

Volume 3D

Scoping of the Assessment - Summary

This appendix provides the rationale for the scope of the assessment and comprises two tables. Table D.1 describes and justifies the level of importance assigned to the ecological features identified during the data gathering exercise carried out to inform this assessment. Table D.2 determines and justifies whether those ecological features require further assessment as they have either sufficient legal protection for a breach in legislation to occur or are of sufficient importance that a significant effect may occur as a result of the Proposed Development.

Within Table D.1, consideration is given to both the importance of ecological features based on legislation and policy (refer to paragraphs 1.8.2 to 1.8.5 and Table 1.7) and importance with regard to the Proposed Development (refer to paragraphs 1.8.6 to 1.8.7). The justification provided for the decision to scope in or out each ecological feature is based on information on its status both with regard to the Proposed Development, and the local, county, regional, national or international context, where available.

Table D.1 Importance of Ecological Features

Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
Nature conservation Sites				
Brother Loch and Little Loch SSSI Open water basin-fens	National	Negligible	Brother Loch and Little Loch SSSI is located approximately 3.8km from the site boundary. The distance from the application boundary exceeds that at which effects of the Proposed Development could potentially be experienced. As a result of this distance there is no direct habitat connectivity and the potential effects on this Site have therefore been scoped out of further assessment.	Y
Lochgoin Reservoir and Dunwan Dam Site of Importance for Nature Conservation (SINC) Open water	County	Negligible	Lochgoing Reservoir and Dunwan Dam SINC is located approximately 2km beyond the site boundary and is not located downstream of one of the catchments that intersect the development site. On this basis, there are considered to be no hydrological effect pathways and potential effects on the Lochgoing Reservoir and Dunwan Dam SINC have therefore been scoped out of further assessment.	Y
Craigendunton Reservoir Provisional Wildlife Site (PWS) Open water	County	Negligible	Craigendunton Reservoir is located within 20m of the Site boundary but approximately 200m from the nearest working area and is not located downstream of one of the catchments that intersect the development site. On this basis, there are considered to be no hydrological effect pathways and potential effects on the Craigendunton Reservoir PWS have therefore been scoped out of further assessment.	Y
Crins Hill PWS Grassland	County	Negligible	Crins Hill is located adjacent to the Site boundary and approximately 700m to the south of the nearest working area. As no construction activities are proposed in areas adjacent to this site it will not be affected by the proposed Development and potential effects on the Crins Hill PWS have therefore been scoped out of further assessment.	Y
Fenwick Moor (Greenfield Burn) PWS Wet peat bog and ponds	County	County	Fenwick Moor (Greenfield Burn) PWS is located within the site boundary but approximately 400m from the nearest working area. Potential effects on Fenwick Moor (Greenfield Burn) PWS have therefore been scoped out of further assessment. It should be noted that this PWS sits partially within the proposed Habitat Management Area (HMA) and forms a continuum with an extensive area of M19a <i>Calluna vulgaris-Eriophorum vaginatum</i> blanket mire <i>Erica tetralix</i> sub-community. Potential effects on	Y



Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
			blanket mire plant communities are considered further within this assessment (see below).	
Habitats				
Wet modified bog communities (M19a, M20a, M25a)	European	Local	See Table D.2	N
Acid flush communities (M6d)	National	Local	See Table D.2	N
Marshy grassland, rush pasture communities (M23a/b & M25a)	National	Local	See Table D.2	N
Poor semi-improved acid grassland (U4b)	Local	Negligible	Poor semi-improved acid grassland is of limited conservation interest, due to its relatively low species diversity and limited extent in the Study Area. As this habitat consists of such small areas within the developable area, any direct or indirect effects on the habitat are considered to be minor. This habitat feature has therefore been scoped out of further assessment.	Y
Poor semi-improved neutral grassland (MG9)	Local	Negligible	Neutral grassland (MG9) is common in farmland/upland fringes throughout Scotland and is composed of very common species, usually regarded as of limited botanical value. Given the low conservation interest, limited extent within the study area and location outside proposed working areas, this feature has therefore been scoped out of further assessment.	Y
Planted coniferous woodland	Local	Negligible	Coniferous plantation woodland is present within the vicinity of the Site. Although maturing coniferous plantation is considered to have some limited value, as it potentially provides shelter to protected species (such as red squirrel), given the absence of red squirrel on site this habitat is considered of negligible conservation value to the Study Area and therefore this feature has been scoped out of further assessment.	Y
Waterbodies (Rivers and streams)	National	Local	See Table D.2	N

Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
Protected and notable species				
Badger	National	Local	See Table D.2	N
Bats (Roosting)	European	Local	<p>All British bat species and their roosts are European Protected species (EPS) and in Scotland listed on the SBL. Whiskered bat (<i>Myotis mystacinus</i>), noctule (<i>Nyctalus noctula</i>), common pipistrelle (<i>Pipistrellus pipistrellus</i>) and soprano pipistrelle (<i>P. pygmaeus</i>) bats are listed as key species in the Ayrshire LBAP. In East Ayrshire, common and soprano pipistrelles are probably the most abundant followed by brown long-eared, Daubenton’s and Natterer’s bats. Other species have been less frequently recorded and this may be due to lack of survey coverage.</p> <p>Historical surveys undertaken on the Site in 2009 and 2012 identified that at least three species of bat (Common pipistrelle, Soprano pipistrelle, are present in small numbers on the site). It was considered at the time to support a no more than locally important population of bats i.e. the site supports populations of bat species that are not threatened or rare in the region and the habitats present are not integral to maintaining those populations.</p>	N
Bats (Foraging and commuting)	European	Local		N
Otter	European	Local	See Table D.2	N
Water vole	National	Local	See Table D.2	N



Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
Red squirrel	National	Negligible	<p>Red squirrel is an SBL priority species and included within Ayrshire LBAP. The Scottish population is estimated as 120,000, approximately 75% of the UK population. This species has a significant presence in East Ayrshire.</p> <p>Evidence from previous surveys (indicates that this species is unlikely to be present within the Site boundary. Only grey squirrel were recorded in hair tube during surveys for Whitelee Extension and pre-construction surveys conducted at Whitelee Windfarm also concluded that it is unlikely red squirrels are present within Whitelee Forest due to the presence of grey squirrel and results of hair tube surveys. Red squirrel is considered to be of negligible conservation value to the Proposed development site given that it is unlikely to be present within the developable area and given that there will be no proposed felling of plantation or semi-natural woodland this species is scoped out of further assessment.</p>	Y
Common lizard	National	Local	See Table D.2	N
Adder	National	Local	See Table D.2	N
Slow worm	National	Local	See Table D.2	N

Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
<p>Freshwater fish (excluding brown trout)</p>	<p>National</p>	<p>Local</p>	<p>Fish species are afforded protection under one or more of the following conservation legislative frameworks; Conservation (Habitats, &c.) Regulations 1994 (as amended), Salmon and Freshwater Fisheries Act (Consolidation) (Scotland) 2003, Aquaculture and Fisheries (Scotland) Act 2007, and Surface Waters (Fishlife) (Classification) (Scotland) Amendment Regulations 2007.</p> <p>A freshwater fish habitat survey was undertaken in February 2010. The habitat survey method was drawn from the Scottish Fisheries Co-ordination Centre (SFCC) guidelines for fisheries habitat survey (SFCC, 2007). The field survey focussed on watercourses considered to have the potential to offer suitable fish habitat including Drumtee Water and Collorybog Burn, a tributary of Drumtee Water, which flow through marshy grassland and wet modified bog. A dense commercial conifer plantation was situated near to Collorybog Burn. Dense conifer plantations generally have a deleterious effect on watercourses, particularly small burns. The intensive nature of this form of land use is likely to be the most important factor affecting the ability of the watercourses to support fish populations. Impacts include drying up of small streams in low flow conditions, loss of productivity, increased acidity and increased turbidity levels (Forestry Commission, 2003).</p> <p>Based on previous surveys, none of the watercourses were considered likely to contain salmon or migratory sea trout, due to the known presence of an obstruction downstream, however barriers to migration may have been removed since this time. All watercourses are likely to support populations of resident brown trout in their lower reaches (Jacobs, 2009). No suitable lamprey habitat was observed and the burns were found to be of poor quality habitat for migratory salmonids. No evidence of European eel was found within the study area, however, it is possible that European eel may be present in both watercourses. Electrofishing surveys would be undertaken prior to the commencement of construction to identify and enumerate fish species present, and if European eel were found to be present any effects on this species would be mitigated through the implementation of the mitigation proposed for brown trout.</p> <p>Conditions within the Site itself are considered to remain relatively unchanged from the baseline and the site is therefore considered to be of negligible importance for freshwater fish, but considered to be of local importance for brown trout.</p>	<p>Y</p>



Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
Brown trout	Local	Local	See Table D.2	N
Birds				
Hen harrier (Breeding)	National	Negligible	<p>Hen harrier is listed on Annex 1 of the Birds Directive and on Schedule 1 and Schedule 1A of the Wildlife and Countryside Act 1981 (as amended in Scotland), It is also a Red listed bird of conservation concern (BoCC), and therefore is a species of high nature conservation interest (NCI). It is a widespread but scarce breeding species in Scotland, with a fragile population in East Ayrshire. For the 10-year period 2003-2012 the annual percentage breeding successfully steadily declined from a high of 61% in 2004. The Natural Heritage Zone (NHZ) 17 population was estimated by Wilson <i>et al.</i> (2015) to be 8 (range 7-10) pairs in 2010.</p> <p>Historical baseline surveys recorded hen harrier activity within the Site as extremely low during breeding and non-breeding seasons. Dedicated searches for nesting birds within 2 km of the Site found no breeding attempts by hen harrier in 2009. During the searches of Whitelee Windfarm site during 2006 to 2011 no breeding attempts were located in the vicinity of the proposed Development, although a pair did nest over 7 km away in 2006.</p> <p>During an ongoing programme of breeding raptor surveys across the Whitelee HMA (over the last four years - 2017, 2018 and 2020), only a single record of a male bird was made in June 2017 and no evidence of breeding has been recorded within the HMA.</p> <p>These records indicate that, despite its High Nature Conservation Importance, the very low levels of activity during both breeding and non-breeding seasons indicate that the Site is likely to be of negligible importance for breeding birds and no more than local importance for non-breeding birds.</p>	Y
(Non-breeding)	National	Local		N



Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
Merlin (Breeding)	National	Local	Merlin is listed on Annex 1 of the Birds Directive and on Schedule 1 and Schedule 1A of the WCA, and is a Red listed BoCC, and therefore is a species of high NCI.	N
(Non-breeding)	National	Local	<p>The last national merlin survey carried out in 2008 suggested a national breeding population of around 1,159 breeding pairs with about 733 pairs in Scotland (Ewing <i>et al.</i> 2011). Comparison with the previous 1993-94 survey suggests an overall stable population, albeit with regional differences in success. The NHZ 17 population was estimated by Wilson <i>et al.</i> (2015) to be 1 (range 0-3) pairs in 2008, and nine breeding attempts in South Strathclyde were monitored by the Scottish Raptor Study Group in 2014.</p> <p>Historical baseline surveys recorded merlin activity within the Site as extremely low during breeding and non-breeding seasons. The most recent breeding record was in 2009 approximately 4km from the Site. During an ongoing programme of breeding raptor surveys across the Whitelee HMA (over the last four years - 2017, 2018 and 2020), no evidence of breeding has been recorded within the HMA.</p> <p>These records indicate that, despite its High Nature Conservation Importance, the very low levels of activity during both breeding and non-breeding seasons indicate that the Site is likely to be no more than local importance for breeding and non-breeding birds.</p>	N



Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
Goshawk (Breeding)	National	Negligible	<p>Goshawk is listed on Annex 1 of the Birds Directive, is listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended in Scotland), and is listed as a Green BoCC. There are an estimated 400 pairs in Britain (Musgrove <i>et al.</i> 2013). The Scottish population of goshawk was estimated to be around 130 breeding pairs (Forrester <i>et al.</i> 2007). The NHZ 17 population was estimated by Wilson <i>et al.</i> (2015) to be less than 5 breeding pairs in 2013. The goshawk population appears to be expanding in range in Scotland (Forrester <i>et al.</i> 2007) and as the species is BoCC green-listed, the national and regional/NHZ populations are likely to be in favourable conservation status.</p>	Y
Non-breeding)	National	Negligible	<p>Historical baseline surveys also recorded extremely low goshawk activity. No breeding attempts by goshawk were recorded in the Site or surrounding area which was surveyed (including the 2 km buffer of the Site; and the Whitelee Windfarm) in any year (2006 – 2011). During an ongoing programme of breeding raptor surveys across the Whitelee HMA (over the last four years - 2017, 2018 and 2020), an adult female goshawk was recorded on two occasions: on 18 May 2017, a female was soaring over forestry to the north of the HMA, including some display activity; and on 22 June 2017 a female was recorded flying at the edge of the HMA.</p> <p>These observations indicate that, despite its High NCI, given the lack of breeding evidence and very low levels of flight activity recorded, the survey area is considered to be of negligible importance for this species.</p>	Y



Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
Peregrine (Breeding)	National	Negligible	Peregrine is listed on Annex 1 of the Birds Directive, is listed on Schedule 1 of the Wildlife & Countryside Act 1981 (as amended in Scotland), the SBL and is listed as a Green BoCC. The Scottish population of peregrine was estimated to be around 544 breeding pairs at the last national survey in 2002. The NHZ 17 population was estimated by Wilson <i>et al.</i> (2015) to be 41 (range 40-49) pairs in 2014.	Y
(Non-breeding)	National	Negligible	<p>Historical baseline surveys also recorded extremely low peregrine activity. No breeding attempts by peregrines were made in the Site or surrounding area which was surveyed (including the 2 km buffer of the Site; and the Whitelee Windfarm) in any year (2006 – 2011).</p> <p>During an ongoing programme of breeding raptor surveys across the Whitelee HMA (over the last four years - 2017, 2018 and 2020), only two records of birds in May and June 2017 and no evidence of breeding has been recorded.</p> <p>These observations indicate that, despite its High Nature Conservation Importance, given the lack of suitable breeding habitat and very low levels of flight activity recorded, the Site is considered to be of negligible importance for breeding and non-breeding birds.</p>	Y



Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
Black grouse (Breeding)	Regional	Local	<p>Black grouse is listed on the SBL and is listed as a Red BoCC. Breeding numbers in the UK declined by 80% between 1991 and 2004. Sim <i>et al.</i> (2008) estimated there to be 5,078 male black grouse in the UK in 2005, with approximately two-thirds of these occurring in Scotland. However, Forrester <i>et al.</i> (2007) estimate that in Scotland there are around 3,550 to 5,750 lekking males, representing about 71% of the British population. In Scotland the breeding range is contracting and numbers are declining, though the rate of decline varies regionally, being highest in southern Scotland, suggesting that the national and regional populations are in unfavourable conservation status. The NHZ 17 population was estimated by Wilson <i>et al.</i> (2015) to be 78 (range 25-148) displaying males in 2005.</p>	N
(Non-breeding)	Regional	Local	<p>Based on the data provided from historical black grouse surveys (2006 – 2011), the area surrounding the Whitelee 3 Extension site supports a small number of black grouse, with two leks each of one male located during surveys in 2007: one to the east (Site A) and one to the south (Site B), each within 1km from the Site boundary. A single displaying male was recorded in 2016 and 2017, with no further records in 2018 and 2020 indicating that the local black grouse population is fragile, declining and unlikely to persist.</p> <p>Based on the historical presence of birds and more recent records of a single displaying bird within the vicinity of the Site, the survey area supports approximately 1.3 % of the NHZ regional breeding population. Thus, the survey area is considered to be of local importance for this species.</p>	N

Barn owl



Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
(Breeding)	National	Negligible	Barn owl is included on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended in Scotland) and is an Amber listed BoCC. The Scottish breeding population is estimated at c. 550 pairs (Forrester <i>et al.</i> 2007). The Strathclyde regional population was estimated by Roos <i>et al.</i> (2015) to be 53 (based on a mean of records between 2007 - 2010).	Y
(Non-breeding)	National	Local	<p>No potentially suitable breeding sites for barn owls were found within the 1 km buffer of the Site boundary during historical surveys. Two roost sites occupied by barn owls were located approximately 915 and 820m to the west of the Site boundary, although no breeding was confirmed and no flights by barn owls were recorded from vantage points during 2008/2009. A barn owl was incidentally observed within the proposed Development on 15 January 2009.</p> <p>During an ongoing programme of breeding raptor surveys across the Whitelee HMA (over the last four years - 2017, 2018 and 2020), no evidence of breeding has been recorded, although a single owl pellet (thought to be barn owl) was recorded in 2020 on Queenseat Hill approximately 1.1km to the east of the Site boundary.</p> <p>The Site conditions remain relatively unchanged, albeit with occasional disturbance from forestry operations, and it is likely that low numbers of non-breeding birds may utilise rank grassland fringes to the Site and wider survey area as a foraging resource. It is also likely that they would continue to use buildings identified within the wider vicinity outside the Site for roosting. Based on the low levels of activity recorded within the Site and wider survey area, despite barn owl being of High Nature Conservation Importance, the survey area is considered to be of negligible importance for breeding birds and local importance as a foraging resource for non-breeding birds.</p>	N



Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
Short eared owl (Breeding)	European	Negligible	Breeding short eared owl is included on Annex 1 of the Birds Directive and is an Amber listed BoCC. The Scottish breeding population is estimated as ranging from 125-1,250 pairs, with high densities in the Southern Uplands (Forrester <i>et al.</i> 2007). The Scottish non-breeding population is estimated to be between 300 – 3,000 individuals (Forrester <i>et al.</i> 2007). The population is essentially nomadic, linked to cyclic populations of field voles, and so difficult to monitor. The national and regional population trends are therefore unknown. The NHZ 17 population was estimated by Wilson <i>et al.</i> (2015) to be 3 (range 0-11) pairs in 2013, and one breeding attempt in South Strathclyde was monitored by the Scottish Raptor Study Group in 2013.	Y
(Non-breeding)	European	Local	<p>Based on the data provided from historical surveys (2006 – 2011), short eared owls were recorded nesting approximately 1.6km to the east of the Site boundary in 2007. Low levels of flight activity were recorded during the same period, but no other records of breeding were recorded. During an ongoing programme of breeding raptor monitoring surveys across the Whitelee HMA the only evidence of breeding was from 2012, approximately 1.5km from the Site boundary; however, over the last four years - 2017, 2018 and 2020, no evidence of breeding has been recorded.</p> <p>It is considered that the historical nesting location may well have lost suitability as a result of the installation of the Visitor centre and an increase in public recreation in the wider vicinity. Conditions within the Site itself are considered to remain relatively unchanged, albeit with occasional disturbance from forestry operations, and it is likely that low numbers of non-breeding birds may utilise the Site and wider survey area as a foraging resource. Based on the low levels of activity recorded within the Site and wider survey area, the survey area is considered to be of negligible importance for breeding birds and local importance as a foraging resource for non-breeding birds.</p>	N



Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
<p>Golden plover (Breeding and non-breeding)</p>	<p>Local</p>	<p>Negligible</p>	<p>Golden plover is included on Annex 1 of the Birds Directive, SBL and is a Green listed BoCC. The breeding population of golden plovers within Scotland is estimated at 37,480. The NHZ 17 population was estimated by Wilson <i>et al.</i> (2015) to be 508 (range 468-548) pairs in 2005. The BTO BirdTrends website states that the national population is in probable decline.</p> <p>Based on historical surveys (2006 – 2011), several flights of golden plover were recorded within the 500 m buffer of the proposed Development during the winter of 2008/2009. This species did not breed or winter in the vicinity of the proposed Development. Greater flight activity was recorded during winter outside a 500m buffer to the SW of the Site. During an ongoing programme of breeding wader surveys across the Whitelee HMA (over the last four years - 2017, 2018 and 2020), no observations of golden plover were made and there was no evidence to indicate breeding attempts by this species within the Whitelee Wind Farm HMA.</p> <p>These observations indicate that, despite its High Nature Conservation Importance, given the lack of breeding evidence and very low levels of flight activity recorded during the non-breeding season, the survey area is considered to be of negligible importance for this species.</p>	<p>Y</p>
<p>Curlew (Breeding)</p>	<p>National</p>	<p>Local</p>	<p>Curlew is included on the SBL and is a Red listed BoCC. The national curlew population was most recently estimated to be 68,000 pairs in 2009 (BTO BirdTrends) but it was reported there has been a notable contraction of range in parts of south and west Scotland. The inclusion of the species on the BoCC Red-list suggests that the national and NHZ/regional populations are in unfavourable conservation status. The NHZ 17 population was estimated by Wilson <i>et al.</i> (2015) to be 2,303 (range 2085-2,521) pairs in 2005.</p> <p>Based on historical surveys two pairs of curlew were recorded within the Site boundary within 200m of the proposed working area in 2009. During an ongoing programme of breeding wader monitoring surveys across the Whitelee HMA which sits adjacent to the Site boundary, six territories were confirmed in 2017, ten confirmed in 2018 and two territories confirmed in 2020. Conditions within the Site itself are considered to remain relatively unchanged from previous surveys albeit with occasional disturbance from forestry operations, and it is likely that the Site may still offer suitable breeding opportunities for breeding curlew. Based on the historical breeding presence within the</p>	<p>N</p>



Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
			<p>Site and the presence of breeding birds within the wider vicinity, the survey area is considered to be of local importance for this species.</p>	
<p>Lapwing (Breeding)</p>	<p>National</p>	<p>Local</p>	<p>Lapwing is an SBL species and a Red listed BoCC. The national lapwing population was estimated to be 130,000 pairs in 2009 (BTO BirdFacts) and the Scottish population is estimated to be between 71,500 and 105,600 pairs (Forrester <i>et al.</i> 2007). The BTO BirdTrends programme has reported a national decline by 43% across the UK, and 57% in Scotland between 1995 and 2014. The BTO's map of change in relative density between 1994-96 and 2007-09 indicates that decreases have been strongest in lowland regions and the south and that some increase may have occurred in some upland and northern regions of Britain. The NHZ trend is unknown but the regional and national populations are likely to be in unfavourable conservation status.</p> <p>No observations and no evidence of breeding was recorded within the Site during historical surveys in 2008 and 2009. During an ongoing programme of breeding wader monitoring surveys across the Whitelee HMA which sits adjacent to the Site boundary, six territories were confirmed in 2017 (four within the site boundary), and none were recorded in 2018 or 2020.</p> <p>Conditions within the Site itself are considered to remain relatively unchanged from previous surveys and it is likely that the Site may offer suitable breeding opportunities for breeding lapwing.</p> <p>Based on the presence of breeding birds within the wider vicinity, the survey area is considered to be of no more than local importance for this species.</p>	<p>N</p>



Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
Snipe (Breeding)	Local	Negligible	<p>Breeding snipe is an Amber listed BoCC due to a moderate decline in its breeding range. The Scottish population was estimated to be 34,594 pairs (Wilson <i>et al.</i> 2015), with an estimated 568 in NHZ 17.</p> <p>No observations and no evidence of breeding was recorded within the Site during historical surveys in 2008 and 2009. During an ongoing programme of breeding wader monitoring surveys across the Whitelee HMA which sits adjacent to the Site boundary, five territories were confirmed in 2017, 11 territories were recorded in 2018 and a single territory was recorded in 2020.</p> <p>Conditions within the Site itself are considered to remain relatively unchanged. The Site offers breeding opportunities for a low number of birds. Based on the lack of historical breeding records and on the presence of small numbers of breeding birds within the wider vicinity, the survey area is considered to be of negligible importance for this species.</p>	Y
Red grouse (Breeding and non-breeding)	National	Local	<p>Red grouse is an SBL, ALBAP priority species and red-listed BoCC. Although red grouse remain widespread through much of Scotland, there have been significant losses between the two Atlas periods of 1968-72 and 2007-11 in East, South and West Scotland, particularly along the moorland edge (Balmer <i>et al.</i> 2013).</p> <p>One confirmed pair of red grouse and one probable pair were located during the Moorland Bird Surveys in 2009 (outside the Site boundary but within a 500m buffer). During an ongoing programme of breeding bird monitoring surveys across the Whitelee HMA which sits adjacent to the Site boundary, 18 territories were confirmed in 2017, 22 territories were recorded in 2018 and 7 territories were recorded in 2020.</p> <p>Conditions within the Site itself are considered to remain relatively unchanged. The eastern edge of the Site within the vicinity of Collory Bog is considered to offer opportunities to support breeding red grouse. Based on the lack of historical breeding records and on the presence of small numbers of breeding birds within the wider vicinity, the survey area is considered to be of no more than local importance for this species.</p>	N



Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
Pink footed goose (Non-breeding)	National	Negligible	<p>Non-breeding pink-footed goose is listed on Annex 1 of the Birds Directive and is an Amber listed BoCC (Eaton <i>et al.</i> 2015) because a globally significant non-breeding population occurs in localised habitats. The Scottish population of pink-footed was estimated to be 52,089 breeding pairs, with 16,237 in NHZ 17 (Wilson <i>et al.</i> 2015).</p> <p>Historical baseline surveys (2008/09) recorded only three flights within a 500 m buffer of the Site boundary. The flight directions suggest the presence of a small local wintering population possibly visiting the waterbodies in the wider area. Given the very low levels of historical flight activity recorded, the fact that the Site does not appear to be located on a regularly used migration route or corridor used for large or regular local movements by wildfowl, the distance to the nearest waterbodies (Craigendunton and Lochgoin), and the lack of suitability for this or any species of wildfowl within the site itself, the survey area is considered to be of negligible importance for this species.</p>	Y
Herring gull (Breeding and Non-breeding)	National	Negligible	<p>Breeding herring gull is listed on the SBL and is a Red listed BoCC due to a severe breeding population decline over 25 years. The Scottish population of herring gull was estimated to be 52,089 breeding pairs, with 2,928 in NHZ 17 (Wilson <i>et al.</i> 2015).</p> <p>Historical baseline surveys recorded herring gull year-round in 2009 in small numbers, often flying over the Site boundary en route to one of the several waterbodies in the area. Land and airspace within the Site boundary is considered to be an occasional and incidental part of wider flight paths for this generally widespread species, and therefore the survey area is considered to be of negligible importance for this species.</p>	Y



Ecological Feature	Importance – Legislation & Policy	Importance – Proposed Development	Justification	Scoped Out of Assessment (Y/N)
<p>Red-listed passerines (Breeding)</p>	<p>Local</p>	<p>Local</p>	<p>Historical baseline surveys for Whitelee Windfarm Extension Phase 3 in 2007 and 2009 recorded a variety of BoCC red-listed species both on and around the Site boundary. Open ground and woodland edge habitats were found to support a modest population of breeding skylark and low numbers of grasshopper warbler (a single territory within the Site boundary). Woodland habitats were found to support very low numbers of breeding lesser redpoll, song thrush, cuckoo and linnet.</p> <p>During an ongoing programme of breeding bird monitoring surveys across the Whitelee HMA which sits adjacent to the Site boundary, the following breeding bird assemblage (BoCC red-listed species) was recorded between 2017 – 2020, comprising cuckoo, skylark, song thrush, mistle thrush, grasshopper warbler, linnet, lesser redpoll, starling and pied flycatcher.</p> <p>Conditions within the Site itself are considered to remain relatively unchanged from the baseline and the breeding bird assemblage is likely to be similar to the historical baseline and the HMA monitoring baseline, which indicate that the Site is likely to be of no more than local importance for breeding red-listed passerines.</p>	<p>N</p>



For those ecological features that remain scoped in following the process as described in **Table D.1**, the following are provided in **Table D.2**: description of the potential environmental change and associated effect (refer to paragraph 1.8.8); a description of the zone of influence for each ecological feature (refer to paragraphs 1.8.10 – 1.8.14 and **Table 1.8**); justification of the decision to scope in or out each ecological feature based on the likely scale of the potential effect, general working measures (i.e. those covered within the Code of Construction Practice) that negate the effect and relevant information on the features status within the local, county, regional, national or international context where that is available.

Table D.2 Scoping of Ecological Features of Local or Above Importance and those Receiving Legal Protection

Ecological Feature	Environmental Change and potential effect	Zone of Influence	Scoped Out (Y/N)	Justification
Wet modified bog communities (M19a, M20a, M25a)	Direct loss and temporary damage to terrestrial habitats	Within the construction/ maintenance areas	N	Blanket bog communities are a restricted and declining habitat in the UK and Europe. Blanket bog is a SBL Priority habitat and includes habitats / vegetation communities listed on Annex I to the EC Habitats Directive.
	Indirect disturbance and changes to composition of plant communities resulting from hydrological change	10m beyond construction/ maintenance areas		<p>A great extent of the Study Area comprises wet modified bog (E1.7), formed of stands consisting of M19a, M20a, and M25a located on deep peat (i.e. >0.5m deep). Wet modified bog is a heavily modified habitat through anthropogenic means including extensive draining and sheep grazing, colonisation by self-seeded trees (conifers and broadleaf) and signs of erosion. As such, a large proportion of the Site is assessed as being in poor/modified condition with low cover values of typical species and unlikely to be actively peat-forming. Considering its heavily modified form, the extent of this habitat and its widespread coverage this feature is considered to be of Local value.</p> <p>The wet modified bog resource recorded within the eastern section of the HMA comprises part of the Fenwick Moor PWS (primarily M19a) and is in places closer to good condition blanket bog communities with greater potential for recovery to SBL and ALBAP quality bog habitat, the eastern extent of this area is considered to be of County value.</p> <p>Land take and land use during construction is likely to lead to the loss/disturbance of this habitat or within a 10m Zol of the construction zone and has been considered for further assessment.</p>



Ecological Feature	Environmental Change and potential effect	Zone of Influence	Scoped Out (Y/N)	Justification
Acid flush communities (M6d)	Permanent loss and damage to terrestrial habitats	Within the construction/ maintenance areas	Y	Acid flush is an SBL Priority habitat (Upland Flushes, Fens and Swamps). Acid flushes are occasional within the Study Area along linear soakways, drains and the sides of watercourses, often in fragmentary small amounts. These habitats are common throughout Scotland, although usually of low diversity and composed of a few very common species. The Development Site is assessed as being of Local importance for acid flush habitats. NVC communities (M6 mires) are classified as highly dependent potential GWDTEs, which may be sensitive to damage during construction works within a 250m Zol. However, there are no significant hydrological effects identified on or off-site (see Hydrology and Geology Assessment Report). Any potential temporary changes to the local hydrology regime would be mitigated by the adoption of standard mitigation practices during construction (see Table 1.9 of the EclA) and it is considered that any potential change in the composition of the vegetation would not have a significant effect on the conservation status of these communities. Potential effects on M6 acid flush have therefore been scoped out of further assessment.
	Indirect disturbance and changes to composition of plant communities resulting from hydrological change	20m beyond construction/ maintenance areas (see Hydrology and Hydrogeology Report for GWDTE assessment where Zol is up to 250m)	Y	
Marshy grassland, rush pasture communities (M23a/b & M25a) (on peat <0.5m)	Direct loss and temporary damage to terrestrial habitats	Within the construction/ maintenance areas	Y	Certain types of marshy grassland are SBL Priority habitat (Purple moor grass and rush pasture). M23 is a rush pasture common throughout Scotland on circum-neutral damp ground, with variable species diversity and botanical value, which can look like acid flush but is more neutral and lacks the <i>Sphagnum</i> carpet. M23 can be rich but all occurrences in the survey area consist of a few very common species. M25 is common throughout large parts of Scotland. It is dominated by purple moor-grass (M25a), dense with dead litter and with only a few sparse associates and generally regarded as of low botanical value except where it is fed by base-enriched waters or is wet enough to be transitional to swamp. All occurrences in the survey area are species-poor and tend to be common around the areas of bog that have been drained for tree planting, grazing or associated with watercourse floodplains. These were identified as potential GWDTE NVC communities (M25 mire and M23 rush pasture), which may be sensitive to damage during construction works within a 250m Zol. However, there are no significant hydrological effects identified on or off-site (see Hydrology and Geology Assessment Report). Any potential temporary changes to the local hydrology regime with some potential change in the composition of vegetation would not have a significant effect on the conservation status of these communities. Potential effects on M23/ M25 marshy grassland plant communities have therefore been scoped out of further assessment.
	Indirect disturbance and changes to composition of plant communities resulting from hydrological change	20m beyond construction/ maintenance areas (see Hydrology and Hydrogeology Report for GWDTE assessment where Zol is up to 250m)	Y	



Ecological Feature	Environmental Change and potential effect	Zone of Influence	Scoped Out (Y/N)	Justification
Waterbodies (Rivers and streams)	Disturbance of river habitats and pollution to watercourses and downstream waterbodies during construction and operation. Includes silt/sediment and pollutant release, damaging fish habitats (inc. spawning habitat), potentially harming fish and associated adverse effects on fish and otter populations.	River catchments that intersect the Development Site	Y	Watercourses are listed as a priority habitat on the SBL and included within the ALBAP. Several burns are found within the application boundary and several are crossed by new tracks. A 20m buffer has been applied to safeguard the watercourses from all proposed track routes. With this design consideration and through the application of standard measures detailed in Table 1.9 of the EcIA, the potential for construction impacts has been mitigated. Potential effects on watercourses have therefore scoped out of further consideration.
Badger	Direct damage to setts and increased disturbance due to elevated levels of noise, lighting, and human presence during construction/ operation related works.	Sett ~30m from construction/maintenance area	Y	<p>Badgers are a common and widespread species whose protection is owing to past persecution rather than current rarity. Badgers are mentioned in several habitat action plans within the Ayrshire LBAP and are widespread in Ayrshire with East Ayrshire holding a moderate population, perhaps 100 social groups, mainly dispersed over lowland eastern farmland and woodland, Ian Hutchinson/Scottish Badgers (pers. comm).</p> <p>No evidence of badger was recorded during extended Phase 1 habitat surveys undertaken in 2020. No field signs of badger were recorded anywhere within the survey area for East Kingswell Windfarm in 2009/2010 and surveys undertaken for neighbouring Whitelee Extension did not record any field signs within the extended site boundary (Volume 3A). The closest known signs of badger to the site were anecdotal records of badger along the M77, noted by SNH (now NatureScot) during consultation, and a single-hole disused sett identified within the study area of Whitelee Extension Phase 2 (Jacobs, 2009), approximately 4 km south of the Proposed Development (Volume 3A).</p> <p>While this species is highly mobile and setting habitat is available, the foraging resource within the Site is considered sub-optimal. Inclusion of badger protection measures within the Site Species Protection Plan (SPP) will cover the potential for future presence. Though there is potential for their presence in the future, based on the survey results and habitat assessment, badger is considered to be of negligible conservation value to the Proposed development site and therefore scoped out of further assessment.</p>



Ecological Feature	Environmental Change and potential effect	Zone of Influence	Scoped Out (Y/N)	Justification
Bats (Roosting)	Potential disturbance to roosts Kill/injure and destroy habitat	~100m from construction/ maintenance areas	Y	Based on desk study data from historical bat surveys at the Site (Volume 3A), five potential buildings and a single potential tree roost were recorded within the northern section of the Site. All locations are recorded outside the ZOI from the nearest construction/ maintenance areas. In addition to which, no felling of trees that could be suitable for roosting bats is proposed as a result of the Proposed Development. It is considered that potential effects on roosting bats from the proposed Development are Negligible and are not considered further in this assessment.
Bats (Foraging/commuting)	Disturbance/ displacement to foraging, commuting bats during construction and operation	~100m from construction/ maintenance areas	Y	Based on desk study data from historical bat surveys at the Site, at least three species of bat were found to be utilise the site in very low numbers (Volume 3A). It is considered that over time bat populations using the site will remain relatively unchanged, and site conditions remain largely similar albeit with occasional disturbance from forestry operations within and around the Site. The number of bats which the Site supports is likely to be limited due to the exposed nature of the habitats and the apparent paucity of roosting opportunities in the woodland and adjacent habitats. In general moorland and upland unimproved grassland tend to be avoided by bats (Walsh <i>et al.</i> , 1996). Bats tend to forage in habitats associated with woodland and water and also make selective use of linear corridors connecting these habitats. Conifer plantation woodlands represent a less optimal woodland type in relation to other woodland types, due to their low insect densities (Walsh <i>et al.</i> , 1996). The higher value foraging habitat features within the Site comprise only a small proportion of the total habitat within the Proposed Development footprint, concentrated around woodland edges, watercourses. Loss of these features during construction of operation will be negligible given the 20m standoff around watercourses and existing forestry. Land take associated with PV arrays comprises open habitats where very low levels of activity were previously recorded and would currently be predicted. On this basis, disturbance or displacement effects to terrestrial habitats of value to bats are considered to be negligible and therefore potential effects on foraging/ commuting bats are scoped out of further assessment.

Ecological Feature	Environmental Change and potential effect	Zone of Influence	Scoped Out (Y/N)	Justification
Otter	Direct damage to resting sites and disturbance to individuals using resting sites due to elevated levels of disturbance (such as increased noise, lighting, and human presence) during construction/operation related works.	Non-breeding resting sites: 30m from the proposed construction/maintenance area (based on NatureScot protected species advice)	N	<p>The Development Site as assessed as being of Local importance for otter for the reasons noted below.</p> <p>Otter is a European protected species (EPS) and an SBL Priority species. During surveys in 2020, otter field signs were recorded within most watercourses in the Study Area.</p> <p>Two potential resting sites (hovers) were recorded within the Study Area. An EPS Licence would be required should proposed works occur within a threshold of disturbance within 30m of a resting site.</p>
		Breeding resting sites: 200m from the proposed construction/maintenance areas (based on NatureScot protected species advice)	N	No breeding sites were recorded within the Study Area; nonetheless, pre-construction surveys have the potential to identify a breeding site, which would require appropriate measures to avoid contravention of legislation.
	Temporary severance of otter habitat and commuting routes	Within the construction/maintenance areas	N	Evidence of otter activity was recorded along a number of watercourses within the Study Area, in the form of spraints, paths, prints, feeding remains, and resting sites. The Proposed Development could therefore lead to temporary habitat severance and fragmentation of territories during the construction phase, particularly during the construction of water crossings.
	Direct mortality due to construction related activities	Within the construction/maintenance area	Y	Evidence of otter activity was recorded along a number of watercourses within the Study Area, in the form of spraints, paths and potential resting sites. The Proposed Development could lead to an increase in mortality as a result of traffic collision during construction or operational phases. Adoption of the environmental measures outlined in Table 1.9 (EclA) (including the development of an Otter SPP will ensure the avoidance of any harm to animals and ensure compliance with legislation.
	Reduction in habitat quality as a result of hydrological connectivity and pollution incidents and impacts on prey	River catchments that intersect the Development Site	Y	Adoption of the environmental measures outlined in Table 1.9 (EclA) (i.e. the pollution protection guidelines and measures outlined in a CEMP) will ensure the avoidance of any degradation of water quality and/or impacts on fish populations as food for otters.

Ecological Feature	Environmental Change and potential effect	Zone of Influence	Scoped Out (Y/N)	Justification
Water vole	Direct mortality due to construction related activities	Within the construction/ maintenance area	Y	Water vole is an SBL priority species and included within Ayrshire LBAP. The most recent national survey (2003) found no evidence of water vole in East Ayrshire, however sampling was sparse and current status is unknown.
	Disturbance/ displacement to water vole during construction and operation		Y	No evidence of the species was recorded during survey of the Site in 2020 and no evidence was recorded during historical surveys of the Site. Water vole are known to be present in the wider area and potentially suitable habitat was noted within the study area. Water vole populations are highly dynamic with the potential for individual water voles to establish or abandon territories in relatively short spaces of time. Therefore, inclusion of water vole protection measures within a Species Protection Plan (SPP) (See Table 1.9, EclA) and the inclusion of pre-construction surveys will ensure avoidance of any significant impacts to this species. Potential effects on water vole are therefore scoped out of further assessment.
	Temporary severance of water vole habitat and commuting routes		Y	
Reptiles (Common lizard, adder and slow worm)	Disturbance, kill/injure/destroy habitat, affect distribution.	Within the construction/ maintenance areas	Y	An incidental record was made of a sloughed adder skin at Collory Bog in 2012 within the Proposed Development. Given the presence of reptile signs within the wider Whitelee Windfarm area (Volume 3A), and the suitability of the existing habitats for reptiles, it is considered likely that populations of adder, lizard and slow worm could occur within the Proposed Development site. Inclusion of reptile protection measures within a Species Protection Plan (SPP) (See Table 1.9, EclA) and pre-construction surveys will protect any identified hibernaculum during the construction phase and ensure avoidance of any significant impacts to this species. Reptiles are therefore scoped out of further assessment.

Ecological Feature	Environmental Change and potential effect	Zone of Influence	Scoped Out (Y/N)	Justification
Brown trout	Deterioration in fish populations due to: loss of, or damage to, juvenile/ spawning habitat at watercourse crossings; disruption/obstruction of migration; harm to fish (direct physical harm/noise); degradation of fish habitats due to pollution/siltation; and harm to fish during operation (electromagnetic emissions).	River catchments that intersect the Development Site	Y	<p>No migratory salmonids (sea trout or Atlantic salmon) are known to be present in the footprint of the proposed Development (Volume 3A). However, brown trout (non-migratory salmonids) are likely to be present in all of the watercourses. Although brown trout are widespread and are not currently considered to be in decline throughout much of their normal range and are not nationally scarce, brown trout is SBL listed.</p> <p>The Proposed Development includes several watercourse crossings. Works on these crossings during the construction phases have the potential to disturb instream habitats, create a temporary barrier to fish movement and have associated risks of silt/pollutant discharges to watercourses. The operational development is likely to have associated electromagnetic emissions and limited pollution risk. Adoption of the environmental measures outlined in Table 1.9 (EclA) (i.e. the pollution protection guidelines and measures outlined in a CEMP) will ensure the avoidance of any degradation of water quality and/or impacts on fish populations. Potential effects on brown trout are therefore scoped out of further assessment.</p>
Hen harrier (Breeding and Non-breeding)	Construction activity resulting in disturbance or displacement of breeding birds.	Within 750 m of Proposed Development footprint (based on disturbance distances as described by Ruddock & Whitfield 2007).	Y	No evidence of breeding has been recorded within the HMA within the immediate vicinity of the Site and the nearest record of breeding was 7km from the Site in 2006 (Volume 3A). Therefore, it is considered that the proposed development will have no detectable effect on the wider breeding population.
	Potential disturbance and displacement to birds due to vehicle movements and associated human activities during operation and for maintenance purposes.	Within 750 m of Proposed Development footprint.	Y	Given the low levels of recorded flight activity within and around the Site, and the fact that disturbance effects during the operational phase will be less than that during the construction phase, it is considered that there would be no detectable effects on the local population.



Ecological Feature	Environmental Change and potential effect	Zone of Influence	Scoped Out (Y/N)	Justification
	Operational displacement leading to barrier effects.	Within 500 m of the Proposed Development boundary.	Y	Low levels of flight activity recorded during historical surveys within the Site and ongoing surveys within the vicinity of the Site (Volume 3A) indicates that the Proposed Development would be unlikely to result in significant displacement of birds or cause a barrier effect, and that there would be no detectable effects on the local population.
	Changes to surface hydrology leading to detrimental changes to species and habitats.	Within 250m (SEPA GUPSLU31 250m) of the Development Site, and River catchments that intersect the Development Site	Y	There were no significant hydrological effects identified on or off-site (Hydrology and Geology Assessment Report) and with adoption of the embedded mitigation measures this means that there will be no detectable effects on the habitats supporting the local non-breeding population.
Merlin (Breeding and Non-breeding)	Construction activity resulting in temporary disturbance or displacement.	Within 500 m of Proposed Development footprint (based on disturbance distances as described by Ruddock & Whitfield 2007).	Y	Based on historical baseline data and contemporary baseline for the Whitelee HMA (Volume 3A), given the low level of merlin activity recorded within the vicinity of the Site, and no breeding locations within the Zol, it is predicted that there will be no detectable effect on the NHZ population.
	Potential disturbance and displacement to birds due to vehicle movements and associated human activities for maintenance purposes.	Within 500 m of Proposed Development footprint.	Y	Available historical and contemporary flight activity data (Volume 3A) indicate that, given the low levels of activity within the vicinity of the Site there will be no likely detectable effect on the NHZ population.
	Operational displacement leading to barrier effects.	Within 500 m of the Proposed Development boundary (based on guidance in SNH 2017).	Y	Available historical and contemporary flight activity data (Volume 3A) indicate that, given the low levels of activity within the vicinity of the Site there will be no likely detectable effect on the NHZ population.



Ecological Feature	Environmental Change and potential effect	Zone of Influence	Scoped Out (Y/N)	Justification
Black grouse (Breeding)	Construction activity resulting in temporary disturbance or displacement.	Within 750 m of Proposed Development (based on disturbance distances as described by Ruddock & Whitfield 2007).	N	Contemporary surveys within Whitelee HMA indicate that black grouse numbers have declined to a single displaying male in 2017, and no further records in 2018 or 2020. Historical and more contemporary baseline surveys indicate (Volume 3A) that the area surrounding the proposed Development site has previously supported a small number of black grouse and therefore land take and land use during construction could potentially contribute to the loss/disturbance to historical lekking sites within a 750m Zol of the construction zone.
	Potential disturbance and displacement to birds due to vehicle movements and associated human activities during operation and for maintenance purposes.	Within 750 m of Proposed Development (based on disturbance distances as described by Ruddock & Whitfield 2007).	N	Historical and contemporary baseline surveys indicate that the area surrounding the proposed Development site has previously supported a small number of black grouse and therefore land take during operation could potentially contribute to the loss/disturbance of foraging habitat within 750m of the Proposed Development.
	Operational displacement leading to barrier effects.	Within 750 m of Proposed Development (based on disturbance distances as described by Ruddock & Whitfield 2007).	N	
	Changes to surface hydrology leading to detrimental changes to species and habitats.	Within 250m (SEPA GUPSLU31 250m) of the Proposed Development, and River catchments that intersect the Proposed Development	Y	There were no significant hydrological effects identified on or off-site (Hydrology and Geology Assessment Report) and with adoption of the embedded mitigation measures this means that there will be no detectable effects on the habitats supporting the local non-breeding population.



Ecological Feature	Environmental Change and potential effect	Zone of Influence	Scoped Out (Y/N)	Justification
Short eared owl	Potential disturbance to birds due to presence of vehicles and associated human activities for maintenance purposes.	Within 500 m of Proposed Development footprint (based on disturbance distances as described by Ruddock & Whitfield 2007).	Y	Historical and contemporary baseline surveys (Volume 3A) indicate that the Site and area surrounding no longer support breeding short eared owl. Nevertheless, as a precaution, a Bird Protection Plan (BPP) would be developed and pre-construction verification check surveys would be undertaken to ensure the avoidance of a breach in legislation.
	Operational displacement leading to barrier effects.	Within 500 m of Proposed Development footprint (based on disturbance distances as described by Ruddock & Whitfield 2007).	Y	On the basis that breeding birds are no longer present within the vicinity of the Site, given the low levels of flight activity there is likely to be no detectable effect on the NHZ population.
	Increased pollution risk associated with accidental spillage of fuels, oils, runoff and dust emission i.e. via direct contact, air or water, leading to harm or degradation to species and habitats.	Within 250m (SEPA GUPSLU31 250m) of the Development Site, and catchments that intersect the Development Site	Y	There were no significant hydrological effects identified on or off-site (Hydrology and Geology Assessment Report) and with adoption of the embedded mitigation measures this means that there will be no detectable effects on the habitats supporting the local non-breeding population.
Barn owl	Construction activity resulting in disturbance or displacement of breeding birds.	Within 200 m of the developable area.	Y	Based on historical and contemporary data (Volume 3A) for the Site and wider area, no breeding locations fell within the Zol, and therefore it is predicted that there will be no detectable effect on the Strathclyde regional population.
Curlew	Construction activity resulting in disturbance or displacement of breeding birds.	Within 500m of the developable area	N	Based on historical and contemporary data (Volume 3A) for the Site and wider area, two historical breeding territories (one confirmed and one probable) fall within the Zol of the Proposed Development. This represents 0.09% of the NHZ population which would not result in significant effects on the NHZ population; nevertheless, this species is taken through for further assessment.

Ecological Feature	Environmental Change and potential effect	Zone of Influence	Scoped Out (Y/N)	Justification
Lapwing	Potential disturbance and displacement to birds due to vehicle movements and associated human activities during operation and for maintenance purposes	Within 500m of the developable area	N	Two historical breeding territories fall within the ZOI of the Proposed Development
	Operational displacement leading to barrier effects.	Within 500m of the developable area	N	Two historical breeding territories fall within the ZOI of the Proposed Development
	Construction activity resulting in disturbance or displacement of breeding birds.	Within 500m of the developable area	N	Based on historical and contemporary data (Volume 3A) for the Site and wider area, three historical breeding territories fall within the ZOI of the Proposed Development, whilst the NHZ population is unknown, given the low numbers of breeding birds within the ZOI significant effects on the NHZ population are unlikely; nevertheless, this species is taken through for further assessment.
	Potential disturbance and displacement to birds due to vehicle movements and associated human activities during operation and for maintenance purposes	Within 500m of the developable area	N	Three historical breeding territories fall within the ZOI of the Proposed Development
	Operational displacement leading to barrier effects.	Within 500m of the developable area	N	Three historical breeding territories fall within the ZOI of the Proposed Development
Red-listed passerines	Operational displacement leading to barrier effects.	Within 50m of the developable area	Y	In view of the numbers of birds likely to be supported within the Site relative to their wider abundance, and the low sensitivity of such passerine species to the impacts of developments involving a similar level of disturbance, these breeding species are not considered further in this assessment.

