN3 - Site consists of poor semi-improved neutral grassland with a tall sward height. Species include creeping thistle, cocksfoot grass, bent grasses, Yorkshire fog, broadleaved dock, cleavers and willowherbs.

TN4 - Blackthorn hedge with an occasional holly, and almost defunct.

TN5 - Bramble in south-west corner of the site.

TN6 - Immature broadleaved trees including wild cherry, ash, beech, birch and hawthorn.

TN7 - Ditch with soft rush growing within it. Beyond the ditch there is a single-track road.

TN8 - A single immature birch tree.

TN9 - A further blackthorn hedge which is almost defunct.

TN10 - Adjacent field is arable habitat which consisted of arable stubble at the time of the survey.

TN11 - Culvert with a brick headwall which is the source of the running water in the ditch running parallel to the eastern boundary.

TN12 - Bramble scrub in north-eastern corner. There is a gap in the hedgerow leading through to the adjacent arable field.



## 6.2 Animal Target Notes (AN)

AN1 - Three broadleaved birch trees are immature and do not have any suitable bat roosting features.

AN2 - Tall poor semi-improved neutral grassland provides suitable habitat for ground nesting birds and also provides habitat for common reptiles and small mammals.

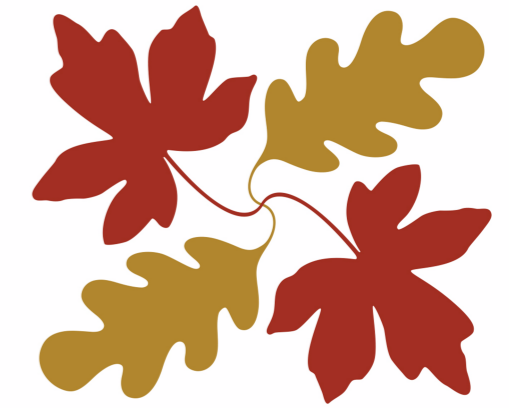
AN3 - Hedge boundary provides suitable nesting and foraging habitat for birds.

AN4 - Single immature birch tree which has no features suitable for roosting bats.

AN5 - Rabbit-sized burrow in hedgerow.



## 7. Extended Phase 1 Habitat Map



**ELLENDALE**  
ENVIRONMENTAL

**Drawing Title;**  
The Causeway, Scotlandwell  
Extended Phase 1 Map

**Client;**  
56three Architects

**Date;**  
10/02/21

**Drawn By;**  
SP

**Project Number;**  
EEL337

**Version Number;**  
v1.0

**Target Note**

● TN

**Animal Note**

● AN

**Water**

— Running Water

**Woodland and Scrub**

● Broadleaf Tree

— Species Poor Hedgerow

+ + Hedgerow With Trees

**Built-up Area**

— Wall

▨ Hard Standing

**Grassland**

■ Semi-improved Neutral Grassland

