Denny to Wishaw Network Upgrade

Environmental Impact Assessment Report

Volume 3 Appendices

Appendix 8.13 Cumbernauld Substation Habitat and Protected and Notable Species Results (excluding badger)

May 2026

Denny to Wishaw Network Upgrade
Environmental Impact Assessment Report
Volume 3, Appendix 8.13 Cumbernauld Habitats and Protected Species

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Appendix 8.13

1.1 Introduction

1.1.1 This appendix accompanies Chapter 8 Biodiversity of the EIA Report (Volume 1). It describes in detail the results of the field survey carried out to establish baseline conditions in the Zone of Influence (ZoI) of the Cumbernauld Substation Extension with respect to habitats and protected or otherwise important mammals[1].

1.1.2 This appendix is supported by the following figures located within Volume 2: Figures:

- Figure 8.2: Ancient Woodland, Peatland and Watercourses;
- Figure 8.3: Phase 1 Habitat Survey Results;
- Figure 8.4: Priority and Notable Habitats and Invasive Non-Native Species Survey Results;
- Figure 8.5: Potential Groundwater Dependent Terrestrial Ecosystems; and,
- Figure 8.6: Bat Ground Level Tree Assessment / Preliminary Roost Assessment Results.

1.1.3 Note that due to the possible risk of persecution of badger, the methods and results of the badger survey are provided in a separate appendix, Appendix 8.14 Cumbernauld Substation Badger Results (Confidential), and accompanying figure, Figure 8.9: Badger Survey Results (Confidential), both of which are confidential.

1.1.4 Within this Appendix, any activities relating to the Cumbernauld Substation Extension are referred to as the "Works", and the "Site" is the precise area in which the Works are located.

1.1.5 Relevant legislation and national planning policy is discussed in Volume 1, Chapter 8 Biodiversity.

1.2 Methods

1.2.1 Desk study methods and ZoI used are described in Volume 1, Chapter 8 Biodiversity.

1.2.2 Field survey methods are described below.

Habitats

1.2.3 The Phase 1 habitat survey was carried out following the standard method described by the Joint Nature Conservation Committee (JNCC)[2], by which areas of land are assigned to habitat types and ecological 'target notes' are recorded. The habitat survey was carried out of the Site (as it was understood at the time of survey) plus a 100m buffer where access was possible and safe.

[1] The methods and baseline results for other components of the project are detailed separately:
For the New Build Overhead Line, AA Route Undergrounding and CB Route Removal, in Appendix 8.1 (habitats), Appendix 8.2 (bats), Appendix 8.3 (otter and water vole) and Appendix 8.4 (great crested newt);
For the Uprated Lines, in Appendix 8.8 (habitats), Appendix 8.9 (bats), Appendix 8.10 (otter and water vole), Appendix 8.11 (great crested newt); and,
For the other components, and ecological features not listed, within Volume 1, Chapter 8 Biodiversity.
[2] JNCC (2010). *Handbook for Phase 1 Habitat Survey – a Technique for Environmental Audit.* Joint Nature Conservation Committee, Peterborough.

1.2.4 Habitats were also classified according to the UK Habitat Classification (UKHab) system[3] and habitat condition assessment was undertaken in line with the statutory biodiversity metric[4].

1.2.5 Notes were made for each habitat which reflect conditions at the time of survey; and relevant ecological characteristics were documented. Typical and important/notable plants were recorded using the DAFOR (D=dominant; A=abundant; F=frequent; O=occasional; R=rare) scale, including any occurrence of invasive non-native species (INNS) of plant.

1.2.6 In all areas of habitat identified by the initial habitat survey as being notable (e.g. habitats listed on the SBL) or potential Groundwater Dependent Terrestrial Ecosystems (GWDTE) a National Vegetation Classification (NVC) survey was carried out following published guidelines.

1.2.7 Excavations greater than 1m, which are expected to take place during the construction of the Cumbernauld Substation Extension, can result in negative impacts to GWDTEs up to 250m away. Thus the habitat survey described above was extended to 250m from the Site where NVC communities listed as potential GWDTEs in SEPA guidance[5,6] were present, as identified from aerial imagery and site walkover.

1.2.8 The habitat survey took place on 07 and 08 August 2025.

Protected and notable species

Bats

1.2.9 In accordance with industry-standard guidelines published by the Bat Conservation Trust (BCT)[7], a Daytime Bat Walkover (DBW) was carried out on 04 March 2025 to assess the suitability of habitats for roosting, commuting and foraging bats. Suitability was categorised according to the descriptions given in Table 1, below.

Table 1. Bat habitat suitability categories (from Collins (2023)[7])

Suitability	Description of commuting and foraging habitat
None	No habitat features on Site likely to be used by any commuting or foraging bats at any time of year (i.e., no habitats that provide continuous lines of shade/protection for flight lines or generate/shelter insect populations available to foraging bats).
Negligible	No obvious habitat features on Site likely to be used for commuting or by foraging bats. However, a small element of uncertainty remains in or der to account for non-standard bat behaviour.

[3] UKHab Ltd (2023). *UK Habitat Classification Version 2.0*. Available at: https://www.ukhab.org/
[4] DEFRA (2023). *Statutory biodiversity metric tools and guides*. November 2023. Available at: Statutory biodiversity metric tools and guides - GOV.UK
[5] SEPA (2014). *Guidance on Assessing the Impacts of Windfarm Development Proposals on Groundwater Abstractions and Groundwater Dependent*. Version 2. October 2014. Available at: https://www.sepa.org.uk/media/143868/lupsgu31_planning_guidance_on_groundwater_abstractions.pdf
Terrestrial Ecosystems
[6] SEPA (2024). *Guidance on Assessing the Impacts of Developments on Groundwater Dependent Terrestrial Ecosystems*. August 2024. Available at: guidance-on-assessing-the-impacts-of-developments-on-groundwater-dependent-terrestrial-ecosystems.docx
[7] Collins, J. (ed) (2023). *Bat Surveys for Professional Ecologists: Good Practice Guidelines*. 4th edition. Bat Conservation Trust. London.

Low	Habitat that could be used by small number of bats for commuting such as a gappy hedgerow or unvegetated stream, but isolated (i.e., not very well connected to the surrounding landscape by other habitat). Suitable but isolated habitat that could be used by small numbers of foraging bats such as a lone tree (not in a parkland situation) or a patch of scrub.
Moderate	Continuous habitat connected to the wider landscape that could be used by bats for commuting, such as lines of trees and scrub or linked back gardens. Habitat that is connected to the wider landscape that could be used by bats for foraging such as trees, scrub, grassland or water.
High	Continuous, high-quality habitat that is well connected to the wider landscape that is likely to be used regularly by bats for commuting such as river valleys, streams, hedgerows, lines of trees and woodland edge. High quality habitat that is well connected to the wider landscape that is likely to be used regularly by foraging bats such as broadleaved woodland, tree-lined watercourses and grazed grassland. Site is close to and connected to known roosts.

1.2.10 Preliminary Roost Assessment (PRA) of structures and Ground Level Tree Assessment (GLTA) were also carried-out within the Site where access was possible and safe on 02 July 2025.

1.2.11 Following guidance[7], structures were assigned a suitability category of None, Negligible, Low, Moderate, or High based on the presence of Potential Roost Features (PRF). Trees were assessed as having 'PRF-M', where they had potential suitability for use by multiple bats (including maternity colonies), or 'PRF-I', where they contained features unlikely to be PRF-M but are potentially suitable for only individual or very small numbers of bats. Where trees could not be definitively classified from the ground, they were assessed as 'Further Assessment Required' ('FAR') and the likely potential suitability (PRF-M or PRF-I) was approximated.

1.2.12 PRFs searched for included suitable holes, cracks or splits in trees, and any possible ingress points to buildings or structures. Where such features existed, searches were made for evidence of use by bats such as droppings, staining, foraging remains, auditory evidence and the presence of live or dead bats.

1.2.13 A PRF Aerial Inspection Survey (elevated tree inspection) was carried out on 24 and 25 November 2025 by Envirocentre. Inspections were completed by Lantra qualified tree climbers holding the appropriate NatureScot bat roost visitor licence and involved using binoculars, a high-powered torch and endoscope to inspect any PRF present in detail, following BCT guidance[8].

Otter

1.2.14 Surveys for otter were carried out along all watercourses and other waterbodies within 200m of the Site (as it was understood at the time of survey), as far as access was possible and safe on 05 November 2025.

[8] Collins, J. (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines. 3rd edition. Bat Conservation Trust, London.

1.2.15 The surveys followed guidance in published literature[9,10,11]. Any evidence found during the survey was mapped and accompanying field notes taken.

1.2.16 Evidence of otter searched for included refuges (holts and layups), spraints (faeces), footprints, trails and foraging signs. Where found, spraints were recorded as fresh, recent or old, according to their apparent age.

1.2.17 Surveyors walked in the channel of watercourses where possible and visually inspected all parts of the banks. Where dense vegetation or soft substrate prevented this, searches for field signs were made as far as access allowed.

Water vole

1.2.18 Surveys for water vole were carried out along watercourses, waterbodies and suitable rushy vegetation within a 50m of the Site (as it was understood at the time of survey), as far as access was possible and safe on 07 and 08 August 2025.

1.2.19 The surveys followed guidance in published literature[12],[13]. Any evidence found during the survey was mapped and accompanying field notes taken.

Other Terrestrial Species

1.2.20 No dedicated pine marten *Martes martes*, red squirrel *Sciurus vulgaris*, brown hare *Lepus europaeus* or hedgehog *Erinaceus europaeus* survey was carried out. However, any sightings of these mammal species, or evidence of their presence (such as squirrel-eaten cones or pine marten scats), were noted if encountered incidentally during all fieldwork.

1.2.21 Similarly, observations of reptiles, other amphibians and important invertebrates were recorded if encountered during all fieldwork, but no targeted survey was carried out for these species.

Limitations and Assumptions

1.2.22 Where habitat edges are sharp and coincide with features on base-mapping or aerial photography that are considered correct, their placement is based on the accuracy of that data in GIS. Otherwise, habitat edges are best estimates as judged in the field. Note also that habitat transitions can be gradual without sharp boundaries. Consequently, habitat mapping and any stated habitat areas are approximate and should be verified by measurement onsite where required for design or construction.

1.2.23 The area to the north of Forest Road was not accessed for surveys. This is because no works are proposed within or immediately adjacent to this area and because this area is already subject to significant disturbance from both Forest Road and the railway, between which it is located. Furthermore, this area was viewed from the Site and appears similar in character to woodland immediately west of the substation and is therefore not considered

[9] Chanin, P. (2003). *Monitoring the Otter* Lutra lutra, Conserving Natura 2000 Rivers Monitoring Series No. 10. English Nature, Peterborough.
[10] Liles, G. (2003). *Otter Breeding Sites*. Conservation and Management, Conserving Natura 2000 Rivers Conservation Techniques Series No. 5. English Nature, Peterborough.
[11] Strachan, R. (2007). *National survey of otter* Lutra lutra *distribution in Scotland 2003-04*. Scottish Natural Heritage Commissioned Report No. 211 (ROAME No. F03AC309).
[12] Dean, M., Strachan, R., Gow, D. and Andrews, R. (2016). *The Water Vole Mitigation Handbook*. Mammal Society Mitigation Guidance Series. The Mammal Society, London.
[13] Strachan, R., Moorhouse, T. and Gelling, M. (2011). *Water Vole Conservation Handbook*. 3rd Edition. Wildlife Conservation Research Unit, University of Oxford.

to have the potential to be a GWDTE. Therefore, no impacts on this area are anticipated and the lack of access for survey is not considered a significant limitation.

1.2.24 Continuing from the above, the Red Burn was not accessed for otter survey. The Red Burn is separated from the Site by Forest Road and the railway, and from the Glencryan Burn by a 90m long culverted section. The existing levels of separation and disturbance mean that no impacts on otter on the Red Burn, if present, are considered possible. Thus the lack of survey in this area is not considered a significant limitation.

1.2.25 No Night-time Bat Walkover (NBW) (or other bat activity survey type) was carried-out. The Site was assessed as having high suitability for foraging and commuting bats, however, the area of suitable habitat is very small (approximately 3ha) and consists of parcels of woodland habitat which could not be easily and effectively surveyed via NBW or static detector deployment. The geography of the Site in the central belt allows the bat species assemblage of the Site to be assumed with relative confidence, the impacts anticipated on bat habitat are minor, and a precautionary approach was adopted when assessing the importance of the bat assemblage. The lack of activity survey is therefore not considered a significant limitation.

1.3 Baseline Conditions

Habitats

1.3.1 The recorded habitats are described below by the corresponding Phase 1 habitat survey categories. Where applicable, the corresponding SBL Priority habitat type is also provided. NVC codes are provided for notable habitats only. This includes potential GWDTEs, shown on Figure 7.5.

Woodland and scrub

Semi-natural broadleaved woodland

1.3.2 Two patches of semi-mature but likely self-seeded Wet Woodland SBL Priority habitat are present. These comprise willow *Salix* sp. and birch *Betula* sp. on a ground flora dominated by tufted hair-grass *Deschampsia cespitosa* but with frequent wetland herbs including wild angelica *Angelica sylvestris*, marsh thistle *Cirsium palustre* and devil's-bit-scabious *Succisa pratensis*. These woodlands correspond most closely to NVC community W7b and are therefore considered potential GWDTEs (see below).

1.3.3 Additional semi-natural woodlands dominated by self-seeded birch and willow are not considered to support a sufficient diversity of wetland herbs to qualify as Wet Woodland SBL Priority habitat. They correspond most closely to NVC type W7 and are therefore considered potential GWDTEs (see below), however they are not considered a good fit for any of the W7 sub-communities, given that the ground flora is likely derived from damp grassland types (upon which these woodlands have recently established), and has not established due to the continued presence of woodland.

Broadleaved plantation woodland

1.3.4 Other woodland patches may have some self-seeded birch and willow but are at mainly planted. In particular, the patches between the two existing wayleaves (southeast of the existing substation) contain numerous saplings in tubes within the open areas. These areas are dominated by willow with much birch, sycamore *Acer pseudoplatanus*, rowan

Sorbus aucuparia and hawthorn *Crataegus monogyna*. Occasionally there is oak *Quercus* sp., gorse *Ulex europaeus*, alder *Alnus glutinosa* and ash *Fraxinus excelsior*. The ground flora is dominated by tufted hair-grass, often with nettle *Urtica dioica*, male-fern *Dryopteris filix-mas* and neutral grasses such as cock's-foot *Dactylis glomerata*. Occasionally there is common sedge *Carex nigra*, soft-rush *Juncus effusus*, meadow vetchling *Lathyrus pratensis* and common valerian *Valeriana officinalis*. Note there is a large patch of Japanese knotweed *Reynoutria japonica* within one of these woodlands (described in more detail in Invasive Species).

1.3.5 For the same reasons as for non-SBL semi-natural broadleaved woodland, these woodlands are not of sufficient quality to qualify as Wet Woodland SBL Priority habitat. They correspond most closely to NVC type W7 and are therefore considered potential GWDTEs (see below), however they are not considered a good fit for any of the W7 sub-communities.

Mixed plantation woodland

1.3.6 Mixed plantation encompasses woodland blocks immediately west and east of the existing substation. Where it occurs this woodland is predominantly planted blocks of larch or pine with scattered rowan, sycamore, oak (some of which is mature), hawthorn, willow, hazel *Corylus avellana* and crab apple *Malus sylvestris*. Self-seeded birch is locally dominant. The ground flora is mossy and locally dominated by bracken *Pteridium aquilinum*, broad buckler-fern *Dryopteris dilata*, purple moor-grass *Molinia caerulea*, nettle or tufted hair-grass. Rarely there is cleavers Galium aparine, wood sorrel *Oxalis acetosella* and enchanter's-nightshade *Circaea lutetiana*. Woodland to the north of Forest Road was not accessed but appears superficially similar to this.

1.3.7 These woodlands do not qualify as SBL Priority habitats. However, one area corresponds most closely to NVC community W7 (no sub-community) and is therefore considered a potential GWDTE (see below).

Dense scrub

1.3.8 Small patches of dense scrub dominated by immature willow and birch are not GWDTEs and are not otherwise notable.

Dry and damp grasslands

1.3.9 The majority of the semi-improved neutral grass is damp and dominated by either tufted hair-grass or Yorkshire fog *Holcus lanatus* with various other species present including soft-rush, hard rush *Juncus inflexus*, bent *Agrostis* sp., false oat-grass *Arrenatherum elatius*, creeping thistle *Cirsium arvense*, common knapweed *Centaurea nigra*, meadow vetchling and tufted vetch *Vicia cracca*. Wetland herbs including marsh thistle, common valerian and wild angelica are rare. Though not of particular note, these grasslands correspond most closely to NVC communities MG9b and MG10a and are therefore considered potential GWDTEs (see below).

1.3.10 A large patch of grassland within the existing northern wayleave is a mix of Yorkshire fog, sweet vernal-grass *Anthoxanthum odoratum* and willow scrub with additional compact rush *Juncus conglomeratus*, meadow buttercup *Ranunculus acris*, tufted hair-grass, colt's-foot *Tussilago farfara*, red clover *Trifolium pratense*, eyebright *Euphrasia* sp. and

meadow foxtail *Alopecurus pratensis*. This habitat is not well established and does not align well with any NVC habitat, including those considered as potential GWDTEs.

1.3.11 None of these grasslands qualify as SBL Priority habitats.

Wetlands

Marshy Grassland

1.3.12 A single patch of neutral sedge mire habitat is present. This is Lowland Fens SBL Priority habitat and comprises common sedge with frequent angelica, and common valerian and occasional marsh thistle, yellow-rattle Rhinanthus minor, tufted hair-grass, meadow vetchling, silverweed Potentilla anserina and colt's-foot. Rarely there is marsh willowherb *Epilobium palustre* and glaucous sedge *Carex flacca*.

1.3.13 This habitat does not align well with NVC habitats considered as potential GWDTEs. However, it is broadly similar to certain types dominated by rushy vegetation which are considered potential GWDTEs (M23) and has therefore been included (see below). In the absence of an official NVC code it is described in this report as 'MX' (as was done by Averis and Averis[14]).

1.3.14 The majority of habitat within the existing wayleaves is dominated by soft rush or compact rush with abundant tufted hair-grass and common sorrel and occasional wetland herbs similar to those listed in the previous habitat (wild angelica, marsh thistle, common valerian) and also jointed rush *Juncus articulatus*, and, rarely, common sedge. These wetlands do not qualify as SBL Priority habitats. However, they correspond most closely to NVC community M23b, (or, where dominated by compact rush, the broad M23 type without a specific subcommunity) and are therefore considered potential GWDTEs (see below).

Watercourses and standing water

Water Framework directive

1.3.15 The only watercourses within the possible ZoI of the Cumbernauld Substation Extension are the Glencryan Burn (located within the Site) and the Red Burn (located immediately downstream of the Glencryan Burn).

1.3.16 The Glencryan Burn, which at its closest runs adjacent to the Site 140m west of the Cumbernauld Substation Extension, is currently classified by SEPA as having an overall 'moderate' status, a 'moderate' overall ecology, 'moderate' fish ecology and 'high' water quality.

1.3.17 Despite having a "moderate" fish ecology, the Glencryan Burn is separated from downstream areas by a 90m long pipe culvert which is likely impassible to migratory fish.

1.3.18 The Red Burn is separated from the Site by Forest Road and the railway and is currently classified by SEPA as having an overall 'moderate ecological potential', a 'moderate' overall ecology, and 'moderate' water quality.

[14] Averis, B. and Averis, A. (2020). Plant Communities Found in surveys by Ben and Alison Averis but not described in the UK National Vegetation Classification. Accessed: https://www.benandalisonaveris.co.uk/wp/wp-content/uploads/2020/11/non-nvc_vegetation_types_found_by_ben_and_alison_averis_2020-06__version_with_image_resolution_reduced_.pdf

1.3.19 The Glencryan Burn and Red Burn are not considered to qualify as River SBL Priority habitat as they are unlikely to meet any of the criteria listed by the SBL Habitat description.

1.3.20 However, these watercourses do enhance improve the habitat diversity of the local area and provide a habitat resource for common and widespread species.

Other habitats

1.3.21 The remaining habitats within the survey area are not of particular note. These include:

- Bracken;
- Hard standing (including the road and existing sub-station); and,
- Buildings.

1.3.22 None of these are considered to qualify as SBL Priority habitats or Annex I habitats, and none are potential GWDTEs.

Groundwater Dependent Terrestrial Ecosystems

1.3.23 The NVC communities identified during the survey which are listed by SEPA guidance on GWDTEs[5, 6] as potential GWDTEs, are listed in Table 2, along with the associated GWDTE importance as assigned using the method described above.

Table 2. NVC communities of potential GWDTEs present within the survey area and GWDTE Importance level.

NVC type	Subcommunities	Notable habitat type	GWDTE importance level
W7 Alnus glutinosa – Fraxinus excelsior – Lysimachia nemorum woodland	W7b Carex remota – Cirsium palustre sub-community	Wet Woodland	Moderately important
	Species-poor (no official sub-community)	None	Low importance
MG9 Holcus lanatus – Deschampsia cespitosa grassland	MG9b Arrhenatherum elatius sub-community	None	Unimportant
MG10 Holcus lanatus – Juncus effusus rush-pasture	MG10a Typical sub-community	None	Unimportant
M23 Juncus effusus / acutiflorus – Galium palustre rush-pasture	Compact rush dominated (no official sub-community)	None	Low importance
	M23b Juncus effusus sub-community	None	Low importance
MX Neutral sedge mire	None	Lowland Fens	Moderately important

Protected and notable species

Notable plant species

1.3.24 The NBN Atlas returned no records of notable plant species within 1km of the Site.

1.3.25 The Site is dominated by widespread and common habitats on the edge of an urban area and is unlikely to support notable plant species.

Bats

1.3.26 There were no bat records returned by the NBN Atlas within 1km of the Site.

1.3.27 Overall, habitats across the Site are of high suitability for foraging and commuting bats. In particular the existing blocks of woodland are continuously connected to habitat to the south including Palacerigg Country Park and farmland beyond. The existing woodland edges are likely to be used by commuting bats and the open grassland and marsh along wayleaves is suitable for foraging bats.

1.3.28 A total of 11 trees were identified by the GLTA as having the potential to support roosting bats. These are detailed below in Table 3. No structures with the potential to support roosting bats were identified.

1.3.29 Further inspection from height and / or with endoscope of the 11 trees identified by the GLTA allowed more definitive classification. The results of the aerial and / or endoscope inspection are detailed below in Table 3.

Table 3. Summary of Ground Level Tree Assessment and aerial/endoscope inspection survey results

Reference	Tree description	GLTA description	GLTA suitability	Further inspection description	Further inspection suitability	OSGR	Distance from Cumbernauld Substation Extension
WB.BT.73	Semi-mature dead Scot's pine. DBH = 50cm.	A single woodpecker hole is located on the trunk at around 15m high, facing south. It is unclear whether the feature connects internally to the trunk. Two additional woodpecker holes are present on an upper branch about 20m high, facing southwest.	FAR (possible PRF-M)	Three woodpecker holes. All superficial but may offer shelter for an individual bat.	PRF-I	NS 77385 74375	Within the Cumbernauld Substation Extension footprint.
WB.BT.74	Mature sycamore. DBH = 80cm.	An east-facing cavity at 6m. This cavity extends upward but is exposed to rainfall from above. Two west-facing cavities located at approximately 3.5m and 4m above ground are connected. There may be a southern extension from the lower cavity, but this is unclear from ground level.	FAR (possible PRF-M)	Three cavities on main stem. Uppermost cavity faces north at 6m. With tube, open and remains of jackdaw's nest (NONE). Cavity below joins upper, exposed and wet (NONE). Southwest cavity exposed with gap behind heartwood (PRF-I).	PRF-I	NS 77421 74329	Within the Cumbernauld Substation Extension footprint.
WB.BT.77	Semi-mature oak. DBH = 40cm.	Another hazard beam with a diametrical split is found on a broken branch about 10m high, facing southwest. The entrance is downward-facing and sheltered,	FAR (possible PRF-I)	Not a feature. More likely squirrel damage masquerading as a hazard beam.	None	NS 77400 74305	Within the Cumbernauld Substation Extension footprint.

		but it is uncertain whether the cavity extends into the branch.					
WB.BT.76	Semi-mature sycamore. DBH = 50cm.	A tear-out on the tree trunk at about 6 m, facing east, which forms a sheltered hole. Although it doesn't extend into the branch, it may serve as a temporary roost for solitary bats.	FAR (possible PRF-I)	Branch cavity, 3m east facing. Open but may offer shelter for an individual bat.	PRF-I	NS 77425 74309	Within the Cumbernauld Substation Extension footprint.
WB.BT.75	Mature oak. DBH = 70cm.	A single hazard beam with a diametrical split in an upper east-facing branch of a mature oak may form a cavity. The split is side-facing and sheltered from rain, at approximately 12m high, and the tree is climbable.	FAR (possible PRF-M)	Hazard beam at 8m on east facing branch. Extends 5-6cm upwards. Tiger slugs indicate dampness and bird droppings indicate night roost. Does not extend downwards.	PRF-I	NS 77439 74309	Within the Cumbernauld Substation Extension footprint.
WB.BT.78	Semi mature birch. DBH = 20cm.	A semi-mature birch has a trunk wound between 1.7 m and 2 m, facing southwest. It extends into a hollow branch but has a cluttered entrance obstructed by twigs.	FAR (possible PRF-I)	Wound on trunk at 1.5m. Feature tapers upwards 40cm. May offer shelter for an individual bat.	PRF-I	NS 77293 74292	Approximately 5m from Cumbernauld Substation Extension footprint.
CM.BT.01	Mature birch. DBH = 40cm.	Lightning strike damage has caused a transverse snap in the trunk between 3.5m and 4m, leading into a hollow trunk cavity. This south-facing feature may offer bat roost potential.	FAR (possible PRF-M)	Feature is exposed at top and is wet. Area of dense tree cover and wind fall, a cluttered location suboptimal for bat access.	PRF-I	NS 77359 74269	Approximately 38m from Cumbernauld Substation Extension.

CM.BT.02	Semi mature birch. DBH 3 cm.	A west-facing wound on the trunk, starting at 2m and extending to 2.5m, continues into a narrowing hollow trunk and may offer limited bat access.	FAR (possible PRF-M)	West facing tear out with two areas of hollowing at 2m-2.5m, then further extending upwards. Area of dense tree cover and wind fall. Lots of clutter.	None	NS 77385 74242	Approximately 37m from the Cumbernauld Substation Extension.
CM.BT.01	Mature birch with snapped trunk and missing crown. DBH = 4 cm.	Cavities in the heartwood of transverse-snapped trunk provide sheltered features suitable for individual bats. These are located around 2 m above ground and face north, but do not extend deeply into the trunk.	FAR (possible PRF-I)	Snapped main stem at 2m. Tree is hung up on oak to the south. Small cavity on east side of hinge. Damp, relatively exposed.	PRF-I	NS 77451 74256	Approximately 29m from the Cumbernauld Substation Extension. Unlikely to be impacted.
CM.BT.03	Semi mature sycamore. DBH = 50cm	A knot hole on the trunk at around 4m above ground, facing east, may provide limited roosting space. It doesn't appear to extend into the trunk but could potentially open sideways.	FAR (possible PRF-I)	Tear out, extending over a knot hole. Extends 6cm. Exposed and cavity is unsuitable.	None	NS 77449 74199	Approximately 84m from the Cumbernauld Substation Extension.
WB.BT.80	Mature goat willow. DBH = 40cm.	A crack on the southeast-facing trunk side from 2.5 m to 3 m is slightly upward-facing. It may form a dry cavity at the top, though this is uncertain.	FAR (possible PRF-M)	Upwards facing 5-6m. Wet and unsuitable.	None	NS 77495 74206	Approximately 69 m from the Cumbernauld Substation Extension.

Otter

1.3.30 The search of the NBN Atlas returned no records of otter within 1km of the Site.

1.3.31 Suitable habitat for the species is present along the Glencryan Burn, and otter are known to be present in the wider area.

1.3.32 No otter refuges or other signs were identified within the survey area.

1.3.33 However, individual otters may use this part of the Glencryan Burn for foraging or commuting at times.

Water vole

1.3.34 According to the National Water Vole Database, water voles are present within 10km grid square which encompasses the Site[15].

1.3.35 However, there were no suitable watercourses or water bodies are present for water vole within the survey area, and no evidence of the species was identified within the rushy grasslands / wetlands within the survey area.

1.3.36 Water vole is therefore considered absent.

Pine marten

1.3.37 No pine marten records were identified by the NBN Atlas, but pine marten are known to be present in North Lanarkshire as noted in the North Lanarkshire Local Biodiversity Action Plan[16].

1.3.38 The habitat within and around the Site has some suitability for pine marten, containing mature trees within which pine marten could take refuge. However, the GLTA survey identified relatively few larger cavities in trees, and no likely pine marten refuges were incidentally identified during the badger survey (which covered an extensive area). A possible pine marten scat was found incidentally in woodland 300m south of the Site (outside the survey areas) suggesting that pine marten may be present in the area around the Site.

1.3.39 Individual pine marten may use the Site and surrounding area for foraging or commuting at times.

Red squirrel

1.3.40 The NBN atlas returned no records of red squirrel within 1km of the Site. This is consistent with data from SSRS[17].

1.3.41 In addition to this, grey squirrels *Sciurus carolinensis* are prevalent in the area surrounding the Site (see Section **Error! Reference source not found.**), and this further reduces the likelihood that red squirrel would occur.

1.3.42 Thus red squirrel is considered absent.

[15] Wildlife Trusts (2025). *The National Water Vole Database Project*. Available at: The National Water Vole Database Project | The Wildlife Trusts
[16] https://www.northlanarkshire.gov.uk/sites/default/files/2023-04/Biodiversity%20action%20plan%202023-2027%20%28Accessible%29.pdf
[17] Saving Scotland's Red Squirrels (2025). Squirrel Sightings. Accessed on 03/11/2025. Available at: Squirrel Sightings – Saving Scotland's Red Squirrels

Great crested newt

1.3.43 The Site is located within the zone of 'marginal suitability' for great crested newt, as determined by the ARG UK Advice Note 5[18], and the species is known to be present within the central belt of Scotland.

1.3.44 The desk study identified no records of great crested newts within the study area from the NBN Atlas and the ARG/ARC UK Record Pool. The Record Pool showed no great crested newt records in the 10km grid square within which the Site is located; however, there were six records in the 10km grid square to the south (at closest, 4.2km away), and two in the grid square to the west (at closest, 7.2km away).

1.3.45 However, there are no waterbodies with the potential to be used by great crested newt within 250m of the Site. In addition, the Glencryan Burn and Forest Road act as barriers to great crested newt travel from the west and north, and the species was determined to be absent from more distant ponds within Palacerigg Country Park to the south and east following surveys undertaken for the wider Denny Wishaw Network Upgrade project.

1.3.46 The species is therefore considered to be absent from the Site and ZoI of the Cumbernauld Substation Extension.

Birds

1.3.47 There were no records returned by the NBN atlas of notable bird species within 1km of the Site.

1.3.48 There is suitable nesting habitat for common breeding bird species within all vegetated parts of the survey area.

Hedgehog and brown hare

1.3.49 Three records of hedgehog within 1km of the Site were returned from the NBN atlas. These records were within the residential areas of Cumbernauld both west and north of the Site.

1.3.50 No records of brown hare were returned.

1.3.51 It is likely that hedgehog occurs in areas of suitable woodland and scrub habitat within the Site. Brown hare may also occur in the grassland habitats within the Site at times.

Common reptiles and amphibians

1.3.52 The NBN atlas returned no records of notable reptiles, amphibians, fish or invertebrates within 1km of the Site.

1.3.53 Some suitable habitat is present within the Site in the form of woodlands, grassland and scrub, much of which is damp and could therefore be used by reptiles as well as foraging / commuting amphibians.

1.3.54 However, as discussed above as for great crested newt, there are no suitable water bodies which could support breeding populations of amphibians.

Other notable species

1.3.55 The NBN atlas returned no records of notable fish or invertebrates within 1km of the Site.

[18] ARG (2010). *Great Crested Newt Habitat Suitability Index.* May 2010. Available at: 5. Great Crested Newt Habitat Suitability Index - Amphibian and Reptile Groups of the UK

1.3.56 The Site and surrounding area is dominated by widespread and common habitats on the edge of an urban area and is unlikely to support notable invertebrate species.

1.3.57 Furthermore, the Glencryan Burn, though rated by SEPA as having a "moderate" fish ecology, is separated from downstream areas by a 90m long culvert which is likely impassible to migratory fish, and, regardless, the Glencryan Burn is 140m away from the Cumbernauld Substation Extension and will not be impacted.

Invasive non-native plants

1.3.58 There were no records of non-native invasive plant species returned by the NBN atlas.

1.3.59 Japanese knotweed and rhododendron *Rhododendron ponticum* were recorded during the surveys.

1.3.60 Two patches of Japanese knotweed, both mature and not showing signs of treatment. were recorded:

- One large patch of 993m^2 located 57m south of the Site; and,
- One smaller patch of 276m^2 located 75m east of the Site, also including some snowberry *Symphoricarpos albus*.

1.3.61 Three scattered rhododendron plants are present within the woodland surrounding the Site, one of which is within the Site and is located 33m east of the proposed earthworks.

1.4 Summary and Conclusion

1.4.1 The main findings of the field surveys are summaries below.

1.4.2 Two SBL Priority habitats are present:

- Wet Woodland; and,
- Lowland Fens.

1.4.3 Seven NVC communities with the potential to be GWDTEs (including Wet Woodland and Lowland Fens) are present.

1.4.4 GLTA identified 11 trees with potential roost features for bats.

1.4.5 No otter or water vole evidence was identified during surveys for these species, and no evidence of any other protected / notable species was identified incidentally.

1.4.6 The Site has the potential to support a range of common and widespread species including common breeding birds, reptiles, hedgehog and brown hare.