

Appendix 12.1

Baseline Determination of Importance

Contents

1. Introduction	1
-----------------	---

Tables

Table 1: Determining the importance of statutory designated sites	2
Table 2: Determining the importance of habitats	4
Table 3: Determining the importance of invasive non-native species	5
Table 4: Determining the importance of birds	6
Table 5: Determining the importance of amphibians	8
Table 6: Determining the importance of reptiles	8
Table 7: Determining the importance of bats	9
Table 8: Determining the importance of terrestrial mammals	11
Table 9: Determining the importance of CNPA draft priority non-protected species	12

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. Criteria used to determine the importance of ecosystems, habitats and species is set out 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 designated sites (see **Table 1**), habitats (see **Table 2**), invasive non-native species (see **Table 3**), birds (see **Table 4**) and other notable species (see **Table 5 to Table 9**). To avoid repetition, ecological features associated with a statutory designated sites 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 Proposed Scheme. 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 potentially 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 protected sites has considered all internationally important sites immediately adjacent or hydrologically connected.
- 1.1.6 This appendix should be read in conjunction with **Appendix 7-1** in **Chapter 7**, which presents a summary of relevant consultation with statutory consultees.

Table 1: Determining the importance of statutory designated sites

Designated sites	Policy and Legal Status	Desktop Review (Historic records, consultations, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat appraisal		
Ramsar sites: Cairngorms Lochs Ramsar Firth of Tay and Eden Estuary Ramsar Inner Moray Firth Ramsar River Spey Insh Marshes Ramsar	Notified through the Convention on Wetlands of International Importance especially as Waterfowl Habitat	None present in study area Distance from study area: Cairngorms Lochs Ramsar – 30km Firth of Tay and Eden Estuary Ramsar – 95km Inner Moray Firth Ramsar – 55km River Spey Insh Marshes Ramsar – 7.2km	A Habitats Regulations Appraisal (HRA) has been undertaken for these designated sites that concluded no Likely Significant Effect (LSE) due to distance, no hydrological connectivity or dilution potential where hydrological connectivity is present.	Not applicable	Not applicable
Drumochter Hills Special Protection Area (SPA) Designated for merlin (breeding) and dotterel (breeding)	Notified through the Council Directive 79/409/EEC on the conservation of wild birds Part of the Natura 2000 network	The Drumochter Estate Access track borders the SPA with a small amount of encroachment into the site at the crossing of the Allt Coire Chuirn. The Drumochter Hills SPA is located approximately 200m east of the mainline between the start of the project at ch. 20,000 and the crossing of Allt Coire Bhathaich around ch. 22,200.	The study area is located adjacent to mosaics of upland moorland, which provides potential merlin nesting and foraging habitat. There is also nesting potential within nearby shelter-belt woodland. Potential nesting habitat for dotterel is unlikely to occur within the study area; as the breeding is restricted to montane plateaus.	No visible evidence of breeding dotterel or merlin recorded within 500m of the study area during 2015 or 2016 surveys. Merlin was observed flying within the study area during 2015 surveys, once at the southern end of the study area, and once at the northern end of the study area (carrying prey). As such, it is considered likely that breeding took place in the wider area in 2015.	International
Other Special Protection Areas (SPAs): Firth of Tay and Eden Estuary SPA Inner Moray Firth SPA Moray Firth pSPA Abernethy Forest SPA Craigmore Wood SPA Kinveachy Forest SPA Moray and Nairn Coast SPA Cairngorms SPA Cairngorms Massif SPA Forest of Clunie SPA Anagach Wood SPA Loch Vaa SPA River Spey Insh Marshes SPA	Notified through the Council Directive 79/409/EEC on the conservation of wild birds Part of the Natura 2000 network	None present in study area Distance from study area: Firth of Tay and Eden Estuary SPA – approx. 70km Inner Moray Firth SPA – approx. 65km Moray Firth pSPA – approx. 79km Abernethy Forest SPA – approx. 45km Craigmore Wood SPA – approx. 54km Kinveachy Forest SPA – approx. 38km Moray and Nairn Coast SPA – approx. 79km Cairngorms SPA – approx. 20km Cairngorms Massif SPA – approx. 14km Forest of Clunie SPA – approx. 31km Anagach Wood SPA – approx. 31km Loch Vaa SPA – 44km River Spey Insh Marshes SPA – 17km	A HRA has been undertaken for these designated sites that concluded no LSE due to distance, no hydrological connectivity or dilution potential where hydrological connectivity is present.	Not applicable	Not applicable
Drumochter Hills Special Area of Conservation (SAC) Designated for acidic scree, alpine and subalpine heaths, blanket bog, dry heaths, montane acid grasslands, mountain willow scrub, plants in crevices on acid rocks, species-rich grassland with mat-grass in upland areas, tall herb communities and wet heathland with cross-leaved heath	Notified through the Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora Part of the Natura 2000 network	The Drumochter Hills SAC is located within the eastern extent of the study area, the Drumochter Estate Access track borders the SAC with a small amount of encroachment into the site around the crossing of the Allt Coire Chuirn.	A review of aerial photography highlights the presence of heather moorland throughout much of the study area. Site condition monitoring data provided by Joint Nature Conservation Committee (JNCC) highlights that habitat mosaics are dominated largely by dry heath and wet heath, with localised blanket bog. Dry heath is scattered throughout the study area and is common in the highlands. Some areas have been subject to rotational muirburn. H12a is the most common form and of lower quality Wet heath is widespread throughout the study area and is a valuable part of the gradient between dry heath and blanket mire. In areas where it is over deep peat it is considered to be degraded blanket mire with the potential to develop into blanket mire Blanket bog - The areas of blanket mire are important for local diversity and providing habitat for rarer species of birds and plants. It is a limited resource nationally and internationally as such the areas within the study area contribute to this resource which is sensitive to changes in the local conditions, particularly areas which are over deep peat. The bog pool communities M1-M3 although in mosaics with the main blanket mire communities (M17-M20) contribute to the overall importance of this distinctive habitat	While the majority of the study area is located out with the SAC, 2015 NVC surveys found habitat mosaics containing qualifying habitats 4030 (dry heath), 4010 (wet heath), and 7130 (blanket bog) are located within the study area between ch. 20,000 and ch. 22,200.	International

Designated sites	Policy and Legal Status	Desktop Review (Historic records, consultations, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat appraisal		
River Spey SAC Designated for Atlantic salmon, Freshwater pearl mussel (FWPM), otter and sea lamprey.	Notified through the Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora Part of the Natura2000 network European Protected Species – listed on Schedule 2 of the Conservation (Natural Habitats &c.) Regulations 1994 SBL priority species	The study area crosses the River Spey SAC (River Truim) at the Dalwhinnie junction (. The River Spey SAC (River Truim) runs generally parallel to the west of the existing A9. HBRG otter record at the Allt Cuaich (2010) Through consultation with SNH and the Spey Fishery Board, Atlantic salmon are known to be present within the upper Spey catchment. Site condition monitoring data provided by SNH highlights that sea lamprey and FWPM are present in the River Spey downstream of the study area.	The River Spey and its tributaries provide good quality habitat for both fish species as well as FWPM and otter, through good water quality and natural substrates. There are known barriers for dispersal of species such as fish and FWPM which may impede movement upstream into the study area.	No FWPM were recorded in the River Truim within the study area during 2015 surveys, however a small number were recorded downstream from the study area. Otter spraints identified at three locations within the study area during 2014 extended Phase 1 habitat surveys. 2015/ 2016 protected vertebrate surveys recorded otter spraints at eight locations within the study area. Atlantic salmon are present within the River Truim and suitable spawning habitat is present at the crossing of the River Truim, Allt Coire nan Cisteachan and Allt Coire Uilleim.	International
Other Special Areas of Conservation (SACs) Firth of Tay and Eden Estuary SAC Moray Firth SAC Beinn a' Ghlo SAC Carn nan Tri-Tighearnan SAC Dunkeld - Blairgowrie Lochs SAC Tulach Hill and Glen Fender Meadows SAC Cairngorms SAC Slochd SAC Insh Marshes SAC Lower River Spey – Spey Bay SAC Monadhliath SAC River Tay SAC Shingle Islands SAC	Notified through the Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora Part of the Natura2000 network	None present in study area. Distance from study area: Firth of Tay and Eden Estuary SAC – 70km Inner Moray Firth SAC – approx.65km Moray Firth SAC – approx.65km Beinn a' Ghlo SAC – approx.23km Carn nan Tri-Tighearnan SAC – approx.55km Dunkeld - Blairgowrie Lochs SAC – approx.47km Tulach Hill and Glen Fender Meadows SAC – approx.18km Cairngorms SAC – approx.19km Slochd SAC – approx.47km Insh Marshes SAC – approx.17km Lower River Spey – Spey Bay SAC – approx.79km Monadhliath SAC – approx.15km River Tay SAC – approx.10km Shingle Islands SAC – approx.34km	A HRA has been undertaken for these designated sites that concluded no LSE due to distance, no hydrological connectivity or dilution potential where hydrological connectivity is present.	Not applicable	Not applicable
National Nature Reserves (NNR)	Notified through the National Parks and Access to the Countryside Act 1949	None present	Not applicable	Not applicable	Not applicable
Drumochter Hills Site of Special Scientific Interest (SSSI) Designated for breeding bird assemblage, fluvial Geomorphology of Scotland, montane assemblage and vascular plant assemblage.	Notified through the Nature Conservation (Scotland) Act 2004	The Drumochter Hills SSSI is located partially within the eastern extent of the study area. Drumochter Estate access track is located entirely within the SSSI.	Site condition monitoring data for the Drumochter Hills SAC, provided by SNH, and a review of aerial photography highlights the presence of habitat mosaics dominated by dry heath, wet heath and blanket bog, which could provide suitable nesting and foraging habitat for upland breeding passerines and waders.	2015 NVC surveys found habitat mosaics dominated by dry heath, wet heath and blanket bog. Ornithology surveys have recorded presence of breeding golden plover within the study area, which is a component of the breeding bird assemblage. Other species associated with the SSSI were active within the study area including golden eagle, wigeon, dunlin and ring ouzel; although no visible evidence of breeding was noted for these species.	National
Local Nature Reserve	Notified through the National Parks and Access to the Countryside Act 1949	None present	Not applicable	Not applicable	Not applicable

Table 2: Determining the importance of habitats

Notable habitats	Policy and Legal Status	Baseline review (study area)	Habitat appraisal	Importance	
SNH Ancient woodland inventory: Cat 1a, 1b, 2a, 2b, 3 AWI sites	Scottish Government Policy: Control of Woodland Removal	None present	Not applicable	Not applicable	
European dry heaths	Annex 1 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora. SBL and CNAP priority habitats	Dry heath within the study area is dominated by ling heather <i>Calluna vulgaris</i> . Dry heath is present on the slopes above the Drumochter Estate access track and on the slopes in the northern extent. Dominated by H12 with smaller areas of H10, H16, H18 and H21. Dry heath communities account for a third of the study area, and are common and widespread throughout Scotland.	Dry heath is scattered throughout the study area	International	
Northern Atlantic wet heathlands		Wet heath is widespread within the study area and is generally found on gentle slopes and flatter ground over peat, forming mosaics with and transitions into other mires as well as dry heath and calcifugous grassland. Large areas to east of study area, particularly in the northern extent and around the Drumochter Estate access track, dominated by M15, with a few areas of M16.	Wet heath is widespread throughout the study area and is a valuable part of the gradient between dry heath and blanket mire. In areas where it is over deep peat it is considered to be degraded blanket mire with the potential to develop into blanket mire	International	
Blanket bogs		M25, M15 and M16 over deep peat: a number of areas accounting for 6.7ha, notably around the Drumochter Estate access track, the proposed Dalwhinnie junction and next to the SSE Aqueduct M25, M15 and M16 over deep peat: found on the River Truim flood plain, the proposed Dalwhinnie junction and the Drumochter Estate access track	Some discrete areas of M25 which are associated with other mire and wet heath. Some are over deep peat and have the potential to be restored to blanket bog. Blanket bog - The areas of blanket mire are important for local diversity and providing habitat for rarer species of birds and plants. It is a limited resource nationally and internationally as such the areas within the study area contribute to this resource which is sensitive to changes in the local conditions, particularly areas which are over deep peat. The bog pool communities M1-M3 although in mosaics with the main blanket mire communities (M17-M20) contribute to the overall importance of this distinctive habitat	International	
Transition mires		Transition mires can occur in a variety of situations; although they are often more common in marginal areas to blanket bog and alkaline fens. In the study area, transition mire is typically characterised by M4 <i>Carex rostrata</i> - <i>Sphagnum fallax</i> mire, which occurs in small stands marking the passage and localised ponding of surface water depressions. M4 found mostly south of the proposed Dalwhinnie junction in small areas associated with other mires and wet heath. One large area on River Truim flood plain.	Transitional habitat between acid bog and alkaline fen, contributes to the local diversity of the mire habitats e.g. part of mosaics with M15 degraded blanket mire over deep peat	Authority Area	
Alkaline fens		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 <i>Carex dioica</i> - <i>Pinguicula vulgaris</i> mire, only in mosaics with wet heath M15 around the Drumochter Estate access track and on the western slopes of Creag Ruadh in the northern extent. M10 <i>Carex dioica</i> - <i>Pinguicula vulgaris</i> mire only in mosaics with wet heath M15 around the Drumochter Estate access track and on the western slopes of Creag Ruadh in the northern extent.	Although small, these fens contribute to the overall local ecological diversity and are found with other Annex 1 habitats. Sensitive to disturbance.	Authority Area	
Upland Flushes, fens and swamps		SBL and CNAP priority habitats	Uplands flushes, fens and swamps is a broad and variable habitat classification that occur where there is groundwater flushing or standing water within floodplains. M6 <i>Carex echinata</i> - <i>Sphagnum fallax/denticulatum</i> mire: Larger areas on the River Truim flood plain, some small areas near the Drumochter Estate access track. Comprises 0.7ha of the study area M11 <i>Carex demissa</i> – <i>Saxifraga aizoides</i> mire: not in the study area M23a <i>Juncus acutiflorus</i> sub-community: one small area comprising 0.05ha M32 <i>Philonotis fontana</i> – <i>Saxifraga stellaris</i> spring: only as small percentages of mosaics with wet heath on slopes hills in northern extent M37 <i>Palustriella commutata</i> - <i>Festuca rubra</i> spring: in one location with mosaic of dry heath S9 <i>Carex rostrata</i> swamp: one small discrete area on flood plain, otherwise as mosaics with other mire and wet heath S19 <i>Eleocharis palustris</i> swamp: not in the study area	Generally small areas found on River Truim flood plain. Often found in mosaics with other mires and heath. Provide habitat for fauna and are important for the ecological diversity and hydrology.	Regional
Upland birchwoods			W11 <i>Quercus petraea</i> - <i>Betula pubescens</i> - <i>Oxalis acetosella</i> : very small area in the study area W17 <i>Quercus petraea</i> – <i>Betula pubescens</i> – <i>Dicranum majus</i> woodland: two areas in the northern extent next to the current A9	These are birchwoods with little or no oak and lack the characteristics of the Annex 1 habitat old sessile oak woods, are important for the ecological diversity of the area and additional tree planting is part of the CNAP.	Local

Notable habitats	Policy and Legal Status	Baseline review (study area)	Habitat appraisal	Importance
Wet grassland	CNAP priority habitats	MG9 <i>Holcus lanatus</i> – <i>Deschampsia cespitosa</i> : none M23b <i>Juncus effusus</i> sub-community: only found as small percentages in mosaics with grassland on the River Truim flood plain MG10 <i>Holcus lanatus</i> – <i>Juncus effusus</i> rush-pasture: one area MG9: Generally, on the River Truim flood plain as small discrete areas or in mosaics with wet and dry heath M23b: Found on the River Truim flood plain in mosaics with grassland and as small discrete areas. MG10: Generally, on the River Truim flood plain as small discrete areas or in mosaics with wet and dry heath	Generally small discrete areas or as part of mosaics with mire and grassland, on the River Truim flood plain	Local
Non-priority grasslands	None	Non-priority grasslands (<i>i.e.</i> vegetation communities that do not correspond with any Annex I, SBL or CNAP 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 U4 <i>Festuca ovina</i> - <i>Agrostis capillaris</i> - <i>Galium saxatile</i> community; along with the sub-communities U4a and U4b <i>Holcus lanatus</i> – <i>Trifolium repens</i> . Calcifugous grasslands are also common throughout the study area with U5 <i>Nardus stricta</i> – <i>Galium saxatile</i> , U6 <i>Juncus squarrosus</i> – <i>Festuca ovina</i> and U20 <i>Pteridium aquilinum</i> – <i>Galium saxatile</i> present.	A common and ubiquitous habitat containing species of limited botanical interest.	Local
Non-priority woodlands		Non-priority woodlands are not common within the study area with only small areas of W18 <i>Pinus sylvestris</i> – <i>Hylocomium splendens</i> and W23 <i>Ulex europeaus</i> .	Whilst these communities can correspond with Annex I habitats, they are generally too small in scale and isolated from other woodlands.	Local
Non-NVC features		Features that do not correspond with any NVC community are common throughout the study area	Features of extremely limited or no botanical interest	Less than local

Table 3: Determining the importance of invasive non-native species

Species Name	Policy and Legal Status	Desktop Review (Historic records, consultations, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
Japanese knotweed (<i>Fallopia japonica</i>)	An invasive non-native species within the meaning of Section 14 of the Wildlife and Countryside Act 1981 (as amended)	No records within study area.	Japanese knotweed can spread along linear features including roads, railway lines and watercourses; therefore, there is potential for this species to be present within the study area.	Phase 1 habitat survey: No records identified NVC Survey: No records identified	Not applicable
Himalayan balsam (<i>Impatiens glandulifera</i>)	An invasive non-native species within the meaning of Section 14 of the Wildlife and Countryside Act 1981 (as amended)	No records within study area.	Himalayan balsam can spread along linear features including roads, railway lines and watercourses; therefore, there is potential for this species to be present within the study area.	Phase 1 habitat survey: No records identified NVC Survey: No records identified	Not applicable
Giant hogweed (<i>Heracleum mantegazzianum</i>)	An invasive non-native species within the meaning of Section 14 of the Wildlife and Countryside Act 1981 (as amended)	No records within study area.	Giant hogweed can spread along linear features including roads, railway lines and watercourses; therefore, there is potential for this species to be present within the study area.	Phase 1 habitat survey: No records identified NVC Survey: No records identified	Not applicable
American mink (<i>Neovison vison</i>)	An invasive non-native species within the meaning of Section 14 of the Wildlife and Countryside Act 1981 (as amended)	No records within study area.	American mink are habitually found in riparian habitats using tall vegetation along margins of watercourses as cover to move throughout their range. On site habitats are expected to contain suitable prey items (e.g. birds, fish and small mammals); therefore, there is potential for this species to be present within the study area.	Protected vertebrate walkover surveys: There are no confirmed records of this species throughout the study area.	Not applicable

Table 4: Determining the importance of birds

Ornithology	Policy and Legal Status	Desktop Review (Historic records, consultations, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
<p>Breeding birds</p> <p><i>Note: Species associated with the SPA and SSSI are included within Table 1.</i></p>	<p>Annex 1 of Council Directive 79/409/EEC on the conservation of wild birds</p> <p>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.</p>	<p>BTO:</p> <p>Historic records of internationally important species within 2km of the proposed scheme include species short-eared owl, black-throated diver and hen harrier.</p> <p>Historic records of nationally important species within 2km of the proposed scheme include crossbill species and black grouse.</p>	<p>There is potential nesting habitat for merlin, hen harrier and short eared owl within the study area, where extensive heather moorland is present.</p> <p>Habitats for black throated diver are limited</p> <p>Based on historic records, there is potential for internationally, nationally and regionally important breeding birds within the study area.</p>	<p>Breeding birds:</p> <p>Merlin has been recorded during surveys in 2015 and 2016. During 2016 a likely breeding attempt was recorded within the study area. While merlin is part of the nearby Drumochter Hills SPA and SSSI, the breeding attempt is not considered to be part of the SPA / SSSI population as it is out with the stated foraging ranges for the species (SNH, 2013). A single breeding pair would comprise >1% of the regional population (combined Cairngorms massif and Central Highlands total of 80 breeding pairs (Wilson et al 2015)).</p> <p>White tailed eagle is recorded present within the study area. Representing >1% of the Scottish population. No evidence of breeding was reported within 1km of the study area.</p> <p>Golden eagle and osprey were also recorded present in numbers which do not represent > 1% of the national population but do comprise >1% of the regional population using the Central highlands/ Cairngorms massif totals. No breeding was reported for either species.</p> <p>A single black throated diver was recorded on loch Ericht at Dalwhinnie but not considered to be breeding. The stronghold for this species in Scotland (176 breeding pairs nationally) is in the far north and west of Scotland with few breeding pairs in the central highland of the Cairngorms region.</p> <p>Golden plover is reported breeding in low numbers within the study area (2 pairs). The species occurs in considerable numbers throughout Scotland (>37,000 pairs) and the central highland and Cairngorms region (>6,000 pairs) (Wilson et al 2015). On this basis, the species is of local importance within the study area, however as the species is present breeding adjacent to the Drumochter Hills SSSI where it is included in the cited upland breeding bird assemblage, the species has been elevated within the assessment to reflect the contribution to the SSSI breeding bird assemblage.</p> <p>One black grouse lek was recorded at the northern extent of the project, which was located approximately 730m from the study area in 2016. Black grouse males were reported 350m from the study area in 2015 in a similar location. Given the importance of lek locations black grouse are considered to be of regional importance within the study area.</p>	<p>International</p> <p>National</p> <p>Regional.</p> <p>Regional</p> <p>Regional</p> <p>Regional</p>
	<p>Schedule 1 of the Wildlife and Countryside Act 1981</p> <p>SBL priority species</p> <p>Red/ Amber listed birds of conservation concern (BoCC)</p>	<p>Historic records of species included in schedule 1 of the Wildlife and Countryside Act important species within 2km of the proposed scheme include (not already discussed) include Crossbill species.</p> <p>SBL and BoCC Red / Amber list species recorded comprised kestrel, black-headed gull, greylag goose, teal, wigeon, lapwing, redshank, curlew, oystercatcher, snipe, common sandpiper, red grouse, skylark, spotted flycatcher, reed bunting and lesser redpoll.</p>	<p>Conifer plantation (snow belt features and plantation around Lechden and Dalwhinnie) provide potential breeding habitat for common crossbill.</p> <p>Wetland habitats within the floodplain provide suitable breeding habitat for greenshank.</p> <p>Conifer plantation (snow belt features and plantation around settlements at Drumochter lodge and Dalnaspidal) provide potential breeding habitat for common crossbill.</p> <p>Floodplain grasslands, heathland, conifer plantation and bog provide a range of habitats suitable for those species shown on the historic records.</p>	<p>Common crossbill assumed to be breeding within the study area at Lechden plantation and plantation woodland around Dalwhinnie. Numbers of breeding pairs were low in contrast with national population estimates (5,000), Forrester and Andrews (2007). Abundant habitat (coniferous woodland is available within the wider region.</p> <p>Other schedule 1 species recorded (no confirmed breeding) include garganey and greenshank.</p> <p>The Strathspey area of the highland supports notable aggregations of waders throughout the floodplain.</p> <p>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 highland region) and as such are important within the authority area.</p> <p>A single ring ouzel territory is identified within baseline surveys. While the national population is estimated to be 4,300 – 5,500 pairs a single pair does not represent national importance and is unlikely to represent regional importance (>1% of regional population), the species is assigned regional value due to its association with the Drumochter Hills SSSI upland breeding bird assemblage.</p>	<p>Local</p> <p>Authority Area</p> <p>Regional</p>
	<p>Red/ Amber listed birds of conservation concern (BoCC)</p> <p>CNPA Priority Species</p>	<p>BoCC Red / Amber list species recorded comprised kestrel, black-headed gull, greylag goose, teal, wigeon, lapwing, redshank, curlew, oystercatcher, snipe, common sandpiper, red grouse, skylark, spotted flycatcher, reed bunting and lesser redpoll.</p>	<p>Floodplain grasslands, heathland, conifer plantation and bog provide a range of habitats suitable for those species within the historic records.</p>	<p>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.</p>	<p>Local</p>
<p>Non-breeding birds</p>	<p>Annex 1 of Council Directive 79/409/EEC on the conservation of wild birds</p> <p>Regularly occurring migratory species no listed on Annex 1 of the Directive</p>	<p>BTO:</p> <p>Historic records of internationally important species within 2km of the study area include species whooper swan, hen harrier, merlin, and ptarmigan.</p>	<p>BLOM aerial survey:</p> <p>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.</p> <p>These habitats are used by non-breeding birds for foraging and commuting.</p> <p>Low peak counts per tetrad indicate that species are likely to be present in no more than regionally important numbers</p>	<p>No targeted surveys for non-breeding birds have been carried out, and no incidental sightings have been recorded during other ecological surveys.</p>	<p>Local</p>

Ornithology	Policy and Legal Status	Desktop Review (Historic records, consultations, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
	<p>Schedule 1 of the Wildlife and Countryside Act 1981</p> <p>SBL priority species</p> <p>Red/ Amber listed birds of conservation concern (BoCC)</p>	<p>BTO:</p> <p>Historic records of Schedule 1 species included within 2km of the study area include crossbill species, black grouse, snow bunting, fieldfare and redwing.</p>	<p>BLOM aerial survey:</p> <p>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.</p> <p>These habitats are used by non-breeding birds for foraging and commuting.</p> <p>Low peak counts per tetrad indicate that species are likely to be present in no more than regionally important numbers</p>	<p>No targeted surveys for non-breeding birds have been carried out, and no incidental sightings have been recorded during other ecological surveys.</p>	Local
	<p>Red/ Amber listed birds of conservation concern (BoCC)</p> <p>CNPA Priority species</p>	<p>BTO:</p> <p>Historic records of regionally important species within 2km of the study area include. Historic records of regionally important species within 2km of the study area include greylag goose, goldeneye, mallard, teal, red grouse, woodcock, kestrel, tawny owl, great grey shrike, reed bunting and lesser redpoll.</p>	<p>BLOM aerial survey:</p> <p>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.</p> <p>These habitats are used by non-breeding birds for foraging and commuting.</p> <p>Low peak counts per tetrad within BTO data sets indicate that species are likely to be present in no more than locally important numbers.</p>	<p>No targeted surveys for non-breeding birds have been carried out, and no incidental sightings have been recorded during other ecological surveys.</p> <p>Resident species such as black grouse and red grouse confirmed during breeding surveys are likely to persist within the study area over winter.</p>	Local

Table 5: Determining the importance of amphibians

Protected species	Policy and Legal Status	Desktop Review (Historic records, consultations, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
Common toad (<i>Bufo bufo</i>)	Scottish Biodiversity List (SBL) species	No records within study area.	BLOM aerial survey and OS maps: A small number of ponds/ areas of standing water were identified within the study area. 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 study area during surveys; this species required similar habitat conditions to common toad and it is therefore considered likely to be present.	Local
Great crested newt (<i>Triturus cristatus</i>)	Annex 2 of Council Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna. European Protected Species (EPS) as listed on Schedule 2 of the Conservation (Natural Habitats &c.) Regulations 1994. Scottish Biodiversity List (SBL) species	No records within study area.	BLOM aerial survey and OS maps: A Habitat Suitability Index (HSI) assessment of four ponds within 250m from the current A9 found all of them to be 'poor'.	Not recorded during any habitat/ species walkover surveys.	Less than local
Other amphibian species: Common frog (<i>Rana temporaria</i>) Palmate newt (<i>Lissotriton helveticus</i>) Smooth newt (<i>Lissotriton vulgaris</i>)	No specific policy or legal status	No records within study area	BLOM aerial survey and OS maps A small number of ponds/ areas of standing water were identified within the study area. 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 were carried out; however incidental sightings of common frog were noted within the study area during walkover surveys. No other incidental sightings of amphibians were noted.	Less than local

Table 6: Determining the importance of reptiles

Protected species	Policy and Legal Status	Desktop Review (Historic records, consultations, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
Adder (<i>Vipera berus</i>)	Protected under Section 9 of the Wildlife and Countryside Act 1981 (as amended) from <i>intentional or reckless killing and injuring and selling, offering or advertising for sale, possessing or transporting for the purpose of sale.</i> Scottish Biodiversity List (SBL) species	No records within study area.	BLOM aerial survey: Much of the study area is composed of heathland habitat which is suitable for adder due to areas of dense vegetation for cover, foraging and resting as well as open basking areas.	No targeted surveys for adder were carried out; however incidental sightings were recorded during walkover surveys at NN6648, 86710	Local
Common lizard (<i>Lacerta vivipara</i>)	Protected under Section 9 of the Wildlife and Countryside Act 1981 (as amended) from <i>intentional or reckless killing and injuring and selling, offering or advertising for sale, possessing or transporting for the purpose of sale.</i> Scottish Biodiversity List (SBL) species	No records within study area.	BLOM aerial survey Much of the study area is composed of heathland habitat which is suitable for common lizard due to areas of dense vegetation for cover, foraging and resting as well as open basking areas.	No targeted surveys for common lizard were carried out; however, they were recorded during the Phase 1 habitat survey (2014) and protected species walkover surveys (2015/ 2016).	Local
Slow worm (<i>Anguis fragilis</i>)	Protected under Section 9 of the Wildlife and Countryside Act 1981 (as amended) from <i>intentional or reckless killing and injuring and selling, offering or advertising for sale, possessing or transporting for the purpose of sale.</i> Scottish Biodiversity List (SBL) species	No records within study area.	BLOM aerial survey Much of the study area is composed of heathland habitat which is suitable for slow worm due to areas of dense vegetation for cover, foraging and resting as well as open basking areas.	No targeted surveys for slow worm were carried out and none were recorded during any habitat/ species walkover surveys.	Local

Table 7: Determining the importance of roosting bats

Protected species	Policy and Legal Status	Desktop Review (Historic records, consultations, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
Common pipistrelle (<i>Pipistrellus pipistrellus</i>)	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 (as amended) Scottish Biodiversity List (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 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: - Wades Bridge, old stone bridge with suitable gaps, NN63886, 82786 - Culvert at NN63989, 85822, crack in box culvert - Lechden plantation (NN65287, 86573), tree at southern end of plantation with suitability - Railway bridge, where railway is close to the A9 at NN67713, 91663 Recorded at Wade's bridge (foraging) and Dalwhinnie culvert (commuting & foraging) during 2015/ 2016 surveys. No evidence of roost present.	Local
Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>)	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 (as amended) Scottish Biodiversity List (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 within the study area.	CFJV protected vertebrate surveys: A small number of features within proposed scheme were identified during protected species walkover surveys as having bat roost potential: - Wades Bridge, old stone bridge with suitable gaps, , NN63886, 82786 - Culvert at NN63989, 85822, crack in box culvert - Lechden plantation (NN65287, 86573), tree at southern end of plantation with suitability - Railway bridge, where railway is close to the A9 at NN67713, 91663 Recorded at Wade's Bridge (commuting and likely foraging), Dalwhinnie culvert (commuting) and Lechden plantation (commuting and foraging). No evidence of roost present.	Local
Nathusius' pipistrelle (<i>Pipistrellus nathusii</i>)	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 (as amended) Scottish Biodiversity List (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 within the study area	CFJV protected vertebrate surveys: No confirmed activity recorded during 2015/ 2016 surveys; and assumed to be absent.	Less than local
Brown long-eared (<i>Plecotus auritus</i>)	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 (as amended) Scottish Biodiversity List (SBL) species	One NESBReC record 1,286m from the northern extent of the Project (1992).	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: Not recorded within the study area during 2015/ 2016 surveys; and assumed to be absent.	Less than local
Daubenton's (<i>Myotis daubentonii</i>)	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 (as amended) Scottish Biodiversity List (SBL) species	One NESBReC record 373m from temporary works boundary at Dalwhinnie. (2001).	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: Not recorded within the study area during 2015/ 2016 surveys; and assumed to be absent.	Less than local

Protected species	Policy and Legal Status	Desktop Review (Historic records, consultations, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
Natterer's (<i>Myotis natterii</i>)	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 (as amended) Scottish Biodiversity List (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 within the study area	CFJV protected vertebrate surveys: Not recorded within the study area during 2015/ 2016 surveys; and assumed to be absent.	Less than local
Whiskered (<i>Myotis mystacinus</i>)	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 (as amended) Scottish Biodiversity List (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 within the study area	CFJV protected vertebrate surveys: Not recorded within the study area during 2015/ 2016 surveys; and assumed to be absent.	Less than local
Leisler's (<i>Nyctalus leisleri</i>)	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 (as amended)	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 within the study area	CFJV protected vertebrate surveys: Not recorded within the study area during 2015/ 2016 surveys; and assumed to be absent.	Less than local
Noctule (<i>Nyctalus noctula</i>)	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 (as amended) Scottish Biodiversity List (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 within the study area	CFJV protected vertebrate surveys: Not recorded within the study area during 2015/ 2016 surveys; and assumed to be absent.	Less than local

Table 8: Determining the importance of terrestrial mammals

Protected species	Policy and Legal Status	Desktop Review (Historic records, consultations, aerial imagery etc.)		Survey Results	Importance
		In Proposed Scheme In study area	Habitat Appraisal		
European badger (<i>Meles meles</i>)	Protected under the Protection of Badgers Act 1992	Scottish Badgers records: - badger road casualty on the A9 around chainage 20,200 (2016) - badger road casualty (2004) around Chainage 21,200 - badger road casualty record (2014) around ch. 21,200, located at the opposite side of the HML from the A9 - badger road casualty on the A9, 367m from the northern extent of the project (2014).	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 and at the north and south sections of the study area. These trees are generally around 35 years old and were likely planted at the time of the last A9 construction/ upgrade (approx. 1979/ 1980) as roadside shelter belts. The woodland belts are fragmented, and the ground within these belts is generally wet. The habitat surrounding the woodland belts is open moorland, dominated by heather subjected to regular muirburn. The historic land use, habitats present, and fragmentation from suitable habitats make it unlikely that badgers are present within the survey area.	No evidence of badger recorded during 2014 extended phase 1 habitat survey or 2015 protected vertebrate surveys	Local
Pine marten (<i>Martes martes</i>)	Fully protected under the Wildlife and Countryside Act (1981) Scottish Biodiversity List (SBL) species	Pine marten scat recorded during preliminary ecological survey in 2013 at NN 6401 8413.	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.	No signs recorded during extended Phase 1 surveys (2014) or protected vertebrate walkover surveys (2015/ 2016)	Local
Red squirrel (<i>Sciurus vulgaris</i>)	Fully protected under the Wildlife and Countryside Act (1981) Scottish Biodiversity List (SBL) species	No records within the study area	BLOM aerial survey The habitat within the survey area is considered to be sub-optimal for red squirrel. The woodland belts noted during 2015/ 2016 protected vertebrate surveys were 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.	No signs recorded during 2014 extended Phase 1 habitat survey or 2015/ 2016 protected vertebrates walkover survey.	Less than local
European wildcat (<i>Felis silvestris silvestris</i>)	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 (as amended) Scottish Biodiversity List species CNAP priority species	CNPA: validated records have highlighted a single RTA to the east of the existing A9 s/b carriageway to the south of the A889 junction near Dalwhinnie (2012).	BLOM aerial survey Wildcat have extensive home ranges, which can increase and 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.	Regional
Water vole (<i>Arvicola amphibius</i>)	Partially protected under the Wildlife and Countryside Act (1981) Scottish Biodiversity List (SBL) species	NESBReC water vole records to the west of the River Truim at Dalannach, and approximately 1km south of Lechden plantation to the west of the project extent	BLOM aerial survey: Several riparian areas are present within the study area which offer some suitability for water vole, particularly west of the A9 (or could be made more attractive to water voles with little intervention). The more lowland characteristic of the River Truim and its tributaries in the west makes it generally more suitable for water vole, though the presence of suitable food species is a key requirement. Habitat to the east of the A9 is generally unsuitable for water vole due to lack of foraging grass species, suitable bank structure and water flow.	Water vole signs recorded during 2014 extended Phase 1 habitat surveys and 2015/ 2016 protected vertebrate walkover surveys. An additional survey of areas of potential water vole habitat within the study area was carried out in September 2016 which recorded further water vole signs at a number of locations within the study area. In particular, the area to the west of the A9 and between the A9 and the railway line.	Authority Area

Table 9: Determining the importance of CNPA draft priority non-protected species

Invertebrates	Policy and Legal Status	Desktop Review (Historic records, consultations, aerial imagery etc.)		Survey Results	Importance
		In study area	Habitat Appraisal		
Wood ant (<i>Formica spp.</i>)	Scottish Biodiversity List (SBL) species Four species of wood ant are identified as key species within the CNPA	No records within study area.	Review of aerial photography highlights potential woodland habitat within the study area that may be utilised by wood ant for foraging and nest building, notably in the eastern extent between ch.0 and ch. 22,100 (near Allt Coire Bhathaich); as well as beyond ch. 29,200 (near the Allt Garbh).	Phase 1 habitat survey: No incidental sightings recorded. Walkover survey: No evidence of wood ants, including nests were recorded.	Less than local