BRO TATHAN UTILITIES, ST ATHAN, GLAMORGAN
ECOLOGICAL ASSESSMENT **January 2024**

1.0 Introduction

1.1 David Clements Ecology (DCE) have been commissioned by Welsh Government to carry out an assessment of the likely ecological impact of a proposed new Utilities Ring Main and all additional connections from this primary route, to provide utility services for the Bro Tathan Business Park, located in St Athan, The Vale of Glamorgan. The location of the proposed utilities route is shown on Plan 1.

1.2 The Bro Tathan site is divided into five areas. Bro Tathan North is partially developed as a business park and surrounded by agricultural fields. Both Bro Tathan West and Bro Tathan East comprise a complex of former Ministry of Defence buildings, together with associated roads, hardstandings and infrastructure, within a context of landscaped grassland and planted trees. Bro Tathan South contains a number of former MOD buildings in a semi-rural context with farmland and a small area of woodland. There is also an airside section which forms part of the St Athan Airfield.

1.3 The installation of the utilities services route will involve the excavation of trenches. These will be approximately three metres deep and two metres wide for foul & surface water drainage, and one metre deep and up to three and a half metres wide for the electric cabling and other services. The working area either side of the trenches will be up to five metres. The topsoil will be put to one side while water pipes, electricity cables and spare ducting are installed. This will cause a temporary disturbance, until the service connections have been completed and the trenches backfilled. Some designated storage areas will also be needed across the site; these will be agreed in consultation with the supervising ecologist and be situated away from ecologically sensitive areas.

1.4 It is understood that a small number of trees and shrubs will need to be removed to facilitate the trenches. There is potential for various protected species to be impacted by the works.

1.5 **Additionally, an existing substation within Bro Tathan East, serving the neighbouring Aston Martin Lagonda (AML) compound is proposed for demolition under a separate application (Ref: 2023/00949/FUL).**

1.6 The purpose of this report is to assess the likely impact of the proposed works on protected species and habitats. Appropriate mitigation measures will be suggested to minimise the risk of any protected species being harmed. Detailed method statements will be provided in a Wildlife Protection Plan. Appropriate biodiversity enhancement measures are also described.

2.0 Data Trawl

2.1 Designated Wildlife Sites in the Vicinity

2.1.1 The site does not lie within or adjacent to any statutory or non-statutory designated wildlife sites.

Statutory Sites

2.1.2 Several coastal Sites of Special Scientific Interest (SSSI) are located about 2km from the site, including the East Aberthaw Coast SSSI, Kenfig National Nature Reserve (NNR) and Merthyr Mawr Warren SSSI. The Glamorgan Coast and the adjacent Severn Estuary are variously designated at both the national and international level (Data from https://magic.defra.gov.uk/MagicMap.aspx).

Non-statutory Sites

2.1.3 Ox Moor Wood, Coed Llancadle and East Orchard Wood Sites of Interest for Nature Conservation (SINC) lie within 2km to the east of the site, and Cwm Colhuw SINC about 2km to the south-west. Many more such sites are present within the surrounding parts of the wider Vale of Glamorgan, which is an area of moderate to high biodiversity value (Data from South-East Wales Biological Records Centre (SEWBReC data 2023)).

2.2 Existing Species Records

2.2.1 Existing records for the site which are in the public domain have been obtained from the South-East Wales Biological Records Centre (SEWBReC). The site formed part of an area which was subject to previous proposals for redevelopment as part of a Defence Technical College and Aerospace Business Park, for which numerous ecological surveys were carried out. More recent surveys have been carried out on the wider Bro Tathan site between 2019 and 2023. Reference to these survey reports is also made when relevant (DCE 2021a-b; 2022a-e; 2023a-f). Relevant legislation is described at Appendix 1.

Bats

2.2.2 There are records of small numbers of brown long-eared bat roosting within an unspecified building at the airbase. There are also a number of other roost records within 1km of the site, including for common pipistrelle and Natterer's bat. Lesser horseshoe bat, a species of high conservation priority is known from a roost approximately 3.85km to the east of the site. There also records of commuting noctule, serotine, soprano pipistrelle, lesser horseshoe bat and whiskered from bat within 2km of the site (SEWBReC data 2023).

2.2.3 Recent surveys have identified more than twenty buildings across the site with bat roosts of common and soprano pipistrelle, brown long-eared bat and serotine (DCE 2023a).

Dormouse

2.2.4 Recent records exist within the data trawl for dormouse approximately 1.2km away from the site, of a single adult dormouse, a dormouse nest and a potential dormouse nest (SEWBReC data 2023). Two dormouse nests were found in Bro Tathan North (DCE 2022b) and a potential dormouse nest in West Orchard (DCE, 2023g) during surveys in 2022.

Other Mammals

2.2.5 The 'Section 7' listed species of conservation concern of brown hare and hedgehog occur across the site, with sightings and records indicating that they are well established both within the airbase and the wider vicinity. Otter, a protected species, is also known to occur

in the wider vicinity of the site, with recent records from watercourses immediately to the south and east of the airbase within 0.5km (SEWBReC data 2023), as well as on other watercourses elsewhere at greater distances. Badger, also a protected species although not on biodiversity conservation grounds, also occurs the wider vicinity of the site. A road casualty was noted on Llantwit Road, close to the entrance to West Orchard in 2022. Fox has also been sited during surveys of Bro Tathan North, Bro Tathan East and West Orchard. Other mammals on the site include rabbit, wood mouse, brown rat and mole; a range of common and ubiquitous species such as mice, voles and shrews etc are also likely to occur (DCE 2022a).

Nesting Birds

2.2.6 Approximately thirty species of bird have been recorded as confirmed, probably or possibly nesting on the site in recent surveys (DCE 2022b; 2023b). Species of conservation concern include skylark, whitethroat, yellowhammer, mistle thrush and linnet. Barn owl is known to roost and forage within Bro Tathan North and Bro Tathan East but is not known to nest anywhere on the site (DCE 2023e).

Reptiles

2.2.7 There are recent records of slow worm and grass snake for the wider site, through various surveys. Common lizard is also highly likely to be present in some areas (DCE 2022d).

Amphibians

2.2.8 The ponds at West Orchard, Beggars Pound and The Rotary Zone support a population of great-crested newt, as well as palmate newt. Common toad and common frog have also been recorded recently on the site (DCE 2022e; 2023f).

Invertebrates

2.2.9 Lepidoptera recorded on the site to date comprise at least eight species of butterfly: small tortoiseshell (*Aglais urticae*), small copper (*Lycaena phlaeas*), meadow brown (*Maniola jurtina)*, green veined white (*Pieris napi*), small white (*Pieris rapae*), common blue (*Polyommatus icarus*), red admiral (*Vanessa atalanta*) and painted lady (*Vanessa cardui*). Two local moths were also recorded during surveys, comprising both larvae and adults of 5-spot burnet moth (*Zygaenae trifolii*), and cinnabar moth (*Tyria jacobaeae*), a 'Section 7' species. A wide range of other invertebrates, including some less common, local and priority species have been recorded across the site (DCE 2022a).

Plants

2.2.10 A few local plants have been recorded in Bro Tathan East, including field madder (*Sherardia arvensis*), wild chive (*Allium schoenoprasum*), early forget-me-not (*Myosotis ramosissima*) and hawkweed ox tongue (*Picris hieraciodes*) (DCE 2022a).

3.0 Methodology

3.1 The route of the proposed Utilities Rain Main and additional connections was subject to a walkover survey based on the Extended Phase 1 Survey/Preliminary Ecological Appraisal methodology in accordance with the guidelines published by the Chartered Institute of Ecology and Environmental Management (CIEEM 2017). The initial survey was carried out on 22nd June 2022. Further surveys took place on 14th and 16th June 2023. All surveys were carried out in good weather. **The surveys included a ground level assessment of all trees that could be affected by the proposed development, as well as an external building inspection of the existing AML substation, following the Bat Conservation Trust (BCT) guidelines that were in place at the time (BCT 2016).**

3.2 The majority of the Bro Tathan site has been surveyed extensively over the past four years. Extended Phase 1 Ecological surveys and Phase 2 protected species surveys have been carried out recently at Bro Tathan East (DCE 2022a); Bro Tathan South (2021a); The airside area (Rotary Zone) (DCE 2021b) and Bro Tathan North (DCE 2022b). Relevant details of the results, data searches and assessments from these surveys have been used to supplement the present report. Additionally, a preliminary ecological appraisal was carried out recently at a section of the route through an area of MOD West Camp, as this area had not been surveyed previously. This report is included in Appendix 3.

3.3 Detailed information on protected species legislation relevant to this report is included in Appendix 1. There is a distinction between European protected Species (EPS), including all species of bats, great-crested newt and dormouse which have a higher level of protection and species protected under the Wildlife & Countryside Act. Depending on the level of risk, works with the potential to affect EPS may require the prior application for a derogation licence, including a detailed method statement from Natural Resources Wales (NRW). In certain instances, it may be possible for works that present a minimal risk of harming EPS or their habitats to be carried out under a non-licenced method statement. Work affecting species such as reptiles or nesting birds, which are protected under the Wildlife & Countryside Act require works to be carried out under an appropriate method statement; a licence is not required.

4.0 Results

4.1 *Bro Tathan North*

4.1.1 The proposed route of the trench mainly runs alongside the existing access road within semi-improved neutral grassland. The northern end of the route ends at the former Dresd Studios compound. The route also crosses hard standing areas and grassland close to the existing buildings within the business park, as well as through an improved agricultural field, that is usually grazed by sheep.

4.1.2 The semi-improved grassland is generally species-poor and mainly comprises mixtures of grasses such as Yorkshire fog, perennial rye-grass, cock's-foot and false oat-grass. Sweet vernal, creeping bent and common bent are all locally frequent within the sward. Frequent broad-leaved species include daisy, creeping buttercup, creeping cinquefoil, yarrow and ribwort plantain. Locally frequent species include bird's-foot trefoil, white clover and red clover.

4.1.3 A small population of slow worms are known to be present in the grassland towards the north of the site.

4.1.4 Skylark is known to nest in the fields close to the access road but is unlikely to be present in the area around the proposed trench.

Bro Tathan North

4.2 ***Bro Tathan West***

4.2.1 The route through Bro Tathan West also generally follows the existing access road through species-poor semi-improved neutral grassland. The route branches out away from the ring main near Eglwys Brewis. The southernmost part of this section of the route will run between a small group of mature sycamore, close to the airfield fence; it is considered unlikely that any trees will need to be removed in this area.

4.2.2 North of MOD West Camp a trench will run through an overgrown area of mostly ruderal vegetation, with some patches of scrub. The ruderal vegetation is dominated by nettle, with other species present including creeping thistle, teasel and scattered bramble. The route also passes through small areas of dense bramble and blackthorn scrub. A more detailed description of the vegetation in this part of the site is provided in Appendix 3 and Plan 3.

4.2.3 The grassland along the access road verge and between the buildings of Bro Tathan West, is dominated by cock's foot, Yorkshire fog and bent grasses, but also has a variety of forbs in some areas, including ladies-bedstraw, bird's-foot trefoil, cat's ear, autumn hawkbit, common knapweed and red clover. The grassland does not appear to quite reach the SINC criteria, however.

4.2.4 Nesting birds are likely to occur in the mature trees close to the route and also in the areas of scrub near MOD West Camp. **One tree (T662), a semi-mature black poplar and a small section of a group of semi-mature blackthorn and elm (G725) will need to be removed in this area. Another tree (T700), a Norway maple may also require removal. All of these trees were assessed as having negligible potential for roosting bats.**

4.2.5 The patches of scrub habitat are poorly connected to other dormouse habitat, but the presence of this species cannot be ruled out entirely as it has been recorded along the Northern Access Road and in Bro Tathan North.

Bro Tathan West and Airfield Fence

4.3 ***Airside Areas (Including Rotary Zone)***

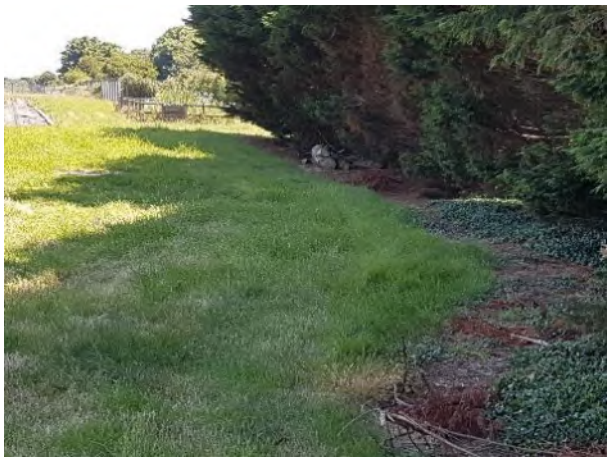
4.3.1 The airfield mainly consists of species-poor semi-improved grassland (planted specifically to reduce the attraction of the habitat for birds and other wildlife, in order to reduce bird-strike). There is a line of conifer trees along the southern section of the Rotary Zone, close to the route of the proposed trench. The route continues past a small pond and then through a horse paddock within Batslays farm (see Plan 4). The paddock was grazed short at the time of the survey, but appears to be species-poor grassland, including some ruderal species such as common nettle and creeping thistle.

4.3.2 The grassland on the airfield mainly comprises mixtures of grasses, with Yorkshire fog, red fescue, false oat-grass, cock's-foot and creeping bent-grass all occurring frequently. Frequent broad-leaved species include daisy, creeping buttercup, yarrow, common cat's-ear, field bindweed, creeping cinquefoil, ribwort plantain and silverweed. Species such as knapweed and red clover occur occasionally throughout the sward and possibly indicate a former higher quality neutral grassland habitat (DCE 2021b).

4.3.3 Skylark is known to nest within some areas of the airfield. The conifer trees and sections of hedgerow within Batslays Farm are also highly likely to be used by nesting birds.

4.3.4 Great-crested newt (GCN) is present in the pond in the southeast corner of the Rotary zone. There are a number of log piles and other potential habitats along the southern fence line, likely to be used by GCN, as well as common amphibians and reptiles. GCN are also likely to be found in the grassland areas of the Rotary zone, but a line of permanent newt fencing between the ponds at Beggar's Pond and West Orchard and the main airfield makes it unlikely that this species occurs on the other sections of the airfield, outside the Rotary zone.

4.3.5 A small section of a managed hedgerow (H729) will need to be removed from the airfield to facilitate the utilities trench.



Rotary Zone

Airfield

4.4 ***Bro Tathan South***

4.4.1 The proposed route of the trench runs adjacent to Llantwit Road, through a semi-improved neutral grassland verge, adjacent to the fence along the airfield boundary. It then enters the West Orchard fields and runs close to the airside fence, through the Beggar's Pound compound and terminating at Cowbridge road. The affected habitats within West Orchard and Beggar's Pound are mainly semi-improved neutral grassland (see Plan 5).

4.4.2 The grasslands comprise mixtures of mainly Yorkshire fog, creeping bent and common rye-grass with occasional timothy and cock's-foot, together with common broadleaved grassland herbs such as creeping buttercup, white clover, dandelion, ribwort plantain and common mouse-ear, etc. Tall coarse grassland species such as thistles (*Cirsium* spp), docks (*Rumex* spp) and ragwort are scattered throughout (DCE 2020; 2021a).

4.4.3 The hedgerows, woodland and bramble scrub areas are used by a range of nesting bird species. Skylarks are known to nest on the airfield grassland to the north of the proposed route of the trench through West Orchard.

4.4.4 A number of the ponds within West Orchard are used by great-crested newt (GCN) and therefore this species is also likely to be present in the adjacent habitats (DCE 2022e). GCN is also present in ponds within the woodland at Beggars Pound, but a section of permanent newt fencing is situated between the site and the ponds (see Plan 6). The newt fencing is monitored annually for damage and repairs carried out under licence. The vegetation either side of the fence line is strimmed twice a year.

Permanent Newt Fence (Beggars Pound)

West Orchard

4.5 ***Bro Tathan East***

4.5.1 The route of the trench will run parallel to the main road along the boundary of Bro Tathan East and close to the existing access road near Aston Martin Lagonda. The trench will be situated within a semi-improved neutral grassland verge of similar composition to elsewhere on the site, with species including Yorkshire fog, cock's foot, false-oat grass, creeping buttercup, white clover, red clover, creeping cinquefoil and bird's-foot trefoil.

4.5.2 **Two trees: a Norway maple (T43) and a sycamore (T47) and sections of two tree groups (G11, including specimens of alder, cherry laurel, Scots pine and G15, a line of leyland cypress), will be removed at Bro Tathan East. All of these trees were assessed as having negligible potential for roosting bats.**

4.5.3 There are two bat houses within Bro Tathan East, close to the northeast boundary with Cowbridge Road. A small number of the mature trees in this area have potential roosting features that could be used by bats, but no evidence of bats has been found during recent ground level and aerial surveys (**and none of these trees are due to be removed**).

4.5.4 The ornamental shrubs and mature trees are likely to be used by nesting birds.

Bro Tathan East

Building

4.5.5 **A substation associated with the Aston Martin Lagonda (AML) compound adjacent to Bro Tathan East is due to be relocated as part of the wider development. The existing AML substation was built approximately 4 years ago. The building is single-storey and approximately 11m by 5.5m. Brick built with a metal roof and fixtures, the building is very well sealed with negligible potential for use by roosting bats or nesting birds.**

AML Substation

5.0 Assessment

5.1 A summary of the main ecological constraints likely to be affected by the proposed works in each area of the site is shown on Plan 2.

5.2 There is a risk of nesting birds being affected by the removal of any habitats with potential for nesting or by disturbance caused by works in the vicinity of nesting habitat. Potential nesting habitat on the site includes trees, shrubs, bramble scrub and areas of grassland utilised by skylark.

5.3 Great-crested newt (GCN) is known to be present at Bro Tathan South and the Rotary Zone. There is a risk of GCN being harmed and a temporary loss of terrestrial habitat while the works are taking place. The trench in these areas will be up to 3.5m wide and 1m deep with a working area of 5m either side. It is estimated that approximately 50m of trench will be excavated each week and trenches will normally be backfilled each day. The risk of encountering GCN in other parts of the Bro Tathan site is considered to be negligible, due to the lack of records and absence of suitable breeding habitat, as well as the exclusion fencing between the GCN ponds and the airfield.

5.4 The mature trees close to the bat houses in Bro Tathan East are important for commuting and foraging bats and a small number have potential roosting features. It is understood that no trees will need to be removed from this area to facilitate the trench; therefore it is unlikely that bats will be affected, providing the trench is at least 5m away from the bat houses, to minimise potential disturbance. **The small number of trees that will need to be removed from Bro Tathan East and West are assessed as having negligible potential to support roosting bats.**

5.5 Dormouse are known to occur in parts of Bro Tathan North, West (Eglwys Brewis section) and South. It is understood that no dormouse habitat will be removed at Bro Tathan North, so the risk of disturbance is minimal. There will be some scrub clearance at Bro Tathan West, near MOD West Camp. Although it is considered unlikely that dormouse are present, due to the isolated nature of the patches of scrub, there is a small risk of disturbance.

5.6 Small numbers of slow worm have been found in grassland areas across the site, including Bro Tathan North, in an area likely to be directly affected by the proposed works. Grass snake has been recorded at Bro Tathan South. The overall potential for reptiles to be affected by the works are considered to be low.

5.7 Other species of conservation concern are known to be present across the site including brown hare, barn owl and hedgehog. Of these, there is potential for hedgehog to be harmed during the construction phase, particularly during the hibernation period when this species is most vulnerable.

6.0 Recommendations

Great-crested Newt (GCN)

6.1 Work taking place within the Rotary Zone and West Orchard is likely to require a NRW GCN derogation licence to be in place with a detailed method statement. It is likely to be most appropriate to carry out the excavation works in sensitive areas between March/ April and May/ June, when GCN are usually in the breeding ponds. The work in these areas will be carried out under the supervision of a suitably qualified and licenced ecologist.

6.2 Work at other parts of the site, where GCN is unlikely to occur, will take place under a reptile method statement (see below), which will also act as a non-licenced method statement for GCN. It will not be necessary to have a GCN derogation licence in place before carrying out work outside the Rotary Zone and West Orchard.

Dormouse

6.3 A non-licenced method statement for dormouse will be needed for the clearance of scrub habitats in Bro Tathan West, near the MOD West Camp. The works proposed for other areas of the site have minimal risk of disturbing dormouse and will be covered by a precautionary approach to works.

6.4 It should be noted that dormice hibernate at ground level during the winter at the base of hedgerows and under dead vegetation; therefore any works affecting these types of habitats will need to take place outside of the winter months.

Bats

6.5 **Bats are unlikely to be affected by the proposed works; however, if any additional trees, not named above, need to be pruned or removed, then a pre-works check for roosting bats will be carried out by a suitably qualified and licenced ecologist. Depending on the results of the initial assessment, further surveys may be needed. In the unlikely event that roosting bats are found then an EPS licence will be required before works can proceed.**

6.6 There is unlikely to be a need to carry out works close to the bat houses; any works within five metres will need to be assessed for the potential to cause a disturbance and will need to take place outside the sensitive maternity period (ie not between April/May and July/ August). None of the trees close to the bat houses are due to be removed.

Nesting Birds

6.7 Any work affecting habitats used by nesting birds including grassland areas used by skylark, as well as trees, shrubs, hedgerows and bramble scrub should take place outside of the nesting bird season (ie not between March and August). In some instances, it may be possible to carry out a pre-works nesting bird check during the nesting season to determine whether there is any nesting activity in the area. In the event of a nest being found, the route will be diverted to avoid disturbance.

Reptiles

6.8 Most areas of the site have some potential to support common reptiles, although the risk of any reptiles being affected by the works is considered low. A section of Bro Tathan North where work is proposed has recent records for slow worm; so, the likelihood of slow worm being encountered in this area is slightly higher; therefore, groundworks and removal of any potential reptile refugia will need to take place outside the reptile hibernation period (ie not between October/ November and March/ April).

Other recommendations

6.9 All protected species method statements, etc will be included within a Wildlife Protection Plan (WPP). A toolbox talk will be given to all contractors before works start to go over the WPP and to outline what procedures to follow if any protected species are inadvertently encountered.

6.10 Any trenches >0.5m in depth will either be covered at night or will be left with a gently sloped plank (or similar) running from the bottom to the surface to act as an escape ramp for any fauna which may fall in, including small mammal species such as hedgehog etc. Any exposed pipes and trenches must be checked for trapped wildlife each morning before starting construction activities.

6.11 Any ground works due to take place close to any mature trees will need to be assessed by a qualified arborist for potential effects on the root protection zone of each tree.

6.12 Replacement planting of trees and hedgerows (at a ratio of 2:1) will be required to compensate for any trees or hedgerows that need to be removed. Suitable native tree and shrub species will be sourced.

Biodiversity Enhancement

6.13 Although this proposal is unlikely to have a significant long-term impact on the ecological value of the site, it is good practice (and required by the LPA) for biodiversity enhancement measures to be incorporated into the development. As most of the grassland areas that will be affected by the installation of the utilities trenches are relatively species-poor, a suitable native wildflower seed mix will be sown on the disturbed ground following the backfilling of the trenches. An appropriate mix would be Emorsgate Standard General Wildflowers (EM2F), which is made up of species' largely present in the local area. Adding yellow rattle seeds, will help to suppress grass growth and allow wildflowers to thrive. The grasslands around the Bro Tathan West buildings are already relatively species rich; wildflower seed will not be added to these areas. No wildflower seed will be added to the grasslands on or adjacent to the airfield, to avoid attracting wildlife that may increase the risk of bird-strike.

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Revisions : Additional information added on bat surveys and other minor changes following NRW comments.

APPENDIX 1: STATUTORY & POLICY FRAMEWORK FOR BIODIVERSITY

The following sets out a brief review of the key legal and key policy elements affecting wildlife species in Wales. It is not intended to be comprehensive and only the most recent and relevant articles are mentioned.

The review sets out our interpretation and understanding of key elements of the legislation and policy insofar as they apply to typical planning and development operations, based on our experience. The interpretations given below are for guidance only, however, and do not constitute legal advice. In all cases the reader is advised to consult the original legal and policy documents for the definitive wordings, and where necessary to obtain qualified legal advice.

The Conservation of Habitats & Species Regulations 2017 ('Habitats Regulations')

The Habitats Regulations were originally enacted to implement the obligations of ***EU Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora & Fauna*** (the 'EU Habitats Directive') into British law, and in so doing created the highest tier of legal protection for wildlife species in UK, the so-called 'European Protected Species' (EPS). These species include, *inter alia*:

- All species of bats
- Hazel dormouse ('dormouse')
- Eurasian Otter ('otter')
- Great crested newt
- Natterjack toad
- Sand lizard
- Smooth snake

The Regulations also cover a small number of very rare plant species such as lady's-slipper orchid.

The requirements of the Habitats Regulations were given continuance following the UK's withdrawal from the EU ('Brexit') in 2019 by the ***Conservation of Habitats & Species (Amendment) (EU Exit) Regulations 2019***, and therefore continue to apply unchanged at the time of writing. EPSs are hereafter referred to as 'Habitats Regulations Species' (HRS) to reflect this change in the legislative framework.

In summary, and *inter alia*, all HRS animal species are protected as individuals against deliberate killing, injury, capture or disturbance, at all stages of their lives, and in addition, the places used for breeding or resting by these species may not be damaged or destroyed. Breeding and resting places are also afforded protection against deliberate disturbance, or the blocking of access, under the amended ***Wildlife & Countryside Act 1981*** (see below). HRS plant species may not be picked (in any part), collected, uprooted or destroyed at any point in their life cycle.

The main exceptions to these provisions are either that the activities were authorised by the relevant statutory body (in this case, Natural Resources Wales – NRW) and, where required, were carried out under a licence ('derogation') obtained in advance. Offences which occur as an incidental result of some other otherwise lawful activity (ie 'accidental' or 'unintentional' offences) are not exempt under the Regulations but may be viewed more leniently where (a) they could not reasonably have been foreseen, (b) the activity causing the offence ceased as soon as the presence of HRS, or their habitats, became apparent, and (c) NRW were informed immediately and appropriate expert advice sought to evaluate and remediate the situation.

Bats

The legal protection covers any place or feature which is used for resting during the day ('day roosts') and also any places which are used for hibernation in winter. Places which are used for short periods of resting at night ('night roosts'), or as customary stations for the handling and processing of food ('feeding perches'), are not usually accorded the same level of importance as day roosts and hibernation sites, although they are in fact still subject to the Regulations and in some cases may be deemed important enough to be accorded full protection.

Dormouse

Protection is usually considered to extend to any habitat, such as woodland, scrub, hedgerows and bramble stands etc, where dormouse occurs and where nests may therefore be present. The continuity of the habitats occupied by dormouse with other areas of similar connecting habitat may also be a matter for statutory consideration under the Regulations.

Otter

Protection is usually considered to extend to any watercourse or waterbody which is used by otter, and which may therefore contain nests or resting places ('holts'). It also extends to any areas of terrestrial habitat away from

watercourses and waterbodies where these also contain holts, and the connectivity of such places with the occupied aquatic habitats may also be a matter for statutory consideration under the Regulations.

Great crested newt

Protection is usually considered to extend to any watercourse or waterbody which is occupied by great crested newt (GCN), and which may therefore be used for breeding. It also extends to any terrestrial habitats used by GCN during its non-aquatic phases, especially those places which are used for hibernation in winter or sheltering during adverse weather conditions. Typically the latter will be physically connected to a breeding pond (or ponds) but may lie anything up to 2km away. At minimum, a terrestrial hinterland of 10m width around the edges of a breeding pond will be considered to be protected where this contains habitats which are suitable for terrestrial use by GCN.

Protected Sites

The Habitats Regulations also set out to protect certain rare and valuable habitat types, such as ancient semi-natural woodland, heathland, bogs and species-rich grasslands etc. This is done through the identification and designation of specifically protected sites known as Special Areas of Conservation (SACs). SACs are subject to the highest level of legal protection against damage, destruction, degradation or harmful uses or activities which is available in the UK. All such sites are also designated as Sites of Special Scientific Interest (SSSIs) under the Wildlife & Countryside Act 1981 (see below).

The Wildlife & Countryside Act 1981 (WCA)

This much amended and complex piece of legislation is the means by which protection is afforded at the next tier of species below the HRSs and is the primary source of protection in respect of birds. Species afforded protection under the WCA include, *inter alia*:

- All species of birds
- Water vole
- Red squirrel
- Common reptiles (ie slow-worm, common lizard, grass snake, adder)
- Marsh fritillary butterfly
- Pearl mussel
- Various plants, ferns, mosses, liverworts, lichens & fungi

Birds

In summary, all wild birds are protected against deliberate killing, injury or capture, and this protection extends to their eggs and young. It is also illegal to destroy, damage or remove the nest of any bird either while it is in use or being built. For certain rare species which are listed on Schedule 1 of the Act the protections go even further: it is illegal to disturb any Schedule 1 bird species, either deliberately or unintentionally ('recklessly'), while it is building a nest or actually nesting, or to disturb the dependant young of any such bird. Exceptions to these general principles affect some specific game, food or pest species, but only under certain specified and defined conditions and usually in accordance with a licence issued in advance by NRW.

Actions which cause an adverse impact to birds or their nests which arise as an incidental result of some otherwise lawful activity, such as the trimming or removal of hedges, trees or scrub for example, would not constitute an offence provided that the activity could not have reasonably been avoided. As a general result of the provisions of the WCA therefore, the deliberate destruction, removal or clearance of habitats containing nesting birds would almost invariably constitute an offence because the impacts to birds could reasonably have been foreseen and avoided, for example by carrying out the clearance activities at a time when birds are not nesting.

Except under certain specified conditions, the clearance or removal of nests or nesting habitats is generally not illegal if it is carried out at a time of year when no birds are nesting or if it can otherwise be shown that no nesting birds are present at the time (eg by means of advance survey).

Activities which might adversely affect Schedule 1 birds such as barn owl, kingfisher or birds of prey can be undertaken provided a licence has been obtained in advance from NRW and appropriate mitigation measures are put in place.

Animals Other than Birds

Animals other than birds, such as water vole, red squirrel, marsh fritillary and pearl mussel for example, are listed on Schedule 5 of the Act, and are afforded protection which is generally similar to that of HRSs. The individual animals

may not be deliberately killed, injured or captured, in any of their life stages, and it is also illegal to destroy or damage any places which these animals use for shelter or protection, or to disturb an animal using such a place or obstruct access to it, whether deliberately or unintentionally.

As with birds, impacts to Schedule 5 animals which arise as an incidental result of an otherwise lawful activity do not constitute an offence provided those impacts could not have reasonably been foreseen and avoided.

Water Vole & Red Squirrel

In the case of nest-making animals such as water vole and red squirrel, protection will normally be taken to extend to the entirety of any suitable, or potentially suitable, nesting or sheltering habitats which are occupied by a residential population of the species concerned. The connectivity of these habitats with other similar habitats in the wider vicinity may also be a matter for statutory consideration.

Marsh Fritillary Butterfly & Pearl Mussel

For species which do not make nests, protection will normally be taken to extend to the entirety of any habitats which are suitable, or potentially suitable, for breeding or sheltering and which are occupied by a residential population of the species concerned. The connectivity of these habitats with other similar habitats in the wider vicinity may also be a matter for statutory consideration.

Common Reptiles

Slow-worm, common lizard, grass snake and adder are afforded so-called 'partial protection' under the WCA. The animals themselves may not be deliberately killed or injured, but they may be captured and the habitats which support them are not afforded any direct protection in themselves.

As with other Schedule 5 animals, adverse impacts which arise as an incidental result of an otherwise lawful activity do not necessarily constitute an offence provided those impacts could not reasonably have been foreseen and avoided. Under current interpretation this is taken to mean that the destruction or clearance of habitats which are known to support common reptiles, or where such reptiles could reasonably be expected to occur, without the implementation of measures to minimise or avoid causing incidental death or injury to reptiles, would be likely to constitute an offence.

Protected Plants

About 180 species of plants, ferns, mosses, liverworts, lichens and fungi are afforded protection under Schedule 8 the WCA. These may not be intentionally picked (in any part), uprooted or destroyed, unless authorised under licence. As with Schedule 5 animals, adverse impacts which arise as an incidental result of an otherwise lawful activity do not necessarily constitute an offence provided those impacts could not reasonably have been foreseen and avoided.

Protected Sites

The WCA also sets out mechanisms for the protection and conservation of habitats and features of high biodiversity value through the identification and designation of specifically protected sites. These include Sites of Special Scientific Interest (SSSIs), National and Local Nature Reserves (NNRs/LNRs) and National Parks etc. Such sites are subject to wide-ranging legal protection against damage, destruction, degradation, exploitation or other harmful activities or uses.

The Protection of Badgers Act 1992 (PBA)

Badger is protected primarily in relation to animal welfare and cruelty, as a result of illegal persecution. Badgers are protected against intentional killing, injury, 'cruel ill-treatment' or capture in all of their life stages. Their nesting burrows ('setts') may not be destroyed, damaged, dug into or obstructed and it is illegal to disturb a badger while occupying a sett, either deliberately or 'recklessly' (ie unintentionally as a result of failure to take due care). The PBA is also taken to confer a degree of protection to foraging areas which are critical to the support of a badger family-group ('clan') where the loss of this would otherwise result in their starvation. As with other protected species, adverse actions which arise as a result of an otherwise lawful activity do not constitute an offence provided those impacts could not reasonably have been foreseen and avoided. A number of specified exemptions are provided in connection with certain legal farming and fox-hunting activities which may impact badgers.

The protection of setts only applies to those which are in 'current use' and not to those which are abandoned. However, many badger setts are occupied only intermittently throughout the year and therefore 'current use' should not be taken to imply *continuous* use.

Actions to remove badger setts on development sites may be undertaken under a licence issued by NRW and in accordance with agreed mitigation measures, and licences may also be issued to allow the removal or exclusion of badgers from sites. Such operations may not occur during the breeding ('close') season, however, which is usually taken to be between December to June inclusive, due to the risk of trapping lactating females and young below ground.

Environment (Wales) Act 2016 (EWA)
Section 7 of the EWA contains the most recent lists of species and habitats which are considered to be of 'principal importance for the conservation of biodiversity in Wales'. These lists replaced those which were previously given under s.42 of the ***Natural Environment & Rural Communities Act 2006***, which in turn replaced the 'Priority Species' listed under the UK Biodiversity Action Plan of 1995 and its Welsh equivalent. Species listed under s.7 of the EWA include many of those afforded protection under the articles described above, including otter, dormouse, water vole, nesting birds, common reptiles and great crested newt, for example, as well as additional species such as:

- W. European hedgehog ('hedgehog')
- Brown hare
- Harvest mouse
- Polecat
- European eel ('eel')
- Atlantic salmon ('salmon')
- Brown & sea trout
- Garden tiger moth
- Cinnabar moth
- Small heath butterfly
- Hornet robberfly
- Shrill carder bee
- Flat sedge
- Wild chamomile
- Common toad

and many other plant and animal species which are not otherwise specifically afforded statutory protection for wildlife conservation reasons (although they may in some cases be afforded some element of protection for other reasons, such as animal welfare or cruelty).

Section 7 of the EWA also identifies a number of habitat-types which are of 'principal value for conservation in Wales'. These include:

- Lowland mixed deciduous woodland
- Hedgerows
- Lowland meadows
- Upland flushes, fens & swamps
- Purple moor-grass & rush-pastures (in Wales, often referred to as 'rhos pastures')
- Reedbeds
- Blanket bog
- Sand dunes
- Rivers & ponds

Although not protected as such, the EWA requires statutory authorities to take such 'Section 7' species and habitats into account when considering the management and development of sites in Wales, and to take "*all reasonable steps*" to maintain and enhance their populations. The presence of such species and habitats is a 'material consideration' on sites where planning permission is sought for development. ***Planning Policy Wales (2021)*** (PPW, 11th Edition) requires Local Planning Authorities (LPAs) to have regard to the presence of 'Section 7' species and habitats and to avoid adverse impacts as a result of development wherever possible. Developments which are considered essential in the public interest must seek to minimise adverse impacts and incorporate appropriate mitigation/compensation measures where adverse impacts cannot be avoided.

Sites of Importance for Nature Conservation (SINCs)
SINCs comprise so-called 'third-tier' sites which have been identified as having biodiversity conservation value at the sub-national (ie regional, county, county-borough or local) level. They are usually identified by the LPA, often in collaboration with other local conservation bodies such as the county Wildlife Trust, and may appear under range of different names (eg 'Wildlife Site', 'County Wildlife Site' etc). Such sites are not specifically protected in law (ie they are 'non-statutory') but they are recognised as a 'material consideration' on sites where planning permission is sought for development. As with 'Section 7' habitats, PPW (2021) requires LPAs to avoid adverse impacts as a result of development wherever possible, and developments which are considered essential in the public interest must incorporate appropriate mitigation/compensation measures where adverse impacts cannot be avoided.

Invasive Non-native Species
Schedule 9 of the ***Wildlife & Countryside Act (1981)*** sets out lists of plant and fauna species which are subject to statutory regulation in Britain. These currently include plants such as Japanese knotweed (*Fallopia japonica*), Himalayan balsam (*Impatiens glandulifera*) and wall cotoneaster (*Cotoneaster horizontalis*), and animals such as signal crayfish, aquarium terrapin, Asian hornet and copyu. The lists are updated regularly.

The import, sale, transport, cultivation and keeping of these species is generally forbidden except under a specially issued licence, and it is illegal to allow these species to escape or spread into the wild, either deliberately or

by accident. This includes any part and all life-stages of the species concerned. Earthworks which might accidentally result in the transfer of Schedule 9 plant material to another location or which encourages it to spread either within or off the site, for example, is forbidden. Any works on a site which might involve contamination by, and potential spread of, any of the listed species must be carried out under an approved method statement designed to prevent them being accidentally dispersed off of or within the site, and which preferably results in their complete elimination wherever this is possible.

APPENDIX 2: PLANT SPECIES RECORDED

All species recorded by DCE, 2022 -2023 (unless otherwise indicated)

Species	Common Name	Contributory Species for potential SINC designation							Comments
		AM	NG	AG	MG	CG	W	PI	
Acer campestre	field maple						X		
Acer pseudoplatanus	Sycamore								
Aesculus hippocastanum	Horse chestnut								
Alnus glutinosa	Alder								
Betula pendula	Silver birch								
Buddleja davidii	Buddleia								
Chaemacyperis lawsoniana	Lawson's cypress								
Corylus avellana	Hazel								
Crataegus monogyna	Common hawthorn								
Fagus sylvatica	Beech								
Fraxinus excelsior	Ash								
Ilex sp	Garden holly								
Malus sp	Cultivated apple								
Pinus sylvestris	Scot's pine								
Platanus x hybrida	London plane								
Populus sp	Hybrid poplar								
Prunus laurocerasus	Cherry laurel								
Prunus sp	Cherry								
Prunus spinosa	Blackthorn								
Quercus robur	Pedunculate oak								
Rosa sp	Wild rose								
Rubus fruticosus agg	Bramble								
Salix sp	Willow								
Sambucus nigra	Elder								
Sorbus acuparia	Rowan								
Tilia sp	Lime								
Achillea millefolium	Yarrow								
Agrostis capillaris	Common bent								
Agrostis stolonifera	Creeping bent								
Anagalis arvensis	Scarlet pimpernel								
Anthoxanthum odoratum	Sweet vernal-grass								
Arrhenatherum elatius	False oat-grass								
Bellis perennis	Daisy								
Carex sp	Sedge								
Centaurea nigra	Common knapweed		X			X			
Cerastium fontanum	Common mouse ear								
Chamerion angustifolium	Rosebay willowherb								
Cirsium arvense	Creeping thistle								
Cirsium vulgare	Spear thistle								
Convolvulus arvensis	Field bindweed								
Cynosurus cristatus	Crested dog's-tail								
Dactylis glomerata	Cock's-foot								
Dipsacus fullonum	Teasel							X	
Epilobium hirsutum	Great willowherb								
Epilobium sp	Willowherb								
Equisetum arvense	Field horsetail								
Festuca rubra	Red fescue								
Filipendula ulmaria	Meadowsweet				X				

Species	Common Name	Contributory Species for potential SINC designation							Comments
Galium aparine	Cleavers								
Galium verum	lady's bedstraw		X			X			
Geranium dissectum	Cut-leaved crane's-bill								
Geranium robertianum	Herb-robert								
Glechoma hederacea	Ground ivy								
Hedera helix	Ivy								
Helminthotheca echioides	Bristly ox-tongue							X	
Heracleum sphondylium	Hogweed								
Holcus lanatus	Yorkshire Fog								
Hypericum macculatum	Imperforate St John's-wort		X						
Hypochoeris radicata	Common cat's ear		X						
Juncus effusus	soft rush								
Lapsana communis	Nipplewort								
Leontodon hispidus	Rough hawkbit		X			X			
Leucanthemum vulgare	Ox-eye daisy		X						
Lolium perenne	Perennial rye-grass								
Lotus corniculatus	Bird's foot trefoil		X			X		X	
Medicago lupulina	Black medick					X			
Myosotis arvensis	Field forget me not								
Persicaria macculata	Redshank								
Phleum pratense	Timothy grass								
Phyllitis scolopendrium	Hart's-tongue fern								
Plantago lanceolata	Ribwort plantain								
Plantago major	Broad leaved plantain								
Poa annua	Annual meadow grass								
Poa pratensis	Smooth meadow-grass								
Potentilla anserina	Silverweed								
Potentilla reptans	Creeping cinquefoil								
Prunella vulgaris	Self-heal								
Ranunculus acris	Meadow buttercup								
Ranunculus repens	Creeping buttercup								
Rumex acetosa	Sorrel							X	
Rumex crispus	Curled dock								
Rumex obtusifolius	Broad-leaved dock								
Senecio jacobaea	Ragwort								
Senecio vulgaris	Groundsel								
Silene dioica	Red campion								
Sisymbrium officinale	Hedge mustard								
Sonchus asper	Prickly sow-thistle								
Taraxacum officinale agg	Common dandelion								
Trifolium dubium	Lesser trefoil								
Trifolium pratense	Red clover		X						
Trifolium repens	White clover								
Tripleurospermum inodorum	Scentless mayweed								
Urtica dioica	Common nettle								
Veronica chamaedrys	Germander speedwell								
Viccia cracca	Tufted vetch		X						
Vicia sativa	Common vetch								
	TOTAL	**0**	**9**	**0**	**1**	**5**	**1**	**4**	

(**Bold**) = SINC Qualifying species
INNS = Invasive non-native species
AM = arable field margin, NG = neutral grassland, AG = acid grassland, CC = calcareous grassland,
MG = marshy grassland, W = woodland, PI = Post-industrial/Disturbed ground

APPENDIX 3: WEST CAMP SECTION – PRELIMINARY ECOLOGICAL APPRAISAL

Introduction

This short report describes and assesses the ecological status of a small section of the proposed Bro Tathan Utilities route, which has not been previously surveyed as part of the ecological assessment of the whole site.

The section of the route in question is approximately 265 metres long and stretches from an existing electrical sub-station next to the church on Eglwys Brewis Road, to the contractor's compound at the north end of Bro Tathan West. This section will require the installation of a foul drainage system only and will be approximately 2m wide and 3m deep, with a working area of up to 5m each side of the trench. The route largely passes through MOD land, which forms part of West Camp (see Plan 3). There are a number of piles of grass cuttings and brash scattered within this area and the ground is uneven, probably due to previous vegetation piles being left on site.

Methodology

Following an initial walkover survey on 14th June 2023, a Preliminary Ecological Appraisal (PEA)/ Extended Phase 1 habitat survey was carried out on 29th September 2023 in good weather conditions, The survey was based on the Extended Phase 1 Survey/Preliminary Ecological Appraisal methodology in accordance with the guidelines published by the Chartered Institute of Ecology and Environmental Management (CIEEM 2017). A GPS device was used in the field to identify the exact route of the proposed trench.

Habitats & Vegetation

Tall Ruderal: The majority of this section of the route consists of tall ruderal vegetation, dominated by nettle (*Urtica dioica*) and creeping thistle (*Cirsium arvense*), with teasel (*Dipsacus fullonum*), bristly ox-tongue (*Helminthotheca echioides*), field bindweed (*Convolvulus arvensis*), hogweed (*Heracleum sphondylium*), bramble (*Rubus fruticosus* agg) and dock (*Rumex* sp) also frequent. Small, isolated patches of dense bramble are also present in this area; however, the utilities route will not go through any of these patches.

Dense Blackthorn Scrub: There are two areas of dense blackthorn (*Prunus spinosa*) on the west and east side of the proposed utilities route (see Plan 3 for locations). The area to the east is approximately 2m high, with nettles growing underneath, but no other species present. The utilities route would pass through approximately 12m of this habitat.
The area close to the road to the west is approximately 7m high with bramble and other vegetation present in the section close to the road. The utilities route would pass through approximately 20m of this habitat.
The route will require the removal of a maximum of 384m^2 of blackthorn scrub.

Dense Bramble Scrub: There is a narrow band of dense bramble adjacent to the blackthorn scrub on the east side of this area (see Plan 3). The utilities route would pass through approximately 6m of this habitat. Up to 72m^2 of bramble scrub would therefore need to be removed.

Log Pile: Plan 3 shows the location of a log pile of the eastern edge of this area adjacent to the contractor's compound (marked with a Target Note).

Fauna
There are no trees, buildings or structures with potential to support roosting bats along the proposed utilities route, but commuting and foraging bats are likely to be present. The small areas of dense bramble and blackthorn scrub have some potential for dormouse. Otter is unlikely to occur on the site, due to the lack of suitable habitat nearby. It is possible that badger occurs on the site when commuting or foraging, although no signs of this species were found during the survey. The presence of a badger sett is unlikely, but some cover is provided within the dense scrub habitats, so this cannot be ruled out entirely. It is likely that hedgehog, a priority species, also occurs on the site.

A number of bird species were recorded during the surveys in and around the site, including robin, raven, blackbird, house sparrow, wood pigeon, magpie, jackdaw, blue tit, starling, long-tailed tit and goldcrest. It is likely that species such as robin, blackbird, house sparrow, dunnock and wren nest within the dense scrub habitats.

The site does not appear particularly suitable for common reptiles and amphibians, although it is possible that small numbers of species such as slow worm are present, at least on occasion. The rare and specially protected great-crested newt is highly unlikely to occur.

Red Admiral (*Vanessa Atalanta*) and the hoverfly (*Volucella zonaria*), a hornet mimic, were recorded during the surveys. It is likely that the site supports a range of common and ubiquitous invertebrate species.

Assessment of Impact of Development
The site is generally of low ecological value; however, the small areas of scrub have potential to support dormouse and nesting birds. Therefore, method statements for these species need to be in place during the site clearance. Badger and common reptiles also need to be considered.

The areas of scrub are suitable for dormouse, but quite isolated and poorly connected to the surrounding habitat. Also, there is no hazel present on the site and the diversity of dormouse food plants present is low. The disturbance due to the development will be of short duration and the scrub vegetation will be allowed to re-establish naturally, following the installation of the foul water drainage. There are not likely to be any long term negative effects on the dormouse population, provided appropriate mitigation measures are put in place.

Potential negative effects on nesting birds, badger and common reptiles can also be avoided with by following a precautionary approach to the site clearance.

Recommendations
A non-licensed method statement is recommended for dormouse and further method statements are required for nesting birds, badger and common reptiles. These should be included within a Wildlife Protection Plan (WPP) for the site.

As an enhancement, the planting of shrubs that provide additional sources of food for dormouse, such as hazel and honeysuckle should be considered.

Photos (September 2023)

Log Pile (Target Note) on east boundary

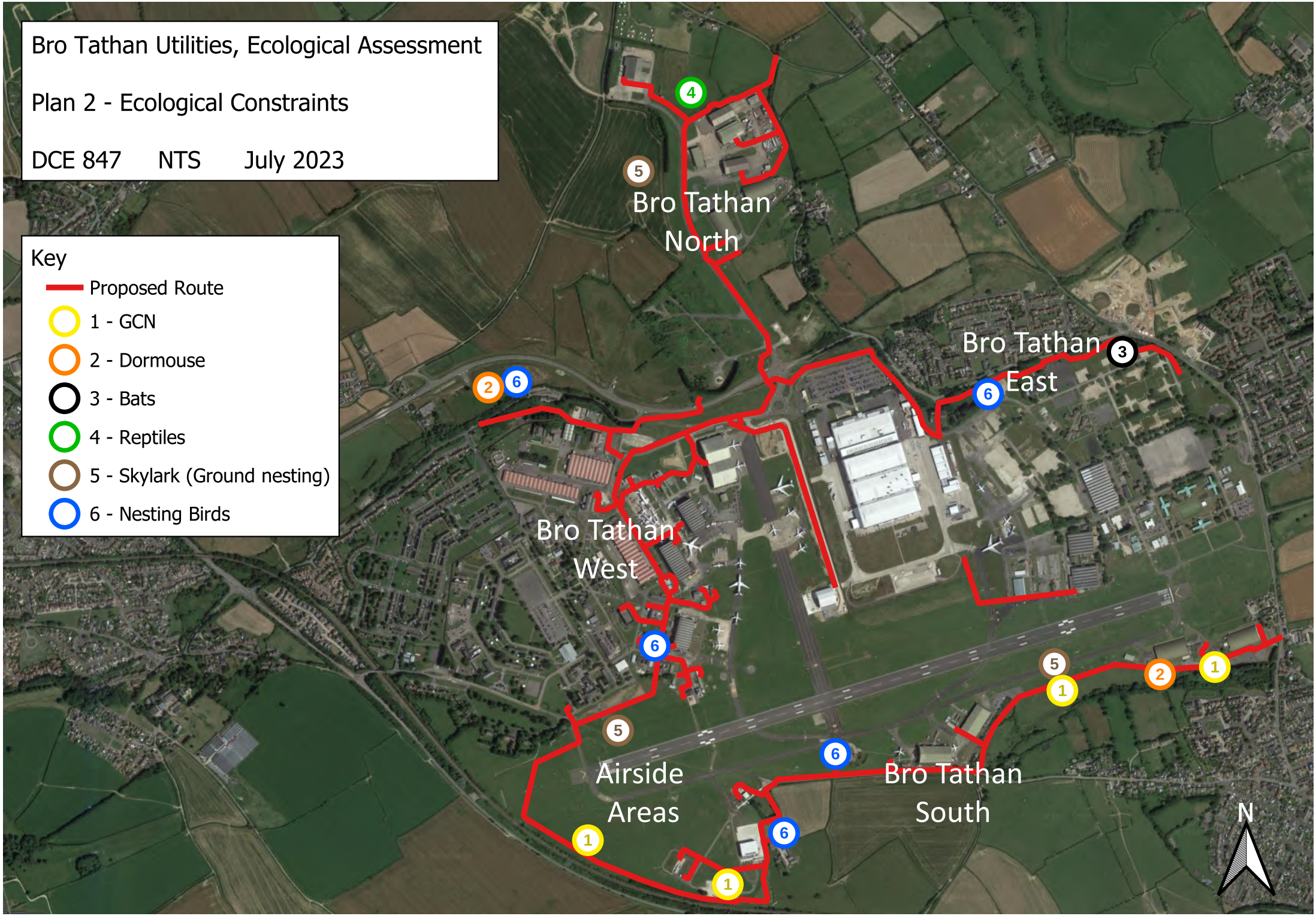
Tall Ruderal Vegetation at east end of route

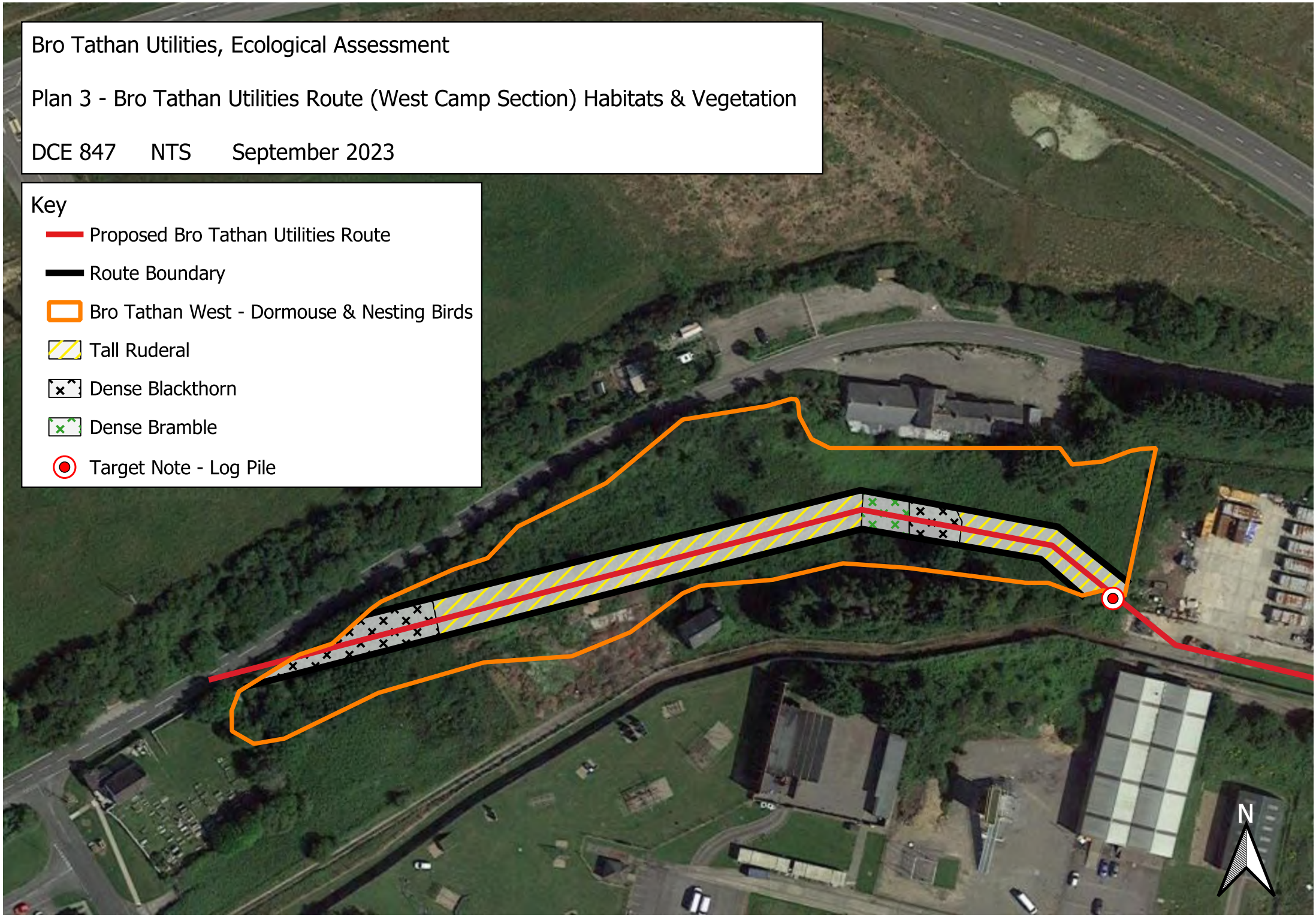
Dense Bramble and Dense Blackthorn (East)

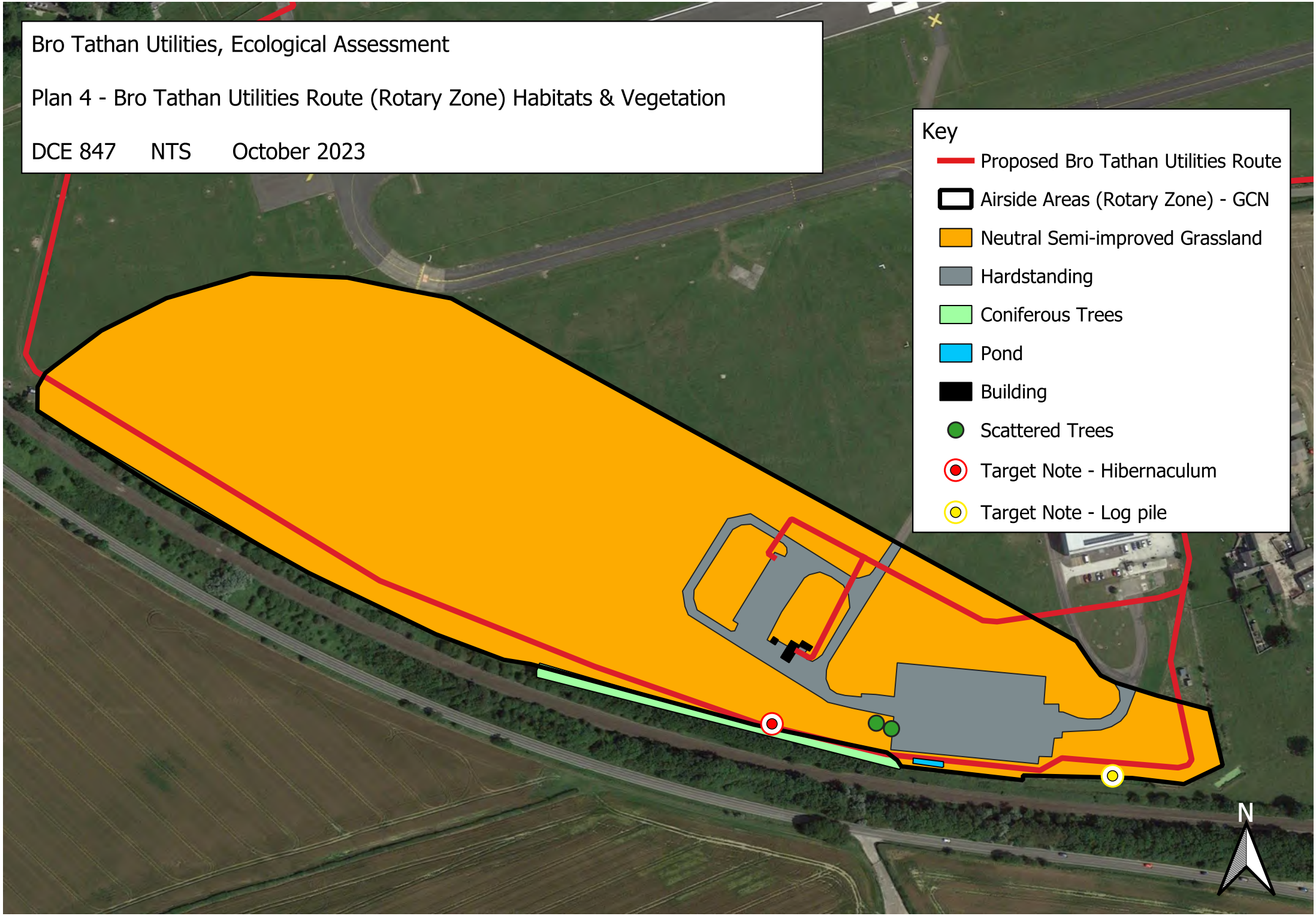
Tall Ruderal Vegetation in centre of route

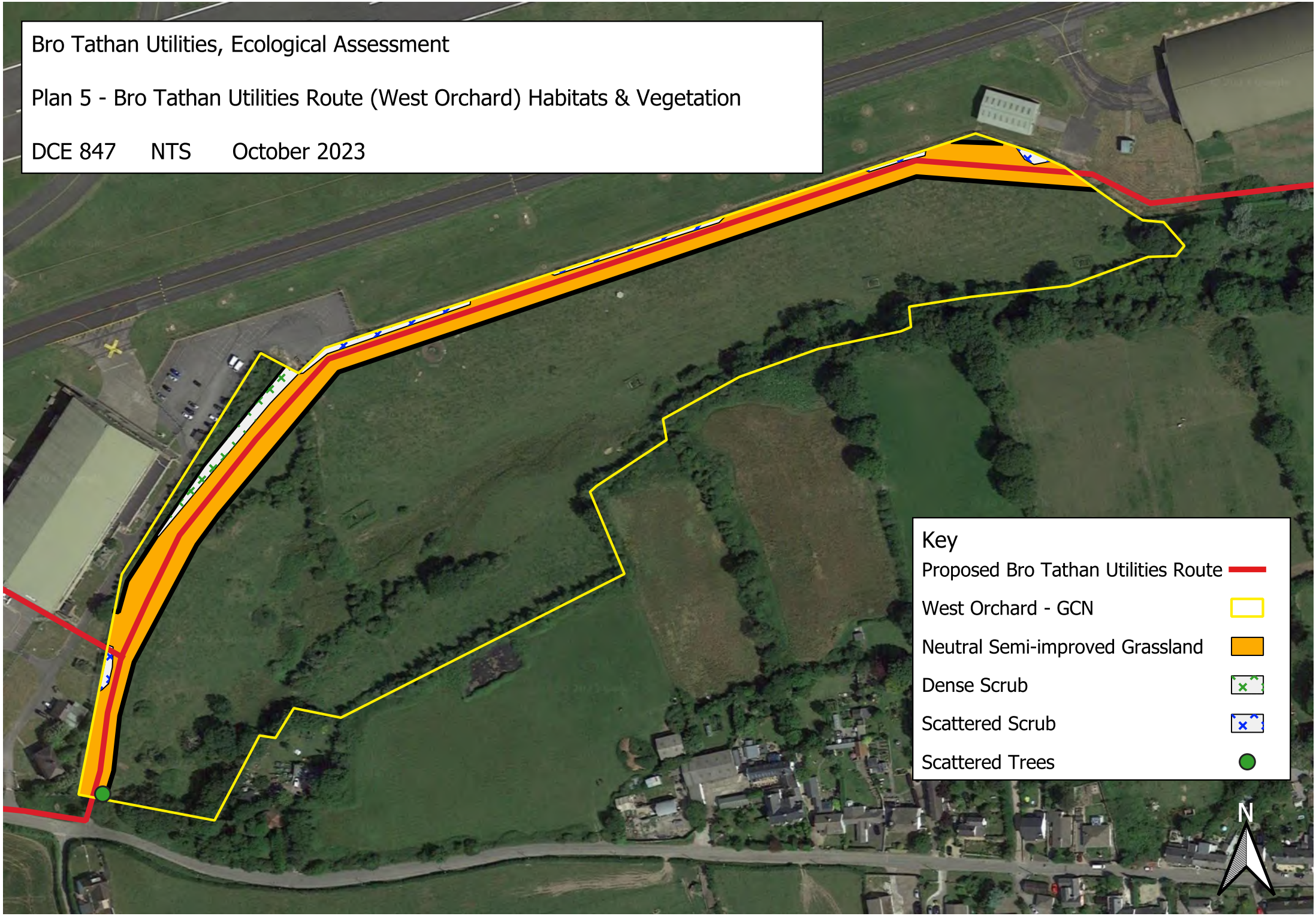
Area of mainly Dense Blackthorn by electrical sub-station at west end of route


Bro Tathan Utilities, Ecological Assessment
Plan 1 - Ecological Constraints
DCE 847 NTS July 2023
Key
Proposed Route
N


Bro Tathan Utilities, Ecological Assessment
Plan 2 - Ecological Constraints
DCE 847 NTS July 2023
Key
Proposed Route
1 - GCN
2 - Dormouse
3 - Bats
4 - Reptiles
5 - Skylark (Ground nesting)
6 - Nesting Birds
Bro Tathan North
Bro Tathan East
Bro Tathan West
Airside Areas
Bro Tathan South
N


Bro Tathan Utilities, Ecological Assessment
Plan 3 - Bro Tathan Utilities Route (West Camp Section) Habitats & Vegetation
DCE 847 NTS September 2023
Key
Proposed Bro Tathan Utilities Route
Route Boundary
Bro Tathan West - Dormouse & Nesting Birds
Tall Ruderal
Dense Blackthorn
Dense Bramble
Target Note - Log Pile
N


Bro Tathan Utilities, Ecological Assessment
Plan 4 - Bro Tathan Utilities Route (Rotary Zone) Habitats & Vegetation
DCE 847 NTS October 2023
Key
Proposed Bro Tathan Utilities Route
Airside Areas (Rotary Zone) - GCN
Neutral Semi-improved Grassland
Hardstanding
Coniferous Trees
Pond
Building
Scattered Trees
Target Note - Hibernaculum
Target Note - Log pile
N


Bro Tathan Utilities, Ecological Assessment
Plan 5 - Bro Tathan Utilities Route (West Orchard) Habitats & Vegetation
DCE 847 NTS October 2023
Key
Proposed Bro Tathan Utilities Route
West Orchard - GCN
Neutral Semi-improved Grassland
Dense Scrub
Scattered Scrub
Scattered Trees
N


Bro Tathan Utilities, Ecological Assessment
Plan 6 - Location of Newt Exclusion Fencing
DCE 847 NTS October 2023
Key
Location of Newt Exclusion Fencing
25
N