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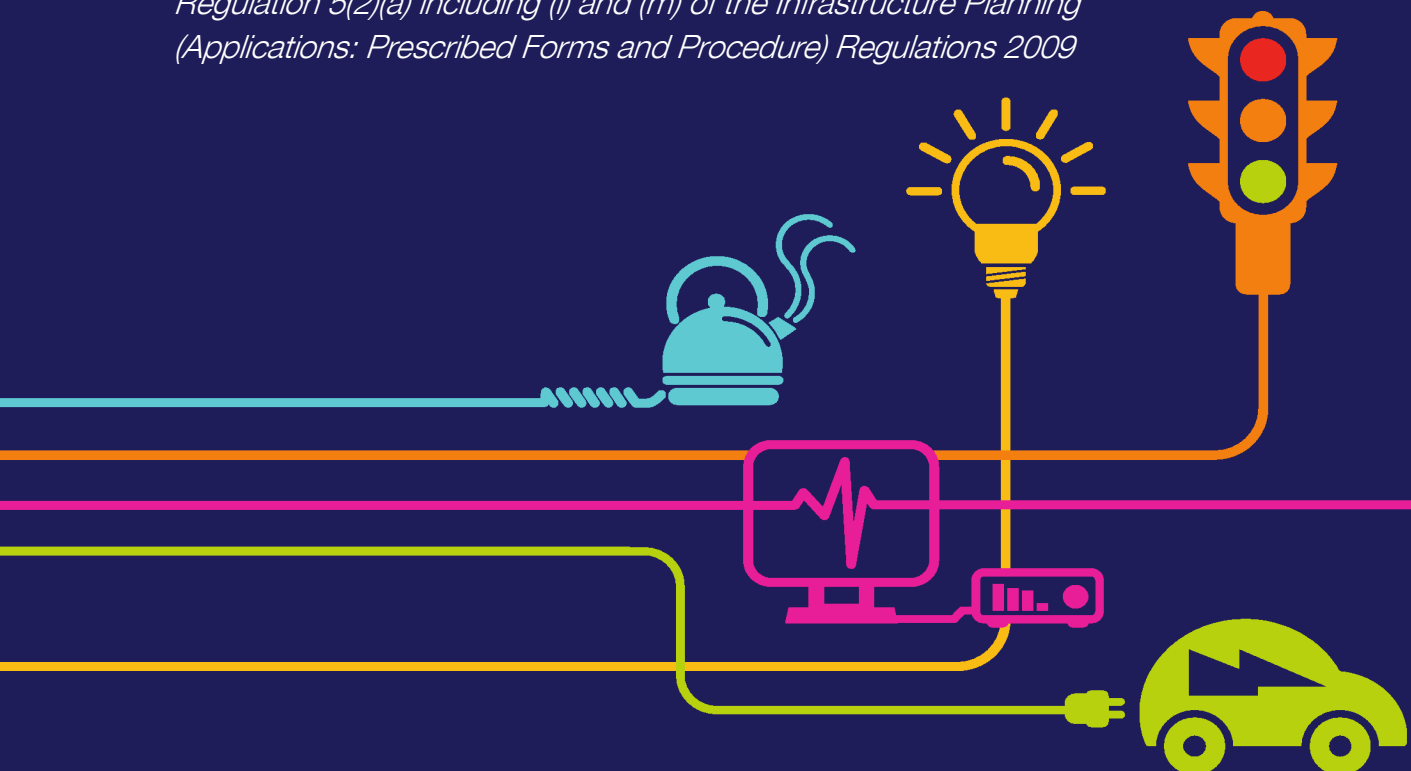
5.9.2.12

Terrestrial Mammal Report

Chapter 9 – Appendix 12

National Grid (North Wales Connection Project)

*Regulation 5(2)(a) including (l) and (m) of the Infrastructure Planning
(Applications: Prescribed Forms and Procedure) Regulations 2009*





North Wales Connection Project

Volume 5

Document 5.9.2.12 Appendix 9.12 Terrestrial Mammal Report

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Final September 2018

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Document Control			
Document Properties			
Organisation		AECOM	
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Title		Appendix 9.12 Terrestrial Mammal Report	
Document Reference		Document 5.9.2.12	
Version History			
Date	Version	Status	Description/Changes
September 2018	Rev A	Final	Final for submission

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1 Introduction

1.1 INTRODUCTION

Description of the Proposed Development

1.1.1 The Proposed Development would provide a new 400 kilovolt (kV) connection between the existing substations at Wylfa and Pentir and includes the following principal components:

- extension to the existing substation at Wylfa;
- sections of new 400 kV overhead line between Wylfa Substation and Braint Tunnel Head House (THH) and Cable Sealing End Compound (CSEC) on Anglesey including modifications to parts of the existing 400 kV overhead line between Wylfa and Pentir;
- Braint THH and CSEC on Anglesey;
- tunnel between Braint and Tŷ Fodol THHs;
- Tŷ Fodol THH and CSEC in Gwynedd;
- new section of 400 kV overhead line between Tŷ Fodol THH and CSEC and Pentir Substation;
- extension to the existing substation at Pentir; and
- temporary construction compounds, access tracks, construction working areas, localised widening of the public highway and third party works that are required to construct the infrastructure listed above.

1.1.2 The Proposed Development has been split into six sections (A – F) see Figure 1.

1.1.3 A full description of the Proposed Development is provided in Chapter 3, Description of the Proposed Development (**Document 5.3**) and Chapter 4, Construction, Operation, Maintenance and Decommissioning of the Proposed Development (**Document 5.4**).

Introduction to the Report

- 1.1.4 This report provides baseline information relating to the status of the following terrestrial mammal species that could potentially be affected by the Proposed Development:
- red squirrel (*Sciurus vulgaris*);
 - brown hare (*Lepus europaeus*);
 - polecat (*Mustela putorius*); and
 - hazel dormouse (*Muscardinus avellanarius*).
- 1.1.5 Baseline information was collated for these four species by undertaking a desk-based assessment which included a review of existing ecological data for within the study area. The study area comprises the Order Limits plus 2 km buffer; data outside this area was also considered where relevant, in particular for red squirrel.
- 1.1.6 In addition, field surveys were also carried out for red squirrel during 2016 and 2017 to identify populations within the survey area which comprised suitable habitat within the Order Limits plus 50 m buffer.
- 1.1.7 This report also identifies relevant legislation and planning policy relating to the aforementioned mammal species, which are outlined in section 2.

Objectives

- 1.1.8 The objectives of the assessment/survey work and report are to:
- review existing ecological data to identify any records of red squirrel, brown hare, polecat and hazel dormouse within and up to 2 km from the Order Limits, referred to as the study area in this report;
 - identify, through desk study, areas of potentially suitable habitat for red squirrel, brown hare, polecat and hazel dormouse within the Order Limits plus 50 m buffer;
 - provide baseline information, through field surveys, about the presence of red squirrel within suitable habitat present within and up to 50 m from the Order Limits, referred to as the survey area in this report;
 - evaluate the status of the four mammal species in relation to the Proposed Development;

- use the above information to inform the Ecological Impact Assessment (EclA) set out in Chapter 9, Ecology and Nature Conservation (**Document 5.9**) to determine whether these species could be affected by the Proposed Development; and
- inform the Biodiversity Mitigation Strategy (**Document 7.7**) for the Proposed Development.

2 Legislation and Planning Policy

2.1 LEGISLATION

- 2.1.1 Several different acts of legislation and regulations refer to the protection of wildlife. Legislation relevant to the terrestrial mammals covered in this report is outlined below.

The Conservation of Habitats and Species Regulations 2017

- 2.1.2 The Conservation of Habitats and Species Regulations 2017 (referred to as the 'Habitats Regulations') consolidates all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994 in respect of England and Wales. The 1994 Regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law and came into force on 30 October 1994.
- 2.1.3 The Habitats Regulations provide for the designation and protection of 'European sites', the protection of 'European protected species', and the adaptation of planning and other controls for the protection of European sites.
- 2.1.4 In summary the Habitats Regulations protect against:
- deliberate capture, injury or killing;
 - deliberate disturbance, where this is likely to impair the species ability to survive, breed, reproduce, rear young, hibernate or migrate, or significantly affect the local distribution or abundance of the species;
 - deliberate destruction of eggs (where applicable); and
 - damage or destruction of a breeding or resting place.
- 2.1.5 It is also an offence to be in possession or control, transport, sell or exchange any live or dead (or part of an) wild animal listed on Schedule 2.
- 2.1.6 Hazel dormouse is listed on Schedule 2 making them a European protected species, protected under the Habitats Regulations.

2.1.7 Polecat is listed under Schedule 4 of the Habitats Regulations, which protects against certain methods of capture or killing.

2.1.8 Red squirrel and brown hare are not protected under European legislation.

The Countryside and Rights of Way Act 2000

2.1.9 The Countryside and Rights of Way Act 2000 applies to England and Wales only. Part III of the Act deals specifically with wildlife protection and nature conservation.

2.1.10 The Act places a duty on Government Departments and the Welsh Government to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted, in accordance with the Convention on Biological Diversity.

2.1.11 Schedule 12 of the Act amends the species provisions of the Wildlife and Countryside Act 1981 (as amended), strengthening the legal protection for threatened species. The provisions make certain offences 'arrestable', include an offence of reckless disturbance, confer greater powers to police and wildlife inspectors for entering premises and enable heavier penalties on conviction of wildlife offences.

Wild Mammals (Protection) Act 1996

2.1.12 Actions with the intent to inflict unnecessary suffering on mammals are covered under the Wild Mammals (Protection) Act 1996. As such the Act may apply during site clearance, particularly where mammals such as brown hare could be present, since such animals could be crushed or asphyxiated in their forms (small depression in the ground) by heavy machinery. All four mammal species would be covered by this legislation.

Wildlife and Countryside Act 1981 (as amended)

2.1.13 Red squirrel and hazel dormouse receive full protection under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). Section 9 of the act affords the following protections:

- Section 9(1) of the Act makes it an offence to intentionally capture, injure or kill a red squirrel or hazel dormouse;
- Section 9(2) makes it an offence to possess or control a red squirrel or hazel dormouse either alive or dead, or any part derived from them;

- Section 9(4) makes it an offence to intentionally or recklessly damage, destroy or obstruct access to any structure or place which a red squirrel or hazel dormouse use for shelter or protection, or intentionally or recklessly disturb them while occupying a structure or place used for that purpose; and
- Section 9(5) makes it an offence to sell, offer or expose for sale, or possess or transport for the purpose of sale, any live or dead red squirrel or hazel dormouse, or any part derived from them.

2.1.14 Polecat is listed under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended), which includes species which may not be killed or taken by certain methods.

2.1.15 Brown hare is not protected under the Wildlife and Countryside Act 1981 (as amended).

Environment (Wales) Act 2016

2.1.16 Section 6 of the Environment (Wales) Act 2016 places a duty on public authorities to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'. The duty replaces the section 40 duty in the Natural Environment and Rural Communities Act 2006 (NERC Act 2006), in relation to Wales, and applies to those authorities that fell within the previous duty (Ref 1).

2.1.17 To assist in complying with this duty, public authorities must have regard to relevant evidence provided in the State of Natural Resources Report and any relevant area statement for an area in which the authority exercises functions, as well as having regard to the list of living organisms and habitats published under Section 7 of the Act (which replaces the section 42 list for Wales provided in the NERC Act 2006) (Ref 1).

2.1.18 Red squirrel, brown hare, polecat and hazel dormouse are listed under Section 7 of the Act. Section 7 is a list of species and habitats of principal importance for the purpose of maintaining and enhancing biodiversity in relation to Wales. This list is currently under review by the Welsh Government in consultation with National Resources Wales (NRW).

2.2 PLANNING POLICY

National Policy

- 2.2.1 Government planning policy guidance throughout the UK requires local planning authorities to take account of the conservation of protected species when determining planning or development consent applications. This makes the presence of a protected species a material consideration when assessing a development proposal. In the case of a European Protected Species, such as the hazel dormouse, planning policy emphasises the strict statutory provisions to which a planning authority must have due regard.
- 2.2.2 In Wales this is implemented through Planning Policy Wales - Edition 9, November 2016, supplemented by a series of Technical Advice Notes (TANs) (Ref 2) which sets out the land use planning policies of the Welsh Government. Consultation is currently being held on the draft Planning Policy Wales – Edition 10 which was issued in February 2018; the consultation period ends in May 2018.
- 2.2.3 Chapter 5 of PPW (9) sets out the Welsh Government's objectives for the natural heritage of Wales which includes the safeguarding of protected species. It states that *'the presence of a species protected under European or UK legislation is a material consideration when a local planning authority is considering a development proposal which, if carried out, would be likely to result in disturbance or harm to the species or its habitat'*. It also states that *'an ecological survey to confirm whether a protected species is present and an assessment of the likely impact of the development on a protected species may be required in order to inform the planning decision'*.
- 2.2.4 Further information on the detail of Planning Policy Wales is provided in Chapter 9, Ecology and Nature Conservation (**Document 5.9**).

Local Policy

- 2.2.5 There are a number of local planning policies set out in the Anglesey and Gwynedd Joint Local Development Plan 2017 (Ref 3) that relate to ecology and nature conservation which in combination with other planning policies will guide local authority expectations in relation to the Proposed Development:
- Strategic Policy PS 19 relates to conserving and enhancing the natural environment;
 - Policy AMG 4 relates to coastal protection;

- Policy AMG 5 relates to the protection and enhancement of local biodiversity; and
- Policy AMG 6 relates to protecting sites of regional or local significance.

Biodiversity Policy

- 2.2.6 As a result of devolution, and new country-level and international drivers and requirements, much of the work previously carried out by the UK Biodiversity Action Plan (BAP) is now focussed at a country-level rather than a UK-level. The UK BAP was succeeded by the 'UK Post-2010 Biodiversity Framework' in July 2012. The UK list of priority species and habitats, however, remains an important reference source and has been used to help draw up statutory lists of priorities in England, Scotland, Wales and Northern Ireland. In Wales the current lists are those under Section 7 of the Environment (Wales) Act 2016 which includes all four mammal species as priority species requiring conservation.
- 2.2.7 The national strategy for biodiversity in Wales is delivered at local level via Local Biodiversity Action Plans (LBAPs). Species and habitats of local conservation concern or value are included in the LBAP and an action plan is created for each species and certain habitat types.
- 2.2.8 The LBAPs relevant to the study area for the Proposed Development are the Anglesey LBAP published by Isle of Anglesey County Council (IACC) and the Natur Gwynedd LBAP for Gwynedd developed by a partnership of organisations and individuals. Red squirrel and brown hare are included on the Anglesey LBAP. Brown hare, polecat and hazel dormouse are included on the Natur Gwynedd LBAP.
- 2.2.9 The Wales Biodiversity Partnership (WBP) brings together key members from the public, private and voluntary sectors to promote and monitor biodiversity and ecosystem action in Wales. WBP provides a leadership role and an expert steer on priorities for action on biodiversity and ecosystems in Wales. The WBP Steering Group has now formally disbanded and the biodiversity action work programme taken on by the Wales Biodiversity Strategy Board (WBSB) and the WBP working groups such as the Wales Mammal Biodiversity Action Forum. The latter provides a link for the flow of information between local, regional, Wales and UK biodiversity action processes.

3 Methodology

3.1 DESK STUDY

- 3.1.1 The desk study aims to identify existing information concerning the presence of red squirrel, brown hare, polecat and hazel dormouse within the study area. This desk study extent was considered to be far greater than the area which could be potentially affected by the Proposed Development.
- 3.1.2 Protected species record data (including records for the four mammal species) was requested from Cofnod, the local environmental record centre, in February 2018; this provided an update to data obtained in November 2016 and May 2015.
- 3.1.3 The Red Squirrel Trust Wales (RSTW) was also contacted for information pertaining to records they may hold on this species. The RSTW provided records for a wider area within Anglesey and Gwynedd (Figure 2) however only those records located within the study area have been considered in this report.
- 3.1.4 As populations for the four mammal species may fluctuate in response to natural and human-caused events, only records dated since 2007 were considered in the baseline, older records were considered to offer limited value in determining current presence and distribution of these species.
- 3.1.5 The results of red squirrel, brown hare and polecat surveys carried out on behalf of Horizon Nuclear Power have been reviewed to provide background context for the parts of the study area covered by these surveys (Ref 4, Ref 5, Ref 6, Ref 7 and Ref 8).
- 3.1.6 An initial desk-based study was carried out to identify areas of woodland and scrub to be included within the red squirrel survey area and to identify habitats potentially suitable for supporting brown hare and polecat within the Order Limits plus 50 m buffer. Hazel dormouse was omitted from this search following consultation with stakeholders, as discussed in section 3.2. Phase 1 Habitat survey data recorded for the Proposed Development during 2016 and 2017 was reviewed in addition to Ordnance Survey (OS) mapping and online aerial photography.

3.2 CONSULTATION

- 3.2.1 Field surveys for brown hare, polecat and hazel dormouse have not been carried out in relation to the Proposed Development. Justification for not undertaking detailed surveys for these species was discussed with stakeholders during the consultation process. Stakeholders identified that the potential for hazel dormouse to be present and using habitats within the survey area was very low and therefore no further assessment (desk or field based) for this species was required.
- 3.2.2 The consultation also concluded that surveys were not required for brown hare and polecat, and that assessment would be based on a desk-based assessment and review of suitable habitats.
- 3.2.3 Following consultation with the RSTW it was agreed that drey surveys were an appropriate survey method to employ to identify the presence of red squirrel within the habitat present in the survey area.

3.3 FIELD SURVEY

- 3.3.1 Red squirrel surveys were undertaken in areas of potentially suitable habitat, as identified by the desk study within the survey area. The red squirrel survey areas are shown on Figure 3 and comprised of areas of woodland and scrub.
- 3.3.2 The red squirrel surveys focussed on identifying the presence of red squirrel dreys (or potential dreys) as well as recording any incidental sightings of red squirrels and field signs such as potential feeding remains. Drey identification/counting was chosen as the preferred method of survey due to the limited potential for disturbance to any squirrels occupying dreys at the time of survey and this approach was agreed with RSTW.
- 3.3.3 Drey counting followed guidance provided in Practical Techniques for Surveying and Monitoring Squirrels 2009 (Ref 9).
- 3.3.4 A search for squirrel dreys was carried out over several site visits in 2016 and 2017. Drey counts conducted in the survey area in 2016 were repeated in all suitable survey areas between January and July 2017.
- 3.3.5 The presence of grey squirrel (*Sciurus carolinensis*) was also recorded as this can indicate the potential absence of red squirrel from an area.
- 3.3.6 In addition any incidental sightings of brown hare or polecat were also recorded during the red squirrel surveys and during a range of ecological

field surveys undertaken between 2015 and 2017 in relation to the Proposed Development.

3.4 LIMITATIONS

- 3.4.1 The aims of a desk study are to help characterise the baseline context of a proposed development and provide valuable background information that would not be captured by site surveys alone. Information obtained during a desk study is dependent upon people and organisations having made and submitted records for the area of interest. As such, a lack of records for a particular species does not necessarily mean that the species do not occur in a study area. Likewise, the presence of records for particular species does not automatically mean that these still occur within the area of interest or are relevant in the context of a proposed development.
- 3.4.2 The detail and accuracy of the desk study records rely on those provided to Cofnod from a variety of sources. The results of the updated desk study undertaken in February 2018 have been considered for the baseline assessment. The latest desk study search was conducted on the Proposed Development layout which now covers a smaller area resulting in some records being excluded that had previously been considered. The search also uses the latest priority and conservation lists which has also resulted in some further additions and exclusions of certain species.
- 3.4.3 In terms of field surveys, the methodology of red squirrel drey identification and counts alone (i.e. without any other survey method being employed) is not able to distinguish between red squirrel dreys and grey squirrel dreys in areas where both species could occur. However, sources including RSTW, suggest that grey squirrels have been eradicated from Anglesey. Therefore any drey recorded within the survey area on Anglesey was assumed to be a red squirrel drey unless otherwise confirmed. Conversely, it was assumed that dreys recorded in the survey area in Gwynedd, on mainland Wales, are grey squirrel dreys, unless otherwise confirmed, as known records for red squirrels in Gwynedd do not fall within the survey area, as per discussion with RSTW.
- 3.4.4 Drey counts are best undertaken during the winter/spring months when dreys are most visible and less hidden by leaves. Winter dreys are also often counted, to ensure that squirrel dreys are distinguished from bird nests. Not all of the red squirrel surveys were carried out in winter/spring, however the 2016 surveys were repeated in 2017, and therefore this is not considered to be a constraint to the surveys and the results are considered to be robust.

- 3.4.5 Squirrel dreys can be difficult to detect due to a number of factors, such as dense foliage, including ivy growing on the trunks of trees. Squirrels can also create nests in tree holes, which are not possible to identify from ground level.

4 Results

4.1 DESK STUDY

Data Records

- 4.1.1 Cofnod provided numerous records for red squirrel, brown hare and polecat within the study area. The records are detailed in Annex A and shown on Figure 1. Numerous records were also received from the RSTW and these are shown on Figure 1 and Figure 2 (overview map). Records have been used to support the discussion on habitat suitability (section 4.4).
- 4.1.2 Due to the precision of some of the grid references provided by Cofnod e.g. 1 km² grid reference which then places the record at the centre of the square, four records show slightly outside the 2 km study area (Records 9, 50, 79 and 86 on Figure 1) and two records fall within the water of Cemlyn Bay (Records 2 and 5 on Figure 1); however these have been included for completeness.

Report Reviews

- 4.1.3 Red squirrel surveys conducted for Horizon Nuclear Power in 2016 (Ref 4) for the Wylfa Newydd Power Station Project indicated that red squirrels were present in their survey area with feeding evidence recorded in seven of the 13 woodland areas surveyed; two of these woodlands are located within the Order Limits for the Proposed Development and two further woodlands are within 50 m of the Order Limits. In addition a drey was recorded in their survey area at grid reference location SH 35535 93734 in a Scots pine (*Pinus sylvestris*) tree; the record is just outside the 50 m buffer of the Order Limits for the Proposed Development (Figure 1).
- 4.1.4 On behalf of Horizon Nuclear Power a search for signs of red squirrel was undertaken at the former Shell Tank Farm to the east of Rhosgoch (Ref 5) in May 2016. This site is approximately 600 m north-east of the Proposed Development at its closest point. It was concluded that the bordering habitats offer low to moderate opportunities for red squirrel however the habitats are isolated from the wider area with no connectivity with nearby woodlands. No evidence of red squirrel presence was identified during the surveys.

- 4.1.5 Surveys for polecats conducted in 2013 in relation to Horizon Nuclear Power for the Wylfa Newydd Project resulted in no animals being detected (Ref 6). Polecats were however recorded during earlier surveys carried out for the Wylfa Newydd Project between 2011 and 2012 (Ref 7). A total of two polecats were caught during the October 2011 study, one male and one female and a single male was caught during the March 2012 survey; the exact locations of the animals caught were not provided but their survey area is within the study area.
- 4.1.6 Surveys for brown hare, conducted in 2012 in relation to Horizon Nuclear Power for the Wylfa Newydd Project (Ref 8), recorded a total of nine sightings largely within improved grassland habitat concluding that they are present in low densities. Surveys conducted in 2010 and 2011 recorded numerous sightings of brown hare; these are shown on Figure 1.

4.2 FIELD SURVEY

Red Squirrel

- 4.2.1 A confirmed occupied red squirrel drey was noted whilst carrying out a bird survey in relation to the Proposed Development. The drey, identified in April 2017, was located in an area of broadleaved woodland to the south-west of the existing Wylfa Nuclear Power Station, approximately 7 m outside of the Order Limits (Reference Number 5, Figure 3). Squirrels were heard calling from the drey.
- 4.2.2 No other confirmed dreys were identified during the red squirrel surveys. The location of potential squirrel dreys and other field signs (feeding evidence) recorded are provided in Table 4.1 and are shown on Figure 3. A potential drey is a feature that appeared to have the characteristics of a squirrel drey, such as size, location in tree and build materials, but could not be confirmed as a squirrel drey during the survey either because no other field signs to suggest squirrel usage was evident e.g. feeding remains, sightings of squirrel, or because the feature was at a height or location which limited identification. Dreys can be similar in size and characteristics as some bird nests and can often be difficult to differentiate.
- 4.2.3 Incidental sightings of squirrel observed in the wider area whilst conducting other ecological surveys for the Proposed Development have also been included in Table 4.1 and on Figure 3.

Table 4.1 Results of Red Squirrel Surveys and Incidental Squirrel Sightings					
Ref No. on Figure 3	Evidence	Date	Approx. location of sighting/ evidence	Section of Order Limits	Approx. distance from Order Limits (m)
1	Multiple squirrel eaten cones (>10)	January 2017	SH 3546 9384	A	57
2	Potential squirrel drey	January 2017	SH 3546 9384	A	57
3	Squirrel eaten cone	January 2017	SH 3557 9367	A	61
4	Squirrel eaten cone	January 2017	SH 3558 9363	A	41
5	Confirmed active red squirrel drey	April 2017	SH 3523 9351	A	7
6	Multiple squirrel eaten cones	January 2017	SH 3528 93485	A	3
7	Potential squirrel drey	January 2017	SH 3528 9348	A	3
8	Potential drey in alder (<i>Alnus glutinosa</i>) tree, located at a height of 10 m. Possibly a corvid nest, due to other corvid nests nearby	July 2017	SH 3753 9143	A	32
9	Potential squirrel drey	January 2017	SH 3759 9143	A	30
10	Potential squirrel drey	January 2017	SH 3760 9141	A	12

Table 4.1 Results of Red Squirrel Surveys and Incidental Squirrel Sightings					
Ref No. on Figure 3	Evidence	Date	Approx. location of sighting/ evidence	Section of Order Limits	Approx. distance from Order Limits (m)
15	Potential squirrel drey in a beech (<i>Fagus sylvatica</i>) tree, at a height of approximately 10 m.	July 2017	SH 3924 9016	A	Within Order Limits
16	Large mass of twigs on the east side of the tree - potential drey.	January 2017	SH 3932 9011	A	33
17	Mass of twigs 4 m height within tree - potential drey.	January 2017	SH 4430 8550	B	70
20	Red squirrel sighting in garden	February 2017	SH 4199 8483	B	1816
21	Red squirrel observed along a country lane, next to a hedgerow	September 2016	SH 4453 8456	C	485
29	Mass of twigs where a fallen tree meets a standing tree, 6 m up - potential squirrel drey	January 2017	SH 4826 7632	D	Within Order Limits
30	Mass of twigs along the central trunk - potential drey	January 2017	SH 4831 7632	D	Within Order Limits

Table 4.1 Results of Red Squirrel Surveys and Incidental Squirrel Sightings					
Ref No. on Figure 3	Evidence	Date	Approx. location of sighting/ evidence	Section of Order Limits	Approx. distance from Order Limits (m)
31	Squirrel eaten pine cone	January 2017	SH 4821 7625	D	Within Order Limits
32	Potential squirrel drey	January 2017	SH 4822 7619	D	Within Order Limits
35	Potential drey in a Norway spruce (<i>Picea abies</i>)	July 2016	SH 5103 7132	E	10
36	Red squirrel sighting	April 2016	SH 5271 7115	F	568
37	Red squirrel sighting in an oak (<i>Quercus robur</i>) tree	August 2016	SH 5091 6967	F	1234
38	Potential squirrel drey in a birch (<i>Betula</i>) tree, at approximately 5 m. On mainland so assumed to be grey squirrel.	July 2017	SH 5579 6811	F	36
39	Grey squirrel observed in a squirrel trap set in the woodland	July 2017	SH 5572 6804	F	Within Order Limits

Table 4.1 Results of Red Squirrel Surveys and Incidental Squirrel Sightings					
Ref No. on Figure 3	Evidence	Date	Approx. location of sighting/ evidence	Section of Order Limits	Approx. distance from Order Limits (m)
40	Potential squirrel drey in an oak tree, at approximately 7 m high. On mainland so assumed to be grey squirrel.	July 2017	SH 5588 6801	F	Within Order Limits
41	Potential drey 15 m up trunk of tree. On mainland so assumed to be grey squirrel.	January 2017	SH 5578 6801	F	Within Order Limits
42	Potential squirrel drey in a pine (<i>Pinus sp.</i>) tree. On mainland so assumed to be grey squirrel.	July 2017	SH 5565 6768	F	Within Order Limits
43	Potential squirrel drey in a Norway spruce (<i>Picea abies</i>), at approximately 10 m high. On mainland so assumed to be grey squirrel.	July 2017	SH 5605 6766	F	Within Order Limits

Table 4.1 Results of Red Squirrel Surveys and Incidental Squirrel Sightings					
Ref No. on Figure 3	Evidence	Date	Approx. location of sighting/ evidence	Section of Order Limits	Approx. distance from Order Limits (m)
44	Potential squirrel drey in a Norway spruce at approximately 8 m high. On mainland so assumed to be grey squirrel.	July 2017	SH 5609 6763	F	Within Order Limits

4.3 INCIDENTAL SIGHTINGS

Brown hare

- 4.3.1 Three brown hare observations were recorded during surveys within the Order Limits in Sections A and C. The locations of these observations are shown as Reference Numbers 14, 25 and 26 on Figure 3.
- 4.3.2 Eleven further brown hare sightings were recorded outside of the Order Limits (but within the study area) in Sections A, B, C and E during surveys. Anecdotal evidence of brown hare was also provided by a landowner in Section C. The locations of these incidental observations are shown on Figure 3.

Polecat

- 4.3.3 No incidental sightings of polecat have been recorded whilst carrying out other ecological surveys in relation to the Proposed Development; however, polecats are solitary, nocturnal animals and therefore rarely casually observed.

4.4 HABITAT SUITABILITY WITHIN THE ORDER LIMITS PLUS 50 M BUFFER

Red squirrel

- 4.4.1 Red squirrels can live in coniferous, broadleaf and mixed woodlands. In more fragmented landscapes such as agricultural and sub-urban areas, they exploit pockets of trees and woodlands connected by hedgerows and other wildlife corridors. Red squirrels will reach their highest population densities in mixed or broadleaf woodlands due to the diversity of species and availability of food. However, they are increasingly restricted to large conifer woodlands and plantations due to competition from encroaching grey squirrels (Ref 10). The records provided by the RSTW identify that red squirrel are more common in the south and east of Anglesey, the Menai Strait area shows a particularly high concentration of records; records in Gwynedd on the mainland are limited (Figure 2). The location of these records highlight the areas of higher habitat suitability throughout the study area and wider area of Anglesey, and the relative lack of records within the Proposed Development corresponds with the lower suitability habitat present for red squirrel.

Section A

- 4.4.2 The presence of red squirrel has been confirmed in Section A through field surveys and data records provided by Horizon Nuclear Power and the

RSTW. Data received from the RSTW included two records for red squirrel sightings within 50 m of the Order Limits; one of these sightings is within 250 m of two potential dreys identified in January 2017. No records were provided by Cofnod in this section.

- 4.4.3 Woodland habitat is very limited within the Order Limits plus 50 m buffer in Section A comprising small, isolated parcels of broadleaved plantation woodland and a stand of coniferous plantation woodland. The habitat suitability in the Wylfa area is considered to be moderate for red squirrel, however for the rest of the section, the suitability is low. Given the restricted areas of suitable habitat and limited desk study records provided for areas outside Wylfa, the likelihood of red squirrel being present in anything more than low densities is low.

Section B

- 4.4.4 A tree with a potential drey was recorded approximately 70 m south-west of the Order Limits (Reference Number 17 on Figure 3) and records for red squirrel sightings between 100 m and 230 m of the potential drey were also provided by RSTW, confirming that they are present (or have previously been present) in the area. An incidental red squirrel sighting was also recorded 1.82 km south-west of the Order Limits (Reference Number 20 on Figure 3).
- 4.4.5 One record was provided by Cofnod for Section B, located 35 m from the Order Limits. Numerous records for red squirrel sightings were provided by RSTW in the wider area of Section B (outside the study area towards the east coast of the island).
- 4.4.6 Woodland habitat is restricted in the Order Limits plus 50 m buffer of Section B, with only small isolated parcels of broadleaved semi-natural woodland present. Therefore it is considered that the habitat suitability for red squirrel is low and that red squirrel would only be present in low densities.

Section C

- 4.4.7 A red squirrel was observed approximately 485 m west of the Order Limits.
- 4.4.8 Cofnod provided two records for the study area but both were over 500 m from the Order Limits. RSTW provided a number of records within the study area and a high number of records in the wider area (outside the study area towards the east coast of the island); none of the records were within 50 m of the Order Limits (Figure 3).
- 4.4.9 Woodland habitat within the Order Limits plus 50 m buffer of Section C is limited to small, isolated parcels of broadleaved and mixed semi-natural

woodland. Therefore the restricted nature of the habitat results in low suitability for red squirrel and given the limited desk study records provided, the likelihood of red squirrel being present in anything more than low densities is low.

Section D

- 4.4.10 In Section D, the possible presence of red squirrel was recorded in Gylched Covert, an area of semi-natural broadleaved woodland within the Order Limits, through the identification of three potential dreys and squirrel feeding remains. Data received from RSTW confirmed that red squirrel has been recorded in and close to this area. The closest Cofnod record was 174 m from the Order Limits, the record was dated 2017.
- 4.4.11 Several other small, isolated areas of broadleaved semi-natural woodland fall within the Order Limits plus 50 m buffer. Therefore it is considered that the habitat suitability for red squirrel is low and that red squirrel would only be present in low densities given the isolated nature of the woodland copses.

Section E

- 4.4.12 Woodland habitat within the Order Limits plus 50 m buffer of Section E is limited to two small areas. A potential drey was recorded in one of these areas in July 2016. A record provided by RSTW (dated 2012), indicates that red squirrel have previously been recorded in this area.
- 4.4.13 Cofnod provided one record located 179 m from the Order Limits and RSTW provided a small number of red squirrel records in the study area. The limited habitat available and small number of records indicates that habitat suitability and population densities are likely to be low.

Section F

- 4.4.14 RSTW provided a high number of red squirrel records within and up to 2 km from the Order Limits; the majority of these records were on Anglesey around the Menai Strait. Across the southern area of Section F on the mainland there are records concentrated around the Menai Strait but generally records within the Gwynedd area are much lower in number. A total of 16 records were provided by Cofnod in Section F, two of these were in the Order Limits of the tunnel section.
- 4.4.15 Multiple potential squirrel dreys were recorded in woodland habitat surrounding the existing Pentir Substation (considered to be grey squirrel dreys); no other field signs, such as feeding remains, were recorded close by.

- 4.4.16 Section F contains more extensive woodland habitat than the other sections, comprising semi-natural broadleaved, coniferous plantation and mixed plantation woodlands. Given the more extensive nature of the woodland, it is considered that the habitat suitability within the Order Limits plus 50 m buffer is moderate and that red squirrel population densities are likely to be moderate in particular on the Anglesey side of the Menai Strait.

Brown hare

- 4.4.17 The dominant habitat for brown hare is generally open farmland and they can utilise a variety of habitats such as arable farmland, mixed grazing pastures, hedgerows, field margins, open woodland and rough grassland. These habitat types are present throughout the Order Limits plus 50 m buffer and within the wider study area.
- 4.4.18 There are areas of habitat suitable for brown hare within all sections of the Order Limits plus 50 m buffer. Habitats present in Sections A-F with the potential to support brown hare include a mixture of grassland types, woodland edges and agricultural fields with hedgerows. Arable crops are limited in Sections A, B, D and F in particular, as the majority of the fields comprise improved grassland, used for pasture.
- 4.4.19 Cofnod supplied a total of eight brown hare records for within the Order Limits plus 50 m buffer; these were located in Sections A, B and F. A total of 90 records were provided across all sections of the study area.
- 4.4.20 Incidental brown hare sightings were recorded in Sections A and C, within the Order Limits.
- 4.4.21 It is concluded that the habitat suitability for brown hare is moderate for all sections of the Order Limits plus 50 m buffer. Population densities are likely to range between low to moderate, with the higher densities being found where there is less livestock grazing and where there is a diversity of habitat to ensure there is sufficient cover for resting, rearing young and to avoid predation.

Polecat

- 4.4.22 Polecats can utilise a variety of habitats including lowland woodlands, marshes, farmland and riparian habitats. They make dens in stream banks or under tree roots and may exploit rabbit burrows for shelter. Polecats are known to visit farmyards and farm buildings where they hunt for their prey. These habitat types are present throughout the Order Limits plus 50 m buffer and within the wider study area.

- 4.4.23 Therefore there are areas of habitat potentially suitable for polecat within all sections of the Order Limits plus 50 m buffer. These include woodland, scrub, a mixture of grassland types, agricultural fields with hedgerows and watercourse corridors.
- 4.4.24 Cofnod did not provide any records for polecat within the Order Limits plus 50 m buffer. However there were 12 records within the study area in Sections A, B, C and F, with the highest number of records (five records) recorded within the study area of Section F. The closest record was 203 m from the Order Limits in Section F.
- 4.4.25 It is concluded that the habitat suitability for polecat is moderate for all sections of the Order Limits plus 50 m buffer. Population densities are likely to range between low to moderate, with the higher densities being found where there are more diverse mosaics of habitats comprising woodland, farmland and river habitats which they can utilise for foraging and shelter.

5.1 RED SQUIRREL

5 Conclusion

- 5.1.1 A confirmed active red squirrel drey was recorded in Section A of the Proposed Development, just outside of the Order Limits.
- 5.1.2 Potential, but not confirmed squirrel dreys were also recorded within and up to 50 m of the Order Limits in Sections B, C, D, E and F.
- 5.1.3 Areas of habitat suitable for red squirrel are found in all sections of the Order Limits, with higher suitability found in the southern areas of Anglesey near the Menai Strait. However the higher suitability habitat is in the section where tunnelling would take place under the woodland. The majority of the records provided are outside the Order Limits and within the wider areas of the study area. The potential dreys identified in Section F in Gwynedd are assumed to be those of grey squirrel based on the results of the desk study and discussions with the RSTW.
- 5.1.4 Under the Wildlife and Countryside Act 1981 (as amended) there is no provision for licensing the killing or injuring of red squirrels or the destruction of places used for shelter or protection for the purpose of development. Any defence against damage under these circumstances is only eligible if this was the incidental result of a lawful operation and could not reasonably have been avoided (Ref 11).
- 5.1.5 Effects as a result of the Proposed Development and mitigation measures are detailed in Chapter 9, Ecology and Nature Conservation (**Document 5.9**). Further details on the mitigation measures are provided in the Biodiversity Mitigation Strategy (**Document 7.7**). Potential enhancement opportunities are detailed within the Enhancement Strategy (**Document 7.13**) which includes opportunities for enhancement of habitats which could in turn benefit red squirrel.

5.2 BROWN HARE AND POLECAT

- 5.2.1 Four incidental brown hare observations were recorded; these were in Sections A and C of the Order Limits.
- 5.2.2 A small number of brown hare records (eight records) were provided by Cofnod for locations inside or within 50 m of the Order Limits (in Sections A

and B and F). A total of 90 records were however provided for within the study area.

- 5.2.3 Cofnod did not provide any records for polecat within 50 m of the Order Limits. Twelve records were provided for the study area, within 2 km of the Order Limits in Sections A, B, C and F.
- 5.2.4 Areas of habitat suitable for brown hare and polecat are found in all sections of the Order Limits. Brown hare utilise a variety of habitats such as arable farmland, mixed grazing pastures, hedgerows, field margins, open woodland and rough grassland. Polecat habitat preferences are lowland woodlands, marshes, farmland and riparian habitats
- 5.2.5 Effects as a result of the Proposed Development and mitigation measures are detailed in Chapter 9, Ecology and Nature Conservation (**Document 5.9**). Further details on the mitigation measures are provided in the Biodiversity Mitigation Strategy (**Document 7.7**). Potential enhancement opportunities are detailed within the Enhancement Strategy (**Document 7.13**) which includes opportunities for enhancement of habitats which could in turn benefit these species.

6 References

Ref 1: Welsh Government. The Environment (Wales) Act Part 1 Interim Guidance
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Ref 2: Welsh Government (2016); Planning Policy Wales Edition 9 – November 2016. <http://gov.wales/docs/desh/publications/161117planning-policy-wales-edition-9-en.pdf>

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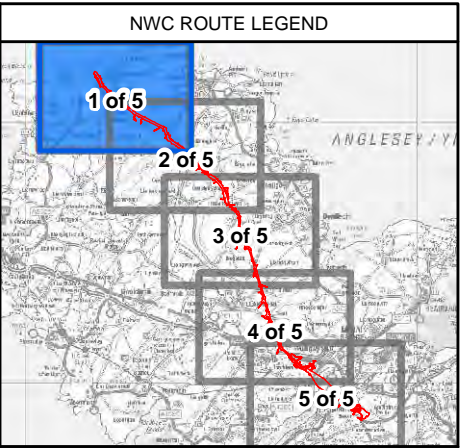
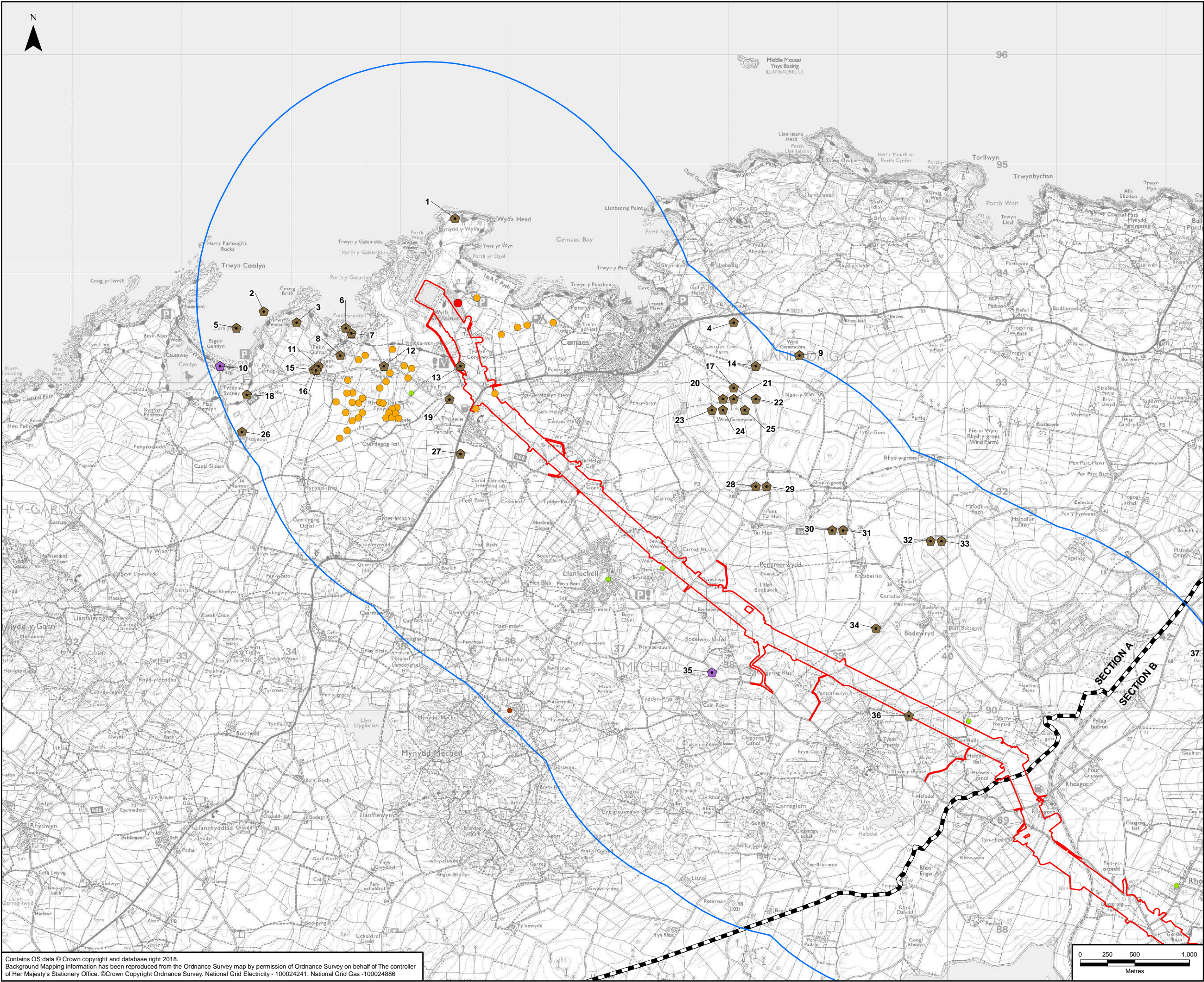
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NOTES

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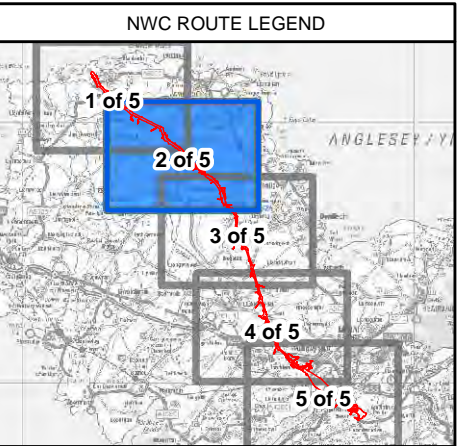
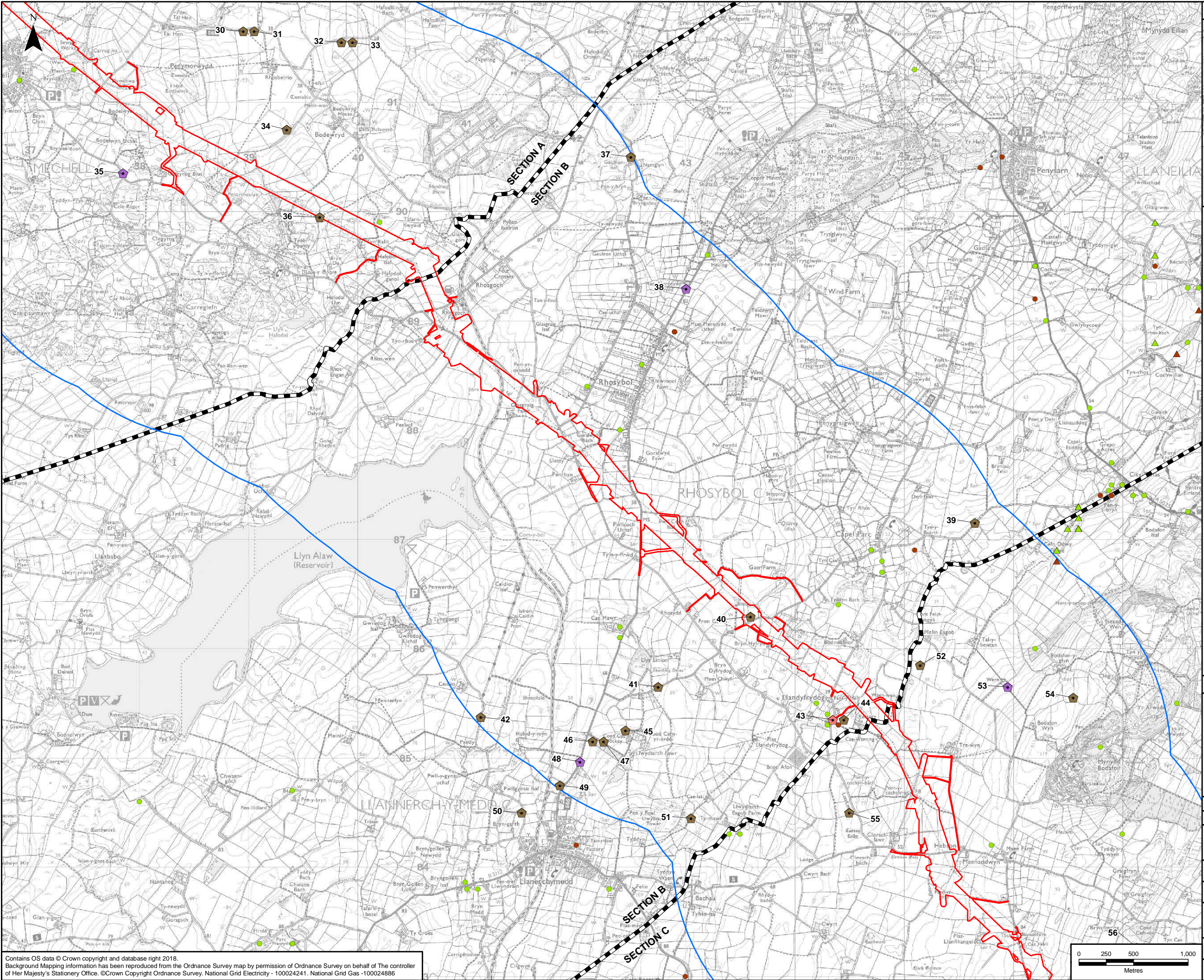
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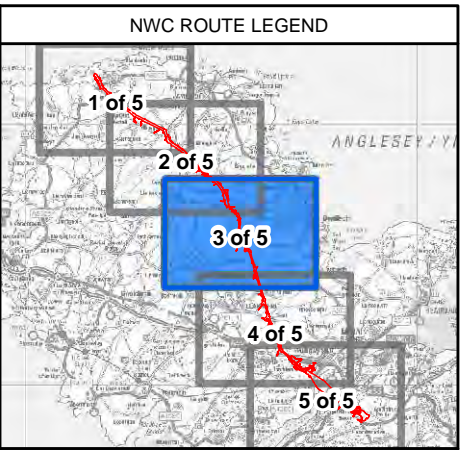
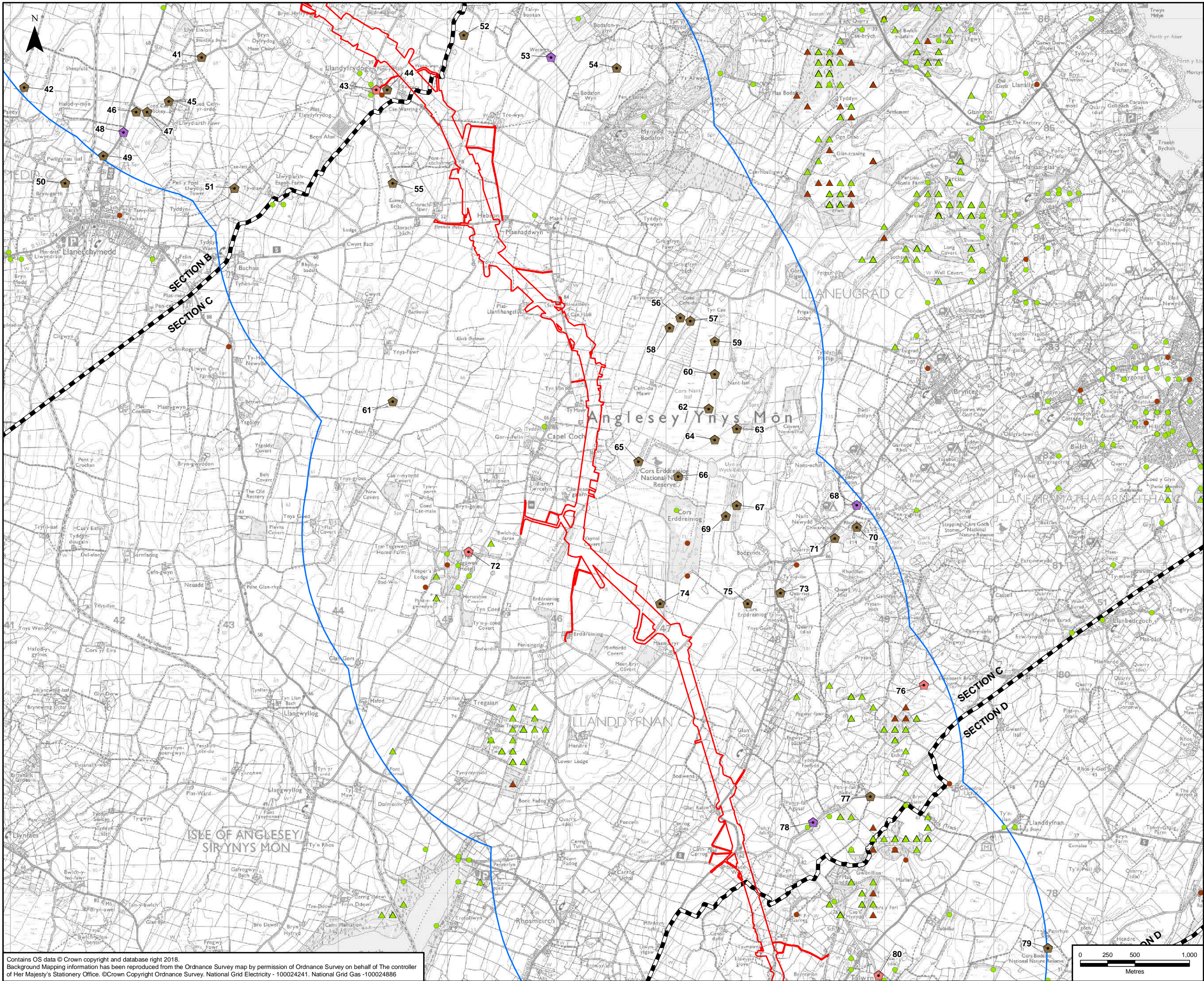
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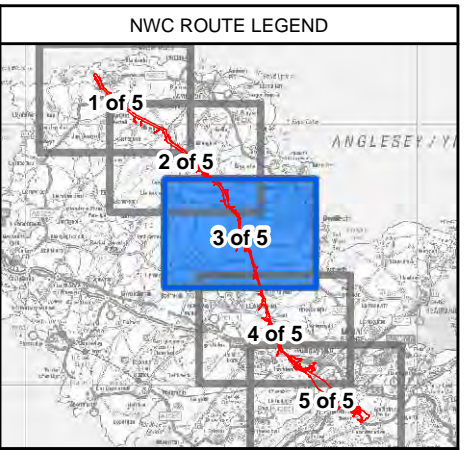
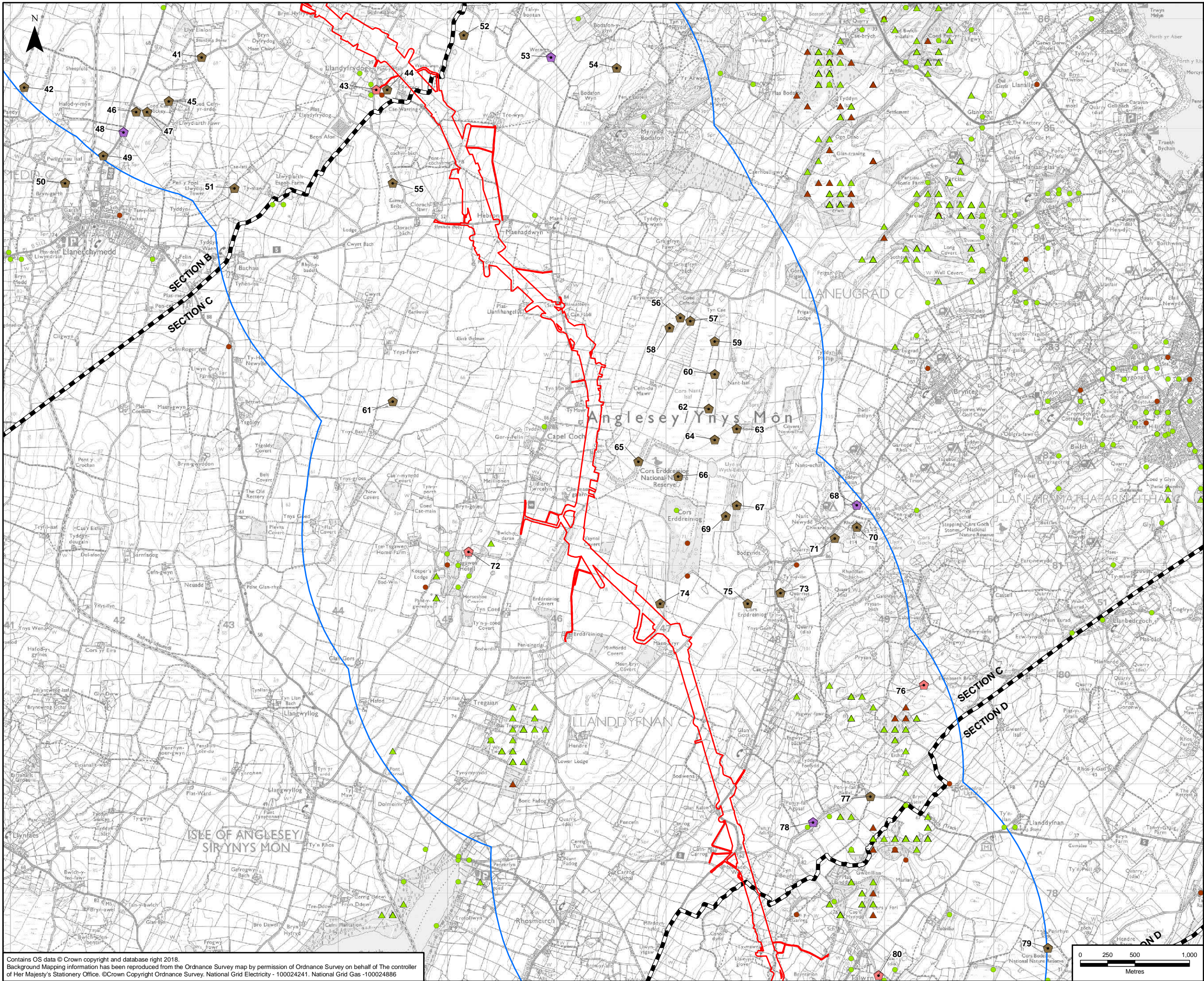
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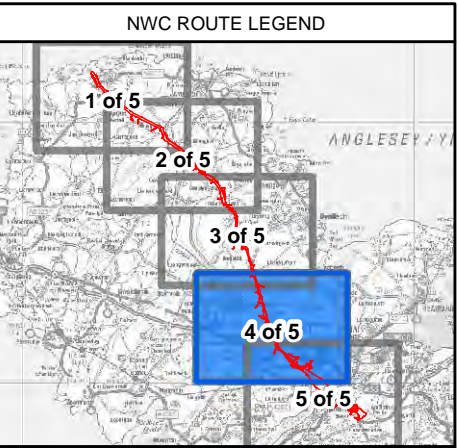
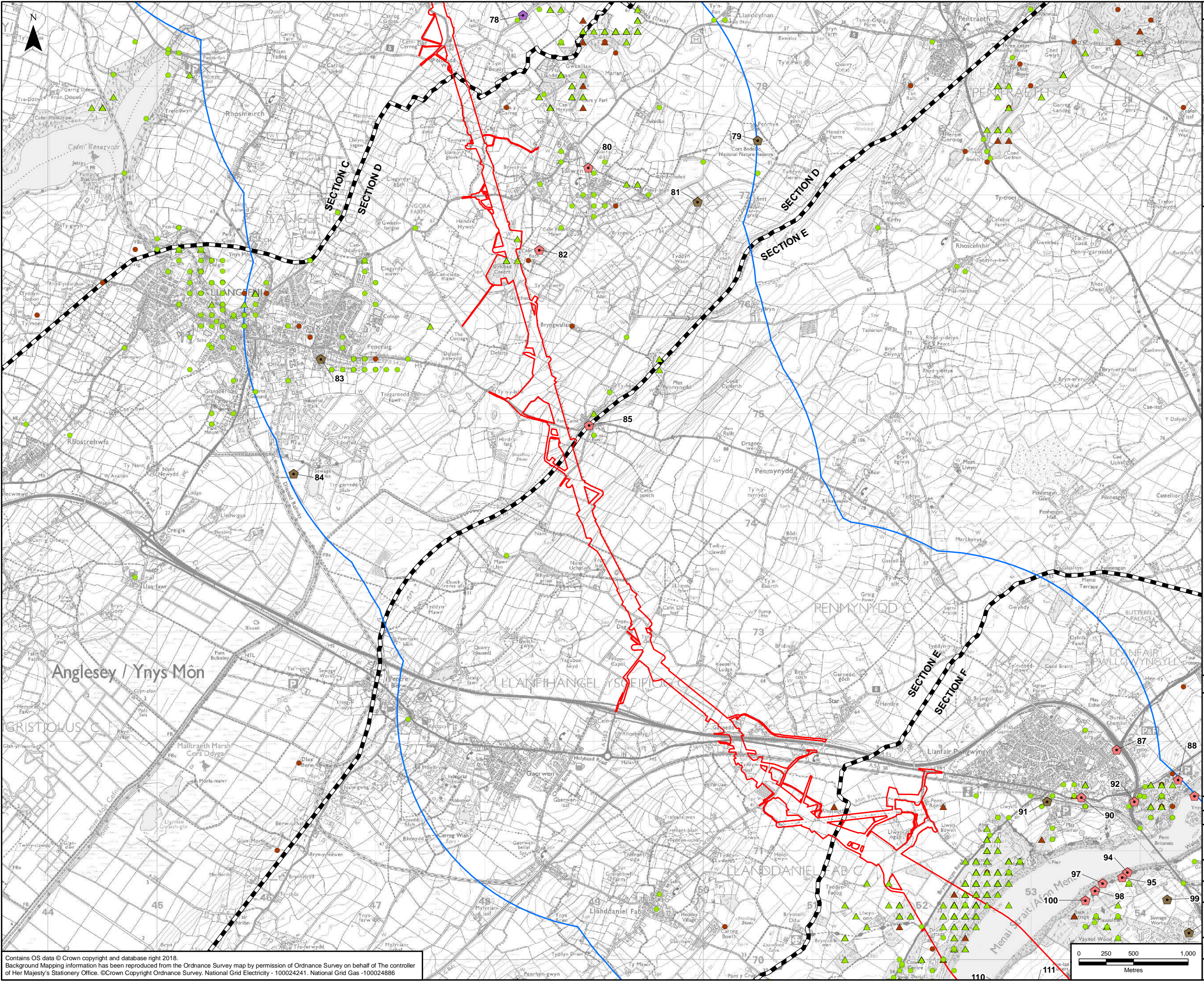
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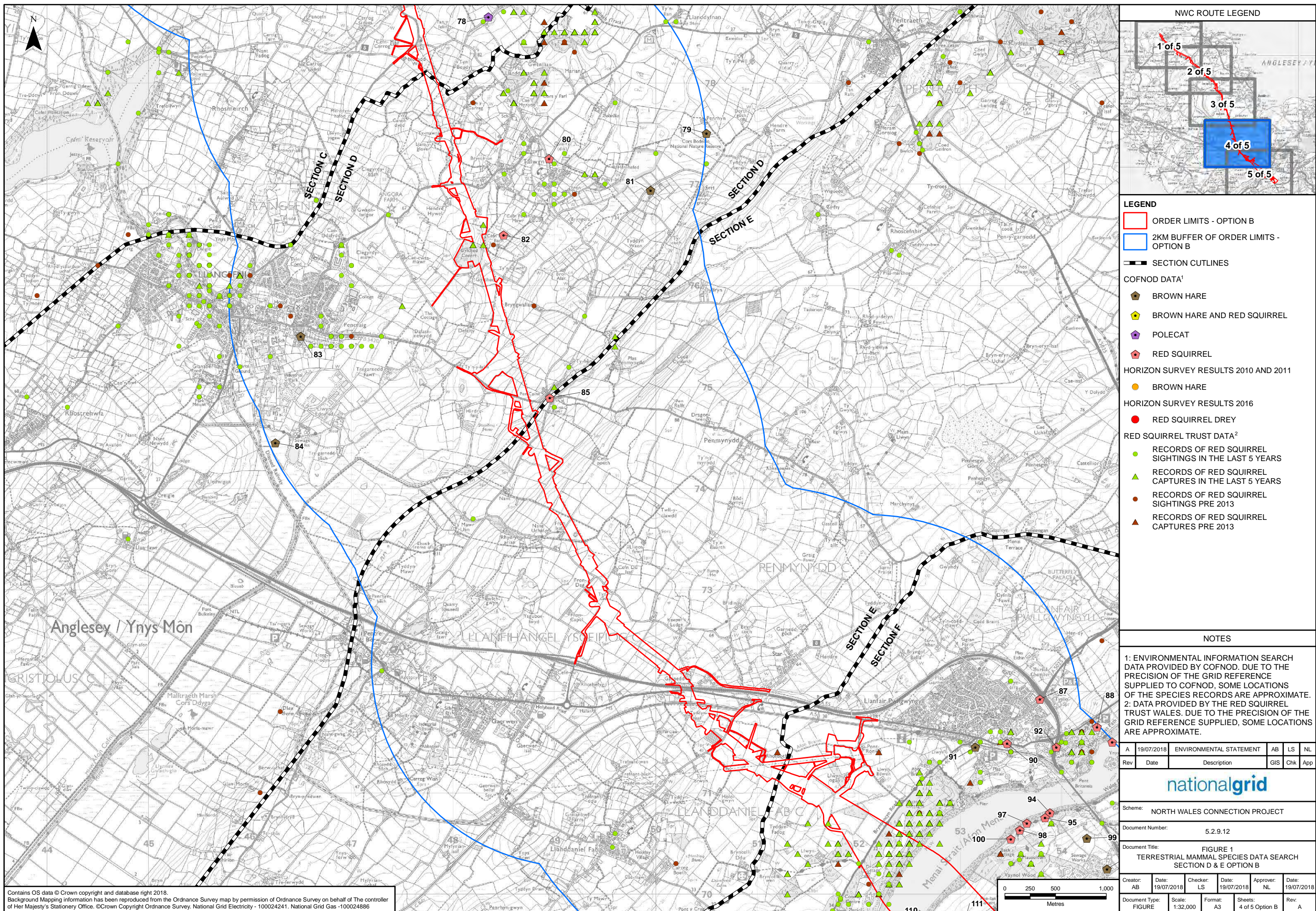
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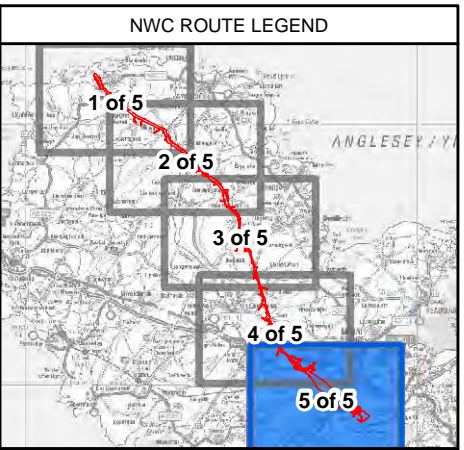
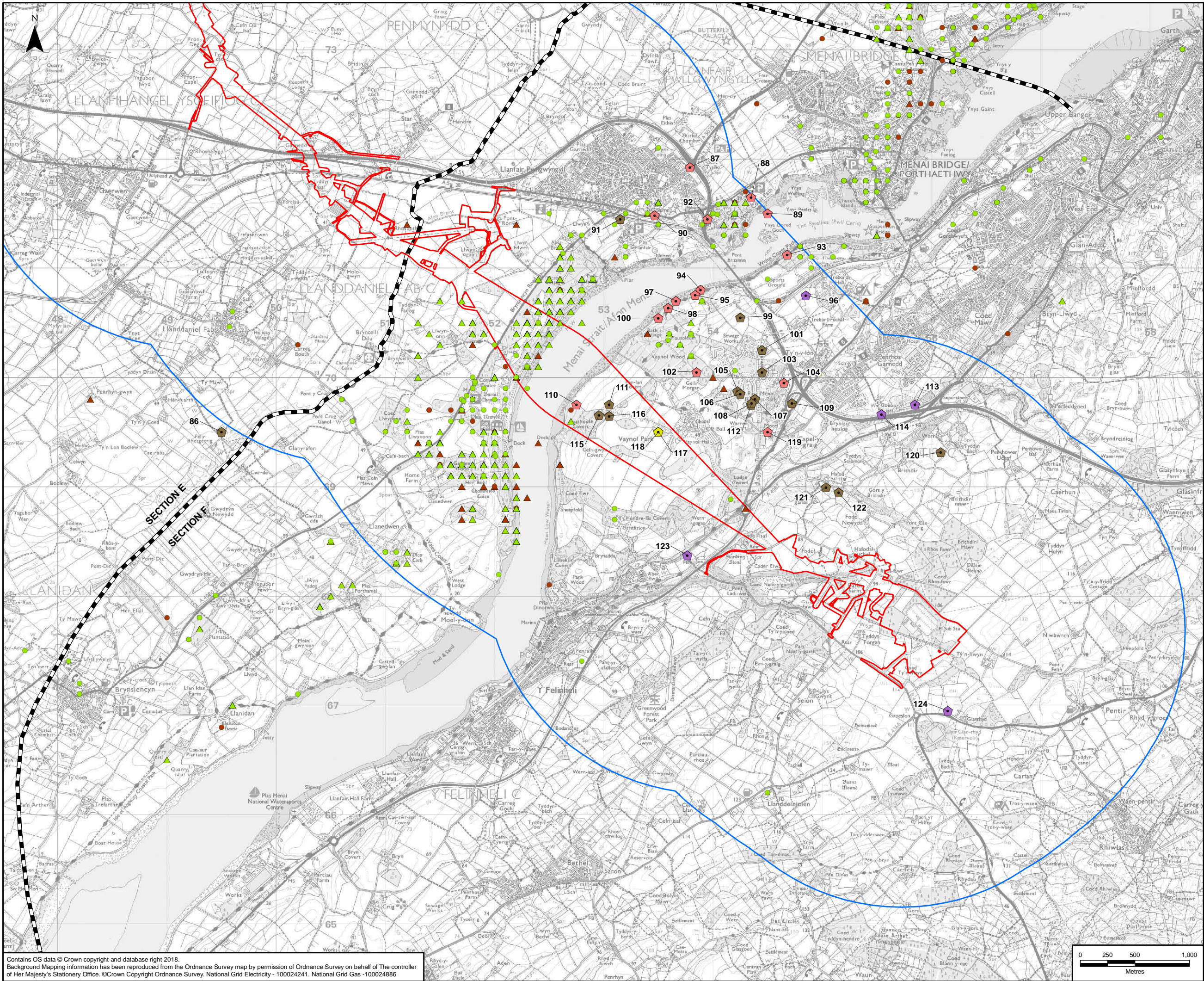
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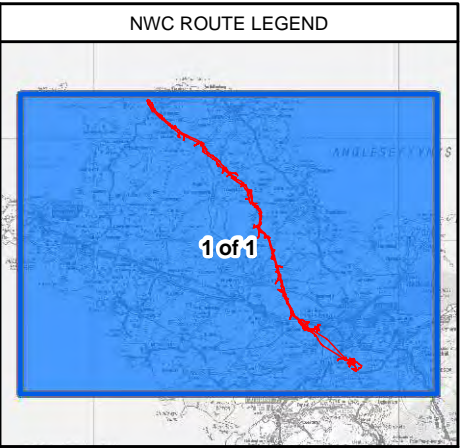
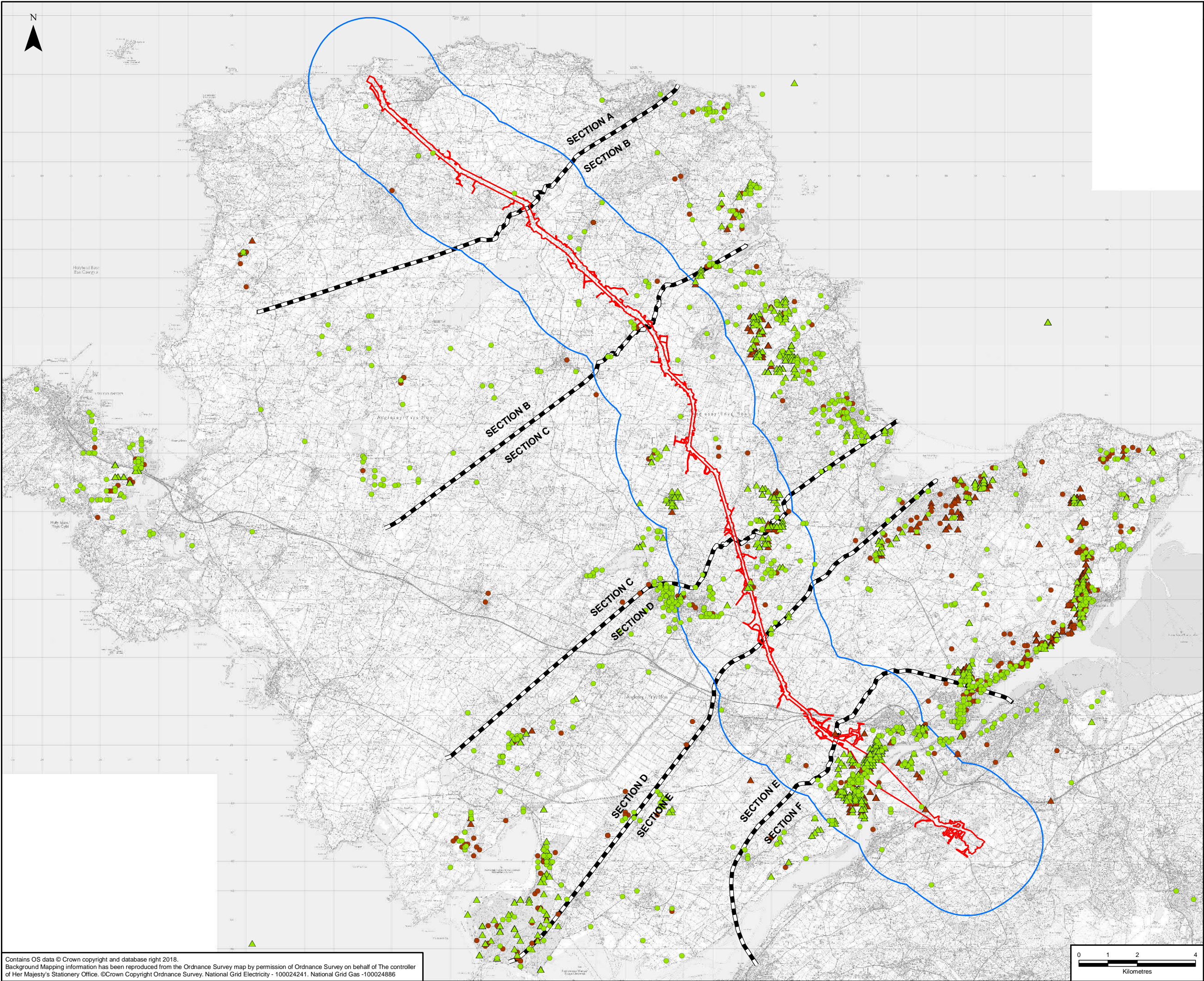
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 - RECORDS OF RED SQUIRREL CAPTURES PRE 2013

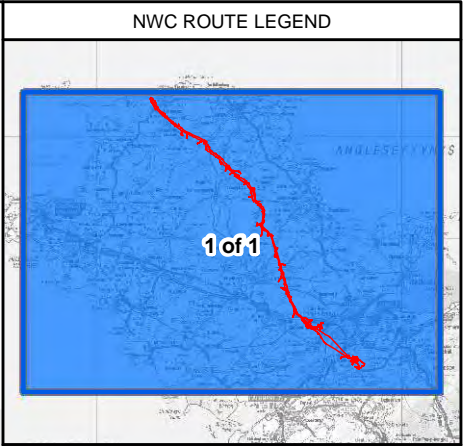
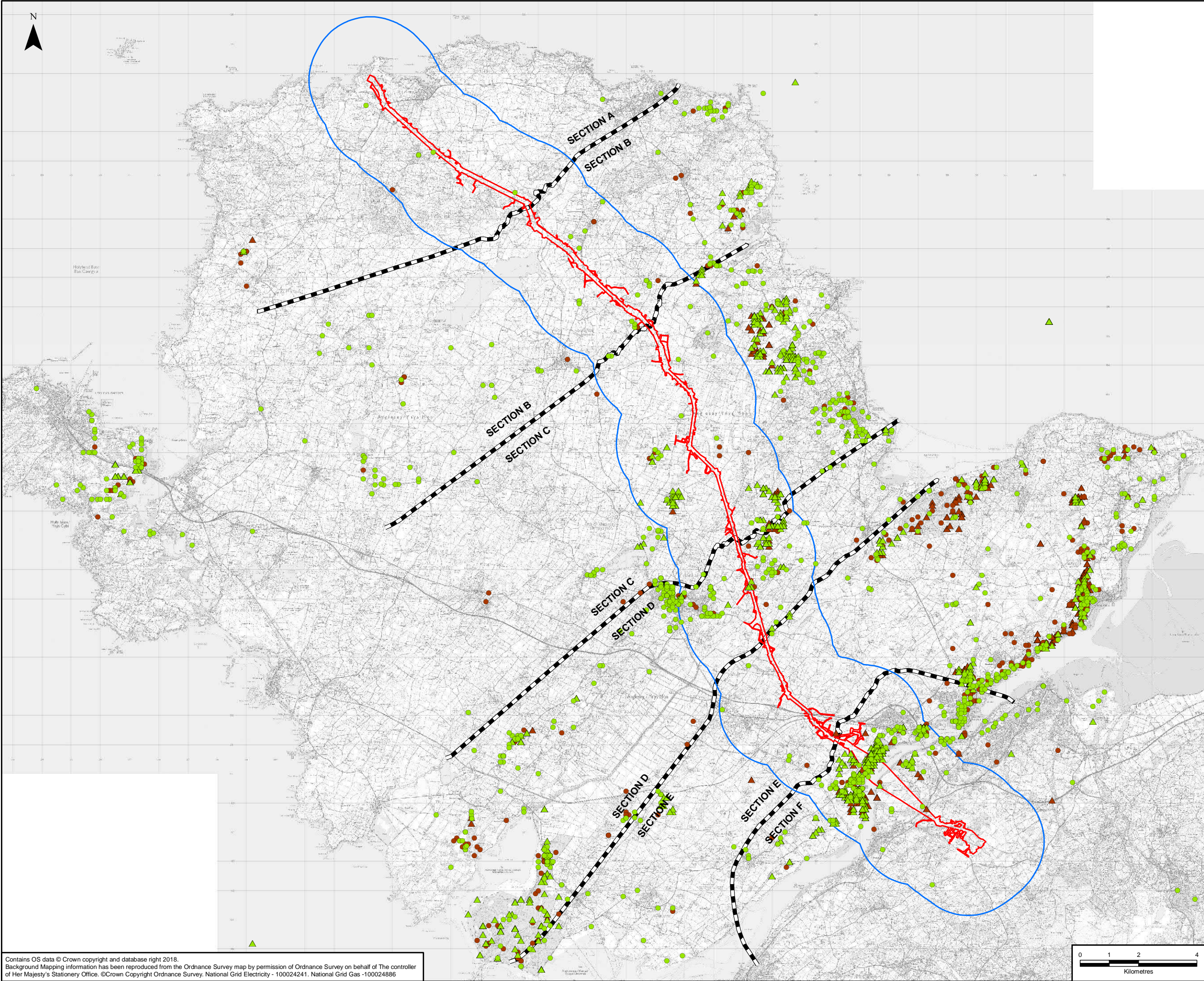
NOTES

1: DATA PROVIDED BY THE RED SQUIRREL TRUST WALES. DUE TO THE PRECISION OF THE GRID REFERENCE SUPPLIED, SOME LOCATIONS ARE APPROXIMATE.

A	19/07/2018	ENVIRONMENTAL STATEMENT	AB	FT	NL
Rev	Date	Description	GIS	Chk	App

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Scheme: NORTH WALES CONNECTION PROJECT					
Document Number: 5.9.2.12					
Document Title: FIGURE 2 RED SQUIRREL TRUST WALES DATA OVERVIEW MAP SECTION OPTION A					
Creator: AB	Date: 19/07/2018	Checker: FT	Date: 19/07/2018	Approver: NL	Date: 19/07/2018
Document Type: FIGURE	Scale: 1:120,000	Format: A3	Sheets: 1 of 1 Option A	Rev: A	

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- LEGEND**
- ORDER LIMITS - OPTION B
 - 2KM BUFFER OF ORDER LIMITS - OPTION B
 - SECTION CUTLINES
- RED SQUIRREL TRUST DATA¹**
- RECORDS OF RED SQUIRREL SIGHTINGS IN THE LAST 5 YEARS
 - RECORDS OF RED SQUIRREL CAPTURES IN THE LAST 5 YEARS
 - RECORDS OF RED SQUIRREL SIGHTINGS PRE 2013
 - RECORDS OF RED SQUIRREL CAPTURES PRE 2013

NOTES

1: DATA PROVIDED BY THE RED SQUIRREL TRUST WALES. DUE TO THE PRECISION OF THE GRID REFERENCE SUPPLIED, SOME LOCATIONS ARE APPROXIMATE.

A	19/07/2018	ENVIRONMENTAL STATEMENT	AB	FT	NL
Rev	Date	Description	GIS	Chk	App

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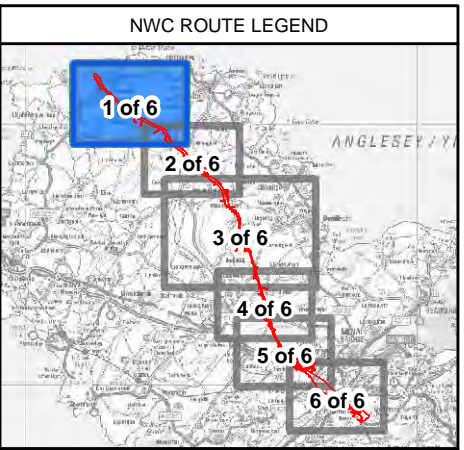
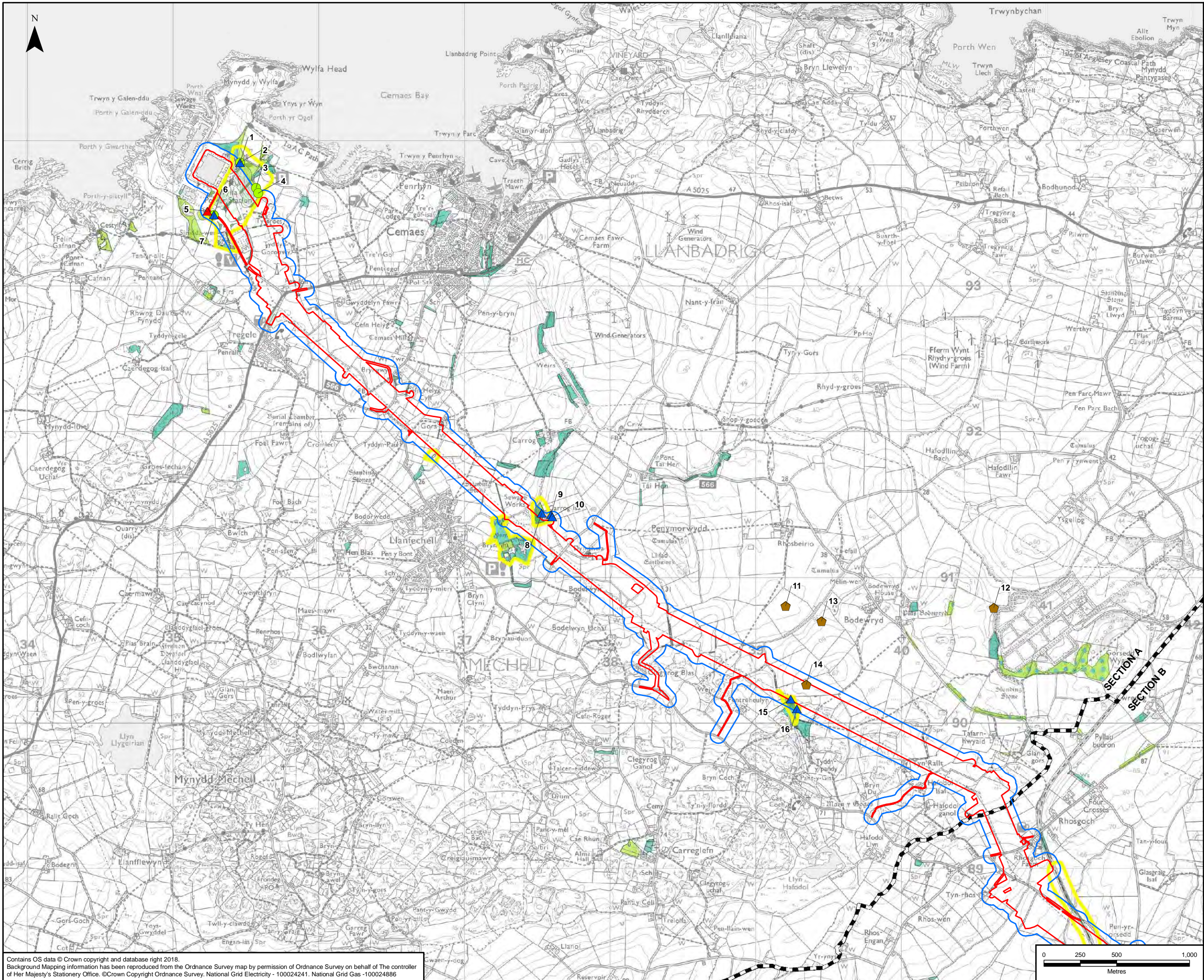
Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 5.9.2.12

Document Title: FIGURE 2
RED SQUIRREL TRUST WALES DATA
OVERVIEW MAP
SECTION OPTION B

Creator: AB	Date: 19/07/2018	Checker: FT	Date: 19/07/2018	Approver: NL	Date: 19/07/2018
Document Type: FIGURE	Scale: 1:120,000	Format: A3	Sheets: 1 of 1 Option B	Rev: A	

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LEGEND

- ORDER LIMITS
- 50M BUFFER OF ORDER LIMITS
- SECTION CUTLINES
- INCIDENTAL SIGHTINGS
 - BROWN HARE
 - BROWN HARE - ANECDOTAL EVIDENCE WAS GIVEN OF HARES IN THIS AREA
 - GREY SQUIRREL (IN TRAP)
 - RED SQUIRREL
- RED SQUIRREL SURVEY AREAS
 - SURVEYED
 - TO BE SURVEYED IN 2018
 - AREA PARTIALLY SURVEYED¹
- SQUIRREL SURVEY RESULTS
 - CONFIRMED ACTIVE RED SQUIRREL DREY
 - POTENTIAL DREY
 - SQUIRREL FEEDING REMAINS
- WOODLAND HABITAT²
 - PHASE 1 SURVEY RESULTS WITHIN ORDER LIMITS AND 50M BUFFER
 - A1.1.1 - SEMI-NATURAL BROADLEAVED WOODLAND
 - A1.1.2 - PLANTED BROADLEAVED WOODLAND
 - A1.2.2 - PLANTED CONIFEROUS WOODLAND
 - A1.3.1 - SEMI-NATURAL MIXED WOODLAND
 - A1.3.2 - PLANTED MIXED WOODLAND
 - ORDNANCE SURVEY MAPPED WOODLAND OUTSIDE 50M BUFFER OF ORDER LIMITS AND UP TO 1KM
 - BROADLEAVED
 - CONIFEROUS
 - MIXED

NOTES

1: PARTIALLY SURVEYED AREA WHERE HEALTH AND SAFETY ISSUES (STEEP SIDED WOODLAND AND RAVINE) PREVENTED A FULL SURVEY FOR RED SQUIRRELS BEING UNDERTAKEN.

2: RED SQUIRRELS CAN BE FOUND IN CONIFEROUS, BROADLEAVED AND MIXED WOODLANDS. CONIFEROUS AND MIXED WOODLANDS HAVE HIGHER VALUE TO RED SQUIRREL THAN BROADLEAVED WOODLAND AS THEY PROVIDE THE FOOD RESOURCES THEY FAVOUR AND THEY ARE LESS LIKELY TO SUPPORT GREY SQUIRREL.

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Rev	Date	Description	GIS	Chk	App

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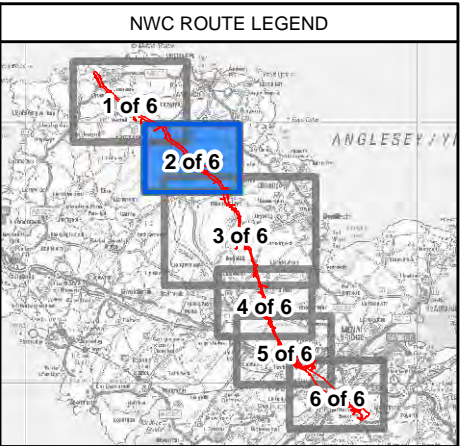
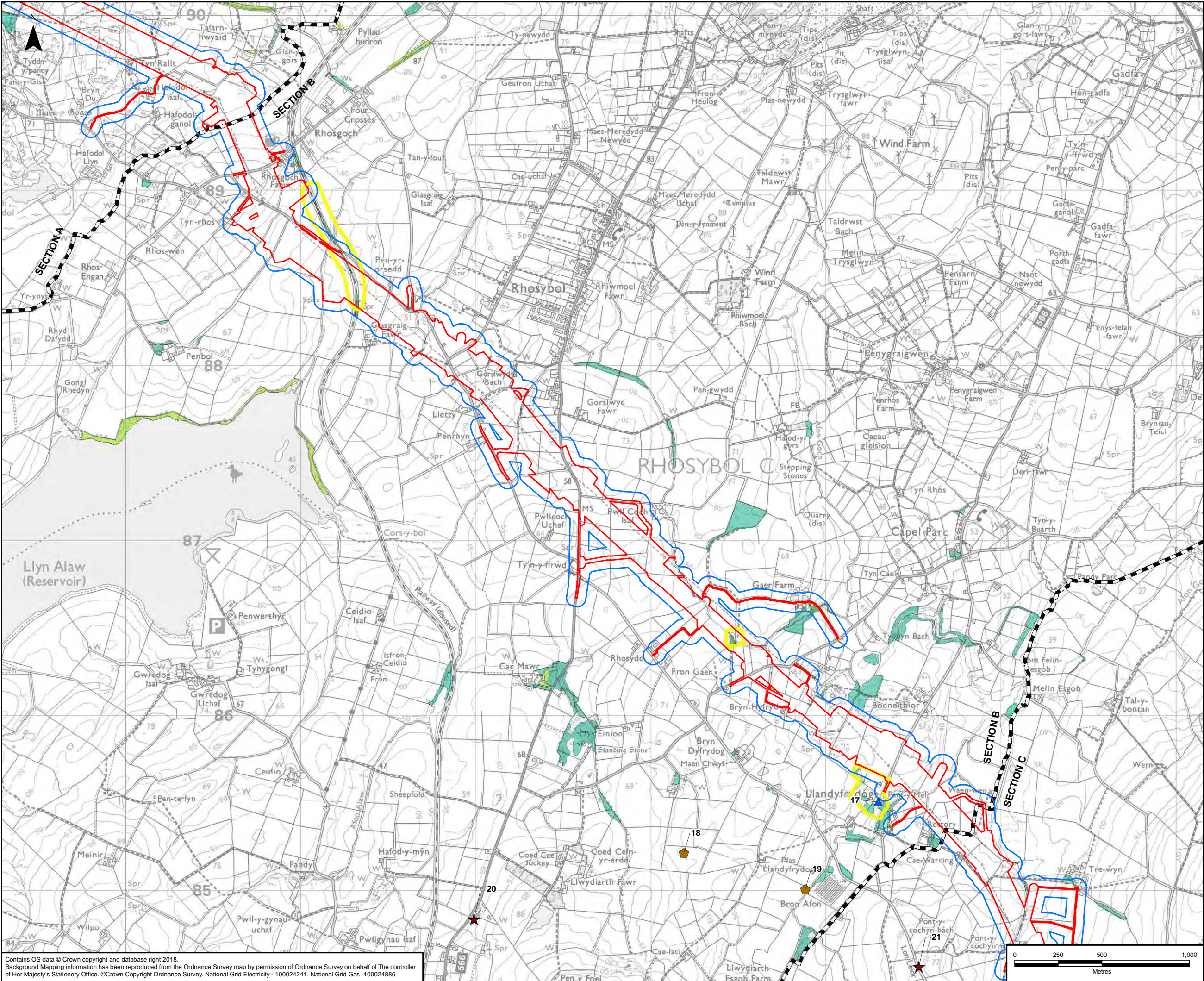
Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 5.9.2.12

Document Title: FIGURE 3
TERRESTRIAL MAMMAL SURVEY RESULTS
SECTION A

Creator: AB	Date: 31/07/2018	Checker: FT	Date: 31/07/2018	Approver: NL	Date: 31/07/2018
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LEGEND

- ORDER LIMITS
- 50M BUFFER OF ORDER LIMITS
- SECTION CUTLINES
- INCIDENTAL SIGHTINGS
 - BROWN HARE
 - BROWN HARE - ANECDOTAL EVIDENCE WAS GIVEN OF HARES IN THIS AREA
 - GREY SQUIRREL (IN TRAP)
 - RED SQUIRREL
- RED SQUIRREL SURVEY AREAS
 - SURVEYED
 - TO BE SURVEYED IN 2018
 - AREA PARTIALLY SURVEYED¹
- SQUIRREL SURVEY RESULTS
 - CONFIRMED ACTIVE RED SQUIRREL DREY
 - POTENTIAL DREY
 - SQUIRREL FEEDING REMAINS
- WOODLAND HABITAT²
 - A1.1.1 - SEMI-NATURAL BROADLEAVED WOODLAND
 - A1.1.2 - PLANTED BROADLEAVED WOODLAND
 - A1.2.2 - PLANTED CONIFEROUS WOODLAND
 - A1.3.1 - SEMI-NATURAL MIXED WOODLAND
 - A1.3.2 - PLANTED MIXED WOODLAND
- ORDNANCE SURVEY MAPPED WOODLAND OUTSIDE 50M BUFFER OF ORDER LIMITS AND UP TO 1KM
 - BROADLEAVED
 - CONIFEROUS
 - MIXED

NOTES

1: PARTIALLY SURVEYED AREA WHERE HEALTH AND SAFETY ISSUES (STEEP SIDED WOODLAND RAVINE) PREVENTED A FULL SURVEY FOR RED SQUIRRELS BEING UNDERTAKEN.

2: RED SQUIRRELS CAN BE FOUND IN CONIFEROUS, BROADLEAVED AND MIXED WOODLANDS. CONIFEROUS AND MIXED WOODLANDS HAVE HIGHER VALUE TO RED SQUIRREL THAN BROADLEAVED WOODLAND AS THEY PROVIDE THE FOOD RESOURCES THEY FAVOUR AND THEY ARE LESS LIKELY TO SUPPORT GREY SQUIRREL.

A	31/07/2018	ENVIRONMENTAL STATEMENT	AB	FT	NL
Rev	Date	Description	GIS	Chk	App

nationalgrid

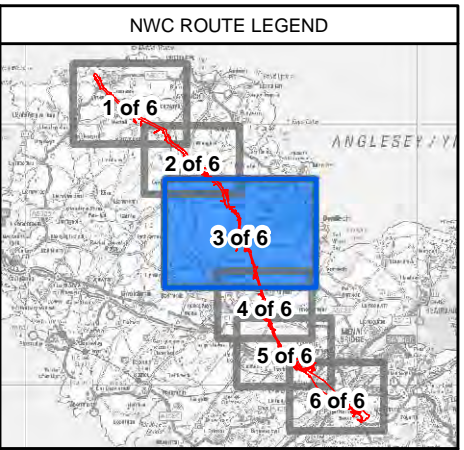
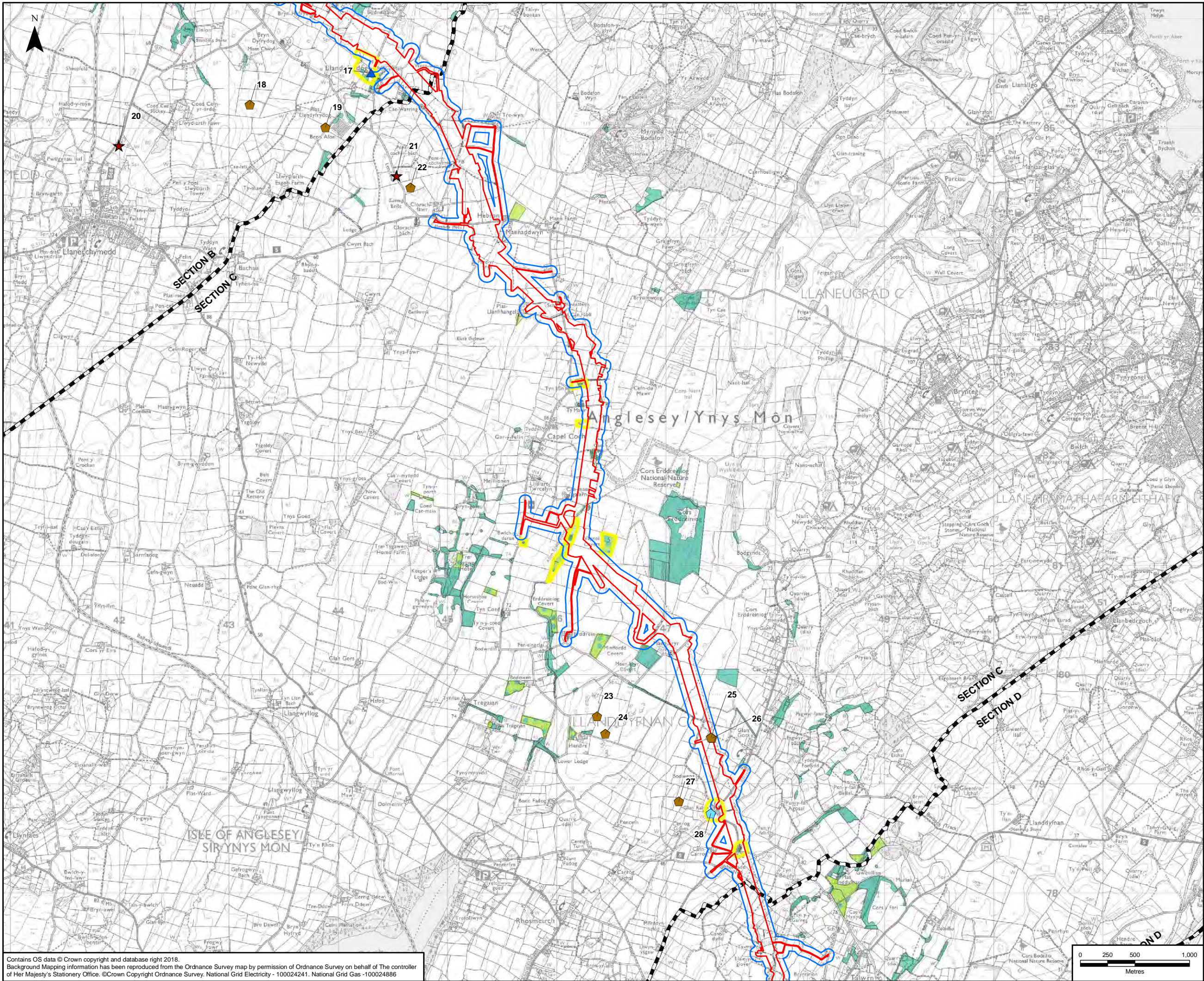
Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 5.9.2.12

Document Title: FIGURE 3
TERRESTRIAL MAMMAL SURVEY RESULTS
SECTION B

Creator: AB	Date: 31/07/2018	Checker: FT	Date: 31/07/2018	Approver: NL	Date: 31/07/2018
Document Type: FIGURE	Scale: 1:20,000	Format: A3	Sheets: 2 of 6	Rev: A	

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LEGEND

- ORDER LIMITS - OPTION A
- 50M BUFFER OF ORDER LIMITS - OPTION A
- SECTION CUTLINES
- INCIDENTAL SIGHTINGS
 - BROWN HARE
 - BROWN HARE - ANECDOTAL EVIDENCE WAS GIVEN OF HARES IN THIS AREA
 - GREY SQUIRREL (IN TRAP)
 - RED SQUIRREL
- RED SQUIRREL SURVEY AREAS
 - SURVEYED
 - TO BE SURVEYED IN 2018
 - AREA PARTIALLY SURVEYED¹
- SQUIRREL SURVEY RESULTS
 - CONFIRMED ACTIVE RED SQUIRREL DREY
 - POTENTIAL DREY
 - SQUIRREL FEEDING REMAINS
- WOODLAND HABITAT²
 - PHASE 1 SURVEY RESULTS WITHIN ORDER LIMITS AND 50M BUFFER
 - A1.1.1 - SEMI-NATURAL BROADLEAVED WOODLAND
 - A1.1.2 - PLANTED BROADLEAVED WOODLAND
 - A1.2.2 - PLANTED CONIFEROUS WOODLAND
 - A1.3.1 - SEMI-NATURAL MIXED WOODLAND
 - A1.3.2 - PLANTED MIXED WOODLAND
 - ORDNANCE SURVEY MAPPED WOODLAND OUTSIDE 50M BUFFER OF ORDER LIMITS AND UP TO 1KM
 - BROADLEAVED
 - CONIFEROUS
 - MIXED

NOTES

1: PARTIALLY SURVEYED AREA WHERE HEALTH AND SAFETY ISSUES (STEEP SIDED WOODLAND RAVINE) PREVENTED A FULL SURVEY FOR RED SQUIRRELS BEING UNDERTAKEN.

2: RED SQUIRRELS CAN BE FOUND IN CONIFEROUS, BROADLEAVED AND MIXED WOODLANDS. CONIFEROUS AND MIXED WOODLANDS HAVE HIGHER VALUE TO RED SQUIRREL THAN BROADLEAVED WOODLAND AS THEY PROVIDE THE FOOD RESOURCES THEY FAVOUR AND THEY ARE LESS LIKELY TO SUPPORT GREY SQUIRREL.

A	31/07/2018	ENVIRONMENTAL STATEMENT	AB	FT	NL
Rev	Date	Description	GIS	Chk	App

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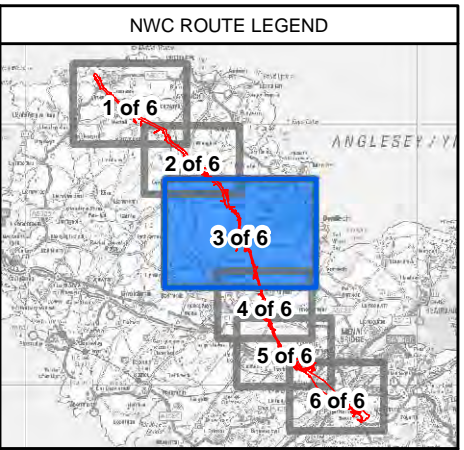
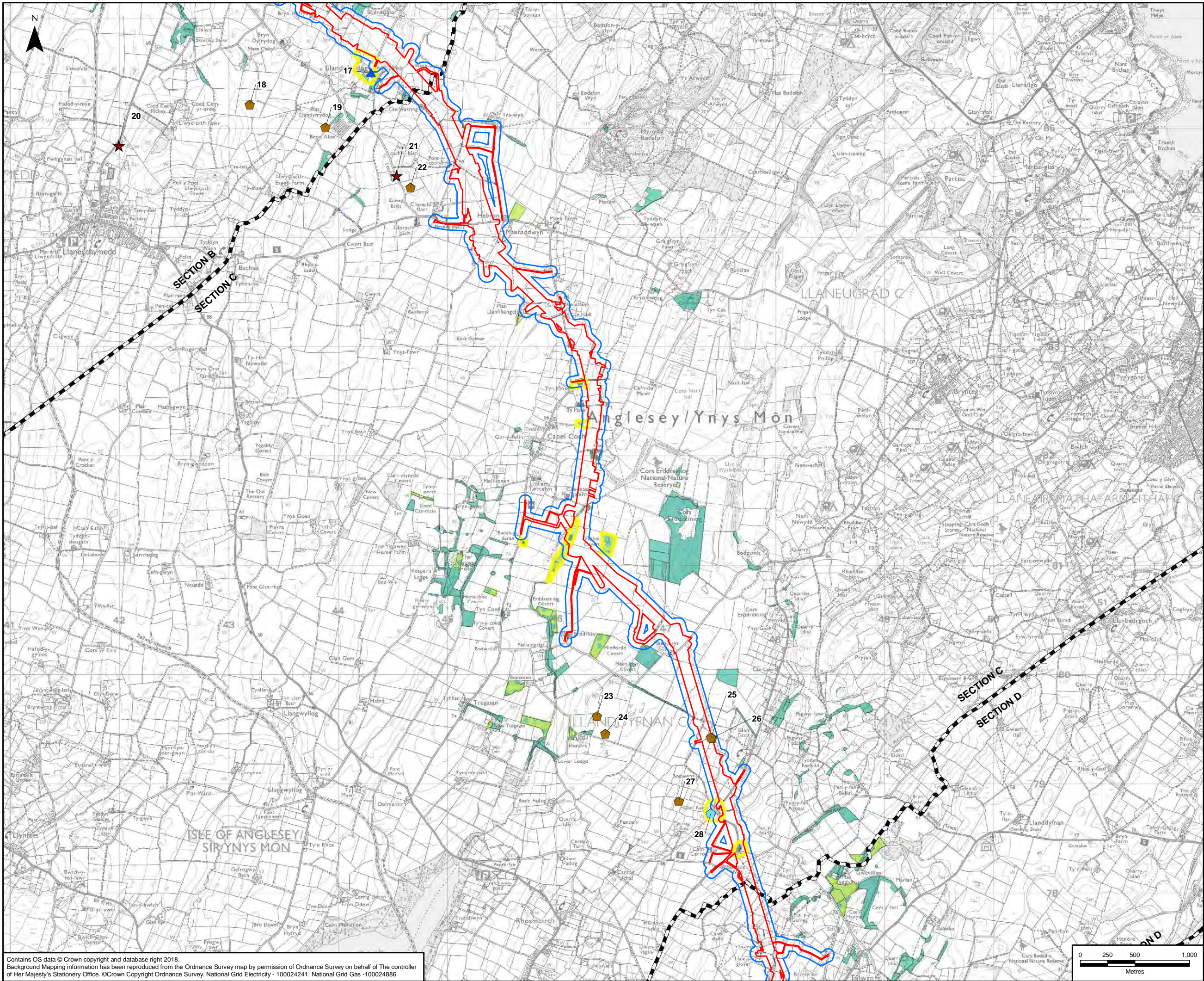
Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 5.9.2.12

Document Title: FIGURE 3
TERRESTRIAL MAMMAL SURVEY RESULTS
SECTION C OPTION A

Creator: AB	Date: 31/07/2018	Checker: FT	Date: 31/07/2018	Approver: NL	Date: 31/07/2018
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LEGEND

- ORDER LIMITS - OPTION B
- 50M BUFFER OF ORDER LIMITS - OPTION B
- SECTION CUTLINES
- INCIDENTAL SIGHTINGS
 - BROWN HARE
 - BROWN HARE - ANECDOTAL EVIDENCE WAS GIVEN OF HARES IN THIS AREA
 - GREY SQUIRREL (IN TRAP)
 - RED SQUIRREL
- RED SQUIRREL SURVEY AREAS
 - SURVEYED
 - TO BE SURVEYED IN 2018
 - AREA PARTIALLY SURVEYED¹
- SQUIRREL SURVEY RESULTS
 - CONFIRMED ACTIVE RED SQUIRREL DREY
 - POTENTIAL DREY
 - SQUIRREL FEEDING REMAINS
- WOODLAND HABITAT²
 - PHASE 1 SURVEY RESULTS WITHIN ORDER LIMITS AND 50M BUFFER
 - A1.1.1 - SEMI-NATURAL BROADLEAVED WOODLAND
 - A1.1.2 - PLANTED BROADLEAVED WOODLAND
 - A1.2.2 - PLANTED CONIFEROUS WOODLAND
 - A1.3.1 - SEMI-NATURAL MIXED WOODLAND
 - A1.3.2 - PLANTED MIXED WOODLAND
 - ORDNANCE SURVEY MAPPED WOODLAND OUTSIDE 50M BUFFER OF ORDER LIMITS AND UP TO 1KM
 - BROADLEAVED
 - CONIFEROUS
 - MIXED

NOTES

1: PARTIALLY SURVEYED AREA WHERE HEALTH AND SAFETY ISSUES (STEEP SIDED WOODLAND RAVINE) PREVENTED A FULL SURVEY FOR RED SQUIRRELS BEING UNDERTAKEN.

2: RED SQUIRRELS CAN BE FOUND IN CONIFEROUS, BROADLEAVED AND MIXED WOODLANDS. CONIFEROUS AND MIXED WOODLANDS HAVE HIGHER VALUE TO RED SQUIRREL THAN BROADLEAVED WOODLAND AS THEY PROVIDE THE FOOD RESOURCES THEY FAVOUR AND THEY ARE LESS LIKELY TO SUPPORT GREY SQUIRREL.

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Rev	Date	Description	GIS	Chk	App

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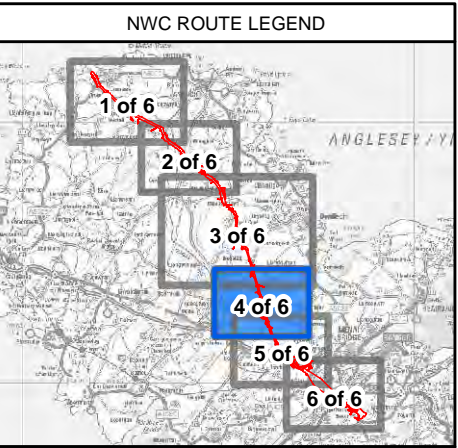
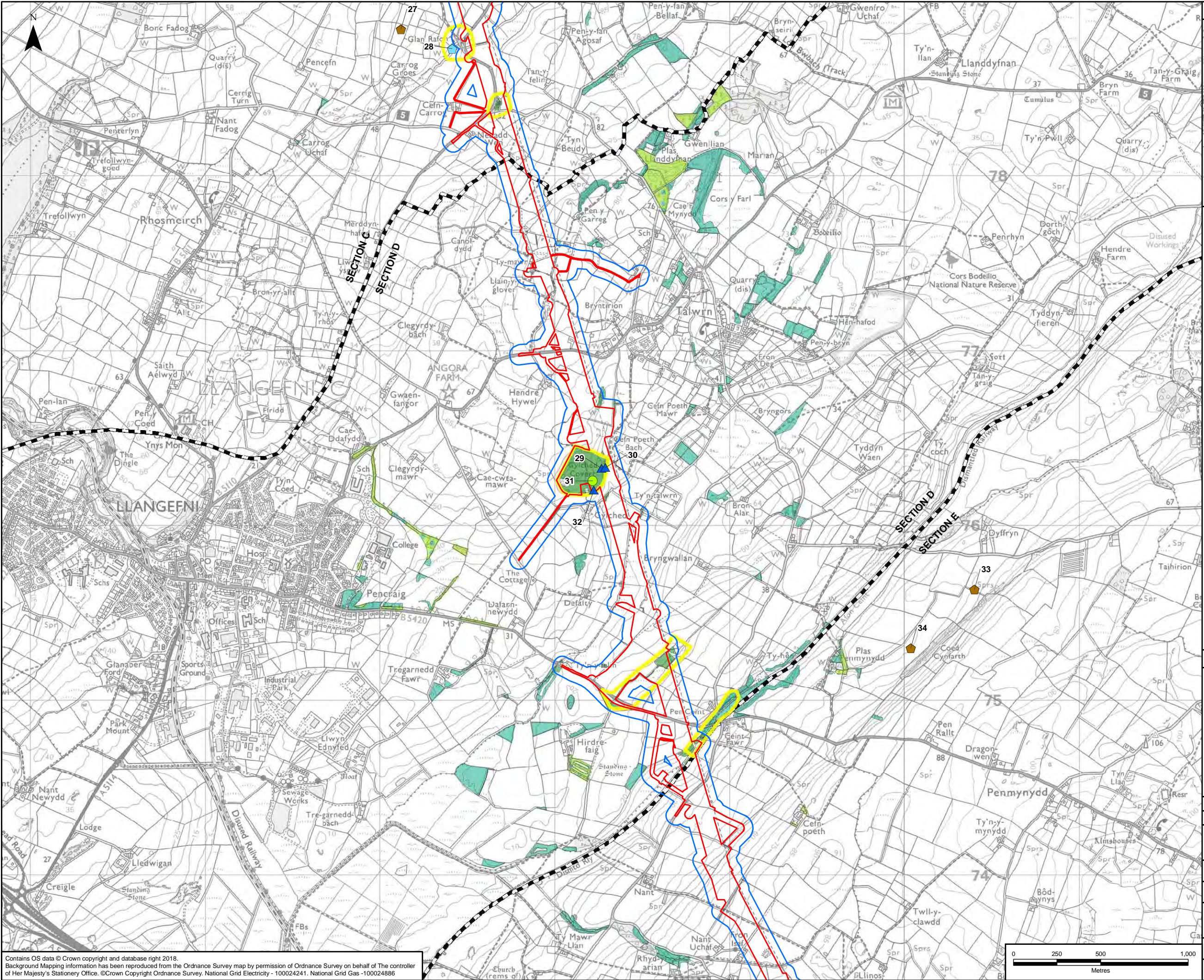
Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 5.9.2.12

Document Title: FIGURE 3
TERRESTRIAL MAMMAL SURVEY RESULTS
SECTION C OPTION B

Creator: AB	Date: 31/07/2018	Checker: FT	Date: 31/07/2018	Approver: NL	Date: 31/07/2018
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LEGEND

- ORDER LIMITS - OPTION A
- 50M BUFFER OF ORDER LIMITS - OPTION A
- SECTION CUTLINES
- INCIDENTAL SIGHTINGS
 - BROWN HARE
 - BROWN HARE - ANECDOTAL EVIDENCE WAS GIVEN OF HARES IN THIS AREA
 - GREY SQUIRREL (IN TRAP)
 - RED SQUIRREL
- RED SQUIRREL SURVEY AREAS
 - SURVEYED
 - TO BE SURVEYED IN 2018
 - AREA PARTIALLY SURVEYED¹
- SQUIRREL SURVEY RESULTS
 - CONFIRMED ACTIVE RED SQUIRREL DREY
 - POTENTIAL DREY
 - SQUIRREL FEEDING REMAINS
- WOODLAND HABITAT²
- PHASE 1 SURVEY RESULTS WITHIN ORDER LIMITS AND 50M BUFFER
 - A1.1.1 - SEMI-NATURAL BROADLEAVED WOODLAND
 - A1.1.2 - PLANTED BROADLEAVED WOODLAND
 - A1.2.2 - PLANTED CONIFEROUS WOODLAND
 - A1.3.1 - SEMI-NATURAL MIXED WOODLAND
 - A1.3.2 - PLANTED MIXED WOODLAND
- ORDNANCE SURVEY MAPPED WOODLAND OUTSIDE 50M BUFFER OF ORDER LIMITS AND UP TO 1KM
 - BROADLEAVED
 - CONIFEROUS
 - MIXED

NOTES

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A	31/07/2018	ENVIRONMENTAL STATEMENT	AB	FT	NL
Rev	Date	Description	GIS	Chk	App

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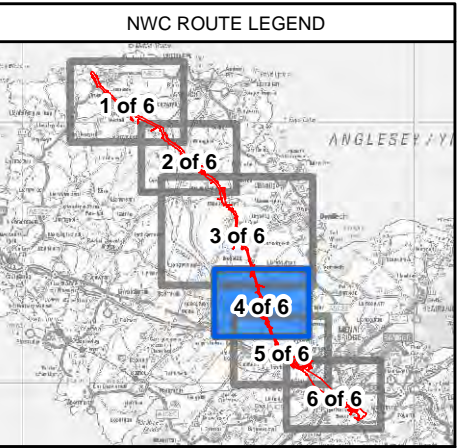
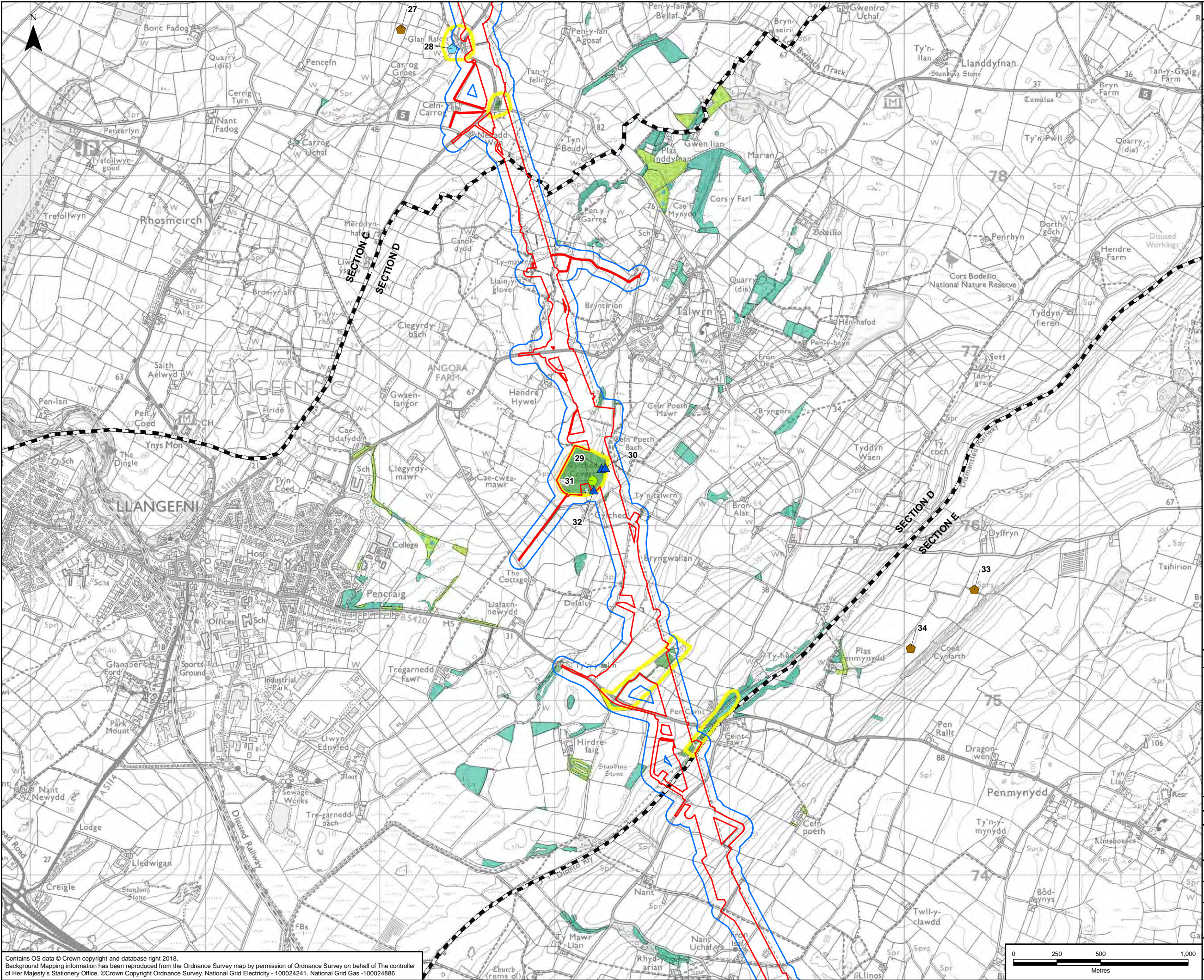
Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 5.9.2.12

Document Title: FIGURE 3
TERRESTRIAL MAMMAL SURVEY RESULTS
SECTION D OPTION A

Creator: AB	Date: 31/07/2018	Checker: FT	Date: 31/07/2018	Approver: NL	Date: 31/07/2018
Document Type: FIGURE	Scale: 1:20,000	Format: A3	Sheets: 4 of 6 Option A	Rev: A	

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LEGEND

- ORDER LIMITS - OPTION B
- 50M BUFFER OF ORDER LIMITS - OPTION B
- SECTION CUTLINES
- INCIDENTAL SIGHTINGS
 - BROWN HARE
 - BROWN HARE - ANECDOTAL EVIDENCE WAS GIVEN OF HARES IN THIS AREA
 - GREY SQUIRREL (IN TRAP)
 - RED SQUIRREL
- RED SQUIRREL SURVEY AREAS
 - SURVEYED
 - TO BE SURVEYED IN 2018
 - AREA PARTIALLY SURVEYED¹
- SQUIRREL SURVEY RESULTS
 - CONFIRMED ACTIVE RED SQUIRREL DREY
 - POTENTIAL DREY
 - SQUIRREL FEEDING REMAINS
- WOODLAND HABITAT²
- PHASE 1 SURVEY RESULTS WITHIN ORDER LIMITS AND 50M BUFFER
 - A1.1.1 - SEMI-NATURAL BROADLEAVED WOODLAND
 - A1.1.2 - PLANTED BROADLEAVED WOODLAND
 - A1.2.2 - PLANTED CONIFEROUS WOODLAND
 - A1.3.1 - SEMI-NATURAL MIXED WOODLAND
 - A1.3.2 - PLANTED MIXED WOODLAND
- ORDNANCE SURVEY MAPPED WOODLAND OUTSIDE 50M BUFFER OF ORDER LIMITS AND UP TO 1KM
 - BROADLEAVED
 - CONIFEROUS
 - MIXED

NOTES

1: PARTIALLY SURVEYED AREA WHERE HEALTH AND SAFETY ISSUES (STEEP SIDED WOODLAND RAVINE) PREVENTED A FULL SURVEY FOR RED SQUIRRELS BEING UNDERTAKEN.

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A	31/07/2018	ENVIRONMENTAL STATEMENT	AB	FT	NL
Rev	Date	Description	GIS	Chk	App

nationalgrid

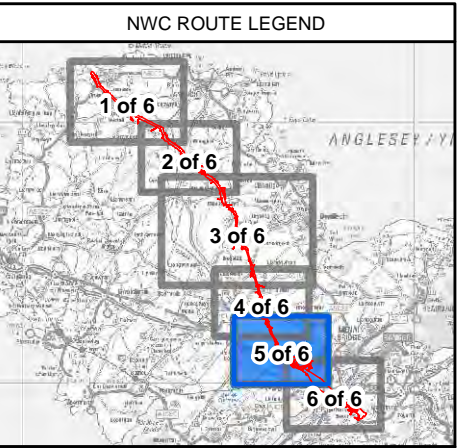
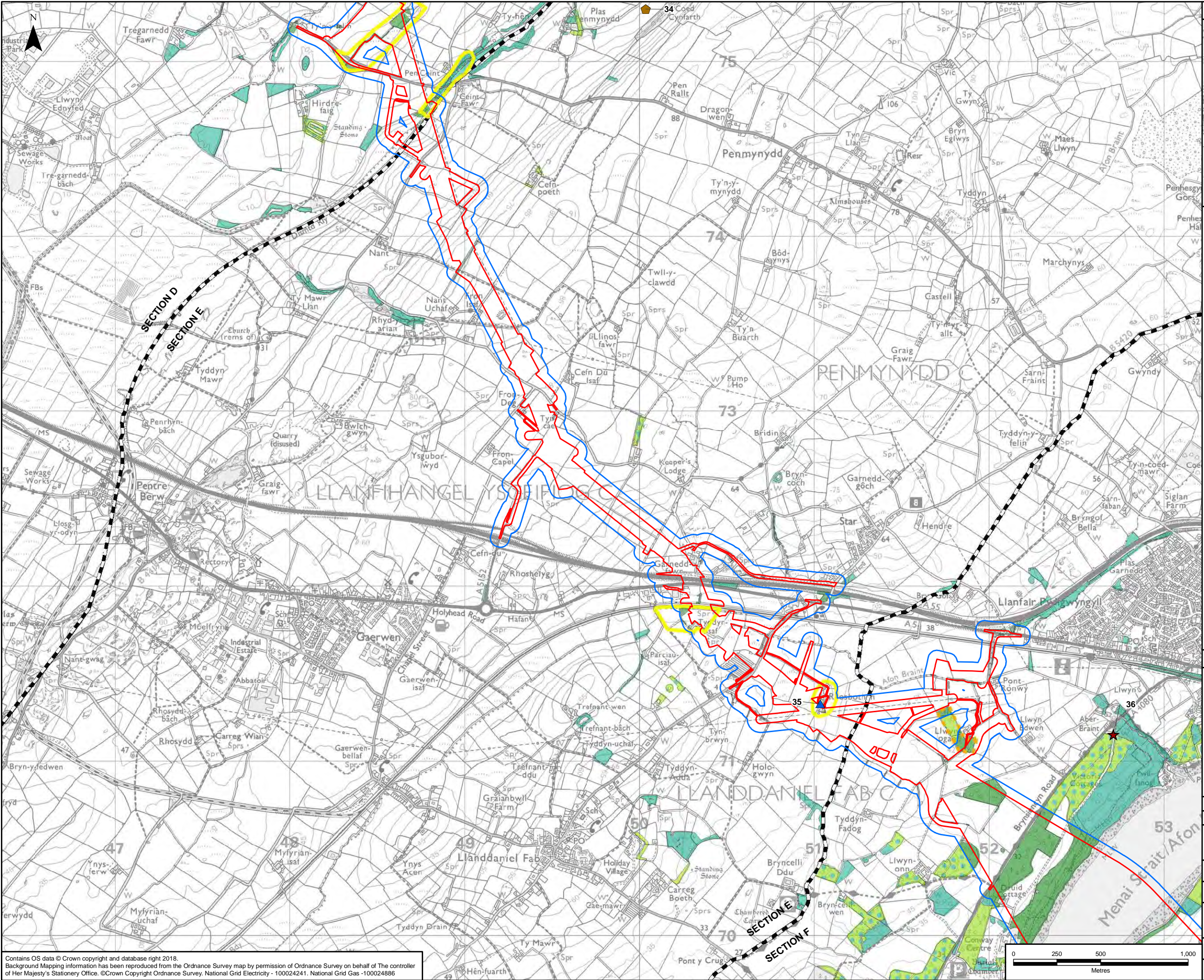
Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 5.9.2.12

Document Title: FIGURE 3
TERRESTRIAL MAMMAL SURVEY RESULTS
SECTION D OPTION B

Creator: AB	Date: 31/07/2018	Checker: FT	Date: 31/07/2018	Approver: NL	Date: 31/07/2018
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LEGEND

- ORDER LIMITS
- 50M BUFFER OF ORDER LIMITS
- SECTION CUTLINES
- INCIDENTAL SIGHTINGS
 - BROWN HARE
 - BROWN HARE - ANECDOTAL EVIDENCE WAS GIVEN OF HARES IN THIS AREA
 - GREY SQUIRREL (IN TRAP)
 - RED SQUIRREL
- RED SQUIRREL SURVEY AREAS
 - SURVEYED
 - TO BE SURVEYED IN 2018
 - AREA PARTIALLY SURVEYED¹
- SQUIRREL SURVEY RESULTS
 - CONFIRMED ACTIVE RED SQUIRREL DREY
 - POTENTIAL DREY
 - SQUIRREL FEEDING REMAINS
- WOODLAND HABITAT²
 - PHASE 1 SURVEY RESULTS WITHIN ORDER LIMITS AND 50M BUFFER
 - A1.1.1 - SEMI-NATURAL BROADLEAVED WOODLAND
 - A1.1.2 - PLANTED BROADLEAVED WOODLAND
 - A1.2.2 - PLANTED CONIFEROUS WOODLAND
 - A1.3.1 - SEMI-NATURAL MIXED WOODLAND
 - A1.3.2 - PLANTED MIXED WOODLAND
 - ORDNANCE SURVEY MAPPED WOODLAND OUTSIDE 50M BUFFER OF ORDER LIMITS AND UP TO 1KM
 - BROADLEAVED
 - CONIFEROUS
 - MIXED

NOTES

1: PARTIALLY SURVEYED AREA WHERE HEALTH AND SAFETY ISSUES (STEEP SIDED WOODLAND AND RAVINE) PREVENTED A FULL SURVEY FOR RED SQUIRRELS BEING UNDERTAKEN.

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A	31/07/2018	ENVIRONMENTAL STATEMENT	AB	FT	NL
Rev	Date	Description	GIS	Chk	App

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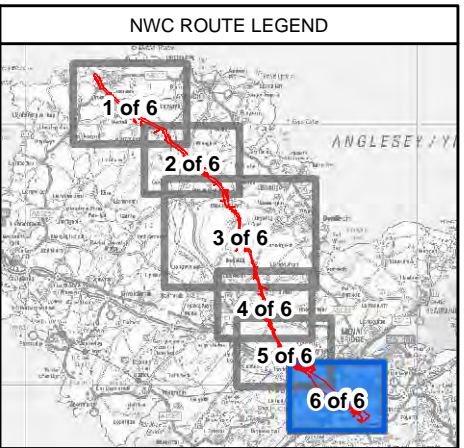
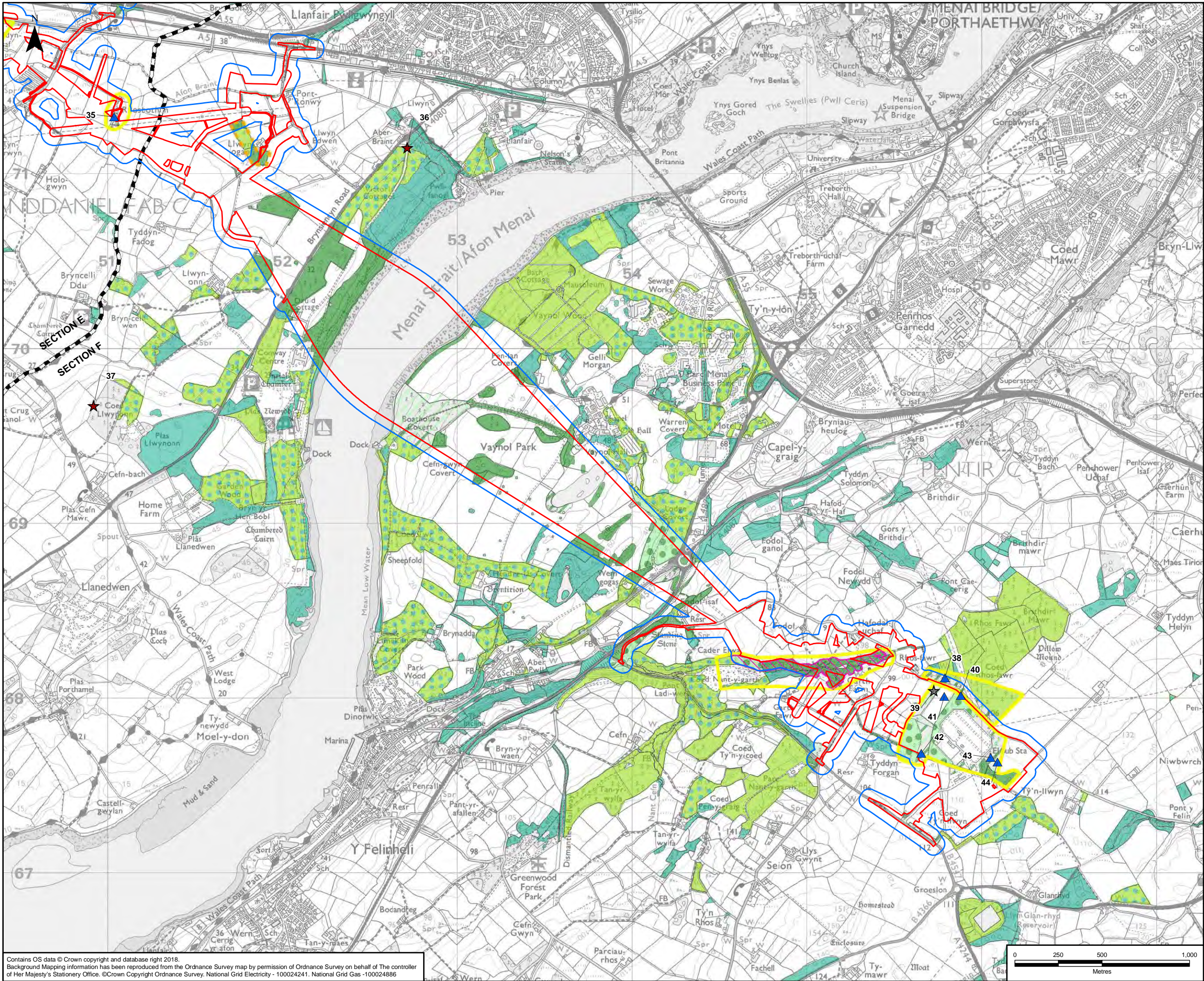
Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 5.9.2.12

Document Title: FIGURE 3
TERRESTRIAL MAMMAL SURVEY RESULTS
SECTION E

Creator: AB	Date: 31/07/2018	Checker: FT	Date: 31/07/2018	Approver: NL	Date: 31/07/2018
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LEGEND

ORDER LIMITS
50M BUFFER OF ORDER LIMITS
SECTION CUTLINES

INCIDENTAL SIGHTINGS

- BROWN HARE
- BROWN HARE - ANECDOTAL EVIDENCE WAS GIVEN OF HARES IN THIS AREA
- GREY SQUIRREL (IN TRAP)
- RED SQUIRREL

RED SQUIRREL SURVEY AREAS

- SURVEYED
- TO BE SURVEYED IN 2018
- AREA PARTIALLY SURVEYED¹

SQUIRREL SURVEY RESULTS

- CONFIRMED ACTIVE RED SQUIRREL DREY
- POTENTIAL DREY
- SQUIRREL FEEDING REMAINS

WOODLAND HABITAT²

PHASE 1 SURVEY RESULTS WITHIN ORDER LIMITS AND 50M BUFFER

- A1.1.1 - SEMI-NATURAL BROADLEAVED WOODLAND
- A1.1.2 - PLANTED BROADLEAVED WOODLAND
- A1.2.2 - PLANTED CONIFEROUS WOODLAND
- A1.3.1 - SEMI-NATURAL MIXED WOODLAND
- A1.3.2 - PLANTED MIXED WOODLAND

ORDNANCE SURVEY MAPPED WOODLAND OUTSIDE 50M BUFFER OF ORDER LIMITS AND UP TO 1KM

- BROADLEAVED
- CONIFEROUS
- MIXED

NOTES

1: PARTIALLY SURVEYED AREA WHERE HEALTH AND SAFETY ISSUES (STEEP SIDED WOODLAND AND RAVINE) PREVENTED A FULL SURVEY FOR RED SQUIRRELS BEING UNDERTAKEN.

2: RED SQUIRRELS CAN BE FOUND IN CONIFEROUS, BROADLEAVED AND MIXED WOODLANDS. CONIFEROUS AND MIXED WOODLANDS HAVE HIGHER VALUE TO RED SQUIRREL THAN BROADLEAVED WOODLAND AS THEY PROVIDE THE FOOD RESOURCES THEY FAVOUR AND THEY ARE LESS LIKELY TO SUPPORT GREY SQUIRREL.

A	31/07/2018	ENVIRONMENTAL STATEMENT	AB	FT	NL
Rev	Date	Description	GIS	Chk	App

nationalgrid

Scheme: NORTH WALES CONNECTION PROJECT

Document Number: 5.9.2.12

Document Title: FIGURE 3
TERRESTRIAL MAMMAL SURVEY RESULTS
SECTION F

Creator: AB	Date: 31/07/2018	Checker: FT	Date: 31/07/2018	Approver: NL	Date: 31/07/2018
Document Type: FIGURE	Scale: 1:20,000	Format: A3	Sheets: 6 of 6	Rev: A	

Annex A: Desk Study Data

Cofnod desk study data for red squirrel, brown hare and polecat records dated since 2007 within 2 km of the Order Limits (study area); refer to Figure 1 for locations.

Due to the format in which the data has been supplied from Cofnod, some of the records for the same location have been grouped together over a period of years and therefore records prior to 2007 may be included; these are summarised in the 'Cofnod Records' table below.

Cofnod Records					
Species	Reference No. on Figure 1	Year of Record	Section	Approximate Distance of Record from Order Limits (m)	Record Notes
Red Squirrel	43	2017	Section B	35	Live sighting
	72	2013	Section C	499	Live sighting
	76	2015	Section C	1816	Live sighting
	80	2016	Section D	495	Live sighting
	82	2017	Section D	174	Live sighting
	85	2015	Section E	178	Live sighting
	87	2017	Section F	1613	Live sighting
	88	2010	Section F	1980	In trap
	89	2012	Section F	1986	Live sighting
	90	2015	Section F	1287	Dead on road
	92	2015	Section F	1558	-
	93	2017	Section F	1858	Live sighting
	94	2017	Section F	1062	Live sighting

Cofnod Records					
Species	Reference No. on Figure 1	Year of Record	Section	Approximate Distance of Record from Order Limits (m)	Record Notes
	95	2017	Section F	992	Live sighting
	97	2017	Section F	827	Live sighting
	98	2017	Section F	730	2 juvenile
	100	2017	Section F	604	3 adults – 1 in trap
	102	2009	Section F	518	1 male
	104	2012	Section F	1032	-
	110	2015	Section F	Within – tunnel section	Live sighting
	118	2011	Section F	Within – tunnel section	Live sighting
	119	2009	Section F	614	Live sighting
Brown hare	1	2010	Section A	623	2 x Live sightings
	2	2008	Section A	1391	Live sighting
	3	2012	Section A	1107	Field record
	4	2013	Section A	1893	2 x Live sightings
	5	2015	Section A	1657	~5 hares seen regularly (98 records b/w 1983 and 2015)
	6	2012	Section A	687	2 x Live sightings
	7	2007	Section A	662	Live sighting
	8	2007	Section A	834	4 x Live sightings
	9	2012	Section A	2023	2 x Live

Cofnod Records					
Species	Reference No. on Figure 1	Year of Record	Section	Approximate Distance of Record from Order Limits (m)	Record Notes
					sightings
	11	2013	Section A	1056	4 x Live sightings
	12	2013	Section A	533	Live sighting
	13	2012	Section A	Within	Live sighting
	14	2013	Section A	1761	2 x Live sightings
	15	2014	Section A	1110	Live sighting
	16	2014	Section A	1088	Live sighting
	17	2013	Section A	1482	2 x Live sightings
	18	2014	Section A	1759	Live sighting
	19	2008	Section A	156	Live sighting
	20	2013	Section A	1343	2 x Live sightings
	21	2013	Section A	1427	Live sighting – 6 records
	22	2013	Section A	1519	2 x Live sightings
	23	2013	Section A	1204	2 x Live sightings
	24	2013	Section A	1289	2 x Live sightings
	25	2013	Section A	1400	2 x Live sightings
	26	2007	Section A	1946	Live sighting
	27	2011	Section A	400	Dead on road
	28	2013	Section A	765	2 x Live

Cofnod Records					
Species	Reference No. on Figure 1	Year of Record	Section	Approximate Distance of Record from Order Limits (m)	Record Notes
					sightings
	29	2013	Section A	816	Live sighting
	30	2013	Section A	1001	Live sighting
	31	2013	Section A	1068	2 x Live sightings
	32	2013	Section A	1332	2 x Live sightings
	33	2013	Section A	1393	Live sighting
	34	2017	Section A	396	Live sighting
	36	2016	Section A	Within	Live sighting
	37	2011	Section B	1983	Live sighting
	39	2008	Section B	1724	Live sighting
	40	2015	Section B	Within	Live sighting
	41	2015	Section B	738	Live sighting
	42	2016	Section B	1941	Live sighting
	44	2013	Section B	48	Live sighting
	45	2010	Section B	1226	Live sighting
	46	2013	Section B	1470	Live sighting
	47	2011	Section B	1413	2 x Live sightings
	49	2011	Section B	1969	Dead on road
	50	2008	Section B	2382	2 x Live sightings
	51	2015	Section B	1615	Live sighting
	52	2008	Section C	426	Live sighting
	54	2008	Section C	1230	3 hares seen

Cofnod Records					
Species	Reference No. on Figure 1	Year of Record	Section	Approximate Distance of Record from Order Limits (m)	Record Notes
	55	2010	Section C	517	Live sighting
	56	2015	Section C	814	Live sighting
	57	2015	Section C	877	Live sighting
	58	2015	Section C	682	Live sighting
	59	2012	Section C	1027	Live sighting – 7 records in 2012
	60	2013	Section C	1006	Live sighting
	61	2011	Section C	1424	Live sighting
	62	2012	Section C	965	Live sighting
	63	2012	Section C	1242	Live sighting
	64	2013	Section C	1062	Live sighting
	65	2017	Section C	378	Live sighting
	66	2016	Section C	727	Live sighting
	67	2008	Section C	1175	Live sighting
	69	2008	Section C	1035	Live sighting
	70	2008	Section C	1820	Live sighting
	71	2008	Section C	1598	2 x Live sightings
	73	2007	Section C	911	1 dead, 1 alive
	74	2012	Section C	76	7 sightings
	75	2014	Section C	600	Live sighting
	77	2014	Section C	1174	Dead on road
	79	2009	Section D	2010	Live sighting
	81	2012	Section D	1542	Live sighting
	83	2009	Section D	1328	Live sighting
	84	2008	Section D	1938	Live sighting

Cofnod Records					
Species	Reference No. on Figure 1	Year of Record	Section	Approximate Distance of Record from Order Limits (m)	Record Notes
	86	2015	Section E	2082	Live sighting
	91	2008	Section F	999	2 x Live sightings
	99	2007	Section F	1152	Live sighting
	101	2008	Section F	1092	Live sighting
	103	2008	Section F	955	2 records 2004 & 2008
	105	2015	Section F	671	Live sighting
	106	2016	Section F	672	2 x Live sightings
	107	2014	Section F	740	Live sighting
	108	2017	Section F	691	Live sighting
	109	2016	Section F	960	Live sighting
	111	2010	Section F	Within – tunnel section	Live sighting
	112	2007	Section F	677	2 x Live sightings
	115	2007	Section F	Within – tunnel section	2 x Live sightings
	116	2007	Section F	Within – tunnel section	Live sighting
	117	2010	Section F	Within – tunnel section	Live sighting
	120	2016	Section F	1093	Live sighting
	121	2017	Section F	511	2 x Live sightings
	122	2014	Section F	521	2 x Live sightings

Cofnod Records					
Species	Reference No. on Figure 1	Year of Record	Section	Approximate Distance of Record from Order Limits (m)	Record Notes
Polecat	10	2014	Section A	1887	Live sighting
	35	2013	Section A	354	1 adult
	38	2013	Section B	1530	1 female
	48	2016	Section B	1687	1 female – dead
	53	2013	Section C	812	Live sighting
	68	2015	Section C	1938	Live sighting
	78	2016	Section C	643	Seen on road
	96	2014	Section F	1726	Trapped in a squirrel trap
	113	2015	Section F	1402	Dead on road
	114	2015	Section F	1273	Dead on road
	123	2014	Section F	203	Live sighting
	124	2007	Section F	399	Dead on road