

Taymouth Castle Housing 4 Aberfeldy

Discovery Land Company



Ecological Assessment



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August
2022



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SUMMARY

Nigel Rudd Ecology was commissioned by Discovery Land Company to undertake a Phase 1 Habitat Survey extended to include protected species, badgers and bats, and designated sites over their land on the Taymouth Castle Estate, Aberfeldy.

The survey is required to inform proposals to develop the land for residential use in respect of potential ecological impacts of the proposals. The outline proposals include construction of five detached houses and associated infrastructure.

The August 2022 survey was designed to establish the ecological status of the land which is located on a mound supporting open woodland/scattered trees. The trees are surrounded by open ground formerly supporting rhododendron.

The field survey was complemented by inspection of biological records for the Site and the surrounding area to a radius of 5km. In addition, potential effects on designated sites within a radius of 2.5km were considered.

There was found to be no potential adverse effect on international, UK Statutory, or locally designated sites, albeit no records were obtained for locally designated sites.

The Phase 1 Survey involved a walkover of the land noting habitats and plant communities and sought evidence of use of the land by badgers and bats.

The habitat on the land is an unexceptional example of its type.

No evidence was found of badgers using the land, there are opportunities for sett excavation, but low-grade foraging resource for the species. There is no record of the species close to the land.

No significant potential bat roost feature was identified on the land. One tree exhibited a low BRP. It is acknowledged that bats forage over the Site and the river to the north.

A small amount of rhododendron is growing on the land. Large areas have been removed from the area to accommodate development and improve biodiversity opportunity.

There will be negligible adverse impact on biodiversity from the loss of unexceptional habitats.

It is anticipated development of the estate will incorporate management of the developed site for biodiversity benefit resulting in a positive effect on biodiversity.



1.0 INTRODUCTION

- 1.1 This report is commissioned by Discovery Land Company in respect of proposals for residential development of land at Taymouth Castle Estate, Aberfeldy (NN778459). The proposals comprise a small development of houses for leisure use, and the installation of associated infrastructure.
- 1.2 The land is approximately 6km west of Aberfeldy to the west of the A827 between Aberfeldy and Kenmore. The land is in the east of the estate, which is bounded at this location by the River Tay to the west, the A827 to the east and south, and to the west by Kenmore, which is located on the east end of Loch Tay.
- 1.3 The site is irregularly shaped aligned north south and is located on a west-facing slope. The land is in the west of the Taymouth Castle grounds bounded to the north by the River Tay and on the east, south and west by the golf course. The west drive to the castle passes through the site.
- 1.4 The site comprises a small hill which supports scattered trees/open woodland with some clearings. The land has been cleared of very dense rhododendron cover. There is one building in the east of the site.
- 1.5 There is one European designated ecological site within 2.5km of the land; The River Tay SAC (Special Area of Conservation). One UK statutory site, River Lyon Bank SSSI (Site of Special Scientific Interest), is within 2.5km of the land. No records were obtained for locally designated sites.
- 1.6 It is important development as proposed is achieved with no adverse impact on biodiversity. The purpose of the survey is to ensure the wellbeing of protected species is safeguarded during construction and operation of the development and to ensure there is no adverse effect of development on designated sites.
- 1.7 The report will set out the survey methods, the findings of the survey, an assessment of the impact of development and recommendations for planting and habitat creation. The report also sets out explicit preliminary measures for enhancement of wildlife opportunities, which will be incorporated in the buildings and/or landscape on the site, should that be appropriate.

2.0 LEGISLATION & POLICY

- 2.1 The following legislation and policies are relevant to the current assessment:
 - The Wildlife & Countryside Act 1981 as amended;
 - The Wildlife and Natural Environment (Scotland) Act 2011;
 - The Conservation (Natural Habitats &c) Regulations 1994
 - The Nature Conservation Scotland Act 2004;
 - The Protection of Badgers Act 1992;
 - Scottish Planning Policy 2014;



- Perth and Kinross Local Development Plan 2 (2019); and
 - Tayside LBAP (Local Biodiversity Action Plan)
- 2.2 The Wildlife & Countryside Act 1981 as amended - The Act consolidated and amended existing national legislation to implement the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and Council Directive 79/409/EEC on the conservation of wild birds (Birds Directive) in Great Britain, Council Directive 79/409/EEC which was updated by Directive 2009/147/EC.
- 2.3 The Act is one of the most important pieces of environmental legislation in Britain. The Act provides for the protection of wild animals, birds and plants as well as the protection of areas of natural heritage value and the designation of protected areas including, Sites of Special Scientific Interest (SSSIs), National Nature Reserves, (NNRs) and Marine Nature Reserves (MNRs).
- 2.4 The Act has been variously amended over the years by legislation including the Nature Conservation (Scotland) Act 2004 and the Wildlife and Natural Environment Act 2011.
- 2.5 Wildlife and Natural Environment (Scotland) Act 2011 – The Act makes changes to existing legislation covering deer management, game management, species licensing, muirburn, snaring, badgers, invasive non-native species and protected areas; SSSIs and ASPs.
- 2.6 The Conservation (Natural Habitats &c) Regulations 1994 – The Regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and wild fauna and flora (The Habitats Directive) into national law. The Regulations have been amended several times in Scotland, the most recent of which was 2012. Irrespective of the amendments, the purpose of the Regulations has remained the same; containing five Parts and four Schedules, the Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European Sites.
- 2.7 The Nature Conservation Scotland Act 2004 – The Act imposes a wide-ranging duty on the Scotland's public sector to conserve biodiversity and protect the nations natural heritage. The Act strengthens protection of SSSIs and increases maximum fines for deliberate or reckless damage to Scotland's important natural land and wildlife habitat from £5,000.00 to £40,000.00.
- 2.8 The Protection of Badgers Act 1992 – The Act protects badgers by making it an offence to: wilfully kill, injure, take or attempt to kill a badger; possess a dead badger or any part of a dead badger; cruelly ill-treat a badger; use badger tongs in the course of killing, taking or attempting to kill a badger; dig for a badger; possess, sell or offer for sale any live badger; or mark, tag or ring a badger.
- 2.9 It is also a crime to interfere with a badger sett by intentionally or recklessly causing or allowing: damage to a sett or any part of it; destruction of it; sett access to be obstructed, or any entrance of it; a dog to enter it; disturbance to a badger when it is occupying it.
- 2.10 There is provision in the Act for licensing any otherwise illegal activity if it can be demonstrated this is in pursuit of a legitimate purpose.



- 2.11 Scottish Planning Policy 2014 – SPP sets out its principles for safeguard of Scotland's Natural Heritage. They are:
- facilitate positive change while maintaining and enhancing distinctive landscape character;
 - conserve and enhance protected sites and species, taking account of the need to maintain healthy ecosystems and work with the natural processes which provide important services to communities;
 - promote protection and improvement of the water environment, including rivers, lochs, estuaries, wetlands, coastal waters and groundwater, in a sustainable and co-ordinated way;
 - seek to protect soils from damage such as erosion or compaction;
 - protect and enhance ancient semi-natural woodland as an important and irreplaceable resource, together with other native or long-established woods, hedgerows and individual trees with high nature conservation or landscape value;
 - seek benefits for biodiversity from new development where possible, including the restoration of degraded habitats and the avoidance of further fragmentation or isolation of habitats; and
 - support opportunities for enjoying and learning about the natural environment.
- 2.12 Planning authorities are required to adhere to the principles by preparing Development Plans and Development Management Plans, The Development plans should identify International, national and locally designated sites and afford them protection appropriate to their level of designation.
- 2.13 Perth and Kinross Local Development Plan – Policies 38(a), 38(b) and NE1C cover protection of international, national and local designated sites stating that development will not be permitted which adversely affects these sites, unless there is overriding public interest in development affecting international and national sites, or the benefits from development outweigh the biodiversity value of locally designated sites.
- 2.14 Policies 40A and 40B relate to trees and woodland supporting applications which retain or protect existing woodland and trees or seek to establish new woodland and tree planting, in advance of development in line with the guidance in the Perth and Kinross Forestry and Woodland Strategy. The policies also require that tree surveys undertaken by a competent person should support the application where there are trees on the site and the nature of the surveys should be agreed with the council before being carried out.
- 2.15 Policy 41 provides for protection and enhancement of all wildlife and their habitats, whether designated/protected or not. It states the council will apply the principles of the Tayside Biodiversity Partnership development guidance as well as wildlife legislation in making determinations on applications received.
- 2.16 The policy also states that development that would adversely affect a species protected by European legislation would not be permitted unless:
- There is overriding public need and no satisfactory alternative; and
 - The development is required for reasons of public health or safety or other overriding reason of public interest or of benefit to the environment.



- and if it is established that the European protected species are present, and the development is not detrimental to the maintenance of the species at a favourable conservation status.
- 2.17 Planning permission will not be granted for development which would have a negative on a protected species unless it can be justified under the relevant protected species legislation.
- 2.18 Policy 42 requires that all new development contributes to the creation, protection, enhancement and management of green infrastructure. This is to be achieved by incorporation of green infrastructure into new developments, using high standards of environmental design, protecting the countryside from inappropriate development, and protection and enhancement of open spaces and links between open spaces and the wider countryside. In addition, it sets out the need for protection, enhancement and management of existing habitats and the creation of new bio-resources. In particular, the policy makes reference to the protection, enhancement and management of water courses, waterbodies and other elements of the blue network and stressed provision should be made to link the with the green networks.
- 2.19 The Tayside BAP – The plan addresses the need for co-ordination of work across habitat types in the promotion of biodiversity opportunity. The plan recognises the importance of the built environment to some rarer species. The relationship between built and natural environment is considered important in terms of water management, flooding and pollution.
- 2.20 The plan also seeks to influence aspects such as development proposals, open space management, rural areas, woodland management, and greening of the built environment.

3.0 THE SURVEY

3.1 Desk Study

3.2 The desk study comprised:

- Acquisition of biological data from the National Biodiversity Network Atlas (Scotland) (NBN Atlas);
- Acquisition of information on designated sites within 2.5km of the land from NatureScot (Sitelink);
- Aerial imagery from Google Earth
- Consulting the Tayside Biodiversity Action Plan; and
- Consultation of historical maps of the land and its surroundings.

3.3 Field Survey

3.4 The survey was undertaken by Nigel Rudd Ecology (Appendix 1) in August 2022.



- 3.5 The survey area extended to the site boundary (Fig1) and an area 50m beyond the boundary, where accessible. The weather was dry and bright with average seasonal temperatures.
- 3.6 The survey comprised a walkover of the land consistent with Phase 1 Habitat Survey methodology (JNCC 2016), noting habitat structure and component plant species, augmented by assessment for potential for use by, or inspection for signs of the presence of, species protected under legislation listed above.
- 3.7 The species sought were badgers, otters, red squirrels and roosting bats, there was no significant suitable habitat for water voles, or great crested newts on the land.
- 3.8 The findings of the survey are set out below.
- 3.9 The survey findings are complemented by consideration of recorded data available from the NBN Atlas (Scotland), and the author's experience of the estate gained over ten years of surveys).

4.0 BASELINE ECOLOGICAL CONDITIONS

4.1 Designated sites

4.2 *International/ National sites*

- 4.3 There is one European designated site within 2.5km of the land; the River Tay SAC.
- 4.4 This SAC consists of running and standing water features with small areas of bog, marsh, fen and water fringe habitats. The qualifying features comprise both habitats and species. The habitats are *oligotrophic to mesotrophic standing water with vegetation of the Littorelleta uniflorae and/or Isoieto-Nanojuncetea*.
- 4.5 The species which is the primary reason for selection of this site is Atlantic salmon *Salmo salar*. The River Tay is constantly in the top 3 salmon fishing rivers in Scotland, presenting habitats that support the full range of salmon life-history types found in Scotland. Salmon enter the River Tay to spawn throughout the year.
- 4.6 Other species which are qualifying features of the SAC, but not a primary reason for site selection. They are sea lamprey *Petromyzon marinus*, brook lamprey *Lampetra planeri*, river lamprey *Lampetra fluviatilis*, and otter *Lutra lutra*.
- 4.7 The qualifying species are distributed throughout the SAC catchment.
- 4.8 The SAC approaches to within 30m of the south-west boundary of the site.
- 4.9 There is one UK Statutory site within 2.5km of the land; River Lyon Bank SSSI.
- 4.10 There is one UK statutory site within 2.5km of the Taymouth Castle site: River Lyon Bank SSSI (Site of Special Scientific Interest).



- 4.11 River Lyon Bank is a small biological SSSI, the notified feature of which is whorled Solomon's-seal *Polygonatum verticillatum*. The site is a narrow strip of riverside woodland noted for its rear vascular plant species including the nationally rare whorled Solomon's seal.
- 4.12 No record was obtained of local nature conservation sites within 1km of the Site.
- 4.13 Woodlands on the Estate are listed in the Ancient Woodland Inventory of Scotland.
- 4.14 **Habitats**
- 4.15 The land proposed for development is in the grounds of Taymouth Castle with its associated parkland golf course set in a mosaic of tree, shrub, herbaceous and grassland habitats. The composite of habitats will be described, and the overall habitat value assessed. The site exhibits open woodland/scattered trees on a mound. The site is divided by the west drive to the Castle. The mound is to the north of the drive and there are more trees to the south,
- 4.16 Tree cover comprises several tree species of varying ages and condition. Species include beech, cypress, lime, sycamore, chestnut, spruce, holly and oak. The tree cover comprises groups of trees of various sizes and individual specimens.
- 4.17 The trees are set within areas of open ground left by the clearance of rhododendron. Bracken, nettle, bramble, woodrush, violet, wood sorrel, some rhododendron and bilberry are represented in the field and ground layer.
- 4.18 The tree cover is not exceptional, this habitat has **site value**.
- 4.19 The building in the site is undergoing renovation, with refurbished stone walls a slate roof and new windows.
- 4.20 The River Tay flows west-east on the north of the Site.
- 4.21 In summary, the Site exhibits very restricted habitat opportunities, the existing habitats are simple in structure, their plant communities are species poor and there are invasive plant species present that detract from their value.
- 4.22 **Species**
- 4.23 The only protected species anticipated as resident on the land were badgers and bats. Inspection of the land revealed no significant habitat potential for otters, great crested-newts, red squirrels or water voles.
- 4.24 *Badgers*
- 4.25 The ecology of badgers *Meles meles* is outlined in Appendix 3. The survey extended to a radius of 50m beyond the Site boundary, where accessible.
- 4.26 The land was inspected for evidence of use by badgers (Appendix 3). **No evidence was found of the species using the Site.** There was neither historical nor recent sign of use by badgers was identified on the Site.



- 4.27 The NBN Atlas has records of the species 2.0km from the Site.
- 4.28 **The Site presents suitable habitat for sett excavation and low value forage resource**, but there is no record of the species local to the Site.
- 4.29 It is not anticipated badgers use the Site and that the Site has **no value** for the species.
- 4.30 *Bats*
- 4.31 The ecology of bats *Chiroptera* is outlined in Appendix 3. There is one building on the site and mature trees.
- 4.32 The trees were inspected for roost potential. No tree exhibited roost potential.
- 4.33 The NBN Atlas (Scotland) holds records of common and soprano *Pipistrellus pipistrellus* and *P. pygmaeus*, and brown long eared *Plecotus auritus* bats within 5km of the land. The author has recorded pipistrelle species local to the land.
- 4.34 There is one building on the site; the Dairy. This building has slate roofs and pointed stone walls. It is undergoing restoration, comprising replacing the roof, cleaning and repointing the stone walls and installation of doors and windows. The building is currently surrounded with scaffolding and affording no roost opportunity.
- 4.35 There is no potential for bat roosting on the site, but extensive forage opportunity on and around the Site, over the trees and along the river.
- 4.36 It is anticipated the site will have **negligible value** for bats.
- 4.37 *Other species*
- 4.38 Otters *Lutra lutra* and red squirrels *Sciurus vulgaris* are found on or adjacent to this Site, but no evidence was found of either species on or adjacent to the site, during the survey. The habitats presented on the site are sub optimal for both species. It is assumed otters use the River Tay adjacent to the Site.
- 4.39 *Rhododendron ponticum* is growing on the land. The species is listed in Schedule 9 of the Wildlife & Countryside Act 1981 as amended because they are non-native invasive species with the capacity to smother native plant communities to the detriment to local biodiversity. It is an offence to cause these species to grow in the wild.

5.0 ECOLOGICAL IMPACTS, OPPORTUNITIES and RECOMMENDATIONS

- 5.1 The proposal is to develop the Housing 4 land for leisure residential use and conversion of the Dairy to a golf club house.
- 5.2 The proposed development land is scattered trees/open woodland within a country estate that has not been managed in recent years, albeit there has been extensive rhododendron removal recently.



- 5.3 The potential impacts of the proposed development are identified below, and where appropriate mitigation measures are proposed.
- 5.4 **Designated sites**
- 5.5 *International designated sites*
- 5.6 There is one international designated site within 2.5km of the of the land; the River Tay SAC. The SAC is valued for fish species it supports and the development of the land will put in place measures to ensure there will be no adverse effects on the river originating from the development of the land as proposed.
- 5.7 There is potential for enhancement of surface water runoff to enter the river, adversely affecting the qualifying species of the SAC, thereby compromising the conservation status of the SAC.
- 5.8 **It is proposed that surface water will be collected and directed to a treatment facility where the water will be left to infiltrate into the ground ensuring there will be no direct discharge of surface water to the river.**
- 5.9 **It is considered there will be no adverse effect on the SAC. This matter was addressed at the time of the original development consent and there will be no compromise of the accepted drainage treatment method.**
- 5.10 *UK designated sites*
- 5.11 River Lyon Bank SSSI is remote from and not connected to the D1 land. Development as proposed will not affect the SSSI.
- 5.12 *Local designated sites*
- 5.13 No locally designated site was noted during this study.
- 5.14 **Habitats**
- 5.15 The development will be located in longstanding scattered tree cover which has plantation origins. The understorey of the tree cover was almost entirely dense rhododendron cover. The rhododendron has been cleared leaving tall trees within open ground. **The habitat has site value, and their loss would result in no significant adverse impact on biodiversity.**
- 5.16 The habitats lost will be replaced by new build with new tree and shrub planting and extensive retention of existing habitats, which will be brought under management for biodiversity benefit. **These changes present positive impacts of development as proposed.**
- 5.17 **Species**
- 5.18 There was no evidence of badgers using the site, and there is no risk to the wellbeing of badgers during the construction process, but building construction raises potential threats to wildlife. **Development will not have an impact on the species, but a precautionary approach is recommended, putting measures in place to ensure small mammals**



- do not come to harm during construction; open pipes should be closed up at the end of each working day, and trenches should be covered, or a ramp provided to permit animals that fall in a means of exit, to prevent animals becoming trapped. Chemicals and materials should be stored securely.**
- 5.19 No significant bat roost potential was recorded on the land. It is anticipated that bats forage over the Site. There will be no significant reduction of forage opportunity because the forage resource lost to development is insignificant in the context of local forage opportunity. The Taymouth Castle Estate presents extensive high quality forage opportunities. **Development of the land with the associated tree and shrub planting represents a possible positive impact on local bat populations.**
- 5.20 There will be clearance of low value semi-natural habitat to make way for development. Clearance of vegetation has the potential to adversely affect nesting birds. Nevertheless, **it is recommended that clearance is carried out outside the bird nesting season; March to August, such that no adverse effect on nesting birds arises. If this is an obstacle to development, it is important that no clearance is undertaken before the land is inspected for nesting birds by a suitably qualified ecologist.**
- 5.21 There is a small amount of rhododendron in the area. **There is a programme of rhododendron removal on the estate which has been implemented on this Site bringing biodiversity enhancement opportunities. The Site will be monitored for rhododendron recovery and new growth will be eradicated, resulting in a long-term effect on biodiversity.**
- 5.22 **Summary**
- 5.23 Development of the Housing 4 land will result in the loss of low value semi-natural habitat to development. There will be negligible adverse impact on biodiversity from the loss of unexceptional habitats and it is **anticipated there will be a positive effect on biodiversity as a consequence of implementation of development as proposed.**
- 5.24 There will be no impact on designated or protected sites.
- 5.25 There will be no impact on badger populations, but precautionary measures should be put in place to safeguard small mammals during construction.
- 5.26 There will be no impact on bat populations.
- 5.27 There has been a reduction of the extent of rhododendron on the land which will have a positive impact on biodiversity.
- 5.28 **It is anticipated that there will be a positive effect on biodiversity as a consequence of redevelopment as proposed.**
- 5.29 **It is proposed to prepare a Biodiversity Strategy for the Taymouth Castle Estate, which would involve creation of new habitat opportunities, and enhancement and management of existing habitats to increase the biodiversity status of the estate. In addition, consideration will be given to installation of features which would artificially enhance wildlife opportunities across the estate.**



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JNCC, (2016), *Handbook for Phase 1 Habitat Survey - a technique for environmental audit*, ISBN 0 86139 636 7



Figure 1

Location Plan

Figure 1



**Taymouth Castle Hsg.4
Aberfeldy**

**Location Plan
August 2022**

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Promap
LANDMARK INFORMATION

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Figure 2

Phase 1 Habitat Plan

Figure 2



-  Scattered trees
-  Running water
-  Building

**Taymouth Castle Hsg 4
Aberfeldy**

**Habitat Plan
August 2022**

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Appendix 1

Personnel

Nigel Rudd BSc CBIol MRSB CMLI

Consultant ecologist with forty-two years-experience. Twenty-three years part-time and nineteen full time. Over twenty-five years-experience in Phase 1 Habitat Survey, twenty in bat, otter, and badger survey and fifteen years in reptile, and formal great crested newt surveys.

Graduated in Applied Biology – Honours Ecology in 1976. (Liverpool Polytechnic)

Three years' research in estuarine algae Heriot Watt University. Lectured Ecology to Landscape students at Edinburgh College of Art/Heriot Watt University 1979-2002, Dean of Faculty Environmental Studies 1998-2000.

Chartered Biologist – Member of the Royal Society of Biology since 1976
Chartered Landscape Architect – member since 1986

Clients – Major house builders, Local and Central Government, non-governmental organisations. Provided survey, EA and BREEAM reports. Professional witness. Co-authored policy and methodology reports.



Appendix 2

Feature Evaluation Table



Nature Conservation Value	Example of Selection Criteria
International	<p>A site designated, or identified for designation, at the international level e.g., World Heritage Site, Special Protection Area (SPA), Special Area of Conservation (SAC) and/or RAMSAR site.</p> <p>A sustainable area of habitat listed in Annex 1 of the Habitats Directive, or smaller areas of such habitat that is essential to maintain the viability of a greater whole.</p> <p>Any regularly occurring population of an internationally important species e.g., UK Red Data Book Species, which is listed as occurring in 15 or fewer 10km squares in the UK, and that is identified as having unfavourable conservation status in Europe or global conservation concern in the UKBAP.</p>
UK	<p>A site protected by national designations e.g., Site of Special Scientific Interest (SSSI), National Nature Reserve (NNR), or Marine Protected Area or a site considered worthy of such designation.</p> <p>A sustainable area of any priority habitat identified in the UK BAP, or smaller areas of such a habitat that is essential to maintain the viability of a larger whole.</p> <p>A feature identified as of critical importance in the UK BAP.</p> <p>A sustainable population of a nationally important species (species listed in Schedules 1, 5 and 8 of the Wildlife & Countryside Act 1981 as amended), which is threatened or rare in the District.</p> <p>Any regularly occurring population of a nationally important species that is threatened or rare in that region of the country and for which the LBAP identifies the need to protect all remaining sites.</p>
National Scotland	<p>Sustainable area of key habitat identified in the UK BAP or smaller areas of such habitat that is essential to maintain the viability of a larger area.</p> <p>Non-statutory sites that the designating authority has determined meet the published ecological selection criteria for designation, including Local Nature Reserves.</p> <p>Some non-statutory designated sites (Ancient Woodland, TPOs).</p> <p>Any regularly occurring, locally important population of a species listed in a Regional Red Data Book or LBAP on account of its national rarity or localisation.</p>
District	<p>Some designated sites (e.g., Local Nature Reserve)</p> <p>Some non-statutory designated sites (including SLNCl/CWS)</p> <p>A viable area of habitat identified in a District BAP.</p> <p>Sustainable populations of a species that is rare or scarce within a District, or listed in a District BAP.</p> <p>A viable area of a habitat that is uncommon in the District/district or a degraded example of a habitat identity in a District BAP.</p> <p>Sites or populations that appreciably enrich the District/district habitat resource.</p>
Local	<p>Area of internationally or nationally important habitats, which are degraded and have little potential for restoration.</p> <p>Areas within the site or locally, or populations, that appreciably enrich the habitat/species resource within the locality, e.g., species-rich hedgerow.</p>
Within zone of influence Site Value	<p>Common and widespread species.</p> <p>Areas of heavily managed or modified vegetation of low intrinsic interest and low value to species of nature conservation interest that do not appreciably enrich the site or locality.</p>



Appendix 3

Species inspections



Badgers

Background – The badger is the largest member of the Mustelidae in Britain weighing up to 20kg and reaching a length of 1m. Badgers are strong animals, adapted to digging, have good hearing and a well-developed sense of smell.

Badgers live in setts. A sett is a network of underground tunnels, which can have a total length of several hundred metres, although individual tunnels reach only 15m. The tunnels incorporate nesting and sleeping chambers, which are usually lined with dry plant material.

Setts are recognised by the large volume of soil and rock deposited at their entrances and the shape of the opening, usually an oval/arch wider than it is high. Plant debris from the bedding is often found close to the entrances. Setts are only excavated where the soil is deep enough and dry.

The setts vary. **Main setts** are large and in continuous use and on average have ten to twelve entrances. Often close to a main sett (up to 150m away) there may be an **Annexe sett** linked to the main sett by established paths. Annexe setts have an average of eight entrances and may not be in continuous use. **Subsidiary setts** are close to the main sett and are not connected by a clear path and not continuously active the average number of entrances is four. The fourth kind of sett is an **Outlying sett**. These can be distinguished by having little associated spoil, no approach path and are seldom used. Often, they can be occupied by other species such as foxes and rabbits. The average number of holes is two.

The badger diet is mainly earthworms but also includes fruit, berries, small mammals, birds, carrion, insects and other invertebrates. Usually, the badgers find the earthworms in areas of short grass, the most important forage resource used.

Badgers live in extended families or clans with up to 6 adults. They are territorial, often marking the boundary of their territory with latrines. The latrines can be used to establish the size of badger territories in bait marking exercises. The territory can extend to 120 hectares in areas with plenty of improved grassland. Where the forage resource is poorer the territory can be much larger.

Badgers mate at any time of the year and births are most common between December and June.

Badgers and the Law

Badgers are protected by the Protection of Badgers Act 1992, which is designed to protect the species against cruelty and incidental effects of lawful activity that might harm badgers.

Under the legislation it is an offence to wilfully or recklessly:

kill, injure, take, possess or cruelly ill-treat a badger, or attempt to do so
Interfere with a sett by damaging or destroying it
Obstruct access to, or any entrance of, a badger sett
Disturb a badger when it is occupying a sett.

A person is not guilty of an offence if the act was '*the incidental result of a lawful operation and could not have been reasonably avoided*'; what is reasonable often has to be determined by the courts.



A badger sett is defined as '*any structure or place which shows signs of current use by a badger*', including culverts, pipes, holes under sheds, piles of boulders, old mines and quarries.

Current does not mean current occupation but applies to any sett in an area of current badger activity. This applies if the sett is used for only short periods in the year.

The Act makes provision for the issue of licences permitting otherwise illegal operations. Scottish Natural Heritage (SNH) is the licence issuing authority for the purposes of development.

The Survey - The inspection was carried out in August 2022 and involved inspection the land for evidence of use by badgers.

In addition to setts, there are a number of signs that indicate badger activity. These include hair on fences; paths or runs; footprints; latrines; snuffle holes in the ground; day nests and scratch marks on trees.

The site and surrounding accessible land to a radius of 50m was assessed for badger activity. A constant search method was employed in a thorough walkover of the land.

No evidence was found of badgers using the land.

Low value potential forage habitat was found on the Site.

NBN Atlas (Scotland) holds records of badgers 2.0km from the Site. It is unlikely the species visits the Site.

Bats

Background - Bats are mammals. They are the only mammals capable of true flight and feed at night, on insects.

During the active seasons of the year bats require a reliable source of insect food, and therefore habitat rich in insects is good for bats. The preferred feeding habitats are well vegetated, moist, sheltered and warm areas such as mixed woodland, freshwater and hedgerow.

Bats roost during the day in a range of places. In summer females form nursery colonies mainly in buildings, especially houses. Males and non-breeders will use a variety of crevice-type locations, including under slates, gaps in masonry, hollows in trees and bridges, and some species also use these sites for nursery roosts.

Distance travelled to feed varies with species, the pipistrelle is known to travel 3 to 5km radius from the roost, while long-eared bats only travel about 1km as a maximum. Bats use linear features of the landscape: rivers, hedges, woodland edge, to commute from their roost and between feeding areas. These linear features are also feeding routes.



Bats are true hibernators, that is, they are able to survive the winter with little food by lowering their body temperature and surviving on stored fatty deposits built up in the autumn. They use a variety of sites for hibernation: hollow trees, caves, old mines, or more superficial sites (depending on species) like crevices in buildings and bridges, old rubble-filled stone walls, even under roof slates or tiles. Most species require a stable cool temperature for hibernation and generally the deeper and more sheltered the space, the more stable is the temperature. Unlike some other hibernators, bats may be active at any time during the winter, particularly on mild nights. They will slowly arouse from hibernation and become active when disturbed, and so are particularly vulnerable in winter when becoming active will possibly exhaust their stored energy supply.

Evidence of bats using crevices and holes in trees and buildings on a regular basis includes; urine and grease stains, droppings, food remains, individual animals and evidence of disturbance of spiders' webs.

Acoustic detectors can be employed to identify bat activity in conjunction with dusk and dawn observations.

Inspection

The Site presents scattered trees, and one building.

The trees on the site were inspected from the ground for bat roost potential in August 2022. The conditions were ideal for this survey because the weather was clear sky and no rain. The scale of the site meant this survey was straightforward.

One tree was assessed as having **low bat roost potential**, this was a dead tree exhibiting upright dead timber with no voids but some raised bark.



Dead tree south of the Drive.

The roost potential of both the trees and the building are made using criteria set out in Table A, below.



Table A - Roost potential classification

Classification Of Feature	Category description and associated features	Possible further survey work Depending on context
Confirmed Roost	Evidence of roosting bats; live/dead bats, droppings, urine stains, grease staining.	If the structure/tree is to be affected by development, a disturbance licence must be obtained from SNH for the proposed work. The licence application would need to be supported by close inspection findings and those of activity surveys. Building/tree work should be supervised in accordance with good practice guidance. Where the roost site is unaffected by the proposal, it is likely a precautionary working method statement or mitigation proposals will be required.
High Potential	A structure or tree with one or more potential roost sites that are obviously suitable for use by larger numbers of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat.	Buildings – Three visits at least one dusk and one dawn activity survey between May – September. Trees – Closer/Aerial assessment by roped access bat worker (if appropriate) and/or nocturnal survey as above between May – August. Additional assessments may result in up or down grading the building/tree, based on findings. If upgraded, and the building/tree is to be affected by development it will be necessary to obtain a licence as described above. If there is no upgrading after consideration of findings a precautionary method statement may be required.
Moderate potential	A structure or tree with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat but unlikely to support a roost of high conservation status (with respect to roost type only – the assessments in this table are made irrespective of species conservation status, which is established after presence is confirmed).	Buildings – Two visits one dusk and one dawn activity survey between May – September. Trees – Closer/Aerial assessment by roped access bat worker for a tree (if appropriate) and/or nocturnal surveys as above between May – August. Additional assessments may result in up or down grading the tree, based on findings. If upgraded, and the building/tree is to be affected by development it will be necessary to obtain a licence as described above. As above there may be a need for acquisition of a licence or preparation of a precautionary method statement.
Low potential	A structure with one or more potential roost sites that could be used by individual bats opportunistically. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and / or suitable surrounding habitat to be used on a regular basis or by larger numbers of bats (i.e. unlikely to be suitable for maternity or hibernation). A tree of sufficient size and age to contain PRFs but with none seen from the ground or features seen with only very limited roosting potential.	Buildings – One dusk or dawn activity survey between May – August. Trees – No further survey work required, but a precautionary working method statement may be appropriate.
Negligible/No potential	Negligible habitat features on site likely to be used by roosting bats.	None.

There is one building, the Dairy. This is a small two storey building which presents a ‘rustic’ character of rough pointed-stone walls slate roof elements with lead flashing and very deep mineral board soffits, and a flat metal sheet roof on the upper floor.

The inspection involved close scrutiny of the walls either by eye or using close-focus binoculars, for crevices, holes, droppings, grease and urine stains

The pointing was intact. The joint between the soffit and the wall head was pointed with mortar and intact. The window recesses were intact presenting no roost potential.



East elevation



West elevation



Deep overhang with pointed junction with wallhead



Pointed walls and slate roof.

No bat roost potential was noted. There is forage available across the land but the extent of forage on the estate makes resource adjacent on the land insignificant to local bat populations.

The NBN Atlas (Scotland) holds records of common *Pipistrellus pipistrellus* and soprano pipistrelle *P. pygmaeus*, and brown long eared *Plecotus auritus* bats within 2.5km of the Site. Pipistrelle bats have been recorded on the estate by the author.

In light of the assessment, it is considered the renovation can continue without the need for further survey work.

Otters

Background - Otters are carnivorous mammals that require access to fresh water, living on the banks of rivers, lakes and seacoasts. Their riverside home range can extend to 25km, and they mark their territory with spraints or droppings. They have slick, oily fur and very thick tails. Their diet is primarily fish, but they will eat small birds, small mammals and frogs.

Otters have a series of holts, usually short burrows into the ground, within their range, one of which a maternity holt is protected by an underwater entrance.

The young otters stay with their mothers for over a year. They thrive on little disturbance and prefer clean water habitats with reed and tree cover for seclusion. The animals are inquisitive and can tolerate disturbance within their territory. The species is recorded on watercourses in many towns and cities.

For many years, otter populations were in decline but there is evidence that they are experiencing a renaissance. The primary threats to otters have been the extensive use of biocides and industrial pollution. Both problems are now more rigorously controlled. The developing population is now under threat from the expanding human population and in particular the construction of new roads and the use of road vehicles. Otters are increasingly being killed crossing roads where new roads are built within their territories.

Otters and the Law



Otters in the UK are protected by a raft of legislation, both European and UK that underlines international and national obligations.

Statutory Obligations

Annex II and IV of European Communities Directive on the Conservation of Natural Habitats and Wild Flora and Fauna. (ECH2, 4)
Appendix II of Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats). (BC2)
Appendix 1 of Convention on International Trade in Endangered Species of Wild Fauna and Flora. (CITES 1)
Schedule 5 and 6, Wildlife and Countryside Act 1981 (and later amendments). (WCA5,6)

ECH2, 4 is transposed into UK legislation by the Conservation (Natural Habitats, etc) Regulations 1994 and is generally known as the Habitats Directive. Under this Directive it is an offence to:

Damage or destroy an Otter shelter, whether intentionally or not; and
To deliberately disturb an Otter.

WCA5, 6 states that it is a criminal offence, in most circumstances, to:

Intentionally kill, take or injure an Otter;
Intentionally disturb an Otter in its place of shelter; and
Intentionally damage, destroy or obstruct access to a place of shelter.

Other obligations

NPP14 advises that the presence of a protected species is a material consideration in the assessment of development proposals.
Otters are a priority species in the UK Biodiversity Action Plan and are therefore included as a priority species in local Biodiversity Action Plans.
Statutory protection for biodiversity is entrenched in the Nature Conservation (Scotland) Act 2004. Under this Act every public body has a duty to conserve biodiversity when executing their duties. Scottish Ministers have also published a Scottish Biodiversity Strategy to create a framework for the next 25 years which will target priority species, including Otter.

Licences

Statutory advice states that an Otter Disturbance Licence will be required for all works within 20 metres of an Otter resting place or 30 metres of a holt. The details of any licence requirements must be agreed with SNH and SEERAD.

Licences will only be granted under the Conservation (Natural Habitats, Etc) Regulations 1994 if SEERAD are satisfied that:

There is no satisfactory alternative and
The action authorised will not be detrimental to the maintenance of the population of the species at a favourable conservation status in their natural range.

Survey



The survey was undertaken in August 2022

The survey comprised an inspection of the riverbank and immediately adjacent habitats 100m up and down stream of the Site, where accessible, for evidence of use by the species for both forage and shelter. Signs sought included: individual animals; tracks; shelters or lay ups; food remains or spraints (faeces).

A desk survey was undertaken to consult recorded biological data for a radius of 5m of the Site.

There will be no disturbance of the riverbank as a consequence of development as proposed.

No evidence was found of otters on the adjacent riverbank. NBN Atlas (Scotland) holds records of the species local to the Site.

It is considered there will be no adverse effect on otters from implementing development as proposed.

Red squirrels

The red squirrel (*Sciurus vulgaris*) has experienced a reduction in its distribution over the last half century, mainly because of competition from alien, grey squirrels (*S. carolinensis*) but also possibly because of habitat fragmentation and disease. Throughout most of Scotland the red squirrel populations are regarded as vulnerable.

Red squirrels are protected under the Wildlife and Countryside Act 1981 that makes it an offence to intentionally or recklessly kill, injure, take or sell an animal, or damage, destroy or obstruct access to its nesting place.

Without human intervention, it is recognised that where red and grey squirrels both live in an area after a period of roughly fifteen years the greys will oust the red population. It is recognised that management can be introduced to control the grey squirrel populations of areas, thus protecting the red population, but that once introduced management must continue indefinitely and that this may involve the co-ordination of the work of a number of different landowners.

In the pursuit of red squirrel conservation identification of priority and potential areas of conservation have been identified. Areas of conifers between 2000-5000ha are considered ideal for the conservation of a population with a high degree of success but areas as small as 200-300ha have potential to support a viable population with appropriate habitat management and grey squirrel control. Even with appropriate management smaller areas have little prospect of success without the involvement of all landowners in a co-ordinated programme.

The Forestry Commission in their Practice Note 5 sets out a number of recommendations for the conservation of red squirrels that might apply to Woodland Grant Scheme applications. These recommendations represent a considered framework of the principles applicable to red squirrel conservation. The factors are:

- Red squirrel reserves should be separated from a grey-dominated area by a buffer zone of at least 1km and consist of a habitat unsuitable for greys comprising conifer forest, broadleaved woodland comprising small-seeding species, arable land or moorland.



- The core of the most suitable sites should be identified, and management proposed that provides a suitable mix of food and cover and provide the opportunity for red squirrels to expand into less suitable areas.
- Tree age classes should vary with a third of the trees <15 years old, one third 15-30 years and the remainder >30 years old.
- Scots pine, larch, Norway spruce, lodgepole pine, firs, yew and hawthorn should be incorporated into the canopy particularly at the edges to promote seeding and fruiting. Birch, rowan, ash, willow, aspen and alder should be planted for general conservation as they do not promote grey squirrels.
- Thinning should be tailored to increase the number of insolated edges to promote
- seeding.
- Planting of oak, chestnut, beech and hazel should be avoided as they encourage greys and mature trees of these species should be removed as they seed readily.
- Extensive clear felling should be avoided to allow movement between canopies.
- The planning should maximise production by the following – extending south - facing aspects, creating irregular shapes to increase edge habitat, aligning rides east-west to create south-facing edges, delaying felling large crown trees, avoiding clear-felling, creation of uneven aged woodland and varying tree species.

The most important aspect of promotion of red squirrels is the control of the grey population. This can be achieved by shooting or trapping. Neither system is without its problems. Shooting is relatively ineffective and risks the shooting of red squirrels by mistake whereas live trapping is more effective but also risks trapping the wrong species. In addition, both systems are costly to implement in terms of man hours and materials.

Survey

The survey was undertaken in August 2022

No evidence was found of red squirrels on the Site, but there are records of the species within 100m of the Site to the east. No grey squirrel was seen during the walkover.

There will be no adverse effect on red squirrels from implementing development as proposed. Development of the Site can be effected in a way that promotes opportunities for red squirrels to recolonise the Site.

A further inspection should be carried out before felling trees on the site.



Appendix 4

Plant species list



Taymouth Castle Housing 2 East Aberfeldy

Plant Species

Beech	<i>Fagus sylvatica</i>
Bent grass	<i>Agrostis tenuis</i>
Birch	<i>Betula pendula</i>
Bilberry	<i>Vaccinium myrtillus</i>
Bracken	<i>Pteridium aquilinum</i>
Bramble	<i>Rubus fruticosus</i>
Holly	<i>Ilex aquifolium</i>
Lime	<i>Tilia platyphyllos</i>
Lawson's cypress	<i>Chamaecyparis lawsoniana</i>
Nettle	<i>Urtica dioica</i>
Oak	<i>Quercus petraea</i>
Redwood	<i>Sequoia sempervirens</i>
Spruce	<i>Picea sp.</i>
Sweet chestnut	<i>Castanea sativa</i>
Sycamore	<i>Acer pseudoplatanus</i>
Violet	<i>Viola canina</i>
Woodrush	<i>Luzula sylvatica</i>
Wood sorrel	<i>Oxalis acetosella</i>



Appendix 5

Sites

River Tay

Designated Special Area of Conservation (SAC)

Country	Scotland
Unitary Authority	Eastern Scotland, Highlands and Islands
Centroid*	NN818481
Latitude	56.56666667
Longitude	-4.083333333
SAC EU Code	UK0030312
Status	Designated Special Area of Conservation (SAC)
Area (ha)	9461.63

* This is the approximate central point of the SAC. In the case of large, linear or composite sites, this may not represent the location where a feature occurs within the SAC.



Location of River Tay SAC

General site character

- Shingle, Sea cliffs, Islets (0.5%)
- Inland water bodies (Standing water, Running water) (95%)
- Bogs, Marshes, Water fringed vegetation, Fens (4.5%)

Download the [Standard Data Form](#) for this site as submitted to Europe (PDF <100kb)

Note When undertaking an appropriate assessment of impacts at a site, all features of European importance (both primary and non-primary) need to be considered.

Annex I habitats that are a primary reason for selection of this site

- Not Applicable

Annex I habitats present as a qualifying feature, but not a primary reason for selection of this site

- **3130 Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea**

Annex II species that are a primary reason for selection of this site

- **1106 Atlantic salmon** *Salmo salar*
The River Tay supports a high-quality **Atlantic salmon** *Salmo salar* population, with rod catch returns showing that the Tay is consistently one of the top three salmon rivers in Scotland. In 1999 the catch was 7230 fish, over 10% of the Scottish total. The Tay drains a very large catchment, and has the greatest flow of all UK rivers. There is considerable ecological variety in the Tay catchment, resulting in the Tay supporting the full range of salmon life-history types found in Scotland, with adult salmon entering the River Tay throughout the year to spawn in different parts of the catchment.

Annex II species present as a qualifying feature, but not a primary reason for site selection

- **1095 Sea lamprey** *Petromyzon marinus*
- **1096 Brook lamprey** *Lampetra planeri*
- **1099 River lamprey** *Lampetra fluviatilis*
- **1355 Otter** *Lutra lutra*

Many designated sites are on private land: the listing of a site in these pages does not imply any right of public access.

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CITATION

**RIVER LYON BANK
SITE OF SPECIAL SCIENTIFIC INTEREST**
Perth and Kinross

Site Code: 1362

NATIONAL GRID REFERENCE: NN 782487

OS 1:50,000 SHEET NO: Landranger Series 52
1:25,000 SHEET NO: Explorer Series 379

AREA: 1.18 hectares

NOTIFIED NATURAL FEATURES:

Biological: Vascular plants: Whorled solomon's-seal *Polygonatum verticillatum*

DESCRIPTION

River Lyon Bank Site of Special Scientific Interest (SSSI) lies approximately 7 kilometres west of Aberfeldy on the northern bank of the River Lyon, to the north west of its confluence with the River Tay. The site comprises a narrow strip of mixed riverside woodland and is notified for its rare vascular plant species, in particular a single colony of the nationally rare whorled solomon's-seal *Polygonatum verticillatum*.

The woodland is a mix of alder, ash, rowan, bird cherry, sycamore and wych elm. Its rich ground flora includes typically woodland species such as ramsons *Allium ursinum*, giant bellflower *Campanula latifolia* and wood anemone *Anemone nemorosa* along with some uncommon species such as moschatel *Adoxa moschatellina*, toothwort *Lathraea squamaria* and mountain melick *Melica nutans*.

NOTIFICATION HISTORY

First notified under the Wildlife and Countryside Act 1981: 15 December 1983

Reviewed under the Nature Conservation (Scotland) Act 2004: 10 December 2010

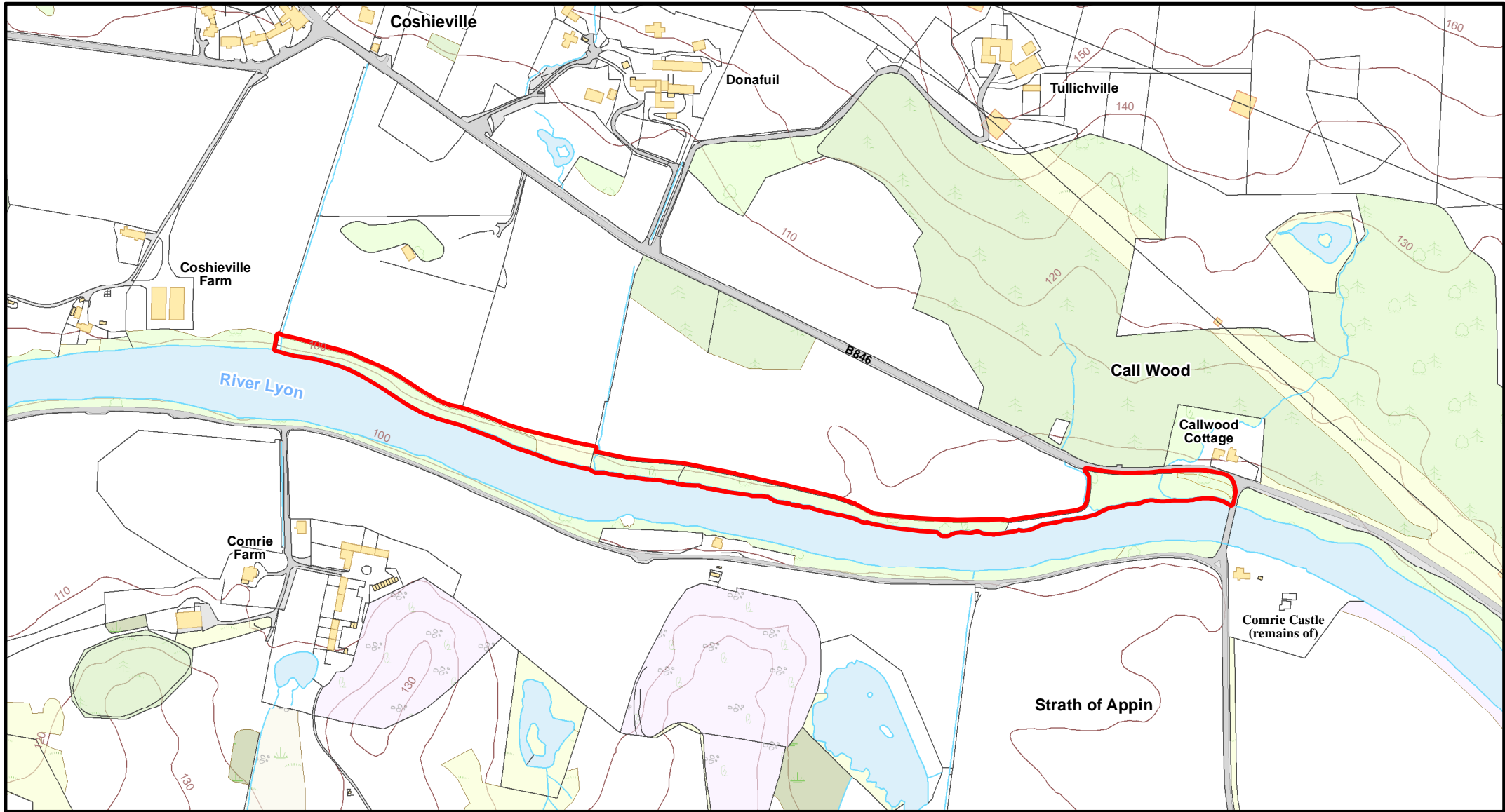
REMARKS

Measured area of site corrected (from 1.2 ha).

River Lyon Bank SSSI overlaps part of the River Tay Special Area of Conservation which is designated for the habitat and species listed below.

Habitat: Clear-water lakes or lochs with aquatic vegetation and poor to moderate nutrient levels


Species: Atlantic salmon *Salmo salar*
Brook lamprey *Lampetra planeri*
Otter *Lutra lutra*
River lamprey *Lampetra fluviatilis*
Sea lamprey *Petromyzon marinus*



River Lyon Bank

Site of Special Scientific Interest

Site Code: 1362

 Site boundary follows the inside edge of the boundary line shown

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This is an updated representation of the notified site boundary. Any apparent small differences are due to changes to the OS backdrop.



Scale 1:5,000

