Appendix 12.1

Baseline Determination of Importance

Contents

Tables

1. Introduction

1.1.1 This appendix presents the ecological baseline used for determining the importance of ecological features and identifying potential impacts of the Proposed Scheme[1]. Criteria used to determine the importance of ecosystems, habitats and species is set out in **Table 12-2** in **Chapter 12**, which define the characteristics of importance according to:

- geographic context
- legal protection
- biodiversity planning policy.

1.1.2 Baseline tables have been prepared to record the determination of importance for habitats (see **Table 1**), birds (see **Table 2**) and other notable species (see **Table 3** to **Table 7**). To avoid repetition, ecological features associated with a statutory designated site are included within the discussion for the relevant site.

1.1.3 Baseline tables are structured to consolidate relevant desktop information and survey findings to help determine the importance of affected ecological features within the context of the study area. The extent of the study area is variable and is set out for each ecological feature in **Chapter 12**.

1.1.4 The study area for protected sites has considered all internationally important sites (Ramsar, SPA, SAC) that have potential to be ecologically or hydrologically connected to the Proposed Scheme and have been assessed alongside **Chapter 12** in a separate Habitat Regulations Appraisal HRA.

1.1.5 The study area for nationally designated sites (SSSI) incorporates sites immediately adjacent or hydrologically connected to the Proposed Scheme.

1.1.6 This appendix should be read in conjunction with **Appendix 7-1** (**Volume** 2), which presents a summary of relevant consultation with key stakeholders and statutory consultees.

[1] A detailed description of design features included in the Proposed Scheme is presented in **Chapter 5**, including the new carriageway surface, structures, road drainage assets, earthworks, signage and winter resilience woodland. Consideration of typical construction methods has also been given to identify minimum working areas required to build the Proposed Scheme.

2. Designated Sites

2.1.1 There are four statutory sites within the study area:

- Drumochter Hills Special Protection Area (SPA)
- Drumochter Hills Special Area of Conservation (SAC)
- River Spey SAC
- Drumochter Hills Site of Special Scientific Interest (SSSI)

2.1.2 No non-statutory designated sites, including sites on the Ancient Woodland Inventory (AWI), were recorded within the study area.

Drumochter Hills SPA

2.1.3 Drumochter Hills contains an extensive mosaic of upland moorland habitats characterised by gently sloping summits and steep-sided stream gullies. Through the Pass of Drumochter, the SPA is bisected by the Highland Mainline (HML) railway and existing A9 road between the Allt Coire Mhic-sith and Balsporran Cottage. The Beauly-Denny Powerline (BDL), and its associated former construction access track, is located to the east of the existing A9 road.

2.1.4 Drumochter Hills has been selected as a Special Protecion Area for:

- breeding merlin *Falco columbarius*, 7 pairs representing at least 0.5% of the breeding population in Great Britain (count, as at mid-1990s)
- breeding dotterel *Charadrius morinellus*, 70 pairs representing at least 8.3% of the breeding population in Great Britain (count, as at mid-1990s).

2.1.5 Site Condition Monitoring (SCM) carried out by SNH has assessed both species as being in unfavourable condition. The SPA is assessed as being of **international importance**.

Drumochter Hills SAC

2.1.6 The boundary for the Drumochter Hills SAC is broadly similar to that of the Drumochter Hills SPA, and has been selected for 10 Annex I habitats including:

- Acidic scree
- Alpine and subalpine heaths
- Blanket bog
- Dry heaths
- Mountain willow scrub
- Montane acid grasslands
- Plants in crevacies on acid rocks
- Species-rich Nardus grassland
- Tall herb communities
- Wet heathland with cross-leaved heath.

2.1.7 Alpine and subalpine heaths, blanket bog, dry heaths, mountain willow scrub and montane acid grasslands are the primary reason for site selection. SCM carried out by SNH has assessed each as being in unfavourable condition with the exception of montane acid grassland, which is in favourable condition.

2.1.8 Both blanket bog and species-rich *Nardus* grassland are highlighted as priority natural habitats for the SAC. The SAC is assessed as being of **international importance**.

River Spey SAC

2.1.9 The River Spey and associated tributaries drain an extensive upland catchment, which has been selected for

- Freshwater pearl mussel *Margaritifera margaritifera*
- Sea lamprey *Petromyzon marinus*
- Atlantic salmon *Salmo salar*
- Otter *Lutra lutra*.

2.1.10 Freshwater pearl mussel and sea lamprey larvae are present throughout the lower reaches of the River Spey (i.e. downstream of Grantown-on-Spey); and recent studies for SNH have identified recruiting populations of freshwater pearl mussel in the middle to lower reaches.

2.1.11 Atlantic salmon spawning habitat is available throughout almost the whole length of the River Spey with nursery habitat present on the main-stem and numerous tributaries. Freshwater and riparian habitats present throughout the catchment also support a stable population of otter.

2.1.12 SCM carried out by SNH has assessed freshwater pearl mussel and Atlantic salmon as being in unfavourable condition. Sea lamprey and otter are in favourable condition. The SAC is assessed as being of **international importance**.

It should be noted that the SAC overlaps with other statutory designated sites including Abernethy Forest, Cairngorms, Craigmore Wood, Drumochter Hills, Kinveachy Forest, Moray and Nairn Coast, and River Spey – Insh Marshes Special Protection Areas. Due to the distance to many of these sites, typical onsite habitats and the core range for species associated with them, there is no significant ecological or hydraulic pathway connecting the study area to these sites.

Drumochter Hills SSSI

2.1.13 Drumochter Hills consists of a high altitude plateau cut by a series of steep-sided corries and stream gullies. The SSSI is bisected by the HML railway, between Dalnaspidal and Balsporran Cottage, and has been notified for the following features:

- Fluvial geomorphology of Scotland
- Montane assemblage
- Vascular plant assemblage
- Breeding bird assemblage

2.1.14 The Allt Dubhaig is located in the Pass of Drumochter and is an excellent natural example of the changes in channel shape and sediment characteristics that occur along a water course. The varied underlying geology in the wider Drumochter Hills, combined with high-altitude, late-lying snow and relatively continental climate, has led to a rich and varied range of arctic-alpine flora. The underlying habitats support an important breeding assemblage of upland and arctic birds.

2.1.15 It is important for its well-developed montane vegetation, which includes a number of nationally rare plant species in a wide range of habitats, and its assemblage of arctic and upland breeding birds. The Allt Dubhaig in the Pass of Drumochter is of geological interest for its fluvial geomorphology. The SSSI is assessed as being of **national importance**.

3. Notable Habitats

3.1.1 Notable habitats are identified as a conservation priority though relevant legislation or planning policy, including:

- internationally important habitat types identified in Annex 1 of 'Council Directive 92/43/EEC' (the Habitats Directive)
- nationally important habitat types identified in the 'Scottish Biodiversity List' (SBL)
- nationally important woodland areas identified in the 'Ancient Woodland Inventory' (AWI)
- regionally important habitat types identified in the CNAP

3.1.2 Notable habitats have been identified based on National Vegetation Classification (NVC) communities recorded during Phase 2 habitat survey (see **Appendix 12.3** (**Volume 2**)); and shown in **Drawings 12.11** to **12.17** in **Volume 3**. The importance of notable habitats are described in **Table 1**.

3.1.3 No invasive non-native species (INNS) were recorded during detailed botanical surveys.

Table 1: Determinining the importance of habitats

Notable Habitats	Policy and Legal Status	Baseline review (study area)	Habitat Appraisal	Importance
Alkaline fens	Annex 1 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora	Alkaline fens consist of a complex assemblage of vegetation types characteristic of sites where there is tufa and/or peat formation with a high-water table and a calcareous base-rich water supply. In the study area, Alkaline fens are characterised by M10 *Carex dioica - Pinguicula vulgaris* mire, which are frequently scattered throughout other habitats, notably wet heaths on lower to mid-gradient slopes east of the existing A9. Some areas of M10 vegetation are relatively species-poor, with little more than an open sward of sedges rooted in a lawn of *Sphagnum denticulatum* with occasional *Scorpidium scorpioides*. Where better developed, other sedges and mosses are more frequent.	There are no extensive stands of alkaline fens, which are more widespread in areas of flushing within wet heath mosaics along old fault lines. Alkaline fens are not a qualifying feature of the Drumochter Hills SAC or Drumochter Hills SSSI and considered to be of authority area importance.	Authority area
Blanket bogs		Blanket bogs are present to the west of the existing A9 road, where valley mire is extensive over the Allt Dubhaig and River Truim floodplains. In these areas, M17a *Drosera rotundifolia-Sphagnum spp*. sub-community is the most commonly identified NVC community, and was found to contain bog pool communities M1, M2 and M3. M19a Erica tetralix sub-community is also present with varying levels of ling heather *Calluna vulgaris* and decreasing levels of Sphagnum mosses indicating some desiccation of the underlying peatlands. Blanket bogs are also present to the east of the existing A9 road, notably around Dalnsapidal. In these areas, blanket bogs are small in scale and indicative of locally deep peat deposits within a wet heath mosaic. In these areas, M17 and M19 mosaics contain degraded blanket bog communities such as M20 Eriophorum vaginatum blanket mire and M25a *Erica tetralix* sub-community.	To the west of the existing A9 road, blanket bogs are extensive over the Allt Dubhaig and River Truim floodplains where they contribute to the valley mire ecosystem. To the east of the existing A9 road, blanket bogs are small in scale and occur locally in wet heath mosaics over deep peat deposits. Blanket bogs are ombrogenous and contain relatively deep peat. They have a relatively widespread distribution in Scotland and Europe; although, they are an irreplaceable resource that is sensitive to disturbance. Blanket bogs are a qualifying feature of the Drumochter Hills SAC and of international importance.	International
European dry heaths		European dry heaths are widespread in the study area and generally occur on steep slopes to the east of the existing A9 road, particularly through the Pass of Drumochter. In these areas, European dry heaths are characterised by H12a *Calluna vulgaris* sub-community, which is the most commonly identified NVC community. Discrete areas of H10, H18 and H21 are also present in areas marginal to H12.	European dry heath is common in the study area; and have a relatively widespread distribution in Scotland and Europe; although this habitat is sensitive to disturbance. European dry heaths are a qualifying feature of the Drumochter Hills SAC and of international importance.	International
Northern Atlantic wet heathlands		Northern Atlantic wet heathlands are relatively common within the study area, occurring on more gentle slopes to the east of the existing A9 road around Dalnaspidal and to the north of Drumochter Lodge. It is typically characterised by extensive M15b Typical sub-community over generally shallow peat.	Northern Atlantic wet heathlands are common in the study area; and have a relatively widespread distribution in Scotland and Europe; although this habitat is sensitive to disturbance. Wet heaths are a qualifying feature of the Drumochter Hills SAC and of international importance.	International
Species-rich Nardus grassland		Discrete stands of species-rich *Nardus* grassland are relatively frequent throughout the study area, generally occurring on steeper slopes to the east of the existing A9 road in more extensive mosaics of dry heath and U4 *Festuca ovina – Agrostis capillaris – Galium saxatile* grassland. There is a greater frequency of calcareous influence through the Pass of Drumochter, as a result of groundwater flushing, where CG10 *Festuca ovina – Agrostis capillaris – Thymus polytrichus* grassland is the most commonly identified NVC community. Two small areas of U4c *Lathyrus montanus – Stachys betonica* sub-community are also present on lower slopes to the east of the existing A9 road near the Allt a' Chaorainn. The field layer in these areas typically contain few forb species and dominated by closely-cropped gramminoids due to grazing.	There are very few extensive stands of species-rich *Nardus* grassland, which is scattered throughout other heathland and grassland habitats. This habitat is relatively widespread in Scotland and Europe. Species-rich *Nardus* grassland are a qualifying feature of the Drumochter Hills SAC and of international importance.	International
Transition mires		Transition mires can occur in a variety of situations; although they are often more common in marginal areas to blanket bogs and alkaline fens. In the study area, transition mire is typically characterised by M4 *Carex rostrata - Sphagnum fallax* mire, which occurs in small stands marking the passage and localised ponding of surface water in depressions. It is generally more extensive to the west of the existing A9 road, within the River Truim floodplain.	There are few extensive areas of transition mire within the study area; although the presence of this habitat to the west of the existing A9 road contributes to the local diversity of the valley mire ecosystem. Transition mires are not a qualifying feature of the Drumochter Hills SAC or Drumochter Hills SSSI and considered to be of authority area importance.	Authority area
Upland flushes, fens and swamps	SBL priority habitat	Upland flushes, fens and swamps is a broad and variable habitat classification that occur where there is groundwater flushing or standing water within floodplains. M6 *Carex echinata - Sphagnum fallax/denticulatum* mire and M11 *Carex demissa – Saxifraga aizoides* mire are relatively commonly; although, they are typically discrete and in areas marginal to other broad habitats including mires, grasslands, heaths and swamps.	There are few extensive areas of upland flushes, fens and swamps within the study area and considered to be of local importance.	Local
Upland birchwoods		Upland birchwoods are not a common within the study area with only an extremely small area of W17 *Quercus petraea – Betula pubescens – Dicranum majus* woodland along the edge of the Allt Coire Mhich-sith. A further small area of W11 *Quercus petraea – Betula pubescens – Oxalis acetosella* woodland was also noted beyond the HML railway through the Pass of Drumochter.	Whilst, W11 and W17 can correspond with Annex I habitat 91AO (Old sessile oak woods with *Ilex* and *Blechnum* in the British Isles), they are small in scale, contain little or no oak and isolated from more extensive oak woodlands. Therefore, upland birchwoods are of local importance.	Local
Wet grasslands	CNPA priority habitat	Wet grasslands are not a common within the study area with only an extremely small area of MG9 *Holcus lanatus – Deschampsia cespitosa* grassland located between the existing A9 road and the National Cycleway Network (NCN) 7, close to where the crossing of the Allt Coire nan Cisteachan. MG10 *Holcus lanatus – Juncus effusus* rush-pasture is present in very small amounts within other broad habitat types.	There are few extensive areas of wet grassland within the study area and considered to be of local importance.	Local
Non-priority grasslands	None	Non-priority grasslands (*i.e.* vegetation communities that do not correspond with any Annex I, SBL or CNPA priority habitats) are common in the study area, generally occurring in areas adjoining the existing A9 road, side-roads and access tracks. In these areas, flora is indicative of nutrient enrichment and/ or infrequent management, which contain MG1 *Arrhenatherum elatius* grassland, MG6 *Lolium perenne – Cynosurus cristatus* grassland, OV24 *Urtica dioica – Galium aparine* community, *OV25 Urtica dioica – Cirsium arvense* community and OV27 *Chamerion angustifolium* community. Calcifugous grasslands are also common throughout the study area, with U5 *Nardus stricta – Galium saxatile* grassland present in riparian zones to the River Truim. U6 *Juncus squarrosus – Festuca ovina* grassland and U20 *Pteridium aquilinum – Galium saxatile* community typically occupy marginal areas to other habitat types (e.g. wet heath).	A common and ubiquitous habitat containing species of limited botanical interest; therefore, this habitat is of local importance.	Local
Non-priority woodlands		Non-priority woodlands and understorey vegetation are not a common within the study area with only extremely small areas of W18 *Pinus sylvestris – Hylocomium splendens* woodland are present in shelter-belt planting around properties at Dalnaspidal and Drumochter Lodge.	Whilst, W18 can correspond with Annex I habitat 91CO (Caledonian forest), they are small in scale and isolated from other similar woodlands. Therefore, a common and ubiquitous habitat of limited botanical interest; therefore, this habitat is of less than local importance.	Less than local
Non-NVC features	None	Features that do not correspond with any NVC community are common throughout the study area.	Features of extremely limited or no botanical interest.	Local

4. Notable Species

4.1.1 Notable species identified as a conservation priority though relevant legislation or planning policy include:

- internationally (or nationally) important interest features associated with SPAs (or SSSIs)
- internationally important resident or regularly occurring migratory species identified on Annex I of the Birds Directive
- nationally important species identified on Schedule 1, 5 and 8 of the Wildlife and Countryside Act 1981 (as amended)
- regionally important species identified on the CNAP
- regionally important red listed Birds of Conservation Concern (BoCC)
- any other locally important species identified as an integral part of the local bird assemblages which is of wider conservation importance (e.g. amber-listed BoCC)

4.1.2 Surveys carried out to determine the presence of notable species are detailed in **Appendix 12.4 to 12.8** in **Volume 2**; and shown in **Drawings 12.25** to **12.35** in **Volume 3**. The importance of notable species are described in **Table 2** to **Table 7**.

Table 2: Determinining the importance of birds

Ornithology	Policy & Legal Status	Desktop Review (Historic records, consultation, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
Breeding birds *Note: Species associated with the SPA and SSSI are included within **Table 1**.*	Annex 1 of Council Directive 79/409/EEC on the conservation of wild birds ***Note:** Areas used regularly by more than 1% of the national population; or by more than 1% of the biogeographic population of regularly occurring migratory species meet SPA selection criteria..*	**BTO:** Historic records of internationally important species (included on Annex 1) within 2km of the study area include golden plover, short-eared owl, golden eagle, hen harrier, and black-throated diver.	**BLOM aerial survey:** There is potential nesting habitat for a range of species within the study area, notably in areas of woodland, scrub and heather moorland. Based on historic records, there is potential for internationally important breeding birds within the study area.	Hen harrier and golden eagle are reported within the study area although with no breeding evidence noted. The presence within the study area is likely to account for at least 1% of the east highland population of both species respectively.	Regional
	Schedule 1 of the Wildlife and Countryside Act 1981 SBL priority species Red/ Amber listed birds of conservation concern (BoCC)	Historic records of nationally important species within 2km of the study area include dunlin, crossbill, peregrine falcon, black tailed godwit and greenshank. Historic records also include common crossbill. Historic records of species included within the SBL and BoCC Red and Amber lists within 2km of the study area include greylag goose, teal, red grouse, kestrel, oystercatcher, lapwing, curlew, snipe, redshank, black-headed gull, skylark, ring ouzel and lesser redpoll.	Wetland areas west of the study area provide suitable wetland breeding habitat for black tailed godwit. Conifer plantation (snow belt features and plantation around settlements at Drumochter lodge and Dalnaspidal) provide potential breeding habitat for common crossbill. Floodplain grasslands, heathland, conifer plantation and bog provide a range of habitats suitable for those species shown on the historic records.	Black-tailed godwit (1 pair) were reported breeding within the wetland at Allt Dubhaig. No evidence of breeding within the study area was reported. Black tailed godwit are a scarce breeder in Scotland and a single pair breeding is likely to represent a large proportion of the breeding population. Other Schedule 1 species recorded include common crossbill; given the low numbers present (2) relative to national populations (>5,000) the species does not reach national importance. A range of species are recorded which feature on both the SBL and BoCC Red and Amber lists. Of these, the wader assemblage present (including lapwing, curlew, snipe and redshank) represents a significant proportion of the wider Strathspey breeding wader assemblage (sub-section of the region) and as such are important within the region.	National Local Regional
	Red/ Amber listed birds of conservation concern (BoCC) CNPA Priority Species	**Note CNPA priority bird species lapwing and redshank are discussed above.** Historic records of species included on the BoCC Red and Amber and CNPA lists within 2km of the study area include oystercatcher, lapwing, curlew, snipe, redshank, black-headed gull, skylark, and lesser redpoll.	Floodplain grasslands, heathland, conifer plantation and bog provide a range of habitats suitable for those species within the historic records.	BoCC and CNPA priority species are recorded throughout the study area utilising habitats present. Other than species already considered above, these typically comprise species which occur in significant numbers both nationally and regionally. They are typically present in low numbers in the study area.	Local
Non-breeding birds	Annex 1 of Council Directive 79/409/EEC on the conservation of wild birds	**BTO:** Historic records of internationally important species within 2km of the study area include whooper swan, golden eagle, hen harrier and merlin. Data indicate low numbers of internationally valued species present overwinter.	**BLOM aerial survey:** Broad habitats within the study area and its immediate surroundings are typical of those found in open moorland environments which include dry heath, wet heath, blanket bog and grassland habitats. These habitats are used by non-breeding birds for foraging and commuting. Low peak counts per tetrad indicate that species are likely to be present in no more than regionally important numbers	No targeted surveys for non-breeding birds have been carried out, and no incidental sightings have been recorded during other ecological surveys.	Regional
	Schedule 1 of the Wildlife and Countryside Act 1981 SBL priority species Red/ Amber listed birds of conservation concern (BoCC)	**BTO:** Historic records of nationally important species within 2km of the study area include ptarmigan, snow bunting, crossbill and peregrine falcon.	**BLOM aerial survey:** Broad habitats within the study area and its immediate surroundings are typical of those found in open moorland environments; these include dry heath, wet heath, blanket bog and grassland habitats. These habitats are used by non-breeding birds for foraging and commuting. Low peak counts per tetrad indicate that species are likely to be present in no more than locally important numbers.	No targeted surveys for non-breeding birds have been carried out, and no incidental sightings have been recorded during other ecological surveys.	Local
	CNPA Priority Species Red/ Amber listed birds of conservation concern (BoCC)	**BTO:** Historic records of regionally important species within 2km of the study area include black grouse, red grouse, goldeneye, mallard, teal, kestrel, woodcock, lapwing, greylag goose, field fare, tawny owl, great grey shrike, redwing, reed bunting and lesser redpoll.	**BLOM aerial survey:** Broad habitats within the study area and its immediate surroundings are typical of those found in open moorland environments; these include dry heath, wet heath, blanket bog and grassland habitats. These habitats are used by non-breeding birds for foraging and commuting. Low peak counts per tetrad indicate that species are likely to be present in no more than locally important numbers.	No targeted surveys for non-breeding birds have been carried out, and no incidental sightings have been recorded during other ecological surveys.	Local

Table 3: Determining the importance of amphibians and reptiles

Species	Policy & Legal Status	Desktop Review (Historic records, consultation, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
Great crested newt *(Triturus cristatus)*	Annex 2 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora. European Protected Species (EPS) as listed on Schedule 2 of the Conservation (Natural Habitats &c.) Regulations 1994 SBL priority species	No records within study area.	**BLOM aerial survey and OS maps:** A Habitat Suitability Index (HSI) assessment of 10 ponds within 250m from the current A9 and significant barriers such as the HML railway and watercourses, found them to range from 'poor' to 'below average' for GCN	Not recorded during any habitat/ species walkover surveys.	Not applicable
Common toad *(Bufo bufo)*	SBL priority species	No records within the study area	**BLOM aerial survey and OS maps:** There are a number of ponds and waterbodies that provide breeding habitat for common toad throughout Project 7. The surrounding wet heathland, blanket bog and dry heath habitats that predominantly surround these ponds provides suitable terrestrial habitat for resting and foraging common toad.	No targeted surveys for common toad were carried out; and no incidental sightings of common toad presence or activity was noted during other ecological surveys. However, common frog was noted within the survey area during surveys; this species requires similar habitat conditions to common toad and it is therefore considered likely to be present.	Authority area
Other amphibian species: Common frog (*Rana temporaria*) Palmate Newt (*Lissotriton helveticus*) Smooth Newt (*Lissotriton vulgaris*)	No specific policy or legal status	No records within the study area	**BLOM aerial survey and OS maps:** There are a number of ponds and waterbodies that provide breeding habitat for other amphibians throughout Project 7. The surrounding wet heathland, blanket bog and dry heath habitats that predominantly surround these ponds provides suitable terrestrial habitat for resting and foraging.	No targeted surveys for common frog were carried out as they are not legally protected; however common frog were noted within the study area during walkover surveys. No other amphibians were noted.	Not applicable
Adder *(Vipera berus)*	Protected under Section 9 of the Wildlife and Countryside Act (1981) *from intentional or reckless killing and injuring and selling, offering or advertising for sale, possessing or transporting for the purpose of sale* SBL species	Records present in study area south of southern tie-in	**BLOM aerial survey:** Much of the study area is composed of heathland habitat which provides potential cover, foraging and resting habitat; as well as open basking areas. Steep topography will limit exposure of potential habitats to direct sunlight around dawn and dusk throughout much of the study area, particularly within the existing A9 road corridor through the Pass of Drumochter. This will limit basking oppounturnities, notably for adder as they are diurnal. Heathland areas are largely managed as grouse moorland and muirburn will further limit the extent and scale of suitable habitat; as well as the abundance of reptiles.	No targeted surveys for adder were carried out; however a single female adder was observed at Dalnsapidal in 2017; two adder were encountered at Dalnaspidal (either side of the existing A9 road) during peat probing surveys in 2016. Therefore, assume small population of adder is locally present, particularly around Dalnaspidal.	Authority
Common lizard *(Lacerta vivipara)*	Protected under Section 9 of the Wildlife and Countryside Act (1981) *from intentional or reckless killing and injuring and selling, offering or advertising for sale, possessing or transporting for the purpose of sale* SBL species	No records within the study area		No targeted surveys for common lizard were carried out; however, incidental sightings of common lizard were recorded to the east of the existing A9 road near Allt Coire Bhotie, west of the existing A9 road at Drumochter Lodge, west of the A9 road through Pass of Drumochter and west of the A9 road at Dalnaspidal. Therefore, assume small population of common lizard is locally present, particularly to the west of the existing A9 road.	Authority
Slow worm *(Anguis fragilis)*	Protected under Section 9 of the Wildlife and Countryside Act (1981) *from intentional or reckless killing and injuring and selling, offering or advertising for sale, possessing or transporting for the purpose of sale* SBL species	No records within the study area		No targeted surveys for slow worm were carried out; however, an incidental sighting of a single slow worm was recorded in 2015 to the east of the existing A9 road near Allt Chaorach Beag. Therefore, assume small population of slow worm is locally present, particularly around Dalnaspidal.	Authority

Table 4: Determinining the importance of bats

Species	Policy & Legal Status	Desktop Review (Historic records, consultation, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
Common pipistrelle *(Pipistrellus pipistrellus)*	Annex 2 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora. EPS as listed on Schedule 2 of The Conservation (Natural Habitats &c.) Regulations 1994 Fully protected under Section 9 of the Wildlife and Countryside Act (1981) SBL species	No records within the study area	**BLOM aerial survey:** Despite being in a high altitude setting which does limit the potential for bat species to be present due to exposed climatic conditions, much of the study area is composed of heathland, grassland, woodland and mire which provides good quality habitat for foraging and commuting bats. There is potential for roosting opportunities in trees and buildings within the study area.	**CFJV protected vertebrate surveys:** A small number of features within the study area were identified during protected species walkover surveys as having bat roost potential: - Dalnaspidal plantation - Derelict Dalnaspidal House - Dalnaspidal culvert - Allt Ruidh nan Sgoilearan cycle path culvert - Allt Fuar Bheann cycle path culvert - Allt a' Chaorainn culvert - Drumochter Lodge plantation - Drumochter Lodge Pipistrelle species recorded at Allt Ruidh nan Sgoilearan cycle path culvert (commuting) during 2015/ 2016 emercence and re-entrysurveys and around a dilapidated building around Dalnaspidal. These comprised of few (1- 3 bats), indicating a small population in the area. No evidence of roost present.	Local
Soprano pipistrelle *(Pipistrellus pygmaeus)*	Annex 2 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora. EPS as listed on Schedule 2 of The Conservation (Natural Habitats &c.) Regulations 1994 Fully protected under Section 9 of the Wildlife and Countryside Act (1981) SBL species	No records within the study area	**BLOM aerial survey:** Despite being in a high altitude setting which does limit the potential for bat species to be present due to exposed climatic conditions, much of the study area is composed of heathland, grassland, woodland and mire which provides good quality habitat for foraging and commuting bats. There is potential for roosting opportunities in trees and buildings part of settlements within the study area.	**CFJV protected vertebrate surveys:** A small number of features within the study area were identified during protected species walkover surveys as having bat roost potential: - Dalnaspidal plantation - Derelict Dalnaspidal House - Dalnaspidal culvert - Allt Ruidh nan Sgoilearan cycle path culvert - Allt Fuar Bheann cycle path culvert - Allt a' Chaorainn culvert - Drumochter Lodge plantation - Drumochter Lodge Pipistrelle species recorded at Allt Ruidh nan Sgoilearan cycle path culvert (commuting) during 2015/ 2016 surveys and around a dilapidated building around Dalnaspidal. These comprised of few 1- 2 bats indicating a small population in the area. No evidence of roost present.	Local
Nathusius pipistrelle *(Pipistrellus nathusi)*	Annex 2 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora. EPS as listed on Schedule 2 of The Conservation (Natural Habitats &c.) Regulations 1994 Fully protected under Section 9 of the Wildlife and Countryside Act (1981) SBL species	No records within the study area	**BLOM aerial survey:** Despite being in a high altitude setting which does limit the potential for bat species to be present due to exposed climatic conditions, much of the study area is composed of heathland, grassland, woodland and mire which provides good quality habitat for foraging and commuting bats. There is potential for roosting opportunities in trees and buildings part of settlements within the study area.	**CFJV protected vertebrate surveys:** Not recorded within the study area during 2015 to 2017 surveys.	Not applicable
Brown long-eared *(Plecotus auritus)*	Annex 2 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora. EPS as listed on Schedule 2 of The Conservation (Natural Habitats &c.) Regulations 1994 Fully protected under Section 9 of the Wildlife and Countryside Act (1981) SBL species	No records within the study area	**BLOM aerial survey:** Despite being in a high altitude setting which does limit the potential for bat species to be present due to exposed climatic conditions, much of the study area is composed of heathland, grassland, woodland and mire which provides good quality habitat for foraging and commuting bats. There is potential for roosting opportunities in trees and buildings part of settlements within the study area.	**CFJV protected vertebrate surveys:** Not recorded within the study area during 2015 to 2017 surveys.	Not applicable

Species	Policy & Legal Status	Desktop Review (Historic records, consultation, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
Daubenton's *(Myotis daubentonii)*	Annex 2 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora. EPS as listed on Schedule 2 of The Conservation (Natural Habitats &c.) Regulations 1994 Fully protected under Section 9 of the Wildlife and Countryside Act (1981) SBL species	No records within the study area	**BLOM aerial survey:** Despite being in a high altitude setting which does limit the potential for bat species to be present due to exposed climatic conditions, much of the study area is composed of heathland, grassland, woodland and mire which provides good quality habitat for foraging and commuting bats. There is potential for roosting opportunities in trees and buildings part of settlements within the study area.	**CFJV protected vertebrate surveys:** Not recorded within the study area during 2015 to 2017 surveys.	Not applicable
Natterer's *(Myotis natterii)*	Annex 2 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora. EPS as listed on Schedule 2 of The Conservation (Natural Habitats &c.) Regulations 1994 Fully protected under Section 9 of the Wildlife and Countryside Act (1981) SBL species	No records within the study area	**BLOM aerial survey:** Despite being in a high altitude setting which does limit the potential for bat species to be present due to exposed climatic conditions, much of the study area is composed of heathland, grassland, woodland and mire which provides good quality habitat for foraging and commuting bats. There is potential for roosting opportunities in trees and buildings part of settlements within the study area.	**CFJV protected vertebrate surveys:** Not recorded within the study area during 2015 to 2017 surveys.	Not applicable
Leisler's *(Nyctalus leisleri)*	Annex 2 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora. EPS as listed on Schedule 2 of The Conservation (Natural Habitats &c.) Regulations 1994 Fully protected under Section 9 of the Wildlife and Countryside Act (1981)	No records within study area	**BLOM aerial survey:** Despite being in a high altitude setting which does limit the potential for bat species to be present due to exposed climatic conditions, much of the study area is composed of heathland, grassland, woodland and mire which provides good quality habitat for foraging and commuting bats. There is potential for roosting opportunities in trees and buildings part of settlements within the study area.	**CFJV protected vertebrate surveys:** Not recorded within the study area during 2015 to 2017 surveys.	Not applicable
Noctule (*Nyctalus noctula*)	Annex 2 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora. EPS as listed on Schedule 2 of The Conservation (Natural Habitats &c.) Regulations 1994 Fully protected under Section 9 of the Wildlife and Countryside Act (1981) SBL species	No records within study area	**BLOM aerial survey:** Despite being in a high altitude setting which does limit the potential for bat species to be present due to exposed climatic conditions, much of the study area is composed of heathland, grassland, woodland and mire which provides good quality habitat for foraging and commuting bats. There is potential for roosting opportunities in trees and buildings part of settlements within the study area.	**CFJV protected vertebrate surveys:** Not recorded within the study area during 2015 to 2017 surveys.	Not applicable

Table 5: Determinining the importance of terrestrial mammals

Species	Policy & Legal Status	Desktop Review (Historic records, consultation, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
Badger *(Meles meles)*	Protected under the Protection of Badgers Act 1992	**Scottish Badgers:** Single animal road mortality to the west of the existing A9 road in 2016, near the Allt Coire nan Cisteachan	**BLOM aerial survey:** Woodland belts are present in sections along the A9 trunk road, and are mostly limited to the east side of the road in broken strips, this woodland potentially provides secure areas for sett building, commuting and foraging badger. The habitats surrounding the woodland belts are open heathland and grassland. These habitats have potential to support foraging and commuting badger. They may be of limited value for secure sett building due to open nature and moorland management (muirburn).	No evidence of badger was recorded during the 2015 surveys	Local
Pine marten *(Martes martes)*	Fully protected under Section 9 of the Wildlife and Countryside Act (1981) SBL priority species	No records within the study area	**BLOM aerial survey:** The lack of suitable sheltering habitat and cover make the survey area unattractive to pine marten. Though less shy than some other animals and more likely to use buildings for breeding, each pine marten does require a large area of continuous woodland. The lack of large woodland within the survey area makes it unlikely that pine marten are occupying this site.	Mustelid prints recorded near Balsporran on the east side of A9 during 2016 update surveys, though cannot be confirmed to be pine marten. No other signs recorded	Authority area
Red squirrel *(Sciurus vulgaris)*	Fully protected under Section 9 of the Wildlife and Countryside Act (1981) SBL priority species	No records within the study area	**BLOM aerial survey:** The habitat within the survey area was considered to be sub-optimal for red squirrel. The few woodland belts within the study area are thin and fragmented, with no apparent connection to good quality squirrel woodland. Though some species of tree were producing cones, the woodlands were young overall. The fragmented nature of these belts and their proximity to the A9 make them unattractive and unsuitable for red squirrel.	Feeding remains consistent with squirrel were recorded within the woodland around Drumochter Lodge during protected vertebrate surveys in 2015. These could not be confirmed to be red or grey squirrel.	Authority area
European wildcat *(Felis silvestris silvestris)*	Listed on Schedule 2 of the Habitats Regulations 1994 (as amended in Scotland); therefore, a European Protected Species. Fully protected under Section 9 of the Wildlife and Countryside Act (1981) SBL priority species Wildcat is identified as a key species within the CNAP.	**Cairngorms National Park:** Verified animal road mortality to the east of the existing A9 road in 2012, near A9/A889 junction at Dalwhinnie	**BLOM aerial survey:** Wildcat have extensive home ranges, which can increase or contract based on levels of disturbance. Habitats of most importance to sustaining wildcat populations include woodland (denning), woodland edge (commuting) and moorland (foraging). Ecology context: montane moorland dominates land to the east of the existing A9 road, which is managed for commercial grouse shooting. Substantial areas of woodland, likely to be commercial forestry, is present to the west of the existing A9 road, beyond Dalwhinnie. Wildcat are unlikely to cross watercourses greater than 3m wide (CNPA 2012); therefore, the River Truim is likely to function as a natural barrier to commuting wildcat.	No targeted surveys for wildcat were carried out; and no incidental sightings of wildcat presence or activity was noted during other ecological surveys.	National
Water vole *(Arvicola amphibius)*	Partially protected under the Wildlife and Countryside Act (1981) SBL priority species	No records within the study area	**BLOM aerial survey:** There are multiple watercourses and streams present within the study area, these watercourses are bounded by heathland and bog which likely creates suitable shelter habitat for water vole.	Water vole activity was noteworthy within the study area and project extent during surveys in 2015 and 2016, with the highest concentration being west of the A9 road.	Authority area
Hare species (*Lepus* spp.)	Partially protection under the Wildlife and Countryside Act (1981) SBL species Mountain hare is identified as a key species within the CNPA	**NBN Gateway:** Records of mountain hare present in study area from NBN data	**BLOM aerial survey:** The habitats both in the study area consisting of acid grassland and dry heath throughout the area provide potential sheltering and foraging habitat for hare species. The presence of mountain hare records in the study area indicates both species could be present in suitable habitat.	Incidental observations of mountain hare and brown hare have been recorded in multiple locations throughout the study area in the 2015/ 2016 protected vertebrate surveys.	Authority area

Table 6: Determinining the importance of invertebrates

Invertebrates	Policy & Legal Status	Desktop Review (Historic records, consultation, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
Wood ant species *(Formica spp.)*	SBL species Four species of wood ant are identified as key species within the CNPA	No records within the study area	Coniferous woodland and woodland rides are present within the study area that may be utilised by wood ant for foraging and nest building	Surveys in 2017 found that no wood ant nests are present within the study area	Not applicable
Other CNPA invertebrates: *Lepidoptera* *Diptera* *Hymenoptera* *Coleoptera*	Identified as key species within the CNPA	*Campiglossa argyrocephala recorded* at pass of Drumochter	Much of the study area extent is composed of heathland, grassland, woodland and mire which provides good quality habitat for a range of invertebrates such as Lepidoptera, Diptera, *Hymenoptera and Coleoptera*. The CNPA desktop review highlighted nine red (highest priority) areas and 15 amber (high priority) areas within the study area, 15 of which are within the study area that contain habitats suitable for a range of CNPA species, including invertebrates. Shingle habitats present along the River Truim provide habitat for a range of CNPA species	No targeted surveys carried out.	Not applicable

Table 7: Determination of freshwater fish

Invertebrates	Policy & Legal Status	Desktop Review (Historic records, consultation, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
Atlantic Salmon *(Salmo salar)* *With respect to Tay Catchment Only as consideration for the River Spey SAC is included within the designated site (see **Table 1**)*	Qualifying species of the River Tay SAC SBL species	No records within the study area	**BLOM aerial survey:** The Allt Dubhaig and River Garry and its tributaries provide good quality habitat for Atlantic salmon through good water quality and natural substrates. There are known barriers for dispersal for Atlantic salmon which may impede movement upstream into the study area.	**CFJV Fish Habitat Assessment:** Fish habitat assessments were carried out to identify and characterise fish habitat within proximity to major watercourse crossings. Atlantic salmon are considered to be absent on the River Garry and Allt Dubhaig, which forms part of the upper River Tay catchment in the study area. This is due to water abstraction at Loch Garry and an impassable weir at Struan, downstream of the study area	International
Lamprey Species *(Lampetra Spp.)* *With respect to Tay Catchment Only as consideration for the River Spey SAC is included within the designated site (see **Table 1**)*	Qualifying species of the River Tay SAC SBL priority species	No records within the study area	**BLOM aerial survey:** The Allt Dubhaig and River Garry and its tributaries provide good quality habitat for lampreys through good water quality and natural substrates. There are known barriers for dispersal for lamprey which may impede movement upstream into the study area.	**CFJV Fish Habitat Assessment:** Fish habitat assessments were carried out to identify and characterise fish habitat within proximity to major watercourse crossings. Lamprey are considered to be absent on the River Garry and Allt Dubhaig, which forms part of the upper River Tay catchment in the study area. This is due to water abstraction at Loch Garry and an impassable weir at Struan, downstream of the study area	International