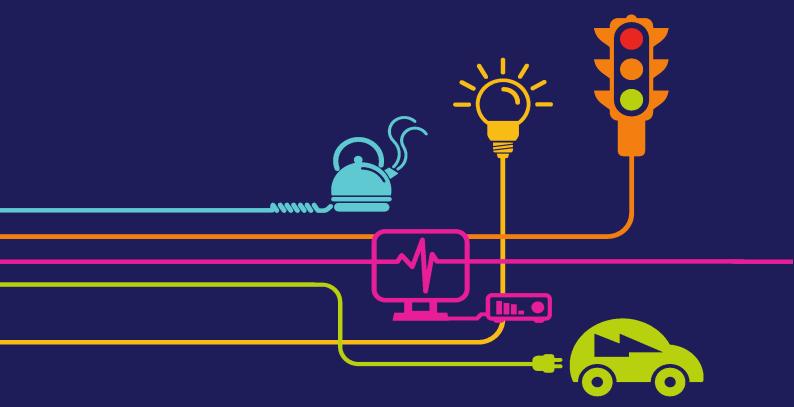


7.8

Archaeological Strategy

National Grid (North Wales Connection Project)

Regulation 5(2)(q) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009



nationalgrid

North Wales Connection Project

Volume 7.0

Document 7.8 Archaeological Strategy

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1 The North Wales Connection Project

1.1 NATIONAL GRID ELECTRICITY TRANSMISSION (THE APPLICANT)

- 1.1.1 National Grid operates the electricity transmission system in Great Britain and owns the system in England and Wales. The system operates at 400 kV and 275 kV, connecting electricity generators to substations where higher voltages are transformed to lower voltages, enabling the power to be distributed to homes and businesses by the Distribution Network Operators (DNO).
- 1.1.2 Transmission of electricity in Great Britain requires permission by way of a licence granted under Section 6(1)(b) of the Electricity Act1 1989 ('the Electricity Act'). National Grid has been granted a transmission licence and is therefore bound by the legal obligations, which are primarily set out in the Electricity Act and the transmission licence. National Grid is the only company licensed to transmit electricity in England and Wales.
- 1.1.3 Under Section 9 of the Electricity Act 1989 National Grid is required, in this capacity, to develop and maintain an efficient, coordinated and economical system of electricity transmission and to facilitate competition in the supply and generation of electricity.

1.2 **PROPOSED DEVELOPMENT NEED**

1.2.1 The UK is facing a major challenge to meet projected energy needs over the coming decades, whilst at the same time tackling climate change. A significant challenge for National Grid and the UK energy industry is to deliver low carbon energy in an affordable, secure and sustainable way.

¹ The Electricity Act 1989: <u>http://www.legislation.gov.uk/ukpga/1989/29/contents</u>

- 1.2.2 The majority of electricity is currently generated by burning gas or coal or by the use of nuclear power stations or renewable generation such as solar and wind. However, there is potential for around 20 per cent of generating capacity to be removed from the electricity transmission network by 2020, as a proportion of existing power stations close because they have reached the end of their operating lives or are unable to meet the requirements of climate change legislation.
- 1.2.3 This means that a major investment in new electricity generation is needed to replace power stations due for closure and to meet future energy demand.
- 1.2.4 Under the Climate Change Act 2008, the UK government is committed to reducing CO2 emissions by at least 80% of 1990 levels by 2050.
- 1.2.5 The UK energy market therefore needs to supply electricity from renewable sources such as wind power, and also from nuclear power, to help tackle climate change and enable the country to meet its national and international obligations. The introduction of new wind and nuclear power generation over the next few years will require the reinforcement and extension of the existing electricity transmission system.
- 1.2.6 National Grid has a statutory duty to promote competition in the supply of electricity and is obliged to offer a connection to the system to anyone who applies for a connection (a 'customer'). Horizon Nuclear Power (HNP) has applied to National Grid to connect their proposed new nuclear power station (2940 MW) at Wylfa on Anglesey (referred to hereafter as Wylfa Newydd Power Station) to the national transmission system. The proposed Wylfa Newydd Power Station would be within a site already identified for this type of development in the UK government's National Policy Statement (NPS) EN-6 'Nuclear Power Generation'.
- 1.2.7 National Grid owns and operates an existing substation at Wylfa, which the proposed Wylfa Newydd Power Station would connect to. This substation is connected to the main transmission system on the mainland in North Wales via a 400 kV overhead electricity line, connecting at the existing National Grid substation at Pentir, Gwynedd.
- 1.2.8 In addition to the Wylfa Newydd Power Station, National Grid has signed connection agreements to connect a further five 'customers' with proposed generation projects in North Wales; a total of 5,419 MW. Further details are provided in the Need Case (**Document 7.1**).
- 1.2.9 National Grid assessed whether there was sufficient capacity available in the existing transmission system in North Wales to accommodate the

changes resulting from new customer connections. From the assessment, National Grid forecasted that without reinforcement, the transmission system would not be compliant with the National Electricity Transmission System Security and Quality of Supply Standard (NETS SQSS) from 2026 onwards. The NETS SQSS is a document that sets out certain criteria with which National Grid must comply in planning, developing and operating the transmission system. To ensure compliance a second 400 kV connection is required between the Wylfa and Pentir Substations. Further details about the need for this second connection are set out in full in the North Wales Connection Project, Project Need Case (**Document 7.1**).

1.3 OVERVIEW OF THE PROPOSED DEVELOPMENT

- 1.3.1 The Proposed Development being brought forward by National Grid is to develop a new 400 kV connection between the existing 400 kV Wylfa Substation on Anglesey and the Pentir Substation in Gwynedd. This would facilitate the export of power from the proposed Wylfa Newydd Power Station. The Proposed Development in its entirety is known as the North Wales Connection Project.
- 1.3.2 The Proposed Development consists of the following principal components:
 - extension to the existing substation at Wylfa;
 - sections of new 400 kV OHL 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 OHL between Wylfa and Pentir;
 - Braint THH/CSEC on Anglesey;
 - a tunnel between Braint and Tŷ Fodol THHs;
 - Tŷ Fodol THH/CSEC in Gwynedd;
 - new section of OHL connection between Tŷ Fodol THH/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.

1.4 CONSTRUCTION

1.4.1 There are a variety of works involved in the construction of the scheme, with the following activities likely to result in ground disturbance which could have the potential to affect archaeological remains

Construction Compounds

1.4.2 Overhead line construction compounds will be located at Penmynydd Road and adjacent to Pentir Substation. In each case, initial soil stripping will be required to create the compound, following the construction of access tracks that will service the compounds. Compounds will also be established to support construction at the substations and at the tunnel head houses and sealing end compounds.

Access tracks

1.4.3 Where new accesses or widening of existing accesses from the public highway are required bellmouths would initially be installed. The topsoil would then be stripped from the access tracks and temporary drainage would also be installed as required and the area fenced. The access tracks would be up to 12 m wide and the required surface width would be stone laid on a geotextile, or formed of interlocking panels, depending on ground conditions and the duration and type of use.

Pylon Working Areas

1.4.4 The topsoil would also be stripped from the pylon working areas in order to allow pylon construction. The foundations of the proposed pylons would either be column and pad, mini pile, pile or special. The base of each pylon will typically be 7.1 m by 7.1 m but will vary in size dependent on ground conditions and pylon type.

Tunnel head houses and sealing end compounds

1.4.5 Topsoil will also be stripped from the site of the tunnel head houses and sealing end compounds, before the sinking of vertical shafts from each location.

1.5 CONSENTING REGIME

- 1.5.1 Sections 14 and 31 of the Planning Act 2008 provide that a project that ' is or forms part of' an electric line installed above ground with a nominal voltage greater than or equal to 132 kV and greater than 2 km in length is a Nationally Significant Infrastructure Project (NSIP), to be determined by the Secretary of State (SoS) in accordance with the requirements of the Planning Act (The Planning Act, 2008). As a result, an application for a Development Consent Order (DCO) under S37 of the Planning Act has been made.
- 1.5.2 In support of the application for a DCO, an Environmental Impact Assessment has been undertaken, and is reported in this Environmental Statement, in accordance with the requirements of the Infrastructure Planning (Environmental Impact Assessment) Regulations 2009 (as amended).

2 Archaeological Strategy

2.1 THIS DOCUMENT

- 2.1.1 This document sets out an archaeological strategy which is intended to mitigate the adverse effects of the construction of the Proposed Development. The procedures outlined by this strategy comply with the provisions of paragraphs 5.8.19 5.8.22 of the Overarching National Policy Statement (NPS) for Energy (EN-1). National Grid will be responsible for ensuring that the procedures are implemented. This strategy is one of a number of plans submitted as part of the DCO application setting out control and management measures to be implemented as part of the DCO and to be secured by Requirement 6 of the draft DCO (**Document 2.1**).
- 2.1.2 This document comprises four principal elements:
 - A statement of the aims and objectives of the investigative works, including an archaeological research agenda (Section 3);
 - A description of the scope of the proposed investigative work (Section 4);
 - Standards for completion of the proposed investigative work, any post excavation analysis of artefactual material and dissemination of the results (Section 5); and
 - Project management procedures (Sections 6 and 7).

2.2 ARCHAEOLOGICAL ASSESSMENT

2.2.1 An archaeological desk study was produced as part of the EIA process (see Volume 5, Document 5.10.2.1) and this was followed by the completion of a geophysical survey of selected survey areas (see Volume 5, Document 5.10.2.2). A programme of trial trenching was then completed to investigate areas of identified potential archaeological interest. This assessment presented records of previously identified heritage assets, with the presence of previously unidentified archaeological remains revealed by the geophysical survey. The desk study also highlighted areas which are still considered to be of potential archaeological interest within the Order Limits, even though the results of the geophysical survey may have been largely negative. This is because the soil conditions within the identified areas may

not have been ideal for geophysical survey or because the potential archaeological remains may be of a type not always readily identifiable by geophysical survey. It is therefore highly likely that archaeological remains may present in areas where the geophysical survey has not produced a positive response, and due consideration of this fact will be made when discussing mitigation later in this document.

2.3 IDENTIFIED HERITAGE ASSETS

2.3.1 Desk study and geophysical survey has identified a number of known or potential areas of archaeological interest within the order limits. These are discussed in Chapter 10, section 7.4 of the ES.

2.4 OUTLINE MITIGATION STRATEGY

- 2.4.1 The design of the Proposed Development has sought to avoid disturbance to known archaeological remains and additional measures for the avoidance of disturbance where possible are included in the CEMP. These include the following measures:
 - Physical protection where possible in order to avoid disturbance; and
 - Provision for archaeological recording through:
 - A targeted programme of 'Strip, Map and Sample' recording of identified areas of archaeological interest, and
 - Watching Brief in areas of where there is less substantial evidence for archaeological remains being present.
- 2.4.2 Where possible, disturbance to archaeological remains will be avoided through such measures as precise routing of tracks away from known archaeological remains. Areas of archaeological interest would be marked on plans and may be fenced or marked on the ground.
- 2.4.3 Exclusion areas will be defined in the CEMP, both as written instructions and on clearly labelled maps.
- 2.4.4 In some cases, important but unexpected archaeological may be encountered during soil stripping. Where feasible, it may be possible to ensure that disturbance to such remains is minimised or avoided by the rerouting of the element of site infrastructure in question, and then re-covering the exposed remains using methods that would maintain the level of preservation in the long term.

- 2.4.5 Where avoidance is not possible, mitigation will be achieved through archaeological investigation, details of which are given in section 5 of this document. The methods to be employed are:
 - Strip, map and sample:
 - This technique allows a greater degree of archaeological control and is more appropriate for more extensive disturbance as a result of development or more complex and significant archaeological remains.
 - It will comprise the machine stripping of topsoil/subsoil to the first archaeological horizon (based on results from the trial trenching, this is typically between 0.3m and 0.45m below the current ground surface but varies with local soil profiles) within working areas under archaeological supervision in advance of construction works commencing, followed by a period of initial identification and mapping of archaeological remains which could then be excavated in a controlled manner. Machine stripping must be undertaken by 360 back acting excavator with a toothless ditching bucket. Bulldozers with push blades are not an acceptable form of soil removal where archeologically remains are anticipated.
 - This technique will be used to investigate areas where more extensive disturbance is anticipated in areas where more significant and/or complex archaeological remains are anticipated, as well as more discrete, subtle and localised remains that cannot be accurately predicted but may be of equally significant and complex character.
 - Archaeological monitoring of intrusive works (watching brief):
 - This mitigation technique will be implemented where a potential for archaeological remains to be present has been identified but where disturbance would be limited and/or where archaeological remains are expected to be of low complexity or heritage significance.
 - It will comprise an archaeologist being present during intrusive groundworks so that the presence or absence of archaeological remains could be confirmed, and any such remains be appropriately recorded. Machine stripping must be undertaken by 360 back acting excavator with a toothless ditching bucket. Bulldozers with push blades are not an

acceptable form of soil removal where archeologically remains are anticipated.

- Should high density or complex remains of archaeological interest or potential be encountered during the course of the watching brief (for example an inhumation or cremation cemetery), it may be necessary to suspend groundworks and provide a contingency programme of work to enable such remains to be recorded appropriately. This may require either additional on-site resources, additional, uninterrupted time to record the remains, or a combination of both.
- This will only take place where the remains cannot be dealt with effectively in the normal course of the watching brief.

2.5 **PROJECT ROLES**

- 2.5.1 All archaeological works will be managed by the Archaeological Clerk of Works, appointed by and acting for National Grid. The Archaeological Clerk of Works will ensure that the strategy is implemented, will review any archaeological Method Statements, sampling/finds policies and reporting, and will lead any necessary consultation and liaison with Gwynedd Archaeological Planning Service (GAPS) and other relevant bodies.
- 2.5.2 GAPS shall provide onsite monitoring and feedback to ensure that the works carried out comply with this Written Scheme of Investigation and current standards of fieldwork. They shall feedback to the Archaeological Clerk of Works with any issues they feel are relevant to the works in order that they may addressed promptly.
- 2.5.3 Regular progress meeting (on site and teleconference) between the Archaeological Clerk of Works, GAPS, the Archaeological Contractor and the Main Construction Contractor to ensure programme timescale are followed, address technical and archaeological issues, and provide mechanisms for feeding back and adjusting fieldwork to address changing research objectives to reflect remains being encountered.
- 2.5.4 Archaeological works will be undertaken by the Archaeological Contractor, acting under the supervision of the Archaeological Clerk of Works. The Archaeological Contractor will have appropriate experience and be able to maintain appropriate staffing for the proposed work. The Archaeological Contractor shall be a Registered Organisation of the ClfA, or have equivalent experience and expertise. The Archaeological Contractor shall be responsible for supplying any specialist technical or analytical services required for specific archaeological procedures.

2.5.5 Before Archaeological work commences, the appointed Archaeological Contractor will provide a detailed Method Statement to set out how they intend to implement the strategy. This will be agreed with GAPS and the Archaeological Clerk of Works.

3 Aims and Objectives

3.1 AIM

3.1.1 The overall aim of the archaeological mitigation strategy is to mitigate any loss of archaeological interest arising from disturbance or removal of archaeological remains during the construction of the North Wales Connection Project.

3.2 OBJECTIVES

- 3.2.1 The objectives of the archaeological mitigation strategy are to:
 - Identify archaeological remains which may be disturbed by the proposed scheme;
 - Where reasonably practicable, ensure that such remains are appropriately protected from disturbance during works (ref 2.4.4);
 - Ensure that any remains which are disturbed are appropriately recorded;
 - Carry out appropriate post-excavation analysis to allow site records and analysis of archaeological material to be synthesised into an appropriate interpretative report; and
 - Disseminate the findings of the archaeological investigations at a level commensurate with their heritage significance.

3.3 ARCHAEOLOGICAL RESEARCH AGENDA

3.3.1 The nature of the known and potential archaeological remains within the Order Limits has been considered in light of the research priorities set out in

the Research Framework for the Archaeology of Wales². This is a developing framework and regional papers have been prepared for each archaeological period, with subsequent reviews in order to refresh the identified priorities. The initial research papers for North West Wales were prepared in 2003 and these have been reviewed alongside subsequent review and discussion papers in order to pick out relevant priorities. Table 3.1 lists how archaeological investigations may contribution to these research priorities.

Table 3.1 Archaeological Research Agenda				
Anticipated remains	Relevant research priority	Potential contribution		
A - Features associated with Neolithic and Early Bronze Age occupation	 1 - Settlement Need for further information on nature of Neolithic settlement 2 - Monuments 	1 - Settlement There is some potential for previously unknown evidence for Neolithic settlement to be identified and investigated.		
	Greater chronological resolution in relation to changes in burial practice 3 - Regionality and Connections Is the assumption that there was contact between the west of Wales and Ireland throughout the Neolithic and Early Bronze Age bourne out by the evidence?	 2 - Monuments There are no known burial monuments which will be investigated, but mitigation works will cover areas in the hinterland of monuments including a barrow and standing stones and so some associated remains may be found. 3 - Regionality and Connections Any evidence for Neolithic and Early Bronze Age occupation 		

² <u>http://www.archaeoleg.org.uk/index.html</u> [accessed 9 June 2017]

Table 3.1 Archaeological Research Agenda				
Anticipated remains	Relevant research priority	Potential contribution		
		could be considered in this context.		
B - Features associated with later prehistoric occupation	1 - Settlement Establishing a chronology for settlement and the relationship between defended and contemporary	1 - Settlement There are known non- defended settlement sites located close to the Order Limits and associated remains could be found and investigations would have the potential to yield further information on the chronology		
	non-defended settlement. 2 - Economy and production			
	Establishment of chronological and landscape association of field systems to settlement. To include use of The gathering of plant macrofossil and animal remains where possible.	of settlement. 2 - Economy and production There is likely to be investigations of later prehistoric field system remains which would have the		
		potential to yield further information on the nature of agricultural production.		
C - Features associated with Roman occupation	 1 - Communications Further information on road network. 2 - Rural settlement Chronology and socio- economic relationships of different components of settlement pattern, including 'villages', hut groups and isolated huts. 	 1 - Communications The suggested route of a Roman road passes to the inside the southern edge of the Order Limits. Trial trenching has confirmed its presence. Further investigation would therefore have the potential to yield information for associate roadside remains. 2 - Rural settlement Potential for investigations to 		
		identify settlement remains, or more likely associated field systems of Roman period rural settlement. Investigations would therefore have the		

Table 3.1 Archaeological Research Agenda			
Anticipated remains	Relevant research priority	Potential contribution	
		potential to yield further information on the nature of the rural economy and potentially on the late prehistoric/Roman transition.	
D - Features associated with Early Medieval occupation	1 - Early medieval Identification of potential early medieval sites, particularly secular settlements, through collation and assessment of new and existing information sources.	There are no anticipated early medieval remains within the Order Limits but the sparse and subtle remains, often combined with the aceramic nature of early medieval settlement is such that there is potential for more discoveries of this period during the course of future fieldwork. Such remains are often confused with sub-Roman/Post Roman contexts and this must be born in mind when interpretation features.	
E - Features associated with Medieval and post Medieval occupation	1 - Medieval and post Medieval rural landscape Identification of extent and chronology of medieval agricultural use of the landscape.	There is likely to be investigations of Medieval or post Medieval field system remains which would have the potential to yield further information on the nature of land division and agricultural production.	

4 Scope of Work

4.1 APPROACH TO ESTABLISHING THE SCOPE OF WORK

- 4.1.1 Table 4.1 sets out a summary of the scope of work for each of the identified assets that may be affected by the development works. This strategy does not cover any additional third party works that may be necessary, such as undergrounding of existing low voltage OHLs.
- 4.1.2 The proposed scope of work at each location has been identified on the basis of available information on the known archaeological interest and an assessment of the archaeological potential. This has been judged using the following criteria:
 - The presence of known archaeological remains;
 - The potential presence of archaeological remains; and
 - The topography and surface geology.
- 4.1.3 The proposed approach has been developed using a range of available data derived from desk study and field survey, and including:
 - Existing records (Historic Environment Record);
 - Historic maps;
 - Aerial photographs;
 - LiDAR;
 - Walkover;
 - Geophysical survey; and
 - Trial trenching.
- 4.1.4 Given the limited level of archaeological evaluation carried out, it is necessary ensure that those areas identified as being subject to watching brief as mitigation have clear justification as to why this method is proposed for specific areas. In consultation with GAPs the following circumstances have been identified as to leading towards a watching brief.
 - Areas where near surface rock outcrops are likely;

- Areas where geophysical survey and or trial trenching have indicated low potential for archaeological remains; and
- Small area more suited to watching brief than strip, map and sample.

4.2 SURVIVING HISTORIC FIELD BOUNDARIES, INCLUDING 'IMPORTANT HEDGEROWS' AND CLODDIAU

- 4.2.1 There is a high potential for surviving historic field boundaries, including 'important hedgerows' and cloddiau along much of the route.
- 4.2.2 Few are currently recorded on the HER, however analysis of historic mapping aerial imagery has shown which boundaries are most likely to be of historic origin.
- 4.2.3 The condition of the boundaries varies across the route with some being in excellent condition, representing good examples of their type while others are inevitably neglected and eroded. Ground conditions and topography do not greatly influence their heritage significance or potential, but can affect the physical type of boundary, whether traditional cloddiau, dry stone wall of hedgerow.
- 4.2.4 Walkover surveys have identified cloddiau and dry-stone walls in a number of places and these have been mapped accordingly.
- 4.2.5 Therefore, in order to mitigate against the effects of the development on the boundaries, a record of their cross section, including any bank material and any associated ditch, to recover dating evidence will be carried out under a Watching Brief.

4.3 EXISTING PYLON BASES

- 4.3.1 There has been no survey at the existing pylon bases as their presence prevents effective geophysical survey and trial trenching was not undertaken close to pylons for good health and safety reasons. Also, there is a general assumption that construction of the existing pylon foundations will have resulted in considerable ground disturbance and so in most cases the archaeological potential is likely to be negligible.
- 4.3.2 There will be relatively little ground disturbance required at existing pylon locations and these areas are likely to have been disturbed as a result of construction of the existing pylon foundations. Therefore, no archaeological work is proposed within these locations.

4.4 ARCHAEOLOGICAL POTENTIAL

- 4.4.1 Professional judgement has been used to assign a level or archaeological potential along the line of the order limits, as described below:
 - High Archaeological features and finds of this period can be demonstrated to be represented on the site.
 - Medium Archaeological features and finds of this period or are likely to be present.
 - Low There is no specific evidence for archaeological features within the site, but absence of such features has not been established.
 - Negligible Absence of archaeological features can be demonstrated (either through prior disturbance or through previous investigation).
- 4.4.2 The reasoning behind the proposed approach is set out below and then summarised in Table 4.1.

Section A

- 4.4.3 While the landscape of today is that of a pastoral economy, Section A contains heritage assets that reflect a wide range of human settlement and activity on Anglesey, from the earliest settled farmers in the Neolithic through to the Chain Home Radar station and the Wylfa Nuclear Power Station.
- 4.4.4 Of principal historic environment interest is the known, and high potential for, prehistoric remains in the area around Llanfechell. This area contains evidence of settlement, funerary and ceremonial sites. The lack of intensive development and the predominantly pastoral land use in the areas outside of the Wylfa Nuclear Power Station means that the potential for previously unrecorded well-preserved subsurface remains is high.
- 4.4.5 The northern part of Section A is within the Wylfa Newydd Power Station site and geophysical survey and trial trenching has been carried within this area, identifying a number of discrete archaeological features dating to the prehistoric period. This indicates the potential for further features of this date to be present.

4AP002-4AP003 and 4ZA005-4ZA006

- 4.4.6 The area falls within the Wylfa Newydd Power Station site and geophysical survey and trial trenching has been carried within this area.
- 4.4.7 The ground conditions are pastoral and relatively flat which would not exclude the site from containing further archaeological remains. Geophysical survey and trial trenching resulted in the identification of a number of discrete archaeological features dating to the prehistoric period.
- 4.4.8 The high potential for archaeological remains and their discrete character, which has been shown on strip, map and sample excavation elsewhere in the Wylfa Newydd Power Station development area, provides the necessary justification to further investigate and record the area through strip, map and sample.
- 4.4.9 Research objectives A-2, B-2, C-2 and E-1 apply.

<u>4AP004</u>

4.4.10 The area falls within Wylfa Newydd Power Station site, where trial trenching has been carried out. The ground conditions are pastoral and relatively flat which would not exclude the site from containing further archaeological remains. Geophysical survey and trial trenching of this area did not reveal any deposits of archaeological interest. Therefore, based on the above information it is considered to be negligible archaeological potential and no further action is required.

4AP005-4AP006 and 4ZA007-4ZA009

- 4.4.11 The Desk Study (**Document 5.10.2.1**) concluded that this work area is within a wider area of high potential for prehistoric remains, particularly around Llanfechell, which is approximately 1.5 km to the south-east. It is under pasture and the local topography is relatively flat but rises with a north-westerly facing slope at its southern end. Geophysical survey has been carried out in the area of 4ZA007 and 4ZA009, and no features of potential archaeological interest were identified.
- 4.4.12 Given the geophysical survey results and the rising north-west topography, this work area is considered to be of low archaeological potential and archaeological recording would be secured through a watching brief.
- 4.4.13 Research objective A-2, B-2, C-2 and E-1 apply.

4AP007 and 4ZA010

- 4.4.14 The Desk Study (**Document 5.10.2.1**) concludes that this work area is within a wider area of high potential for prehistoric remains, particularly around Llanfechell. There are, however no recorded assets in the immediate vicinity. The land is pastoral and slopes slightly to the southeast. Geophysical survey has been carried out immediately either side of the 4ZA010 which did not reveal any anomalies interpreted as being of archaeological interest but has not been subject to trial trenching.
- 4.4.15 Given the lack of information on this work area, it is considered to be of medium archaeological potential, however in order to address the paucity of investigation this area has been selected to be to further investigate and record via strip, map and sample within the pylon working areas and with a watching brief on the access tracks.
- 4.4.16 Research objectives **A-2**, **B-2** and **E1** apply.

Access track between 4ZA010 and 4ZA012

- 4.4.17 This short length of access track (220m) is within a wider area of high potential identified in the Desk Study (**Document 5.10.2.1**). There are no recorded assets in the immediate vicinity, nor has there been any fieldwork along its route, however an area of geophysical survey has been carried out immediately to the north-east, which did not reveal any anomalies interpreted as being of archaeological interest. Topographically, the pasture field is relatively flat but rises towards its southern end as it crosses over a small ridge of land.
- 4.4.18 Given the geophysical survey results on the adjacent land, and the rising topography, this work area may be considered to be of low archaeological potential and archaeological recording would be secured through a watching brief.
- 4.4.19 Research objectives **A-2**, **B-2** and **E1** apply.

4AP008-4AP014 and 4ZA012-4ZA018

4.4.20 The Desk Study (**Document 5.10.2.1**) concludes that this work area is within a wider area of high potential for prehistoric remains, particularly around Llanfechell. While there are no known records within the Order Limits, there are a number of prehistoric monuments in the vicinity. The land is predominantly pasture and the local topography is gently sloping, predominantly following the sides of a stream. The area was extensively covered by geophysical survey, which revealed only a few anomalies

interpreted as being of archaeological potential. Due to land access issues this work area was not followed up with trial trenching

- 4.4.21 Given the archaeological potential inferred in the Desk Study (**Document** 5.10.2.1), and the limited amount of field evaluation it is considered that the archaeological potential of this area is medium, and likely to contain previously unrecorded remains, which provides the necessary justification to further investigate and record the area through strip, map and sample.
- 4.4.22 Research objectives A-1, A-2, A-3, B-1, B-2, C-2, D-1 and E1 apply.

Access track east of Clegy rog Blas

- 4.4.23 A short length of new access track leading from the road south of pylon corridor and past a farm called Clegy rog Blas runs adjacent a rock outcrop that was identified as having archaeological potential as an orthostatic wall was observed during a walkover survey. The temporary access is likely to be formed from stone.
- 4.4.24 Given the potential, and the limited amount of field evaluation it is considered that the archaeological potential of this area is medium, and likely to contain previously unrecorded remains, which provides the necessary justification to further investigate and record the area through strip, map and sample.
- 4.4.25 Research objectives **A-1 and B-1** apply.

4AP015-4AP016 and 4ZA019-4ZA020

- 4.4.26 Whilst in a wider area considered to be of high potential for prehistoric remains, this length of work area is predominantly on land that contains many rock outcrops and near surface bedrock. Proposed pylon base locations for 4ZA019 to 4ZA020 have been subject to geophysical survey, none of which revealed any anomalies interpreted as being of archaeological potential.
- 4.4.27 Given the nature of the ground conditions and the lack of evidence from the geophysical survey, the archaeological potential of this work area considered to be low and archaeological recording would be secured through a watching brief.
- 4.4.28 Research objectives E-1, B-1, C1, D-2 and E1 apply.

4AP017-4AP018 and 4ZA021-4ZA022

- 4.4.29 4ZA021 is located near a spring and a former mill site, suggesting a localised medium archaeological potential and along with pylon 4ZA022, these will be subject to strip, map and sample within the pylon working areas in order to provide a more detailed record of edge of the rocky landscape and a watching brief on the access tracks.
- 4.4.30 Research objectives **E-1** applies.

4AP019-4AP023 and 4ZA023-4ZA027

- 4.4.31 Whilst in a wider area considered to be of high potential for prehistoric remains, this length of work area is predominantly on land that contains many rock outcrops and near surface bedrock. All the proposed pylon base locations have been subject to geophysical survey, none of which revealed any anomalies interpreted as being of archaeological potential.
- 4.4.32 Given the nature of the ground conditions and the lack of evidence from the geophysical survey, the archaeological potential of this work area considered to be low and archaeological recording would be secured through a watching brief.
- 4.4.33 Research objectives E-1, B-1, C1, D-2 and E1 apply

Section B

- 4.4.34 As with the other sections, the landscape of today is that of a pastoral economy; however Section B contains heritage assets that reflect a broad period of human settlement and activity on Anglesey, from the earliest settled farmers in the Neolithic through to the post medieval roadside settlement. There was relatively little significant development in the 20th century.
- 4.4.35 Of principal heritage significance is the area around the known urn burials, near Pen yr Orsedd, Rhosybol, the full extent of which is not known. Geophysical and trial trenching confirmed the high archaeological potential of the area around Pen yr Orsedd, with the identification of enclosure and boundaries, as well as a number of discrete features of possible Neolithic date.
- 4.4.36 The area around Llandyfrydog is also of high archaeological potential, which was identified in the Desk Study (Appendix 10.1, Document 5.10.2.1). This was confirmed by the geophysical survey which indicated the presence of enclosures or earlier field boundaries.

4AP024 and 4ZA028

- 4.4.37 The area is located close to a possible enclosure identified during the geophysical survey, but which falls outside of the Order Limits. While the area of 4AP024 was subject to geophysical survey, no potential archaeological features were identified.
- 4.4.38 Due to the proximity of the possible enclosure this area is of medium archaeological potential and in order to test the effectiveness of the geophysical survey these two pylon working areas will be subject to strip, map and sample.
- 4.4.39 Research objectives **B-2**, **C-2** and **E-1** apply.

Access track between 4AP024 and 4AP025

- 4.4.40 This area of lesser known potential has been investigated by geophysical survey and no noteworthy features were identified.
- 4.4.41 Given the baseline information the potential of this work area is considered to be of low archaeological potential and archaeological recording would be secured through a watching brief.
- 4.4.42 Research objectives **B-2**, **C-2** and **E-1** apply.

4AP025-4AP028 and 4ZA029-4ZA032

- 4.4.43 The Desk Study (**Document 5.10.2.1**) infers that this area has the highest potential for prehistoric remains within Section B, and this was verified by the identification of Neolithic remains during trial trenching. While the geophysical survey did not identify any of the features uncovered in the trial trenches, it has recorded possible enclosure and boundaries. These were not tested by trial trenching.
- 4.4.44 Given the high potential inferred in the Desk Study (**Document 5.10.2.1**) and the results of the evaluation, it is considered that this area is of high archaeological potential, and likely to contain previously unrecorded remains, which provides the necessary justification to further investigate and record the area via strip, map and sample.
- 4.4.45 Research objectives A-1, A-3, B-2, C-2 and E-1 apply.

4AP029 and 4ZA030 and 4ZA033-4ZA034

4.4.46 The pylon working areas have been subject to partial geophysical survey but no trial trenching and no features of potential archaeological interest were identified. The Desk Study (**Document 5.10.2.1**) has implied that the area is of unknown / low archaeological potential based upon the paucity of known heritage assets in the vicinity.

- 4.4.47 Given the baseline information the archaeological potential of this work area is considered to be low to medium, archaeological recording along the access tracks between pylon working areas would be secured through a watching brief. Given the larger areas, the pylon working areas shall be investigated and recorded through strip, map and sample.
- 4.4.48 Research objectives A-1, B-1, B-2, C1, D-2 and E1 apply.

4AP031 and 4ZA035

- 4.4.49 The pylon working areas have been subject to partial geophysical survey but no trial trenching. With the exception of an enclosure to the west of 4AP031, no features of potential archaeological interest were identified. The Desk Study (**Document 5.10.2.1**) has implied that the area is of unknown / low archaeological potential based upon the paucity of known heritage assets in the vicinity.
- 4.4.50 Given the baseline information the archaeological potential of this work area is considered to be low to medium, archaeological recording along the access tracks between pylon working areas would be secured through a watching brief. Given the larger areas, the pylon working areas shall be investigated and recorded through strip, map and sample.
- 4.4.51 Research objectives A-1, B-1, B-2, C1, D-2 and E1 apply.

4AP032 - 4AP037 and 4ZA040- 4ZA041

- 4.4.52 No features of potential archaeological interest were identified in this area, though it is located within an area of broader archaeological interest and so is considered to have a low to medium archaeological potential. Archaeological recording along the access tracks between pylon working areas would be secured through a watching brief. Given the larger areas, the pylon working areas shall be investigated and recorded through strip, map and sample.
- 4.4.53 Research objectives A-1, B-1, B-2, C-1, D-2, and E1 apply.

4AP038-4AP039 and 4ZA042-4ZA043

4.4.54 The area around Llandyfrydog is of high archaeological potential, as inferred by the Desk Study (**Document 5.10.2.1**). A number of the proposed pylon working areas were surveyed by geophysical survey which indicated the presence of enclosures or earlier field boundaries.

- 4.4.55 Given the high potential inferred in the Desk Study (**Document 5.10.2.1**), and the geophysical survey results the archaeological potential of this area is high, and it is likely to contain previously unrecorded remains, which provides the necessary justification to further investigate and record the area through strip, map and sample of the pylon working areas and access tracks.
- 4.4.56 Research objectives A-1, B-1, B-2, D-2 and E1 apply.

4AP040-4AP042 and 4ZA044-4ZA046

- 4.4.57 The area between Llandyfrydog and Maenaddwyn has not been assessed by geophysical survey or trial trenching and is in an area of unknown potential. It lies between areas of known archaeological potential at Llandyfrydog and Maenaddwyn.
- 4.4.58 Given the baseline information the archaeological potential of this work area is considered to be medium, archaeological recording along the access tracks between pylon working areas would be secured through a watching brief whilst the pylon working areas shall be investigated and recorded through strip, map and sample.
- 4.4.59 Research objectives A-1, B-1, B-2, D-2 and E1 apply

Section C

- 4.4.60 As with the other sections, the landscape of today is that of a pastoral economy; however, Section C contains heritage assets that reflect the full gamut of human settlement and activity on Anglesey, from the earliest settled farmers in the neolithic through to post medieval roadside settlement. There was relatively little development in the 20th century.
- 4.4.61 The area to the north of Capel Coch contains a group of standing stones which infers that the area was an important place during the prehistoric period and that it is likely that further unrecorded remains will be present.
- 4.4.62 South of Maenaddwyn are the standing stones of Maen Addwyn and Llech Golman, with further evidence of archaeological potential indicated by the geophysical survey, which revealed a complex of small field boundaries that may be of prehistoric origin. This shows the area to have been settled during the prehistoric period, with the potential for further remains to be present.

4AP043-4AP048 and 4ZA047

- 4.4.63 The area south of Maenaddwyn is known to be of particular interest, particularly for the presence of prehistoric remains. Most notably are the three standing stones, Carreg Leider, Maen Addwyn and Llech Golman. Part of the area was assessed by geophysical survey which revealed a complex of small field boundaries which may be of prehistoric origin.
- 4.4.64 Given the high potential inferred in the Desk Study (**Document 5.10.2.1**), and the geophysical survey results the archaeological potential of this area is high, and it is likely to contain previously unrecorded remains, which provides the necessary justification to further investigate and record the area through strip, map and sample of the pylon working areas and access tracks.
- 4.4.65 Research objectives A-1, A-2, A-3, B-1, B-2, D-1 and E1 apply.

4AP049-4AP064

- 4.4.66 The area east and south of Capel Coch is not considered on available evidence to be of high archaeological potential based upon the baseline evidence, though geophysical survey around the proposed locations of pylons 4AP057 and 4AP059 produced anomalies that may be of archaeological origin.
- 4.4.67 Given the baseline information the archaeological potential of this work area is considered to be low to medium. Archaeological recording along the access tracks between pylon working areas would be secured through a watching brief. Given the larger areas, the pylon working areas shall be investigated and recorded through strip, map and sample.
- 4.4.68 Research objectives **D-1** and **E1** apply.

Section D

- 4.4.69 There was relatively little development in Section D during the 20th century. Notable heritage assets within Section D are the Penmynydd standing stone and the hut circle settlement at Cefn Poeth Bach. The section comprises undulating land cut by a series of small watercourses, with some area of wet ground at the bases of the slope. Whilst there were relatively few previously recorded features of archaeological interest within this section, geophysical survey and subsequent trial trenching has demonstrated a potential for the presence of archaeological remains within the area.
- 4.4.70 Features that have been identified include a single ditched polygonal enclosure at Hendre Hywel and a probable settlement site and field system

either side of a watercourse at Ty'n-y-felin. These were not dated but suggest settlement activity during the prehistoric and/or medieval periods and further archaeological remains are likely to be present, though some wooded and of the section may have a lower archaeological potential, ands areas which have historically been wet ground may have proved unsuitable for settlement or other uses and may also have a lower archaeological potential.

<u>4AP067</u>

- 4.4.71 The geophysical survey revealed a single ditched polygonal enclosure to the north of 4AP067. This was tested by trial trenching which confirmed the presence of a ditched enclosure, but provided no firm dating evidence for its origin. This area is therefore of high archaeological potential.
- 4.4.72 Strip, map and sample excavations will investigate and record the access track and pylon working areas within the vicinity of the polygonal enclosure.
- 4.4.73 Research objectives **B-1**, **C-2** and **D-1** apply.

4AP068-4AP070

- 4.4.74 Geophysical survey of the pylon working areas and parts of the access tracks between them did not identify any features of probable archaeological interest. This combined with the lack of further evidence for activity provided by the Desk Study (**Document 5.10.2.1**) suggests that this area is of low to medium archaeological potential.
- 4.4.75 Archaeological recording along the access tracks between pylon working areas would be secured through a watching brief, and the pylon working areas shall be investigated and recorded through strip, map and sample.
- 4.4.76 Research objectives **D-1** and **E-1** apply.

4AP071 and the Penmynydd Road Construction Compound.

- 4.4.77 Geophysical survey revealed a probable settlement site and field system within the Penmynydd Road Construction Compound. Trial trenches confirmed the presence of features of archaeological interest shown by the geophysical survey as well as further pits and ditches which had not been detected, though there was no dating material to ascribe their origins. This area is therefore of high archaeological potential.
- 4.4.78 The Penmynydd Road Construction Compound, as well as access tracks and pylon working area for 4AP071 shall be investigated and recorded via strip, map and sample.

4.4.79 Research objectives **B-1**, **B-2**, **C-2**, **D-1** and **E-1** apply.

<u>4AP072</u>

- 4.4.80 The geophysical survey of the pylon working area for 4AP072 revealed possible field boundaries that may be associated with the settlement in the Penmynydd Road Construction Compound. The land, however is more steeply sloping with a north-westerly aspect. The geophysical survey and trial trenching at 4AP073 identified two single ditched enclosures with shallow internal pits, all of which were undated.
- 4.4.81 Given the baseline information the archaeological potential of this work area is considered to be low, and archaeological recording would be secured through a watching brief.
- 4.4.82 Research objectives **B-1**, **B-2**, **C-2**, **D-1** and **E-1** apply.

Access tracks west of 4AP073

- 4.4.83 There are no recorded features in this area and the archaeological potential of this work area is considered to be low so archaeological recording for the access track would be secured through a watching brief.
- 4.4.84 Research objectives **B-1**, **B-2**, **C-2**, **D-1** and **E-1** apply.

<u>4AP073</u>

- 4.4.85 Geophysical survey revealed probable enclosures at this location and so the archaeological potential is high. Archaeological recording shall be secured through strip, map and sample.
- 4.4.86 Research objectives **B-1**, **B-2**, **C-2** and **D-1** apply.

Section E

4.4.87 Section E contains the scheduled remains at Capel Eithin which comprises an extremely complex site, providing evidence for Neolithic, Bronze Age, Iron Age/Roman and Early Christian activity. The archaeological remains present appear to continue beyond the scheduled area and so there is a high archaeological potential within the vicinity of Capel Eithin.

4AP074-4AP077

4.4.88 The Desk Study (**Document 5.10.2.1**) and geophysical survey for this area does not suggest that there is a high potential for the presence of archaeological remains.

- 4.4.89 Given the baseline information the archaeological potential of this work area is considered to be low to medium. Archaeological recording along the access tracks between pylon working areas would be secured through a watching brief, and the pylon working areas (with the exception of 4AP075 which is on a sloping ground with a north-western aspect) shall be investigated and recorded through strip, map and sample.
- 4.4.90 Research objective A-1, B-1, C-2, D-1 and E-1 apply.

4AP078-4AP081

- 4.4.91 This area has potential for the presence of prehistoric and early medieval remains, based principally on the presence of the scheduled remains at Capel Eithin. This site is extremely complex, providing evidence for Neolithic, Bronze Age, Iron Age/Roman and Early Christian activity. The archaeological remains present appear to continue beyond the scheduled area.
- 4.4.92 Given the proximity to the SAM at Capel Eithin, this area is considered to be of high archaeological potential and the access tracks and pylon working areas between 4AP078 and 4AP081 will be covered by strip, map and sample.
- 4.4.93 Research objective A-1, B-1, C-2, D-1 and E-1 apply.

<u>4AP082</u>

- 4.4.94 This area has some potential for the presence of prehistoric and early medieval remains, based principally on the presence of the scheduled remains at Capel Eithin. However, at approximately 1.3 km, 4AP082 lies sufficiently distant that the risk of associated remains is low.
- 4.4.95 Given the baseline information the archaeological potential of this work area is considered to be low, and archaeological recording for the access track and pylon working area for 4AP082 would be secured through a watching brief.
- 4.4.96 Research objective A-1, B-1, C-2, D-1 and E-1 apply.

Section F

4.4.97 The area is important for its planned landscapes and contains two closely linked Grade I Registered Parks and Gardens (Plas Newydd and Vaynol), occupying opposite shores of the Menai Strait.

- 4.4.98 Bryn Celli Ddu, provides the most obvious evidence for prehistoric occupation in the area. This appears to have formed part of a 'funerary landscape' with associated standing stones in close vicinity and also other chambered tombs in the wider area. All of this is strongly suggestive of the presence of further archaeological remains. This includes the potential for the presence of burnt mounds along watercourses.
- 4.4.99 Within Gwynedd, the Ty Fodol THH/SEC and short section of proposed overhead line is located within the Arfon plateau. Within this area there is evidence for settlement, suggesting a pattern of dispersed settlement during the late prehistoric and Romano-British periods. Recorded evidence for this in the form of cropmark and earthwork evidence for small settlement sites with associated field systems, with a number having been subject to some excavation. There is therefore potential for further such sites to be present and a Roman road is also known to have crossed to the south of Pentir substation. The presence of standing stones such as Coed Nant-y-garth also indicates earlier prehistoric activity.

4AP083-4AP084

- 4.4.100 While there are no recorded assets in the immediate vicinity, the access track runs immediately parallel to the line of a stream (also the parish boundary). Burnt mounds have been recorded c.200m to the north.
- 4.4.101 Given the potential for burnt mounds along the water course, this area is of medium archaeological potential and the length of access track will be investigated and recorded through strip, map and sample. The two pylon working areas will be subject to a watching brief. 4AP083 has been subject to geophysical survey which did not reveal any features of archaeological potential.
- 4.4.102 Research objectives **A-2** and **B-2** apply.

4AP085 to 4AP087

- 4.4.103 This area lies to the north of the Bryn Celli Ddu prehistoric monument complex. It has been identified as an area of high archaeological potential within the Desk Study (**Document 5.10.2.1**) and through discussions with GAPS.
- 4.4.104 Given the potential for prehistoric activity in this area, this length of access track and pylon working areas and the Braint SEC/THH will be investigated and recorded through strip, map and sample.
- 4.4.105 Research objectives A-1, B-1, D-1 and E-1 apply.

Braint Sealing End Compound and Tunnel Head House

- 4.4.106 This area lies to the north of the Bryn Celli Ddu prehistoric monument complex. It had been identified as an area of high archaeological potential within the Desk Study (Document 5.10.2.1) and through discussions with GAPS. While the geophysical survey of the Braint SEC/THH did not reveal any potential archaeological remains, subsequent trial trenching revealed pits and ditches of undated origin.
- 4.4.107 Given the potential for prehistoric activity in this area, this length of access track and pylon working areas and the Braint SEC/THH will be investigated and recorded through strip, map and sample.
- 4.4.108 Research objectives A-1, B-1, D-1 and E-1 apply.

Ty Fodol Tunnel Head House and Sealing End Compound

- 4.4.109 The Ty Fodol THH/SEC are located on an area of high ground overlooking the Menai Strait. There are surviving prehistoric and Roman sites in the immediate vicinity, including the scheduled Coed Nant-y-garth standing stone to the west and Fodol Ganol Enclosed Hut Group to the east. Geophysical survey and trial trenching have been carried out on the site, which revealed undated pits and ditches. Some features were cut into and sealed beneath colluvium indicating that the remains are of antiquity.
- 4.4.110 Given the high archaeological potential of the site, the Ty Fodol SEC/THH construction area will be investigated and recorded through strip, map and sample.
- 4.4.111 Research objectives A-1, B-1, D-1 and E-1 apply.

4AP088-4AP089

- 4.4.112 The access track and pylon working areas for 4AP088 and 4AP089, and the track leading towards 4AP090 are located on the gently sloping land above a steep sided valley. While there are no known recorded heritage assets along this route, its topographic location is potentially conducive to prehistoric settlement or activity. It is therefore identified as being of medium archaeological potential.
- 4.4.113 Given the known potential of the area the access track and pylon working areas will be investigated and recorded through strip, map and sample.
- 4.4.114 Research objectives A-1, B-1, D1, and E-1 apply.

4AP090-4AP091

- 4.4.115 The Desk Study (**Document 5.10.2.1**) and localised geophysical survey suggests that this area does not have a high archaeological potential. The exception being the line of a possible Roman Road to the south, which was subsequently confirmed by trial trenching.
- 4.4.116 Given the baseline information the archaeological potential of this work area is considered to be low and mitigation would be in the form of a watching brief.
- 4.4.117 Research objectives **E-1** applies.

Pentir Construction Compound

4.4.118 Any archaeological remains within the Pentir Construction Compound will be recorded through strip, map and sample due to its proximity to the Roman Road resulting in a high archaeological potential.

Research objectives **C-1** and **C-2** apply. 4ZB001A and Pentir substation extension

- 4.4.119 The access track and pylon working area for 4ZB001A, to the east of the Pentir substation in an area that may have potential for remains associated with the Roman Road, resulting in medium potential.
- 4.4.120 Given the potential, the access track will be investigated via watching brief and pylon working areas will be investigated and recorded through strip, map and sample.
- 4.4.121 Research objectives C-1 and, C-2 apply.

Table 4.1 Summa	ry Scope of Work				
Work area	Archaeological Potential	Investigative Technique	Relevant Research Objective	Schedule of Environmental Commitments Reference	Shown on Figure 1 sheet
Section A		•	·		
4AP002-4AP003 and 4ZA005- 4ZA006	High Geophysical survey and trial trenching within Wylfa Newydd Power Station site has identified discrete archaeological features dating to the prehistoric period.	Strip, Map and Sample	A-2, B-2, C-2, E-1	ARC001	1
4AP005-4AP006 and 4ZA007- 4ZA009	Low Located on a north-west facing slope and geophysical survey has identified no features of potential archaeological interest.	Watching brief	A-2, B-2, C-2, E-1	ARC002	1
4AP007 and 4ZA010	Medium Located within an area around Llanfechell containing prehistoric and later archaeology, though geophysical survey identified no features of potential archaeological	Strip, Map and Sample (pylon working areas) and Watching Brief (access tracks)	A-2, B-2, E-1	ARC003	1

Table 4.1 Summar	ry Scope of Work				
Work area	Archaeological Potential	Investigative Technique	Relevant Research Objective	Schedule of Environmental Commitments Reference	Shown on Figure 1 sheet
	interest in this area.				
Access track between 4ZA010 and 4ZA012	Low On rising topography and geophysical survey has identified no features of potential archaeological interest.	Watching brief	A-2, B-2, E-1	ARC004	2
4AP008-4AP014 and 4ZA012- 4ZA018	Medium Located within an area around Llanfechell containing prehistoric and later archaeology within only limited evaluation completed in this area.	Strip, Map and Sample	A-1, A-2, A-3, B-1, B-2, C-2, D-1, E1	ARC005	2-4
Access track east of Clegy rog Blas	Medium Adjacent rock outcrop has orthostatic wall indicating early activity	Strip, Map and Sample should the track require stripping.	A-1, B-1	ARC006	5
4AP015-4AP016 and 4ZA019- 4ZA020	Low Area of land that contains many rock outcrops and near surface	Watching Brief	E-1, B-1, C1, D-2, E1	ARC007	6

Table 4.1 Summar	y Scope of Work				
Work area	Archaeological Potential	Investigative Technique	Relevant Research Objective	Schedule of Environmental Commitments Reference	Shown on Figure 1 sheet
	bedrock.				
4AP017-4AP018 and 4ZA021- 4ZA022	Medium Located near a spring and a former mill site	Strip, Map and Sample (pylon working areas) and Watching Brief (access tracks)	E–1	ARC008	6
4AP019-4AP023 and 4ZA023- 4ZA027	Low Area of land that contains many rock outcrops and near surface bedrock.	Watching Brief	E-1, B-1, C1, D-2, E1	ARC009	6
Section B					
4AP024 and 4ZA028	Medium Proximity to a possible enclosure identified during the geophysical survey	Strip, Map and Sample	B–2, C–2, E– 1	ARC010	6
Access track between 4AP024 and 4AP025, within field unit.	Low	Watching Brief	B–2, C–2, E– 1	ARC011	6

Table 4.1 Summar	y Scope of Work				
Work area	Archaeological Potential	Investigative Technique	Relevant Research Objective	Schedule of Environmental Commitments Reference	Shown on Figure 1 sheet
4AP025-4AP028 and 4ZA029- 4ZA032	High Neolithic remains identified in this area during trial trenching.	Strip, Map and Sample	A-1, A-3, B-2, C-2, E-1	ARC012	7-8
4AP029-4AP030 and 4ZA033- 4ZA034	Low to medium No features of potential archaeological interest were identified in this area.	Strip, Map and Sample (pylon working areas) and Watching Brief (access tracks)	A-1, B-1, B-2, C-1, D-2, E1	ARC013	8
4AP031 and 4ZA035	Low to medium Possible enclosure identified to west of 4AP031,	Strip, Map and Sample	A-1, B-1, B-2, C-1, D-2, E1	ARC014	8
4AP032 – 4AP037 and 4ZA040- 4ZA041	Low to medium No features of potential archaeological interest were identified in this area	Strip, Map and Sample (pylon working areas) and Watching Brief (access tracks)	A-1, B-1, B-2, C-1, D-2, E1	ARC015	8
4AP038-4AP039 and 4ZA042- 4ZA043	High Recorded archaeological remains in the area around Llandyfrydog	Strip, Map and Sample	A-1, B-1, B-2, D-2, E1	ARC016	10

Table 4.1 Summa	ry Scope of Work				
Work area	Archaeological Potential	Investigative Technique	Relevant Research Objective	Schedule of Environmental Commitments Reference	Shown on Figure 1 sheet
	and enclosures or earlier field boundaries identified by geophysical survey.				
Section C					
4AP040-4AP042 and 4ZA044- 4ZA046	Medium Between areas of known archaeological potential at Llandyfrydog and Maenaddwyn but little specific in this area.	Strip, Map and Sample (pylon working areas) and Watching Brief (access tracks)	A-1, B-1, B-2, D-2, E1	ARC017	11
4AP043-4AP048 and 4ZA047	High Potential for presence of prehistoric remains, with potential field boundaries identified by geophysical survey.	Strip, Map and Sample	A-1, A-2, A-3, B-1, B-2, D-1, E1	ARC018	12-15
4AP049-4AP064	Low to medium No recorded features in this area.	Strip, Map and Sample (pylon working areas) and Watching Brief (access tracks)	D-1, E–1	ARC019a ARC019b	15-20

Table 4.1 Summa	Table 4.1 Summary Scope of Work				
Work area	Archaeological Potential	Investigative Technique	Relevant Research Objective	Schedule of Environmental Commitments Reference	Shown on Figure 1 sheet
Section D					
4AP067	High Single ditched polygonal enclosure identified to the north of 4AP067.	Strip, Map and Sample	B–1, C–2, D– 1	ARC020a ARC020b	21
4AP068-4AP070	Low to medium The Desk Study and geophysical survey results do not indicate the presence of archaeological remains.	Strip, Map and Sample (pylon working areas) and Watching Brief (access tracks)	D-1, E–1	ARC021	22
4AP071 and the Penmynydd Road Construction Compound	High Geophysical survey revealed probable settlement site and field system, confirmed by trial trenching which also showed further pits and ditches.	Strip, Map and Sample	B-1, B-2, C-2, D-1, E-1	ARC022	23
4AP072	Low Land steeply sloping with a north- westerly aspect.	Watching Brief	B-1, B-2, C-2, D-1, E-1	ARC023	23

Table 4.1 Summa	Table 4.1 Summary Scope of Work				
Work area	Archaeological Potential	Investigative Technique	Relevant Research Objective	Schedule of Environmental Commitments Reference	Shown on Figure 1 sheet
Access tracks west of 4AP073	Low No recorded features in this area.	Watching Brief	B-1, B-2, C-2, D-1, E-1	ARC024	23
4AP073	High Geophysical survey revealed probable enclosures	Strip, Map and Sample	B–1, C–2, D– 1	ARC025	23
Section E					
4AP074-4AP078	Low to medium No recorded features in this area.	Strip, Map and Sample (pylon working areas) and Watching Brief (access tracks)	A–1, B–1, C- 2, D-1, E-1	ARC026	24
4AP079-4AP081	High Proximity to Capel Eithin scheduled monument.	Strip, Map and Sample	A–1, B–1, C- 2, D-1, E-1	ARC027	24
4AP082	Low to Medium No recorded features in this area.	Watching Brief		ARC028	24
4AP083-4AP084	Medium No recorded assets but potential for	Watching Brief (pylon working areas)	A-2, B-2	ARC029	24

Table 4.1 Summar	y Scope of Work				
Work area	Archaeological Potential	Investigative Technique	Relevant Research Objective	Schedule of Environmental Commitments Reference	Shown on Figure 1 sheet
	burnt mounds along watercourse.				
Access track north of 4AP084	Medium No recorded assets but potential for burnt mounds along watercourse	Strip, Map and Sample	A-2, B-2	ARC030	24
Section F					
4AP085-4AP087 and Braint Sealing End Compound and Tunnel Head House	High In the vicinity of the Bryn Celli Ddu prehistoric monument complex. Trial trenching revealed pits and ditches of undated origin.	Strip, Map and Sample	A–1, B–1, D- 1, E-1	ARC031	25
Ty Fodol Tunnel Head House and Sealing End Compound, access tracks and 4AP088-4AP089	High/Medium Geophysical survey and trial trenching have revealed undated pits and ditches. No known recorded archaeology but the topographic location is potentially conducive to prehistoric settlement or activity	Strip, Map and Sample	A–1, B–1, D- 1, E-1	ARC032	26

Table 4.1 Summa	ry Scope of Work				
Work area	Archaeological Potential	Investigative Technique	Relevant Research Objective	Schedule of Environmental Commitments Reference	Shown on Figure 1 sheet
4AP090-4AP091	Low No known recorded archaeology but the topographic location is potentially conducive to prehistoric settlement or activity.	Watching Brief	E–1	ARC033	26
Pentir Construction Compound.	High Proximity to Roman road.	Strip, Map and Sample	C-1, C-2	ARC034	27
4ZB001A and Pentir substation extension.	Medium Proximity to Roman road.	Strip, Map and Sample (pylon/sub- station working areas) and Watching Brief (access tracks)	C-1, C-2	ARC035	27
Within ARC012 east of 4ZA029	High Geophysical Survey identified a possible enclosure within order limits but outside expected area of access.	Where possible, excavations will be avoided in this area.	-	ARC036	27
Within ARC012	High	Where possible,	-	ARC037	_

Table 4.1 Summa	Table 4.1 Summary Scope of Work				
Work area	Archaeological Potential	Investigative Technique	Relevant Research Objective	Schedule of Environmental Commitments Reference	Shown on Figure 1 sheet
south-east of 4ZA030	Geophysical Survey identified a possible ringditch within order limits but outside expected area of access.	excavations will be avoided in this area.			
Within ARC014 west of 4AP031	Geophysical Survey identified a possible enclosure within order limits but outside expected area of access.	Where possible, excavations will be avoided in this area.	-	ARC038	_
Within ARC016 west of 4ZA043	Geophysical Survey identified a possible enclosure within order limits but outside expected area of access.	Where possible, excavations will be avoided in this area.	_	ARC039	-
Ffynnon Gybi, Holy Well, Pont Clorach	Site of medieval holy well with strong links to local folklore.	Where possible, excavations will be avoided in this area.	-	ARC040	-
Within ARC019 north west of 4AP066	Geophysical Survey identified a possible feature within order limits but outside expected area of access.	Where possible, excavations will be avoided in this area.	-	ARC041	-

Table 4.1 Summar	y Scope of Work				
Work area	Archaeological Potential	Investigative Technique	Relevant Research Objective	Schedule of Environmental Commitments Reference	Shown on Figure 1 sheet
Within ARC020a/b north of 4AP067	Geophysical Survey identified a large enclosure within order limits but outside expected area of access	Where possible, excavations will be avoided in this area.	-	ARC042	-

5 Standards for Archaeological Work

5.1 GENERAL PRINCIPLES

- 5.1.1 The appointed Archaeological Contractor will submit a Method Statement, including a detailed plan of areas to be subject to strip-map-and-sample, and a Risk Assessment for approval by the Archaeological Clerk of Works, before work commences..
- 5.1.2 Machine excavations will be entered only on agreement with the main construction contractor and only where safe to do so, in order to examine the stratigraphy in exposed sections. After excavation has progressed beyond this depth, recording will take place without entering the trench unless adequate safety measures have been agreed with a competent person. If the heritage significance of the archaeological remains are such that their full recording is required then discussions with the main construction contractor, GAPS and the Archaeological Contractor will be required to establish safe access to the trench or feature.
- 5.1.3 Where the presence of archaeological remains has been established, and where safe to do so, selected faces of the trench will be cleaned with appropriate hand tools, to a degree sufficient to facilitate recording.

5.2 STRIP, MAP AND SAMPLE

- 5.2.1 The purpose of strip map and sample is to identify specific archaeological foci within an extensive area of potential or to expose the spatial characteristics of extensive archaeological landscape elements, such as field systems, prior to selecting locations for targeted sample excavation. This work is to be undertaken within a framework of evidence based research objectives.
- 5.2.2 All groundwork operations must be conducive to identifying archaeological remains, and as such must be undertaken with a 360 back action excavator with toothless ditching bucket until such time as they have been released to the main construction contractor.
- 5.2.3 Following initial machine excavation, which will be directed and monitored by the Archaeological Contractor, it will be necessary for some areas of strip map and sample to be carefully cleaned by hand in order for features to be readily identified. A period of post cleaning weathering will also help

features become apparent. Consequently, adequate provision in the timetable is to be included to cover this period of cleaning and weathering, of up to one week.

- 5.2.4 Once cleaned and weathered, the area should be examined and a plan of identified and potential archaeological features and deposits prepared at an appropriate scale. This will inform proposals for sample excavation, to be agreed with GAPS.
- 5.2.5 Where it is clear that a stripped area contains no archaeological remains or deposits of archaeological interest, the Archaeological Clerk of Works will liaise with GAPS in order to agree release of such areas to the main contractor.
- 5.2.6 Key stages in strip-map-and-sample are:
 - The careful stripping of identified areas to the first archaeological horizon (based on results from the trial trenching, this is typically between 0.3m and 0.45m below the current ground surface but varies with local soil profiles), in order to reveal the site plan; and
 - Immediate planning (mapping) of the area while the uncovered surface is fresh. The area should be subsequently checked to see if weathering reveals further features and the plan updated as appropriate.
- 5.2.7 Following planning, investigation of an appropriate sample of identified features drawing on the standards set out in Section 6. Key areas and nodes will be investigated in sufficient detail to understand them both in respect of themselves and also in relation to their surroundings. This work will be focused on adding to the spatial, chronological, functional and environmental context of the investigated area.
- 5.2.8 This requirement will be continually monitored during the course of fieldwork, and amended according to its effectiveness in meeting research objectives. In particular consideration of strip map and sample operations will be discussed with GAPS, with a view to extending these operations where significant archaeological remains have been observed or scaling them back operations where the potential presence of archaeological features is demonstrably low, based on:
 - Identified prior truncation/disturbance;
 - Absence of observed features; or

- Confirmation of prior survey results which suggest poor survival of archaeological features.
- 5.2.9 Any decision to scale back the scope of strip, map and sample mitigation will only be undertaken after agreement of GAPS has been confirmed.
- 5.2.10 Following completion of archaeological investigation to the satisfaction of GAPS the relevant area or agreed parts thereof will be released to the main contractor so that construction works may proceed.

5.3 WATCHING BRIEF

- 5.3.1 The appointed Archaeological Contractor will submit a Method Statement, including a detailed plan of areas to be subject to the archaeological watching brief, and a Risk Assessment for approval by the Archaeological Clerk of Works, before work commence.
- 5.3.2 Sufficient and appropriate resources (qualified staff, equipment, accommodation etc) must be used to enable the project to achieve its aims, the desired quality and timetable, and comply with all statutory requirements.
- 5.3.3 A documented line of communication shall be established before commencement of works between the Archaeological Contractor and the on-site construction contractor to ensure that archaeological monitoring is applied at all times in the areas defined as requiring formal observation.
- 5.3.4 On arrival on site, the archaeologist should report to the site manager or other identified representative of the principal contractors or developers, and conform to their arrangements for notification of entering and leaving site.
- 5.3.5 Where the archaeologist has by instruction or agreement the power to suspend development work, the archaeologist, in exercising such power, follow procedures previously agreed with the other contractors on the site. Within the constraints of the nature of the archaeological resource, the archaeologist shall not cause unreasonable disruption to the maintenance of the work schedules of other contractors.
- 5.3.6 Any contingency elements must be clearly identified and justified. It is the role of the archaeologist undertaking the work to define appropriate staff levels.
- 5.3.7 Full and proper records (written, graphic, electronic and photographic as appropriate) should be made for all work, using pro forma record forms and sheets as applicable, and shall comply with section 5.4.17 below.

5.3.8 Artefact and environmental data collection and discard policies, strategies and techniques must be fit for the defined purpose, and understood by all staff and subcontractors (see also CIfA Standard and guidance for the collection, documentation, conservation and research of archaeological materials, CIfA Finds Group 1992).

5.4 STANDARDS FOR ARCHAEOLOGICAL FIELDWORK

General Methods

- 5.4.1 In all areas identified as requiring archaeological work in this strategy removal of topsoil, overburden and 20th/19th-century and later remains to the first significant archaeological horizon will be undertaken by a 360° excavator fitted with a wide toothless bucket, under the continuous supervision of the archaeology contractor with the authority to halt and direct machine excavation. Spoil will be temporarily stockpiled on site at a safe distance from the trenches and other constraints, to the satisfaction of the main contractor.
- 5.4.2 Areas subject to machine excavation will be periodically scanned with a metal detector in order to identify the possible presence of metal artefacts.
- 5.4.3 The first significant archaeological horizon and all subsequent archaeological deposits will be cleaned by hand. Excavation of any archaeological deposits identified will proceed by hand except where specifically agreed with GAPS.
- 5.4.4 Arrangements for the processing of bulk samples taken for the recovery of environmental materials and artefacts, especially carbonised plant remains and ceramics, should be confirmed. These arrangements must be sufficient to provide feedback on the character of sample assemblages concurrent with the fieldwork to enable refinement of field sample collection, as necessary to fully realise the research objectives and project aim. It is anticipated there will be on-site processing facilities during excavation and strip, map and sample operations.
- 5.4.5 The following professional standards apply:
 - CIfA 2014 Standard and Guidance for Archaeological Field Evaluation;
 - ClfA 2014 Standard and Guidance for Archaeological Excavation;
 - ClfA 2014 Standards and Guidance for an Archaeological Watching Brief;

- ClfA 2014 Guidelines for the Collection, Documentation, Conservation and Research of Archaeological Materials;
- ClfA 2014 Code of Conduct.

Sample Excavation

- 5.4.6 Features and deposits will be sectioned and recorded in plan. Archaeological features will be hand cleaned prior to excavation to provide accurate definitions. For linear features such hand cleaning will be targeted at sample excavation points. Deposits interpreted as natural subsoil should be tested by hand or machine excavation to determine the validity of this interpretation.
- 5.4.7 The sampling strategy will be developed throughout the investigation period in consultation with GAPS in the light of the results of the field work. The excavation will normally include as a minimum:
- 5.4.8 A robust spatial framework of excavation to provide an understanding of the distribution of past activities across the investigation area including any 'special' deposits and any patterning in artefact distribution. Such a framework will take into account the inter-relationship of major features;
- 5.4.9 The investigation of the intersections of features of archaeological date to obtain a phasing of the site;
- 5.4.10 Structural remains and other areas of significant and specific activity (domestic, industrial, religious, hearths, 'special'/ patterned deposits, artefact and ecofact rich deposits etc.) will be fully excavated and recorded in order that their extent, date form, function and relationship to other features and deposits can be established.
- 5.4.11 All burial deposits and associated remains will be fully excavated and recorded in accordance with an agreed methodology (see below).
- 5.4.12 Representative non-structural linear cut features will be sample excavated and recorded to establish the feature's character, date and morphology and to provide information on activities taking place in close proximity to the feature. A 20% sample should be taken of all linear features, up to 5m in length; for features greater than this the sampling requirement can be reduced with the agreement of GAPS. However should a linear be artefact or ecofact rich then the feature should be fully excavated and recorded. The junctions and intersections of linear features should be removed over a sufficient length to determine the nature of the relationship. All terminal ends will be investigated. Sections will normally be at least 1m wide.

- 5.4.13 Non-structural pits will be half-sectioned unless the character, number or size of the pits makes this unpractical. For instance, if a pit contains several intersections and re-cuts, it would not always be appropriate to half-section it. In this situation, the Archaeological Contractor will consider 'quadranting' or single context planning. Equally if 'special' deposits are expected, pits may need to be excavated in plan rather than being half-sectioned. The strategy will need to be agreed with GAPS and the Archaeological Clerk of Works.
- 5.4.14 Non-structural post and stake-holes will be half-sectioned sufficiently to clarify character, relationships and chronology, unless they are artefact or ecofact rich, in which case the feature will be fully excavated.
- 5.4.15 The sampling excavation strategy will be reviewed continuously throughout the course of fieldwork and, if necessary, amended in order to take account of changing circumstances and understanding. Any changes or amendments will be agreed in advance of implementation with GAPS and the Archaeological Clerk of Works, such as:
 - in some cases, it will be sufficient to excavate a representative sample of long linear features (e.g. boundary ditches) or quarry pits in order to record their form, function, and date and recover artefacts and ecofacts; and
 - where insufficient dating material or information has been retrieved from a partially sectioned feature, further sampling may be undertaken, subject to consideration of residuality or other factors that might limit the integrity of archaeological data, with reference to the research objectives and in consultation with GAPS and the Archaeological Clerk if Works.

Recording

5.4.16 A full and proper record (written, graphic and photographic as appropriate) will be made for all work. All data shall be collected in a manner suitable for it to be readily integrated directly into the Historic Environment Record in accordance with a specification to be agreed with Gwynedd Archaeological Trust. A continuous numbering system will be used and the following registers kept on standardised forms: contexts; sections; plans; and photographs. The recording system to be used will be stated in the contractor's Method Statement and if requested copies of the manual to that system will be provided to GAPS and the project consultant archaeologist. Basic requirements are outlined below:

Geomatics

5.4.17 The excavation area will be accurately related to the National Grid and located on an Ordnance Survey map of the area at an appropriate scale not smaller than 1:2500. One or more temporary benchmarks (TBM) related to Ordnance Datum will be established near the archaeological investigation. Vertical control will be established from the nearest Ordnance Survey bench mark (OSBM), with the traverse completed as part of a closed loop and a record of the process will form part of the site archive. Site temporary benchmark(s) (TBM) will be established either by survey-grade GPS (i.e. capable of measurement of elevation to an accuracy of +/-20mm) or through closed traverse from an OS Benchmark. All archaeological deposits and features, representative levels for the current ground surface and base of the trench will be recorded with an above Ordnance Datum (AOD) level.

Site Drawings

- 5.4.18 An overall plan of the individual sites shall be drawn at a scale of not less than 1:200 to show the location of the investigation areas in relation to existing features visible on the ground. Accurate scale plans and section drawings (both sections of features and representative trench sections) will be drawn at 1:20 and 1:10 scales as appropriate. Where archaeological features are not observed or little variation in sequence is apparent, only representative sample sections will be recorded and the trench plan will be recorded in outline at a larger scale. Plotting of small finds in three dimensions (3d) will be undertaken where appropriate. All drawings will feature multiple records of heights related to Ordnance Datum, including levels on current ground level adjacent to the excavation edges.
- 5.4.19 Each plan and section will be located by reference to an established site grid and in elevation by levels above Ordnance Datum, through measurements from the TBM.

Stratigraphic Recording

- 5.4.20 All contexts will be given an individual number and recorded on a pro-forma sheet. A separate block of numbers will be allocated to each investigation area. Context descriptions, comprising both factual data and interpretative elements, will be recorded on standardised record sheets. Where stratified deposits are encountered a "Harris"-type matrix will be compiled during the course of the excavation.
- 5.4.21 Where archaeological deposits are not encountered representative sequence descriptions will be recorded and relevant locations shown on an accurate site plan.

Small Finds

5.4.22 The locations of small finds will be recorded. Where the specific location of individual objects other than small finds might provide useful interpretive data, their location will be recorded in 3d, either as coordinates or on a plan as appropriate.

Photography

- 5.4.23 Photography will be by digital photography taken on a digital SLR or compact camera capable of imaging in RAW format as well as jpg. Images may be included in the report as appropriate. This will illustrate the principal features and finds both in detail and in a general context. The photographic record will also include working shots to represent more generally the nature of the fieldwork. Photographs should also be used to record interpretive data (e.g. groups of features and the relationships between them rather than individual features) and important artefacts in situ where possible. Other than 'working' shots they should include clear metric scales and should only be taken after the relevant features/areas have been hand cleaned.
- 5.4.24 Given the large areas to be recorded the use of photogrammetry and aerial drone photography should be employed. This will provide a detailed record as well as increase the probability of identifying subtle features not readily interpreted from ground level. Therefore this method of recording should be employed throughout the excavation period.

Environmental Sampling

- 5.4.25 A detailed sampling policy will be decided in consultation with GAPS. This will detail specific categories of material that are of interest and identify a programme of work to support the research objectives set out in the Project Design, which will be revised as appropriate throughout the excavation and post-excavation phases.
- 5.4.26 The on-site sampling policy will be inclusive, as the heritage significance of individual features may not be fully understood until wider patterns of spatial distribution and phasing are understood. As set out in the general methods above, arrangements for the processing of bulk samples taken for the recovery of environmental materials should be confirmed. The final sampling and discard policy will be agreed in consultation with the project environmental specialist and GAPS.
- 5.4.27 Archaeological deposits will be sampled systematically in bulk samples. In general, coarse sieved samples of 100l or more will be recovered from deposits containing small bone or exploited mollusc assemblages.

Flotation samples of 40-60I will be recovered from deposits containing charred materials. All samples will be collected from the fills of cut features, and from any other securely stratified deposits that have the potential to provide environmental or economic information, such as occupation layers or material accumulating on use surfaces. Particular emphasis will be placed on contexts that may supply material suitable for scientific dating of potential early medieval and prehistoric features. Decisions on sampling must also take account of stratigraphic factors and consider the opportunity to employ chronological and spatial controls in the recovery of samples in order to generate environmental information of sufficient quality to meet the research objectives.

- 5.4.28 Provision will be made for column and other appropriate samples to be taken for geoarchaeological assessment and analysis as appropriate. Due consideration will be given to the collection of samples suitable for microfossil analysis and other specialised analysis from suitable deposit sequences, that might inform the pattern of changing environmental conditions over time. Waterlogged and cess deposits will be specifically sampled for microfaunal and invertebrate analysis. Bulk samples will also be taken from any waterlogged deposits present for assessment of organic remains. Any organic artefacts that are retrieved during the excavation will be stored in appropriate conditions and assessed by a qualified archaeological conservator.
- 5.4.29 Industrial residues and waste from craft and manufacturing processes will also be routinely sampled.

Artefact Recovery

- 5.4.30 The recovery of material that can adequately date major archaeological phases is a key requirement. It is recognised that the incidence of artefacts may limit the quality of datable assemblages, and measures for scientific dating are also set out below. However artefacts remain a key source of dating information.
- 5.4.31 Bulk finds such as pottery and animal bone will normally be collected by context. Where it is appropriate and following additional instruction, soil samples will also be recovered for sieving, specifically for the purpose of:
 - Providing statistically controlled samples; and
 - Enhanced recovery techniques.
- 5.4.32 As set out in the general methods above, arrangements for the processing of bulk samples taken for the recovery of artefacts should be confirmed.

- 5.4.33 Finds will be temporarily stored on site and removed from site to a secure location as required. All finds that are retained will be washed, marked and bagged in a manner suitable for long-term storage.
- 5.4.34 A sampling strategy for the recovery and recording of waterlogged wood and timber will be agreed with GAPS and the Archaeological Clerk of Works, where significant quantities of such materials are observed.
- 5.4.35 All finds and samples will be exposed, lifted, cleaned, conserved, marked, bagged, boxed and stored in accordance with the ClfA Guidelines for Finds Work, the guidelines in the UKIC Conservation Guidelines No. 2 and the requirements of the recipient museum.
- 5.4.36 A discard policy acceptable to the relevant receiving museum will only be implemented following quantification, assessment and recommendation from artefactual and environmental specialists. Certain classes of material, such as post-medieval pottery and building material, may be discarded after recording if a representative sample is kept, but no finds will be discarded without the prior approval of GAPS and the receiving museum.

Conservation

5.4.37 Procedures for the recovery, packing and transportation of artefacts will follow First Aid for Finds (2nd Edition) and UKIC's Conservation Guidelines No. 2. Where delicate artefacts are uncovered, appropriate immediate measures will be taken, and the artefacts transferred to the appropriate Conservator. Should particularly complex conservation requirements become apparent, the conservator will be called to site to excavate and package the object.

Scientific Dating

5.4.38 Achieving a coherent chronology across all phases of activity is a key objective, as this may help resolve problems in the identification of cultural activity during period when ceramics were not generally available to communities in Gwynedd and Anglesey. A strategy for the selection of

samples for scientific dating will be required, taking into consideration statistical procedures designed to enhance the accuracy of site chronologies, for instance the use of Bayesian techniques³.

- 5.4.39 Samples of material suitable for scientific dating techniques including AMS C14 dating, archaeomagnetism (for example, charred seeds or in situ burnt clay from appropriate contexts) or thermoluminescence will be collected where available. Given the nature of archaeomagnetic and thermoluminescence dating, it is important to liaise with specialists at the early stages of the project to ensure that they are present to take this form of in situ sampling.
- 5.4.40 There will be a need for multiple (paired) AMS C14 dates from the same context in order to form robust and statistically reliable chronologies.
- 5.4.41 Scientific dating will be a significant consideration during the postexcavation assessment and will inform and influence the research objectives of the final report.

5.5 PROCEDURES IN RESPECT OF STATUTORILY DESIGNATED REMAINS

Human Remains

- 5.5.1 It is not anticipated that human remains will be present within the site, given the prevailing soil conditions within Anglesey and Gwynedd, which are not normally favourable for the preservation of buried bone. However, there is a potential for unexpected discoveries and there are areas of Anglesey which have demonstrated good survival of bone.
- 5.5.2 While articulated human remains are rare on Anglesey, partially preserved skeletal remains do occur, particularly in Early Medieval long cist graves.

³ Bayliss A & Bronk Ramsey C 2004 Pragmatic Baysians: a decade of integrating radiocarbon dates into chronological models in Caitlin E Buck and Andrew R Milard Tools for Constructing Chronologies: Crossing Disciplinary Boundaries, Lecture Notes in Statistics 177, 25-42

These are likely to be identified by the presence of a capstone, and before this is removed, and the level of preservation determined, a licence will still be required from the Coroner, and GAPS and the and the Archaeological Clerk of Works will be informed before excavating the grave.

- 5.5.3 In the event of human remains being encountered they will be left in situ, covered and protected and the Coroner, GAPS and the Archaeological Clerk of Works will be informed.
- 5.5.4 The Archaeological Contractor will arrange receipt of the appropriate documentation and license from the Department of Justice to enable the legal removal of any human remains encountered in the works. The Archaeological Contractor is to comply with the conditions of any issued License.
- 5.5.5 If removal is agreed, all subsequent work will comply with relevant regulations (including local authority environmental health regulations) and technical guidance⁴.
- 5.5.6 The Archaeological Contractor will have available within the team or on call an appropriately qualified and experienced osteo-archaeologist to supervise the excavation and removal of human remains from the site. The Archaeological Contractor will use an appropriately qualified and experienced archaeological conservator to assist where appropriate in the lifting of human remains and grave goods / cremation vessels.
- 5.5.7 The potential for chemical analysis of bone and teeth to provide information on past human diet, health, migration and kinship, as well as the age of the skeletal material⁵ will be considered during post-excavation.

⁴ EH 2004 *Human bones from archaeological sites* <u>http://www.english-</u> <u>heritage.org.uk/publications/human-bones-from-archaeological-sites/</u>

⁵ Richards M 2004 *Sampling procedures for bone chemistry* in M Brickley and J I McKinley (eds) Guidelines to the Standards for Recording Human Remains IFA Paper No. 7, 43-46 <u>http://www.archaeologists.net/modules/icontent/index.php?page=35</u>

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Protected Military Remains

- 5.5.8 The 1986 Protection of Military Remains Act (POWRA) applies to any aircraft which have crashed while in military service and to certain wrecks of vessels which were wrecked while in military service. POWRA makes it an offence to disturb, move or unearth military remains which have been designated.
- 5.5.9 There are no designated protected areas or controlled sites within the Order Limits, and there are no records of military vessels or aircraft having been lost within the order limits or within the immediate vicinity of the Order Limits.
- 5.5.10 Where remains are observed during archaeological investigation or construction work, intrusive work should cease and the site be secured while consultation with the Ministry of Defence is undertaken.

Treasure

5.5.11 Any items which are recovered which could be deemed as treasure will be subject to the provisions of the Treasure Act 1996 and the Treasure (Designation) Order 2002. Such material shall normally be removed from site to a secure location at the end of the working day on which it is found. In addition to the statutory authorities the relevant Portable Antiquities Officer should be informed.

5.6 **POST-EXCAVATION WORK, REPORTING AND DISSEMINATION**

Finds

- 5.6.1 All finds processing, conservation work and storage of finds must be carried out in compliance with the ClfA Guidelines for the collection, documentation, conservation and research of archaeological materials (2008) and those set by UKIC (1990).
- 5.6.2 The deposition and disposal of artefacts must be agreed with the legal owner and recipient museum prior to the work taking place. Where the landowner decides to retain artefacts, adequate provision must be made for recording them. Details of land ownership should be provided by the developer.
- 5.6.3 All retained artefacts must be cleaned and packaged in accordance with the requirements of the recipient museum.

Site Archive

- 5.6.4 Before the commencement of fieldwork, contact should be made with the landowners and with the appropriate archaeological archive to make the relevant arrangements. Details of land ownership should be provided by the developer. Details of the appropriate museum can be provided by GAPS.
- 5.6.5 The Archaeological Contractor will specify the receiving museum and confirm that arrangements for receipt of archaeological material and site archives have been agreed before the commencement of fieldwork.
- 5.6.6 The archive and the finds must be deposited in the appropriate local museum, within six months of completion of the post-excavation work and report.
- 5.6.7 GAPS will require confirmation that the archive has been submitted in a satisfactory form to the relevant museum.

Post-Excavation Assessment

Post-excavation Assessment

5.6.8 A discrete post-excavation assessment (PXA) will be carried out at the end of all excavation and/or strip, map and sample works (as identified at Section 4) and submitted to GAPS within six months of the completion of fieldwork.

Purpose

- 5.6.9 The intention of carrying out a PXA is to provide a rapid summary of the material recovered during the excavation and to allow costed recommendations to be made for the final reporting, which will be carried out following the completion of all of the archaeological fieldwork.
- 5.6.10 The PXA is intended to be a summary document rather than a detailed record. As such, the level of reporting will provide sufficient detail to allow recommendations to be made and justified.

<u>Form</u>

- 5.6.11 The PXA will comprise:
 - Introduction:
 - scope of the project;
 - o circumstances and dates of fieldwork and previous work; and

- comments on the organisation of the report.
- Original research aims.
- Summary of the documented history of the site(s).
- Interim statement on the results of fieldwork.
- Summary of the site archive and work carried out for assessment:
 - site records: quantity, work done on records during postexcavation assessment;
 - finds: factual summary of material and records, quantity, range, variety, preservation, work done during post-excavation assessment;
 - environmental material: factual summary of human and animal bone, shell and each type of sample (e.g. bulk organic, dendrochronological, monolith), quantity, range, variety, preservation, work done on the material during post-excavation assessment; and
 - documentary records: list of relevant sources discovered, quantity, variety, intensity of study of sources during postexcavation assessment.
- Potential of the Data:
 - an appraisal of the extent to which the site archive might enable the data to meet the research aims of the project, subdivided according to the research aims of the project rather than the form of the data;
 - a statement of the potential of the data in developing new research aims, to contribute to other projects and to advance methodologies; and
 - a summary statement of the significance of the data.
- Additional information will normally include:
 - supporting illustrations at appropriate scales;
 - sufficient supporting data, tabulated or in appendices, and/or details of the contents of the project archive, to permit the interrogation of the stated conclusions; and

• index, references and disclaimers.

Full Report and Publication

5.6.12 Following submission of the post-excavation assessment report and proposal for analysis and publication, the Archaeological Contractor will discuss and agree with GAPS the scope of the Full Report and the format and destination of subsequent publication(s) arising from excavation and post-excavation work on the site. The Archaeological Contractor will be expected to produce a paper suitable for publication within 18 months of completion of work on the site.

OASIS

5.6.13 The overall aim of the Online Access to the Index of Archaeological Investigations (OASIS) project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large scale developer funded fieldwork. The archaeological consultant or contractor must therefore complete the online OASIS form at http://ads.ahds.ac.uk/project/oasis/. Once a report has become a public document by submission to or incorporation into the Gwynedd Historic Environment Record (HER), Gwynedd HER will validate the OASIS form thus placing the information into the public domain on the OASIS website. The Archaeological Contractor must indicate that they agree to this procedure within the Method Statement submitted to the Archaeological Clerk of Works for approval.

Publication

5.6.14 Formal publication of the results of the fieldwork will be required. It is intended that the results of the works as a whole will be reviewed and decisions taken on the scope and level of any publication(s) following the submission of the PXA reports and review.

Public Outreach

- 5.6.15 A proportionate programme of outreach activities, commensurate to the findings of the archaeological mitigation works, will be provided by National Grid. The scope of these works will be defined in Method Statements), prior to post excavation works commencing.
- 5.6.16 The following activities are provisionally suggested as appropriate, proportionate and deliverable methods of providing public outreach:
 - Presentations, talks and public events: The results of field work could be disseminated by providing talks and events to the public

(after excavation and offsite, and commensurate to the findings of fieldwork) to explain what has been found locally. This would be delivered by the Archaeological Clerk of Works and the Archaeological Contractor.

- Exhibitions: The results of the onsite mitigation recording could, if warranted, be presented in displays at local museums or libraries. This would be at the discretion of the receiving museums display policies.
- 5.6.17 With due consideration for site safety, public safety and the avoidance of damage to archaeological sites by trespassers, there may also be potential to offer updates during the course of the onsite mitigation works via newsletters and any other public information activities undertaken by National Grid throughout the construction period.

5.7 MONITORING

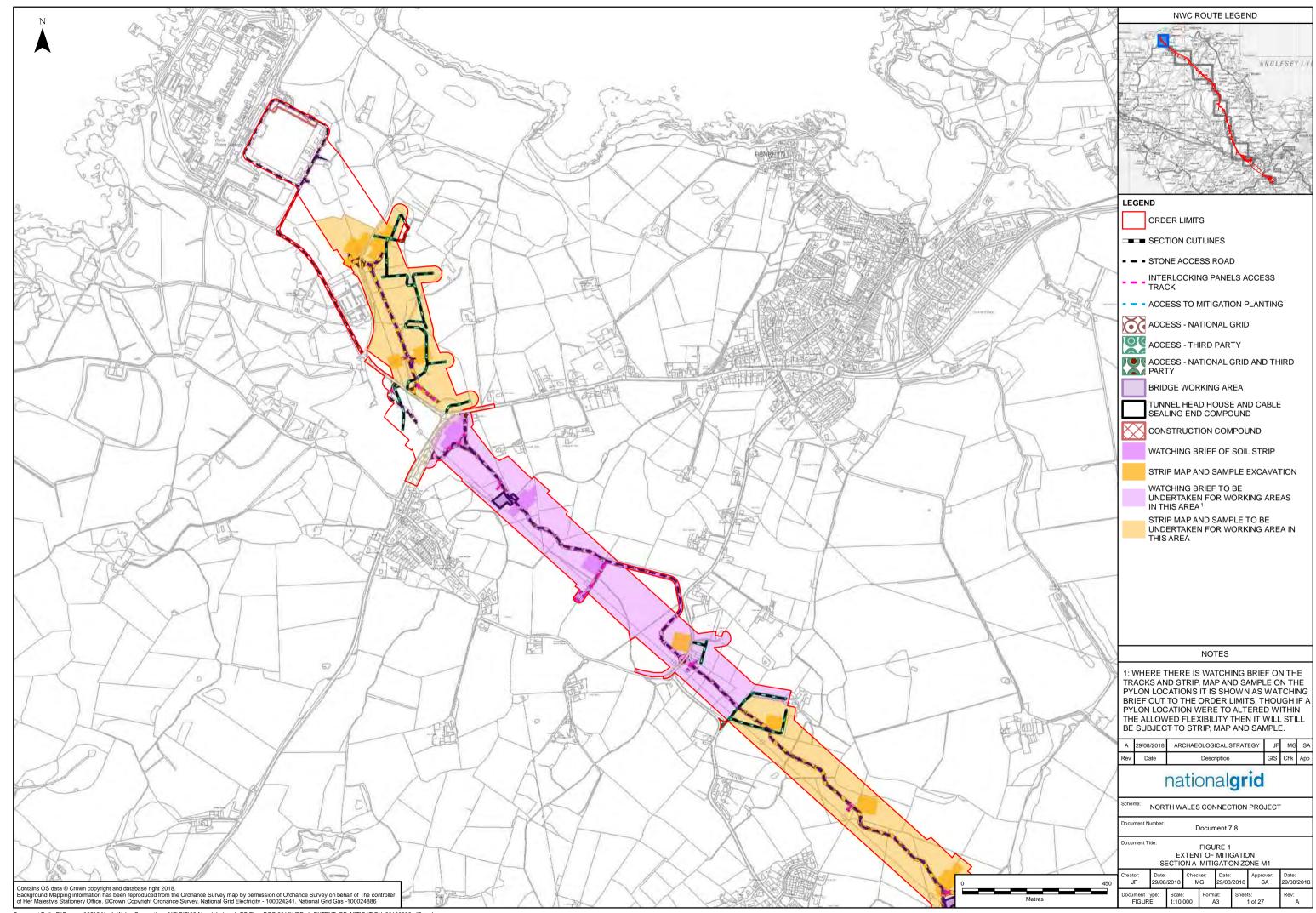
- 5.7.1 GAPS must be informed of the start date and timetable for the evaluation in advance of work commencing.
- 5.7.2 Reasonable access to the site must be afforded to GAPS or their nominee at all times, for the purposes of monitoring the archaeological evaluation
- 5.7.3 Regular communication between the Archaeological Contractor, GAPS, client and other interested parties must be maintained to ensure the project aims and objectives are achieved.

6 Health, Safety and Environment

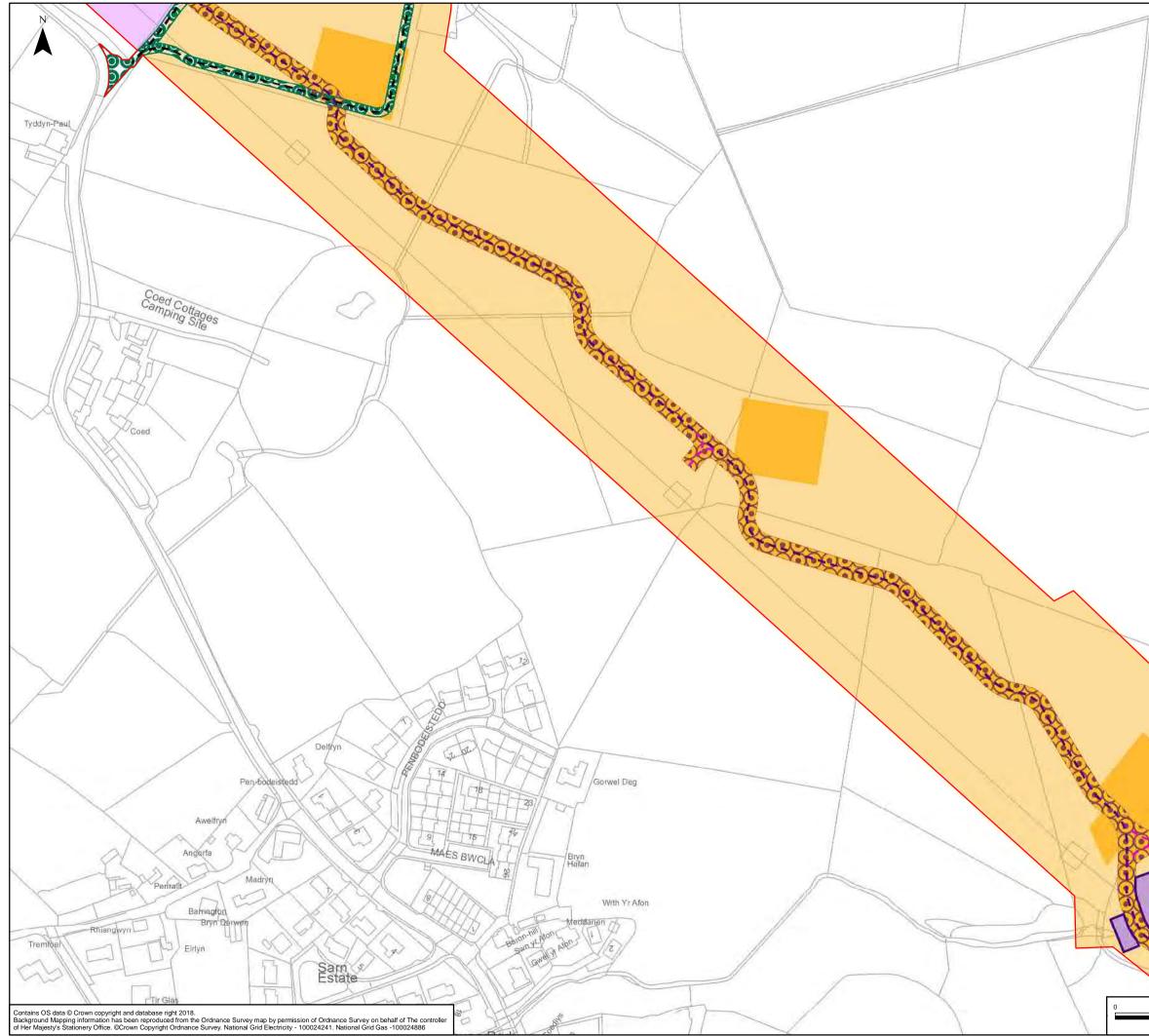
- 6.1.1 Health and Safety will take priority over all other requirements. A conditional aspect of all archaeological work is both safe access to the area of work and a safe working environment. All relevant Health and Safety legislation, regulations and codes of practice should be respected and adhered to. Site-specific risk assessments will be carried out in respect of each element of the mitigation fieldwork prior to commencement of the fieldwork and copies sent to the representatives of the client for approval.
- 6.1.2 The project will be carried out in accordance with safe working practices and under the defined Health, Safety and Environmental Policy.
- 6.1.3 Copies of the successful contractor's insurance policies will be required in advance by the client or their nominated representative.
- 6.1.4 The appointed sub-contractor/s will take responsibility for securing the trenches (e.g. by fencing), provision of welfare, backfilling and reinstatement of the trenches and the removal of materials brought onto the site during the evaluation.
- 6.1.5 Service plans and plans of buried restrictions will be supplied by the appointed Principal Contractor. Any archaeological intervention must respect all requirements for safe stand-off distances and working practices in regard of these features. Any resulting changes to the Archaeological Clerk of Works.
- 6.1.6 Appropriate welfare facilities must be provided at each strip map and sample area for the duration of the archaeological works.

7 Figures

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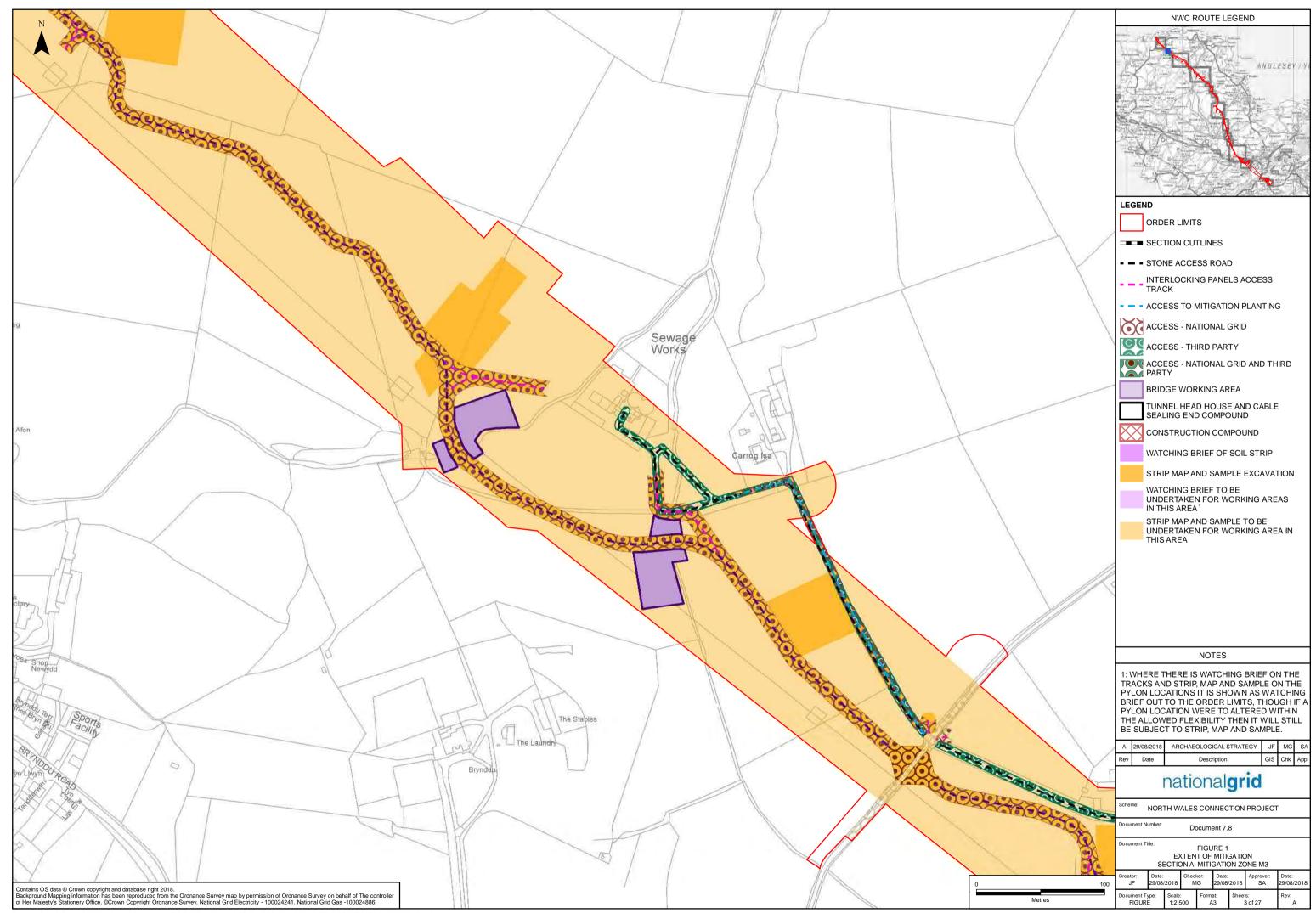


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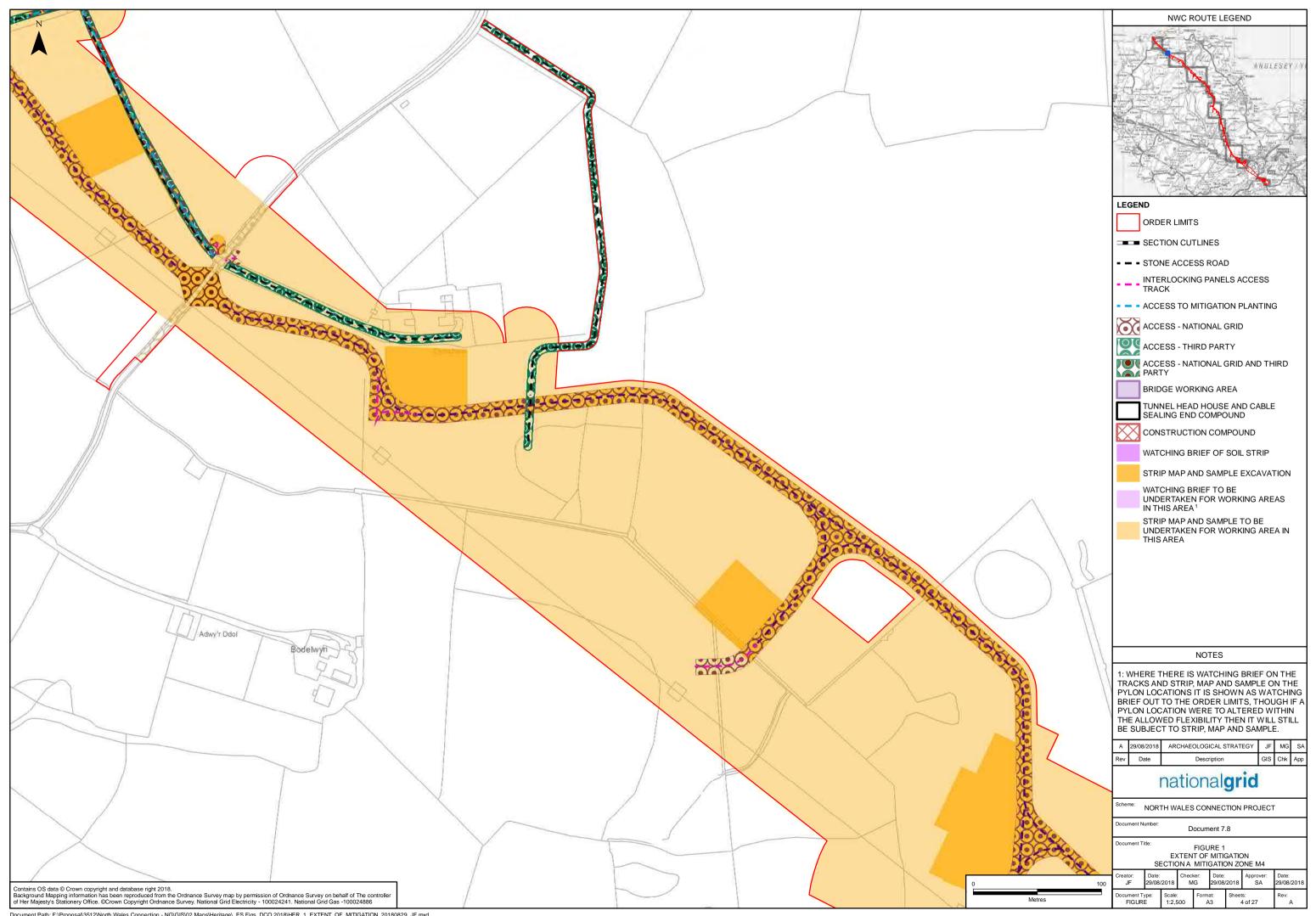


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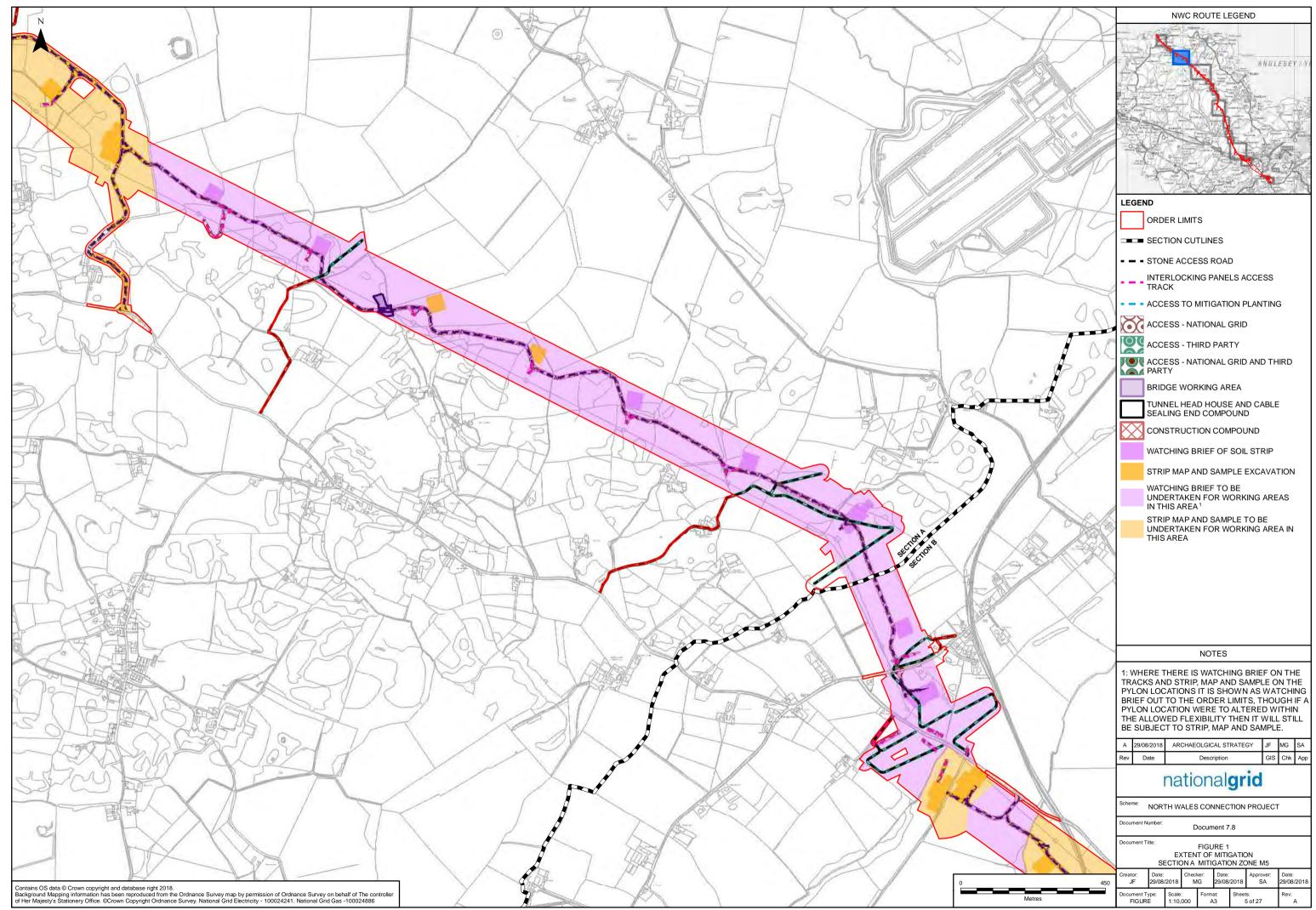
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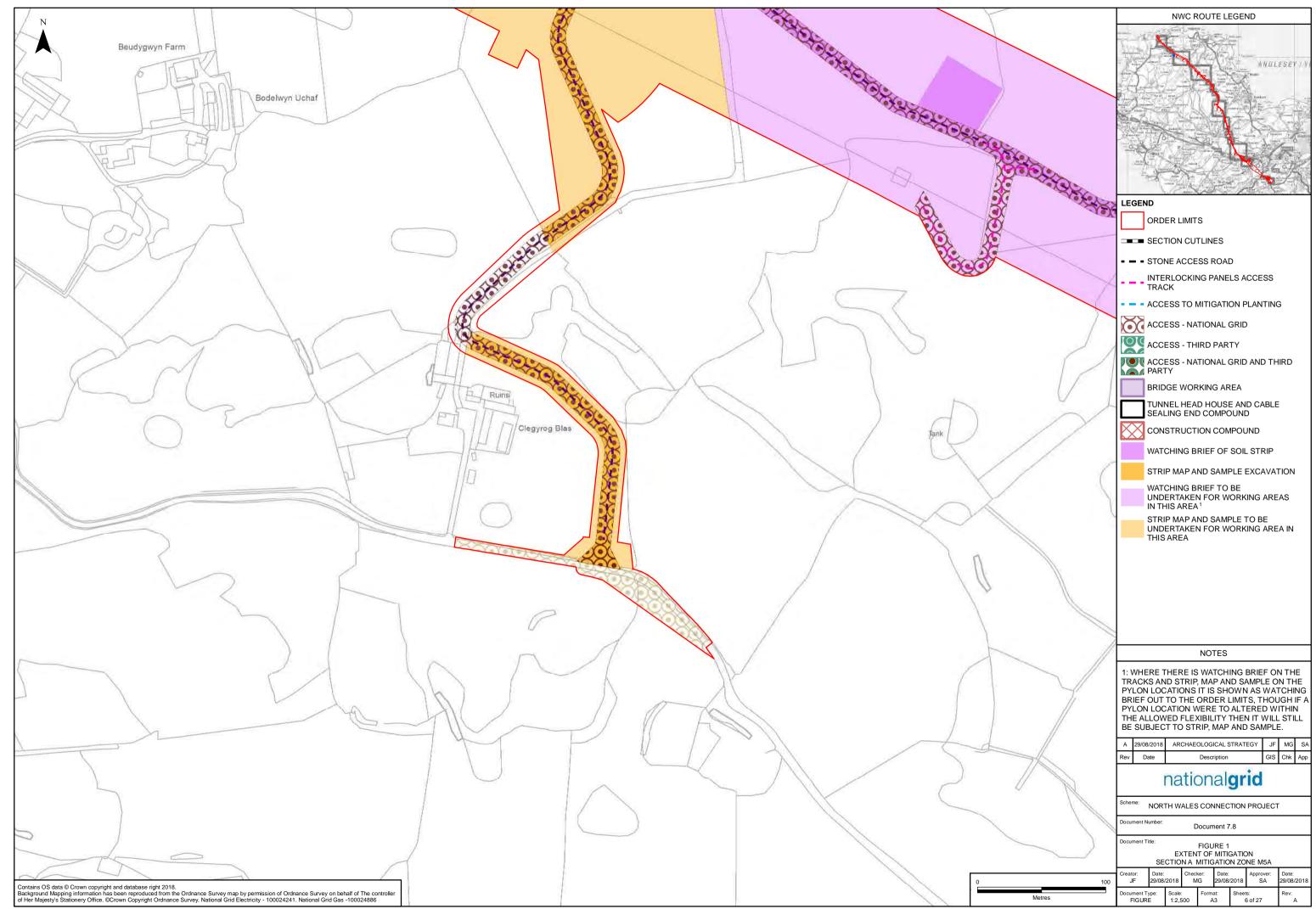


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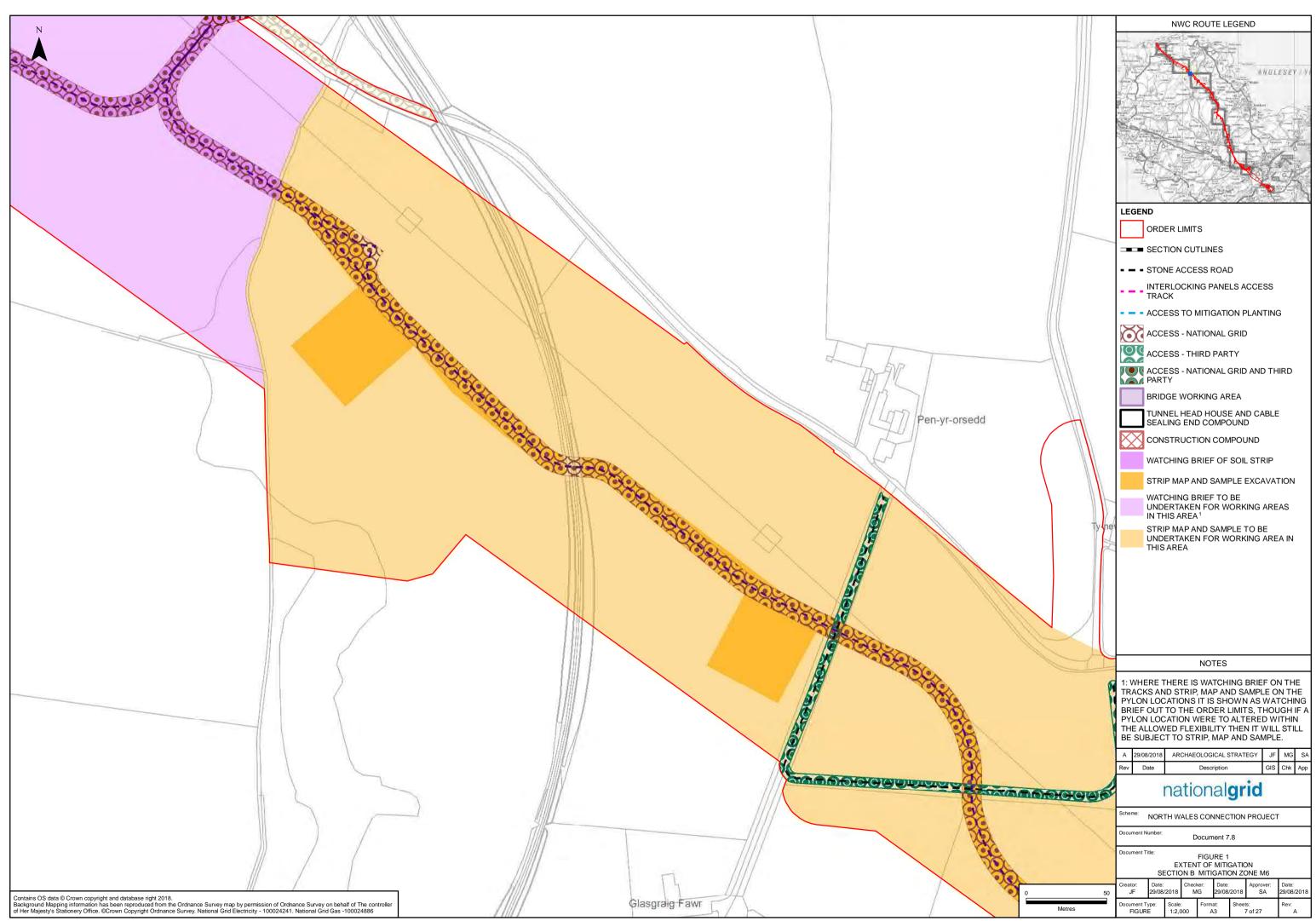


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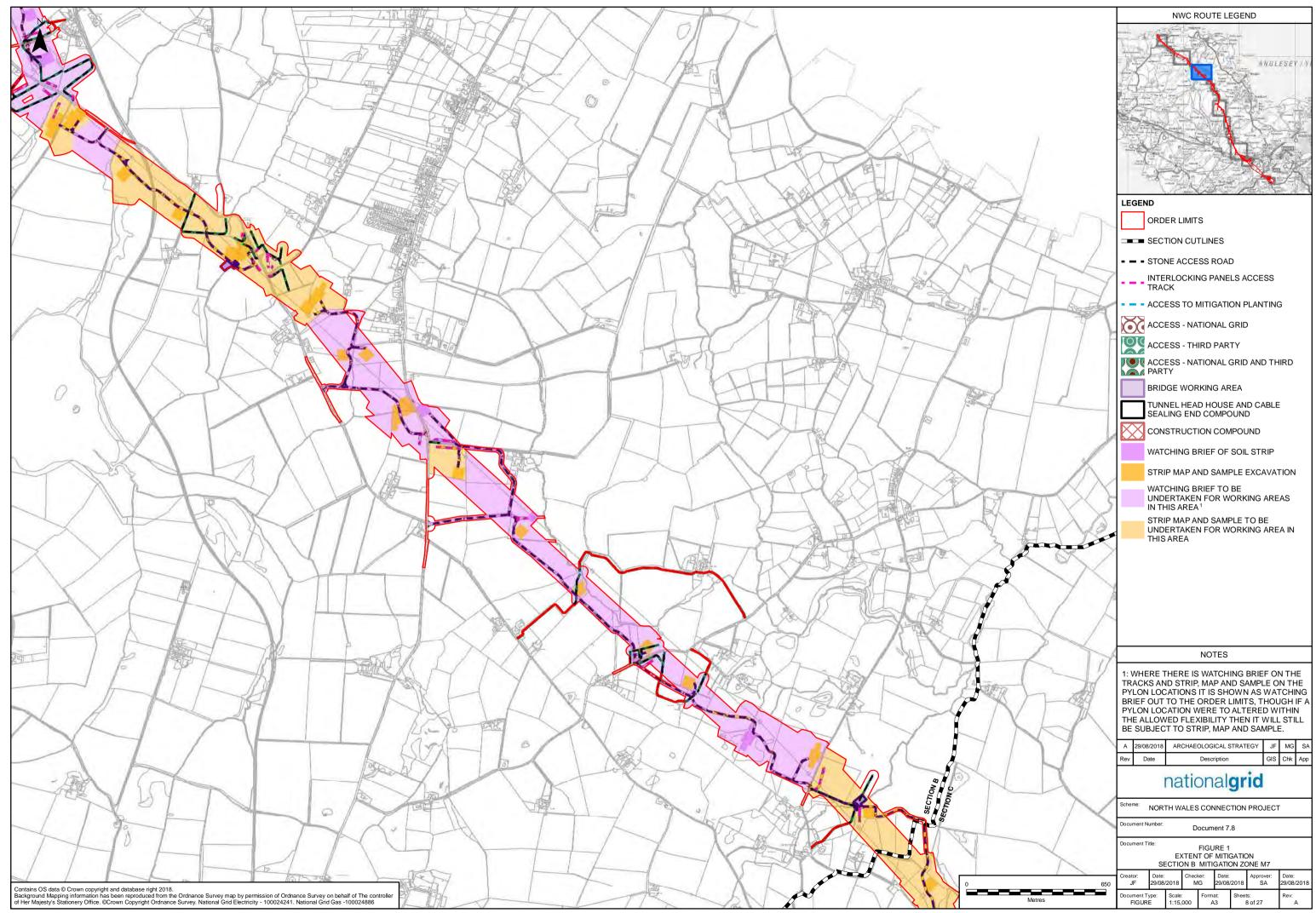


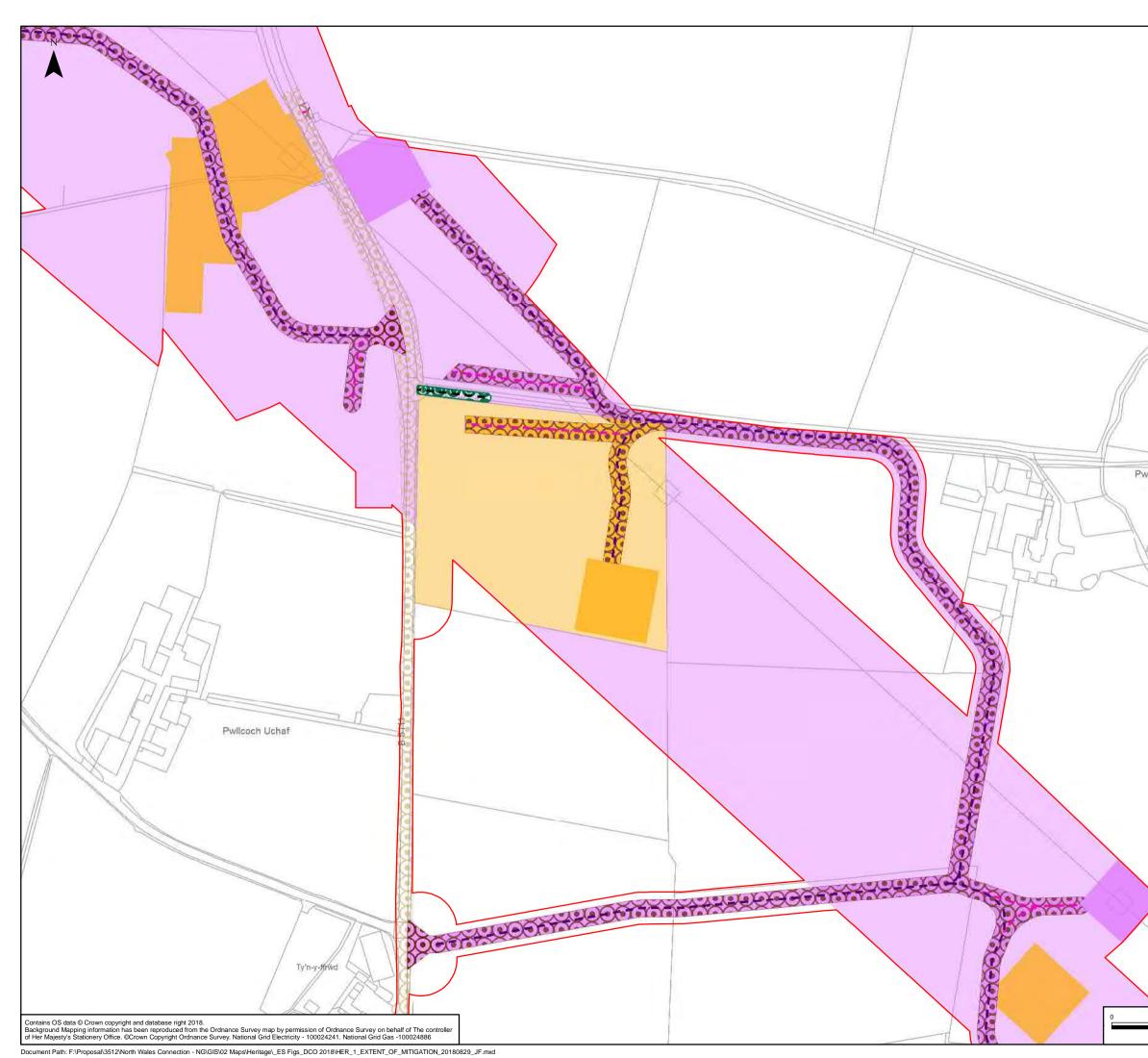


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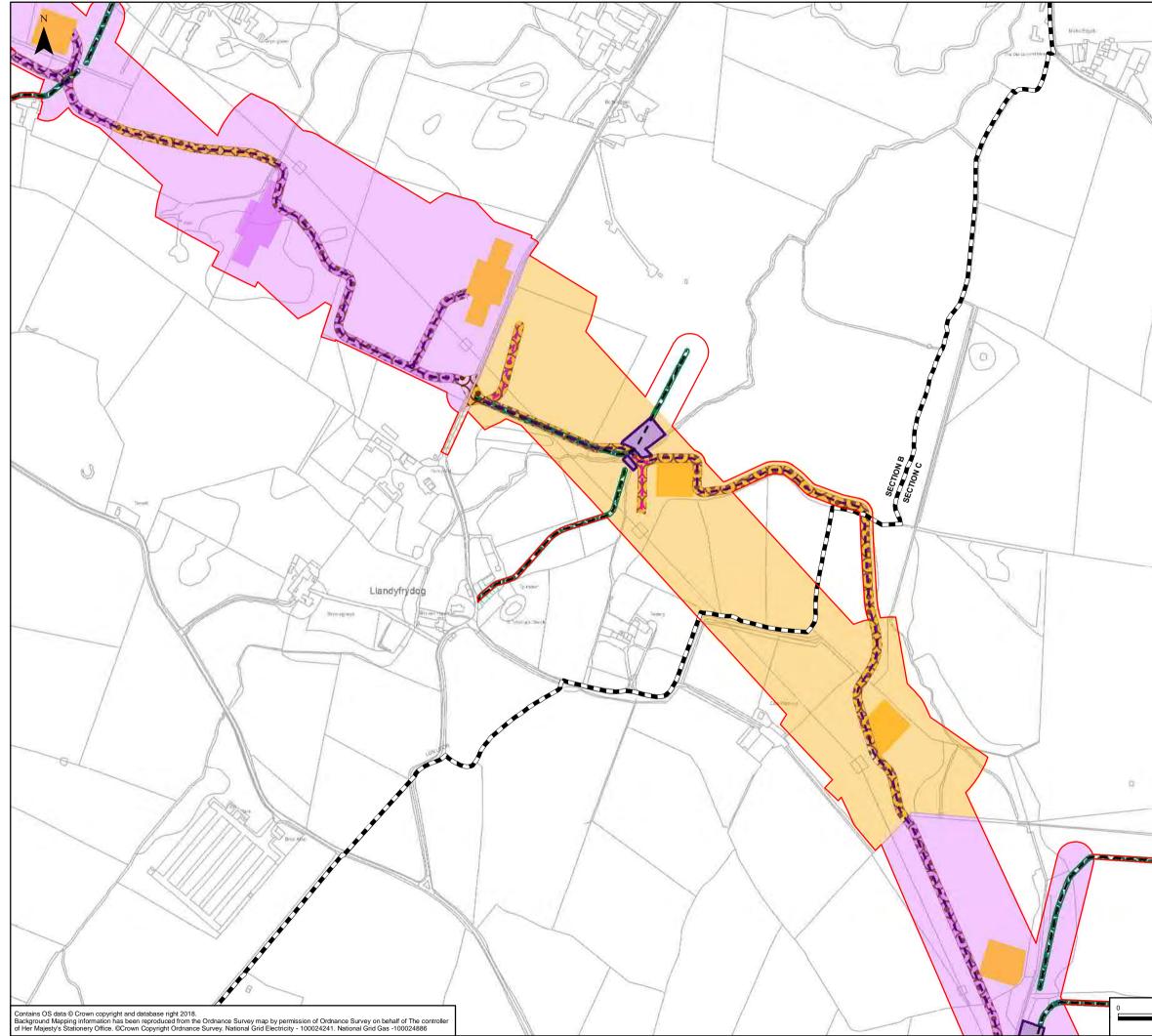


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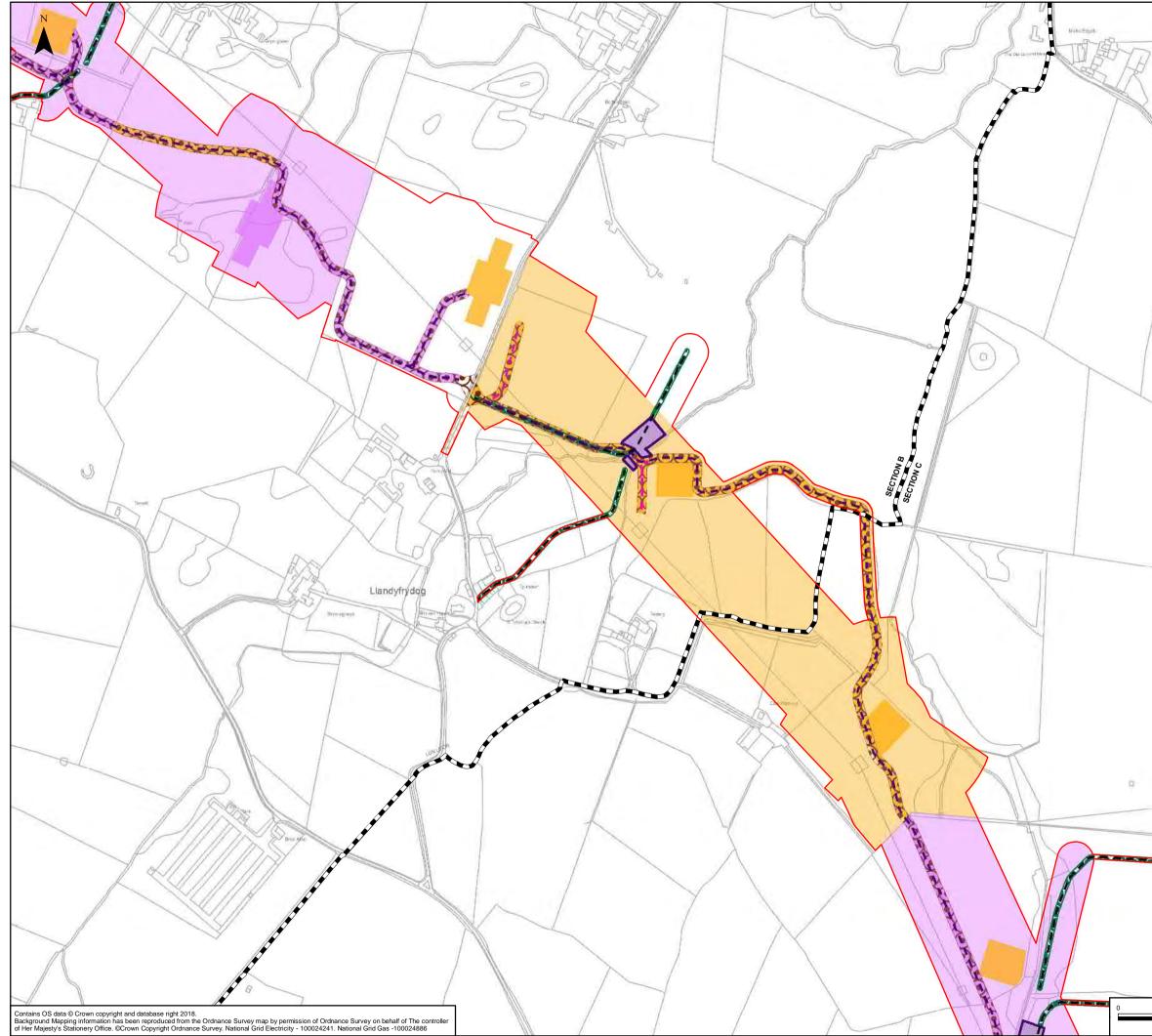




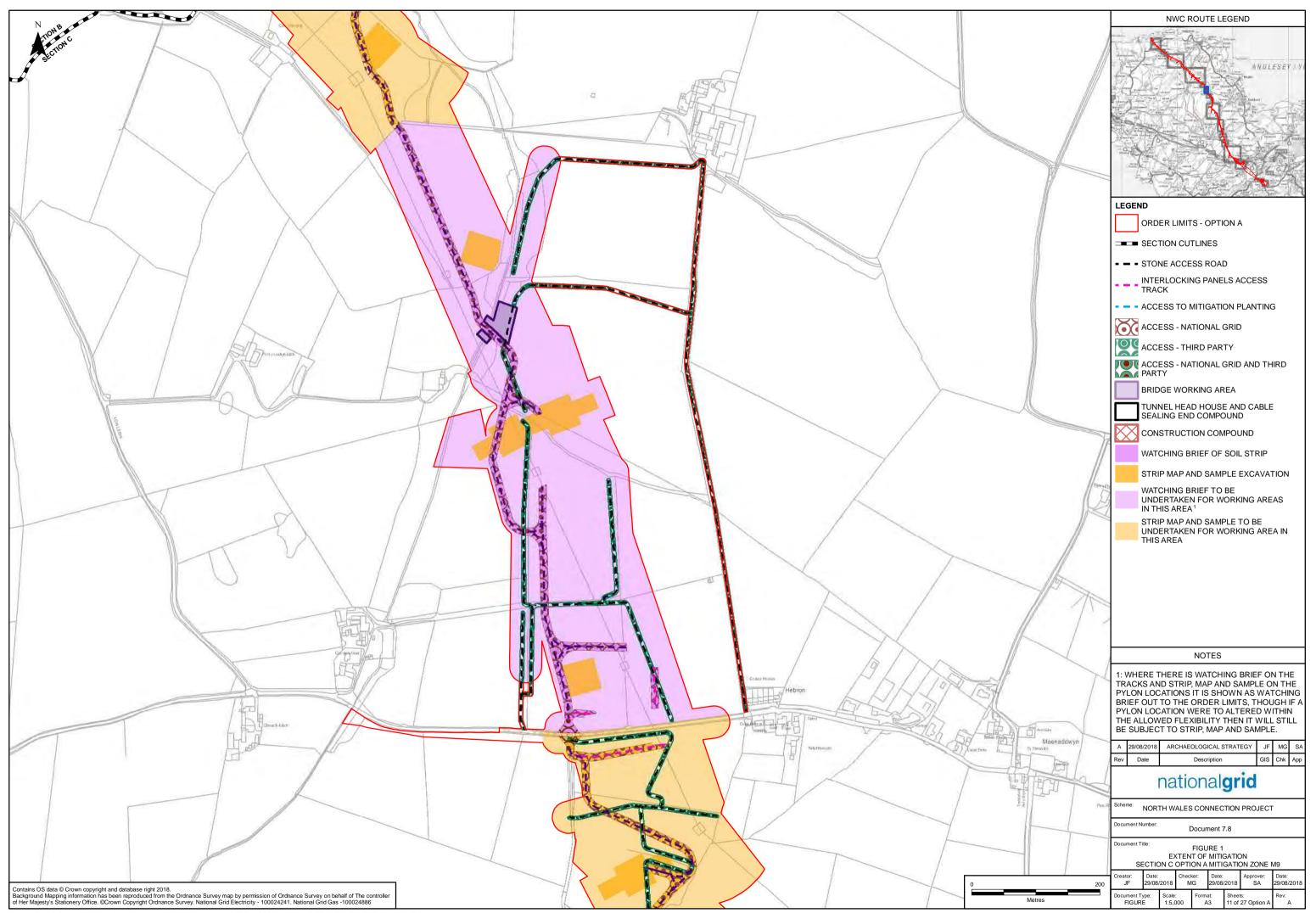
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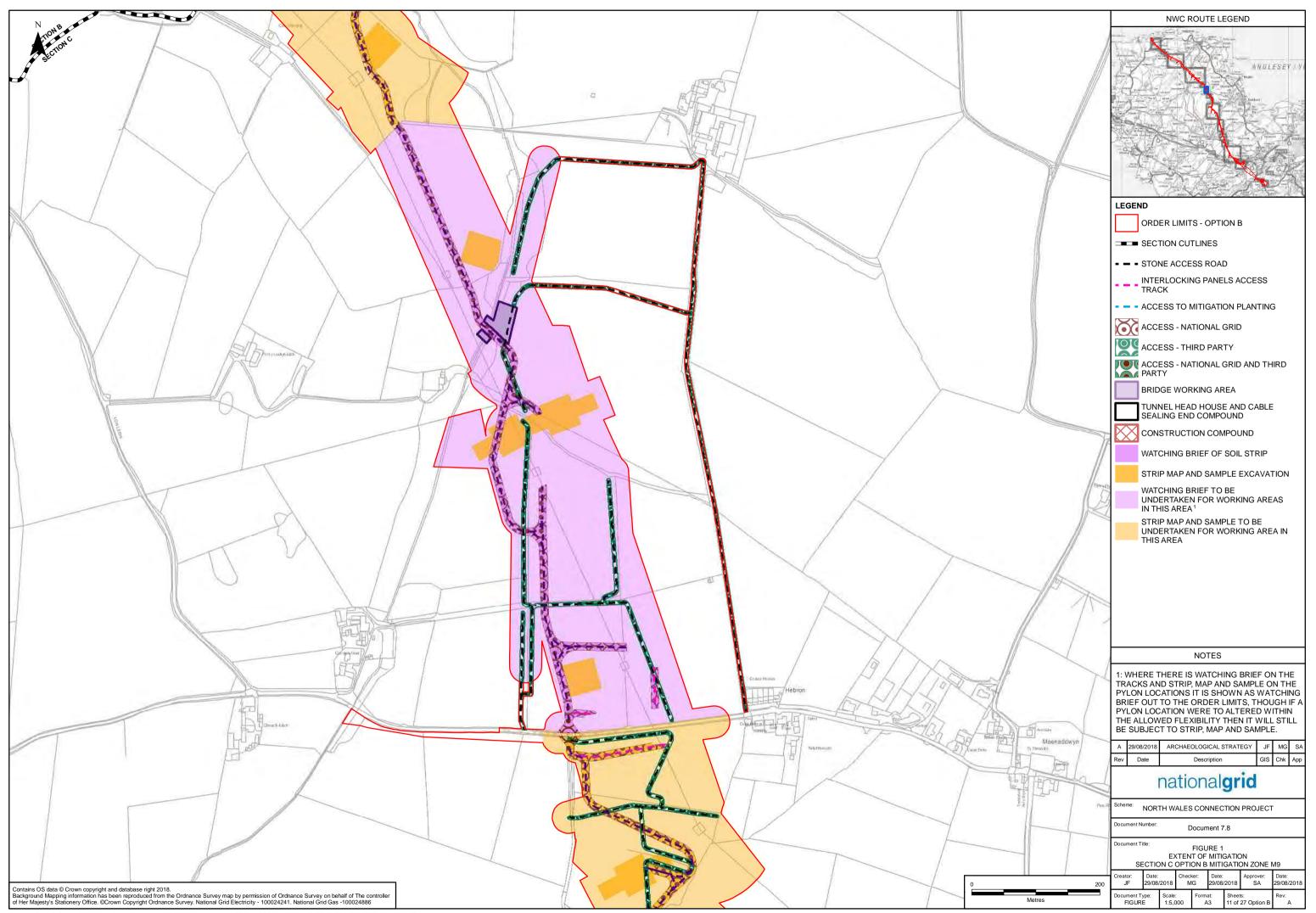
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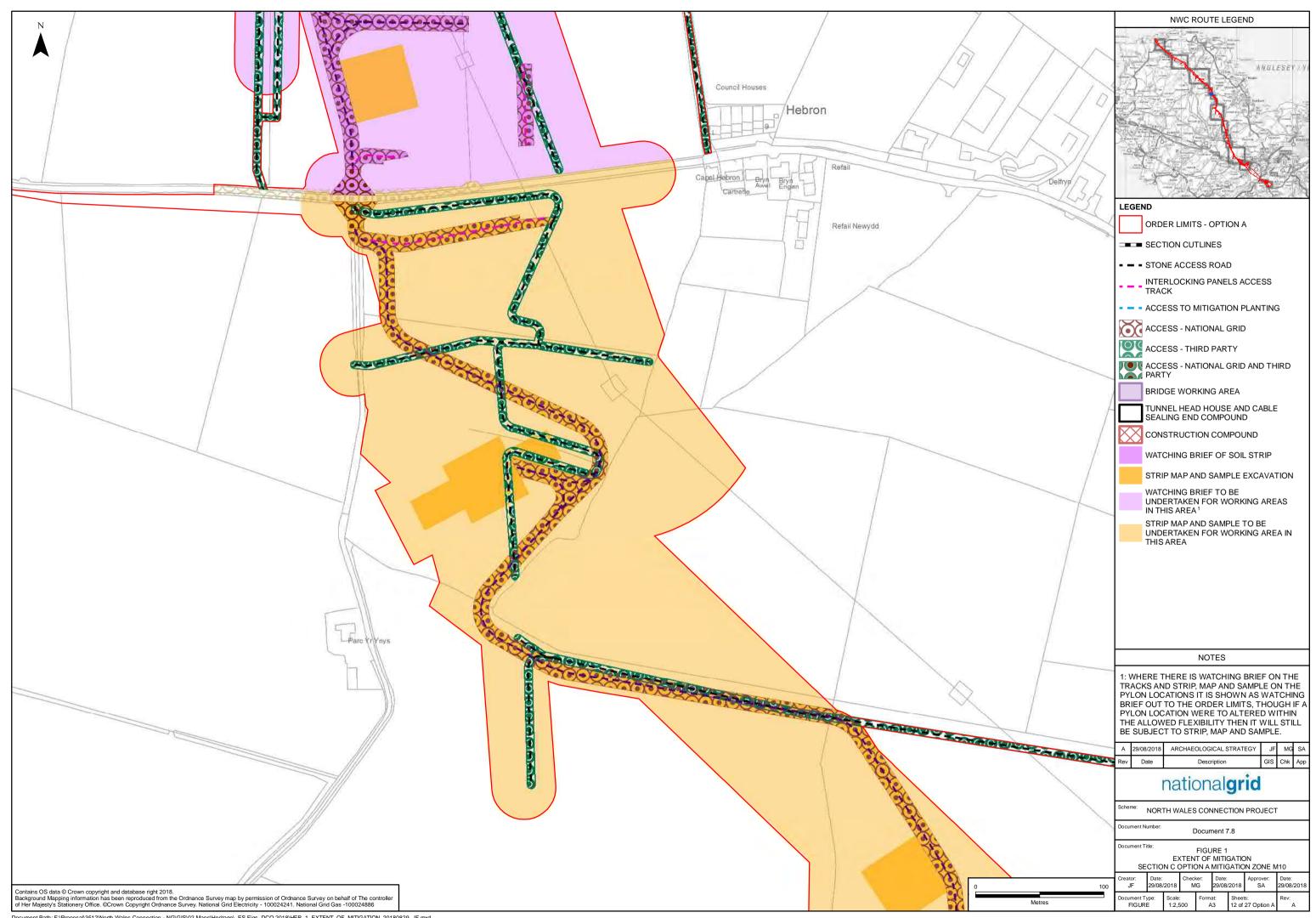
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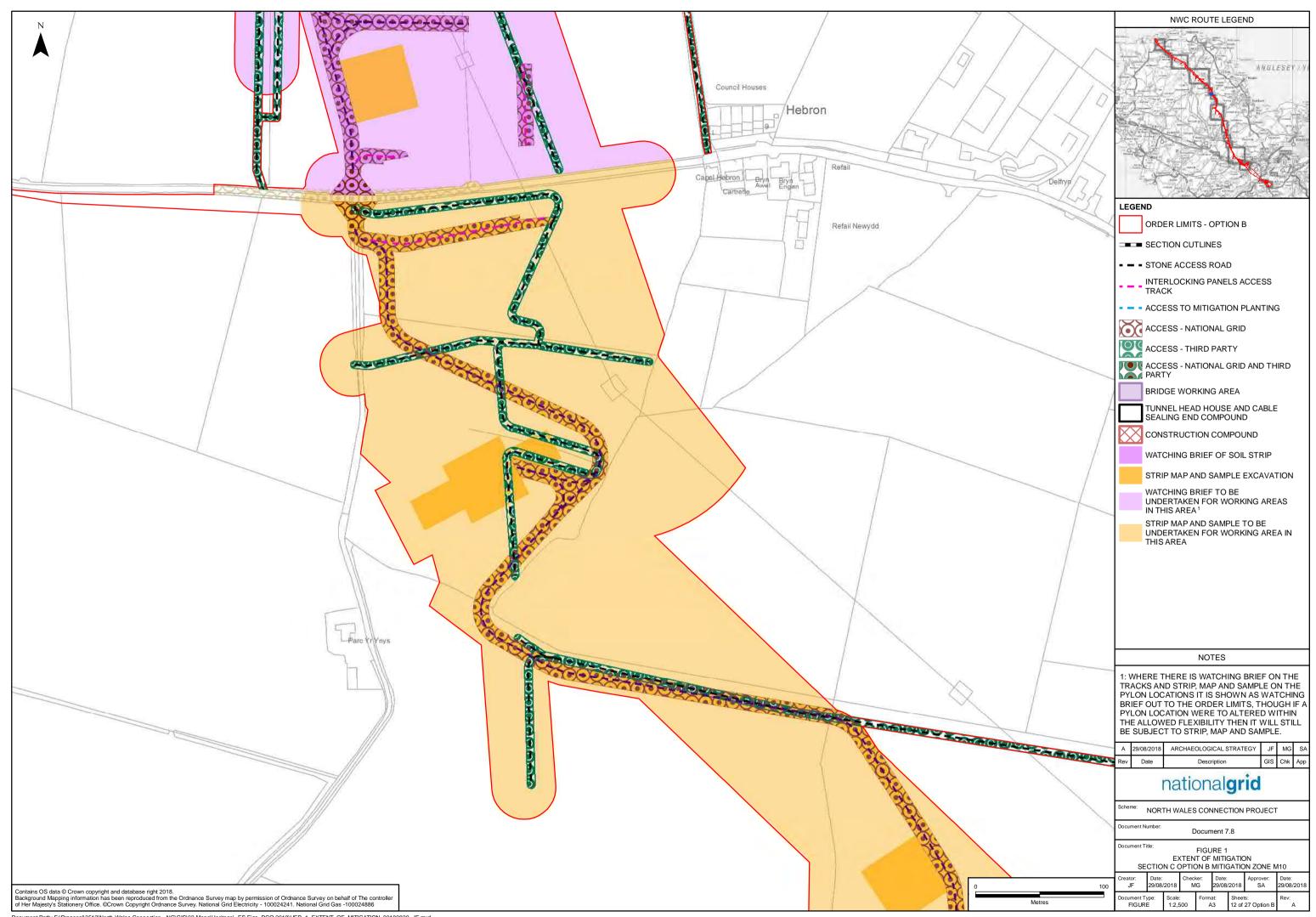


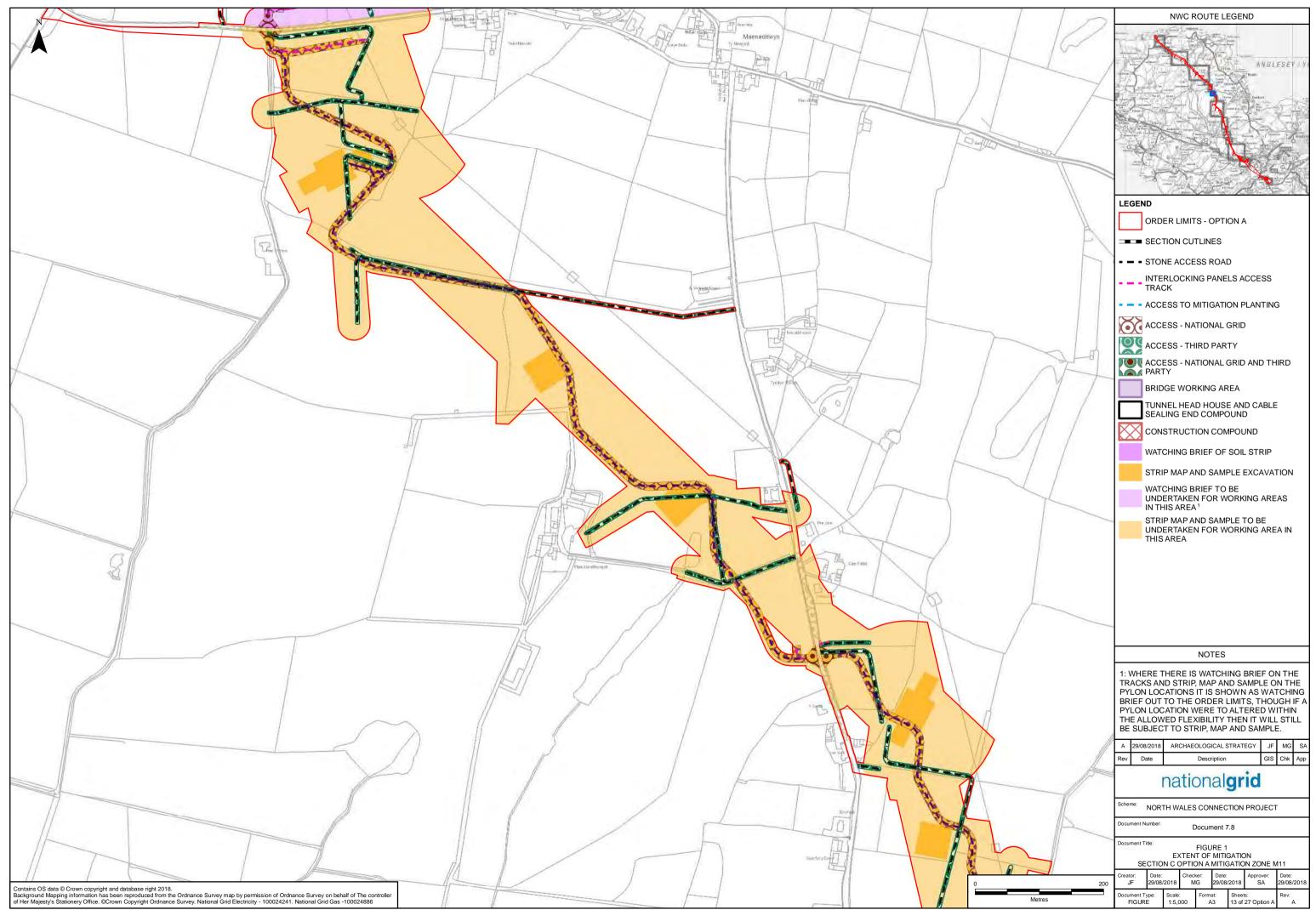
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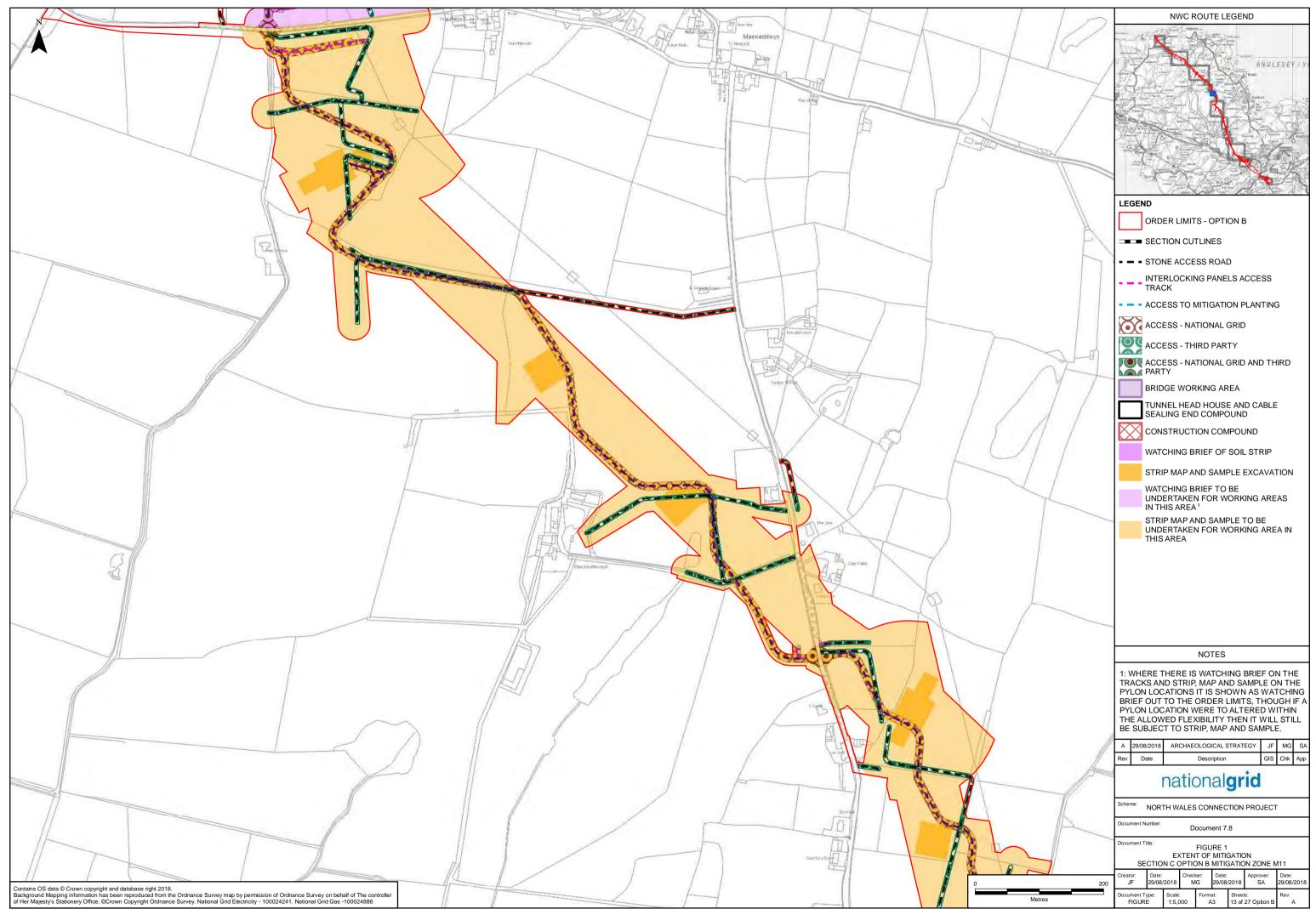


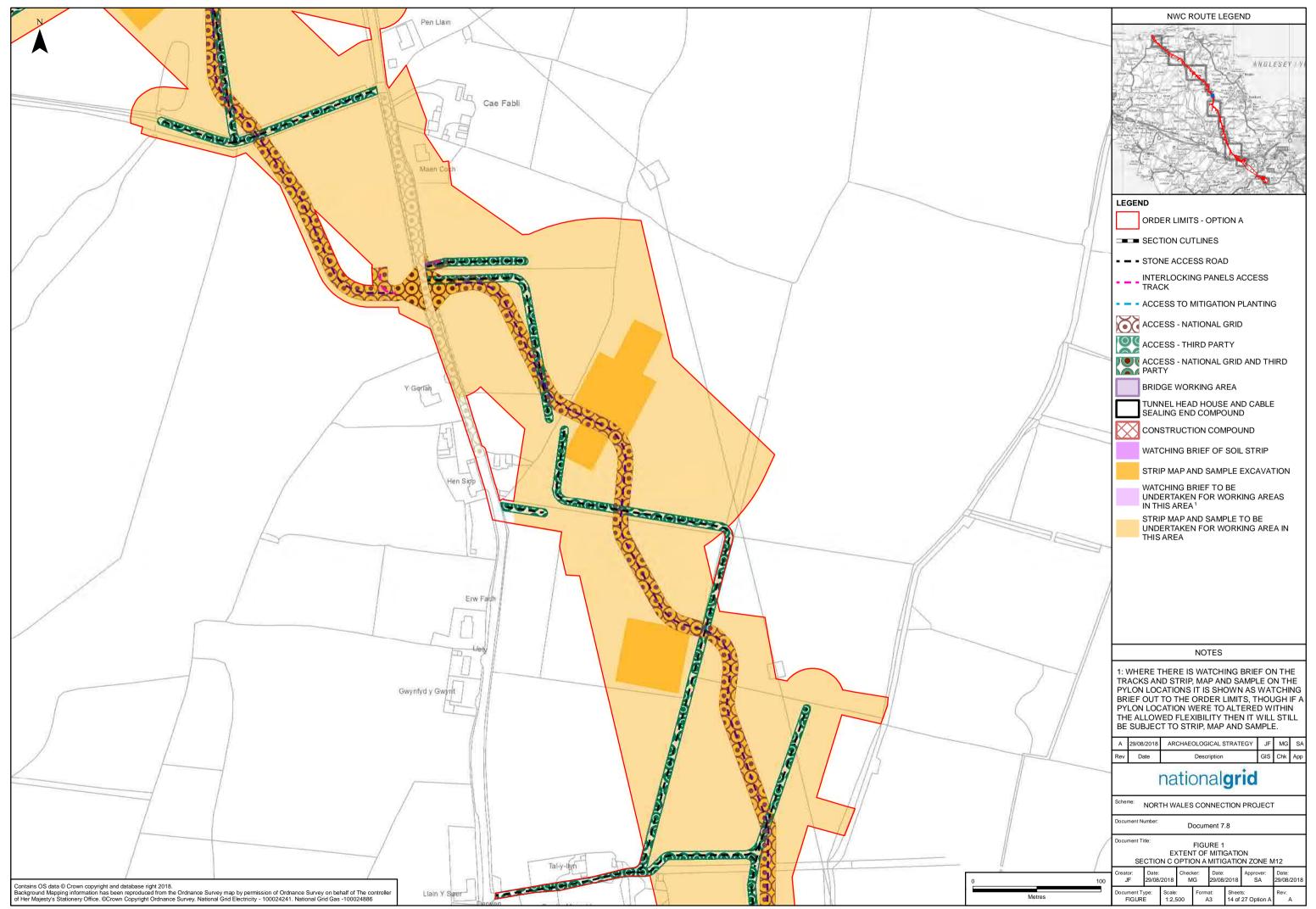
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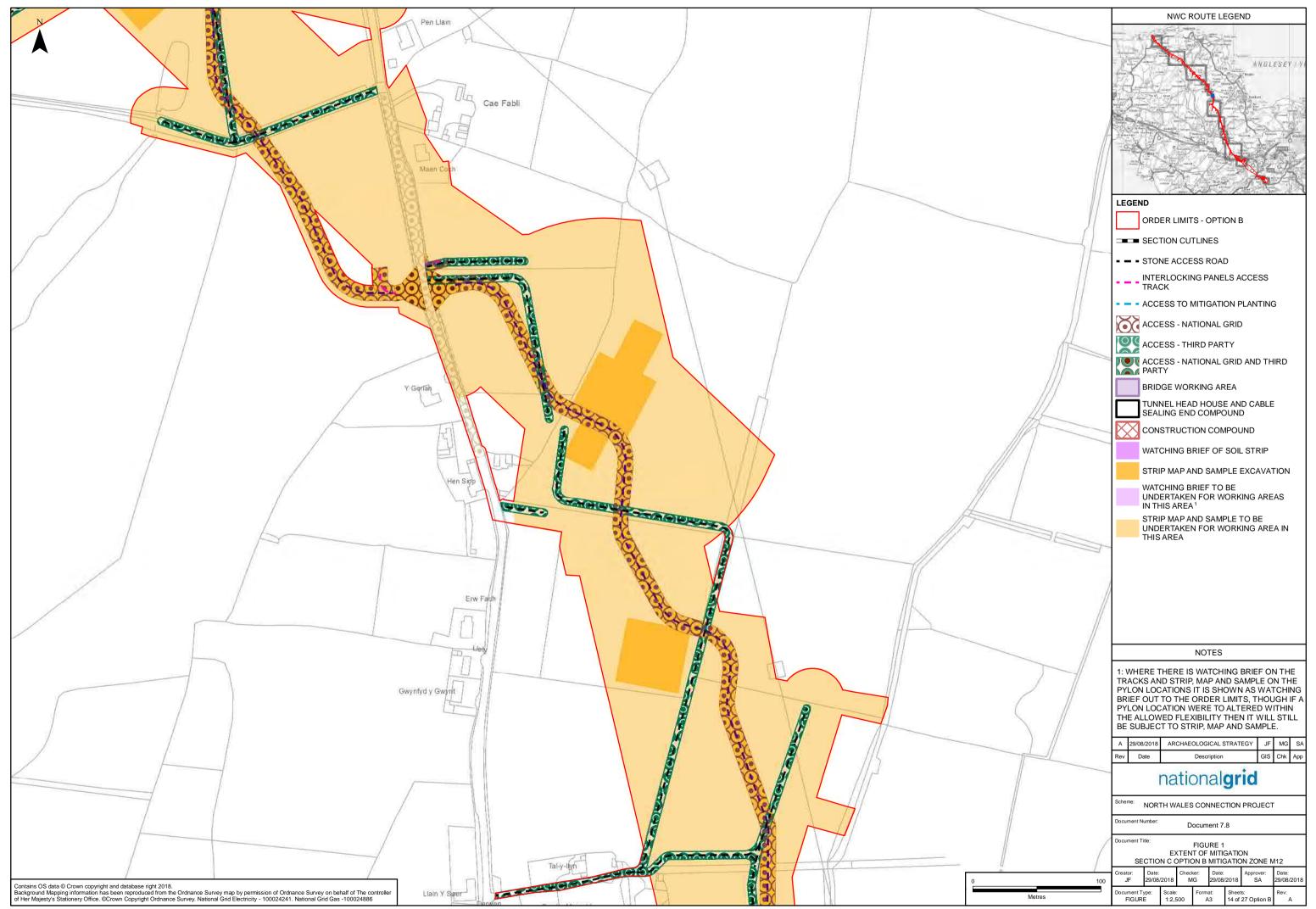


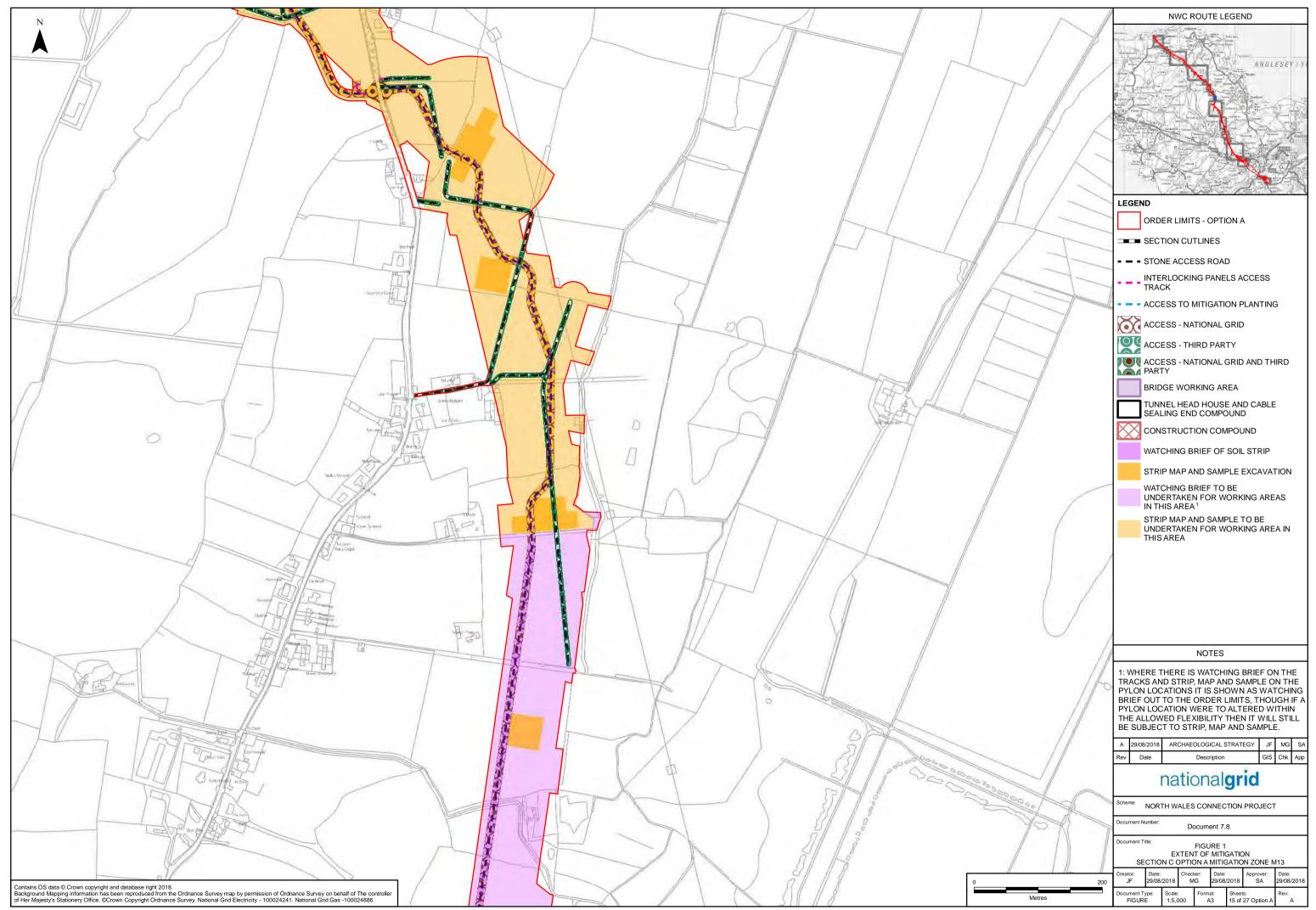


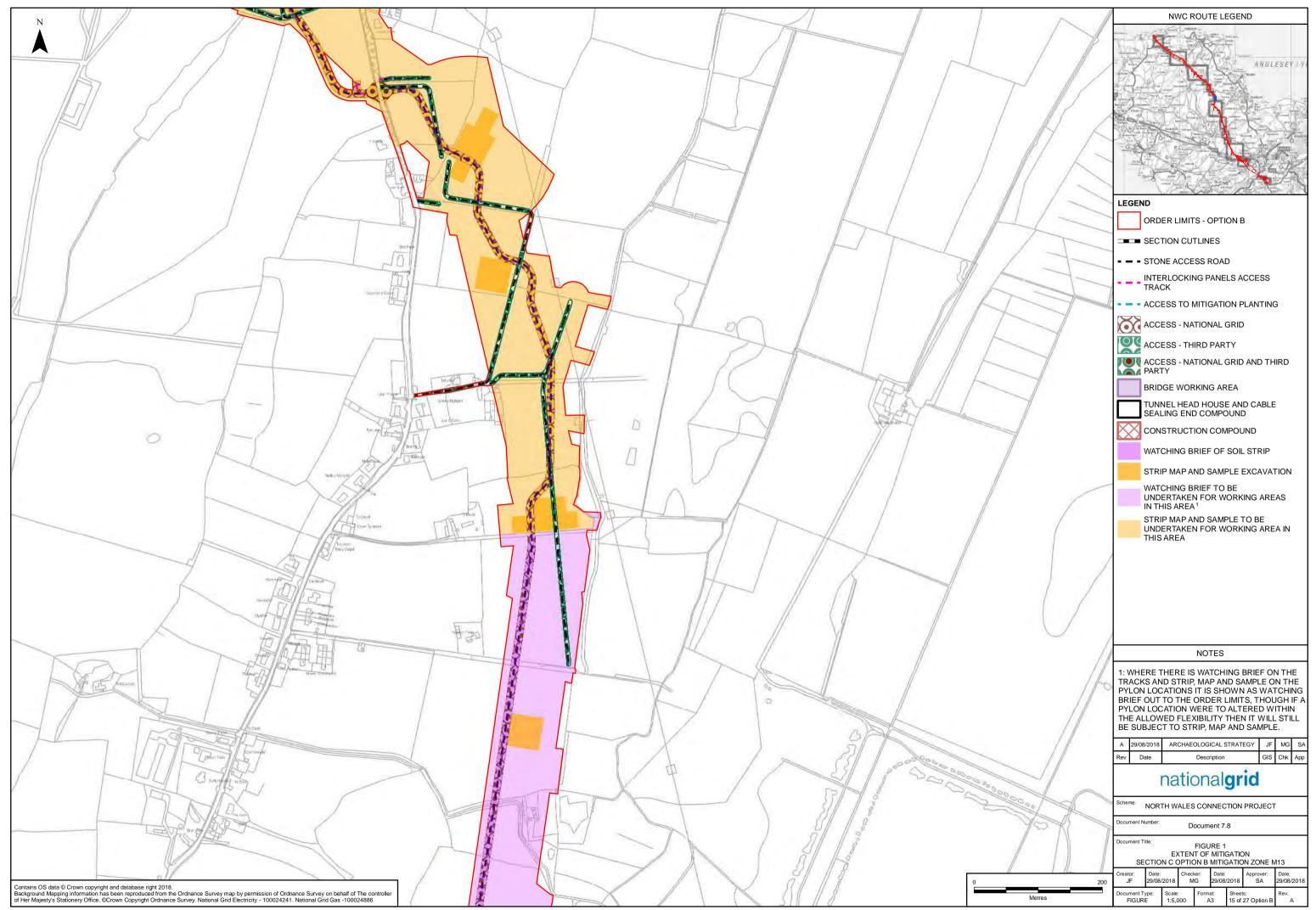


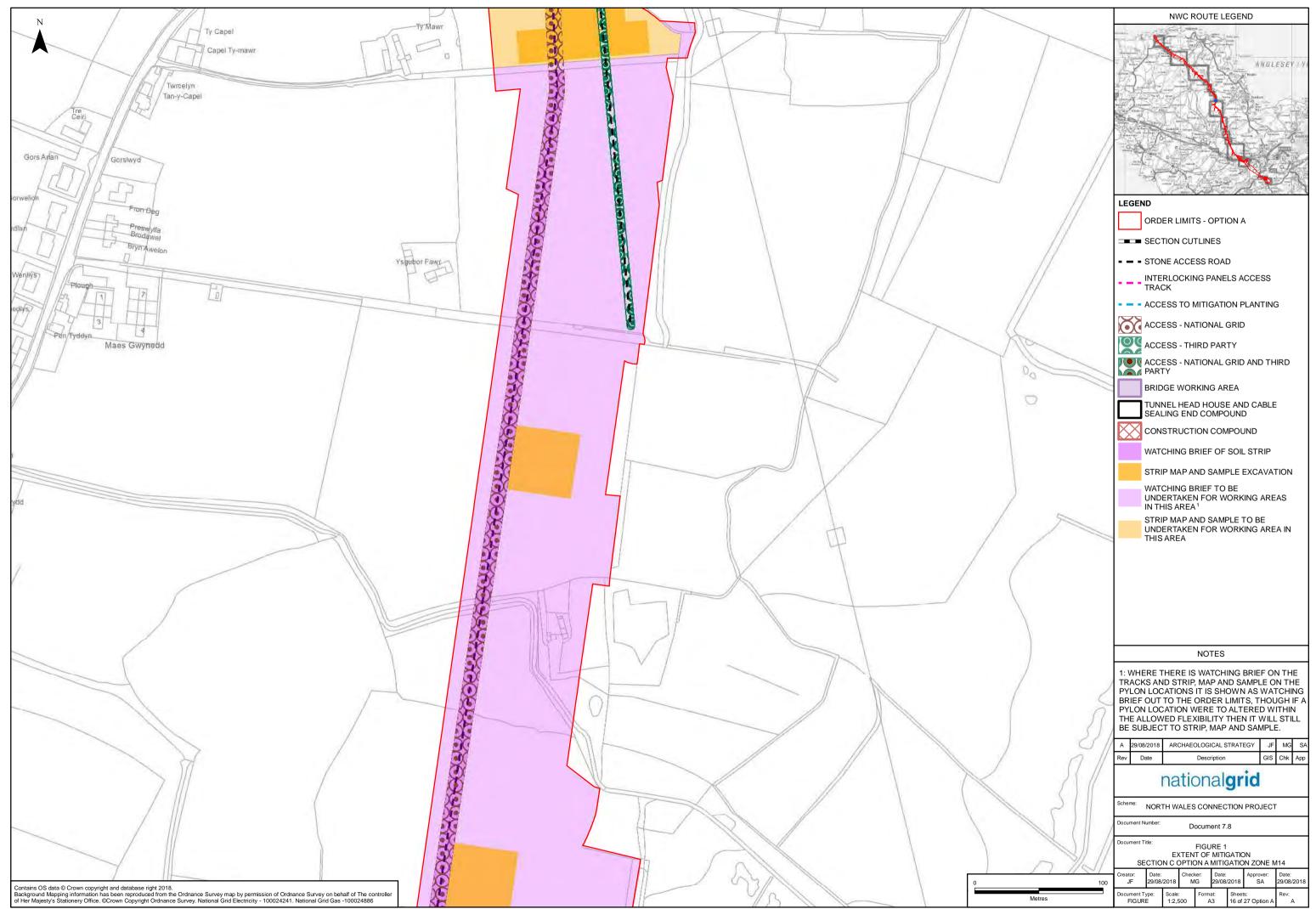


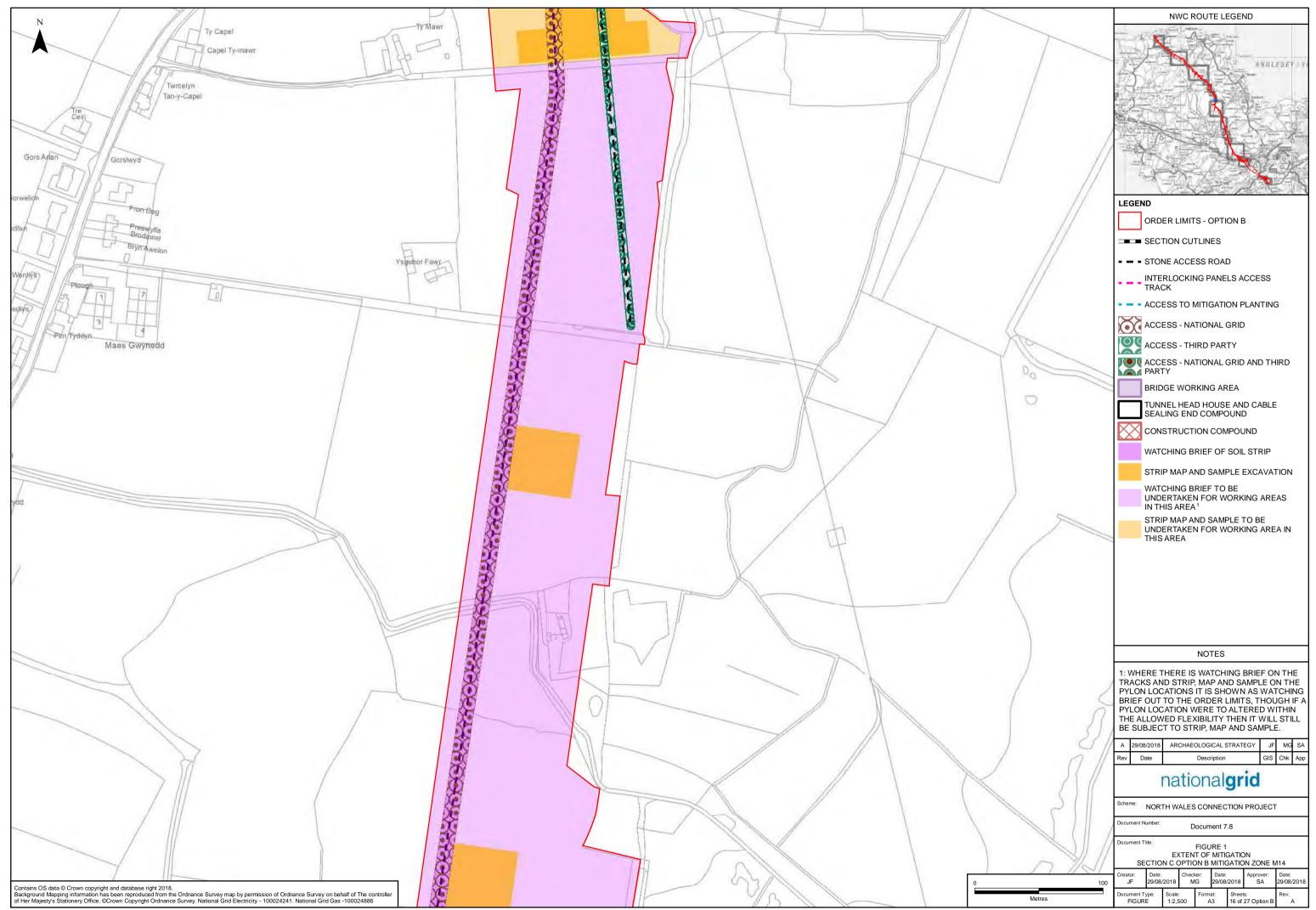


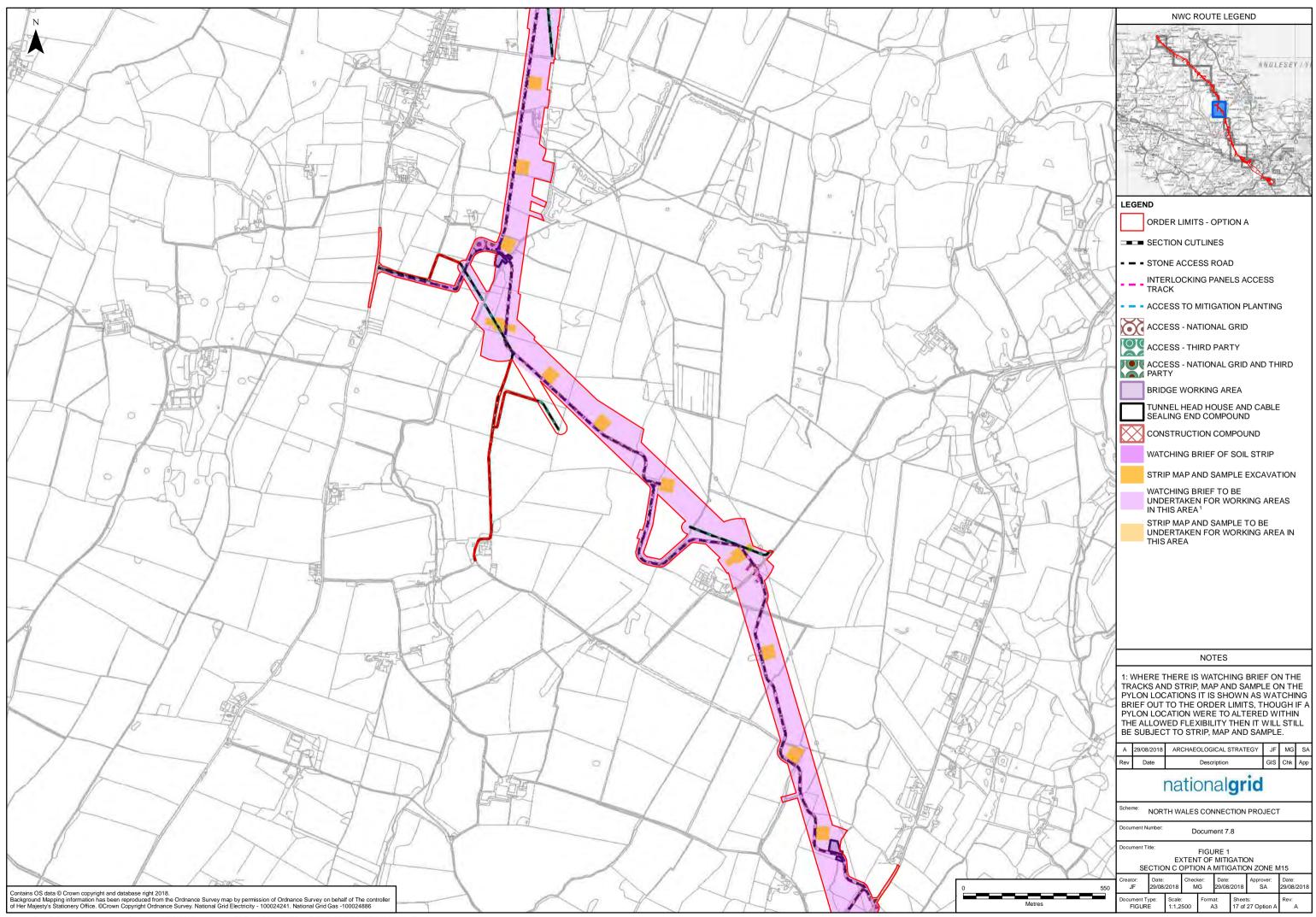


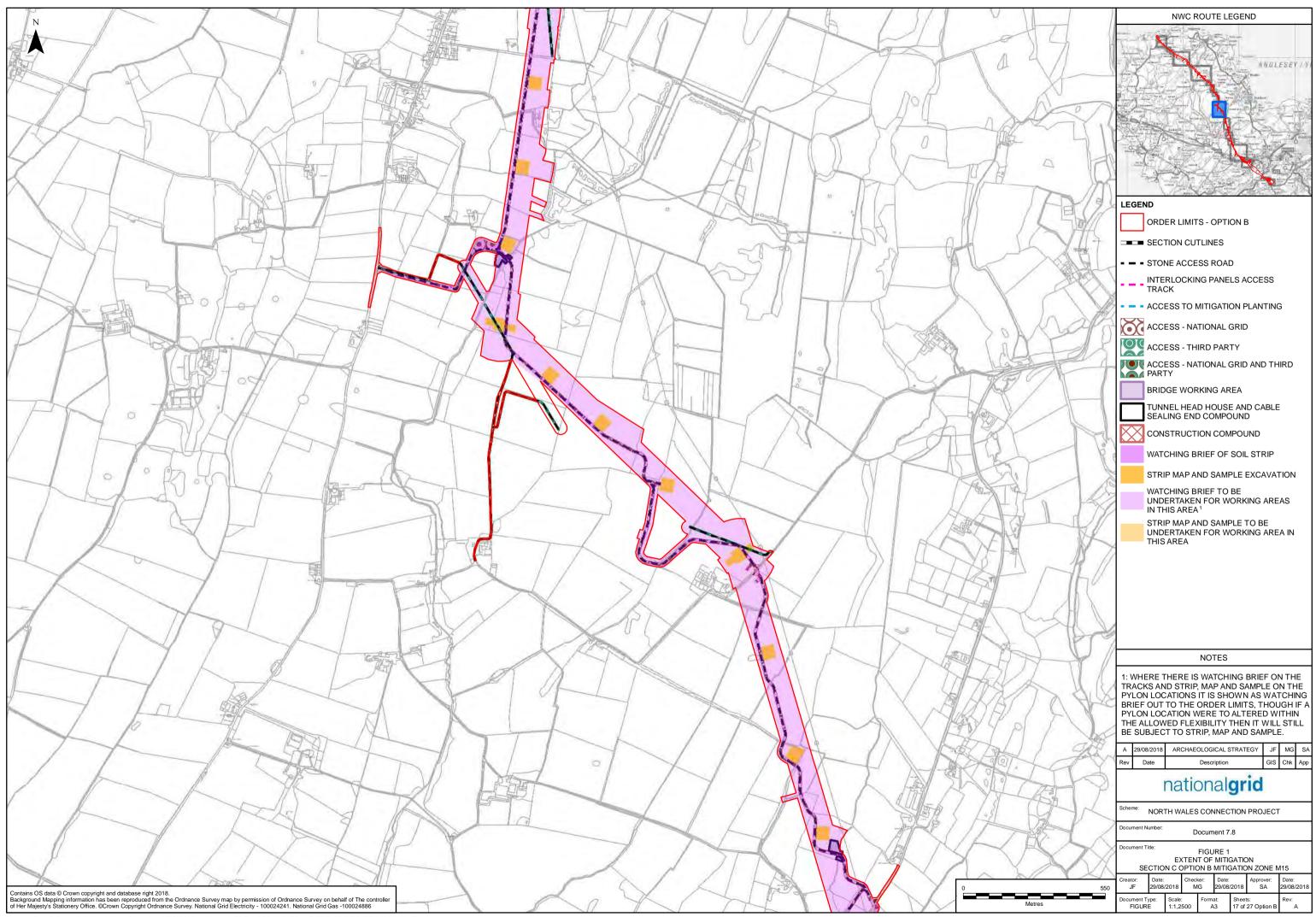


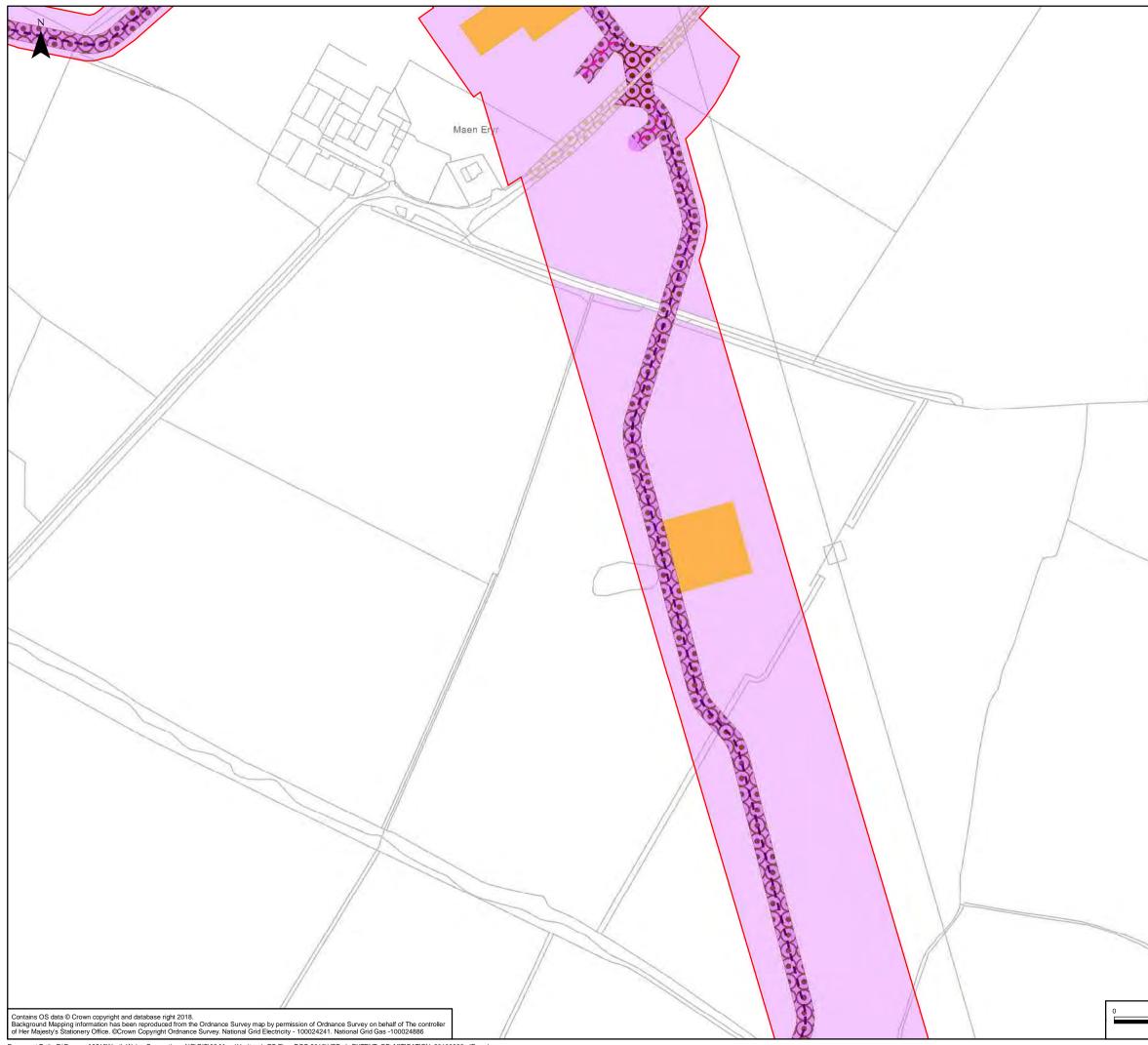




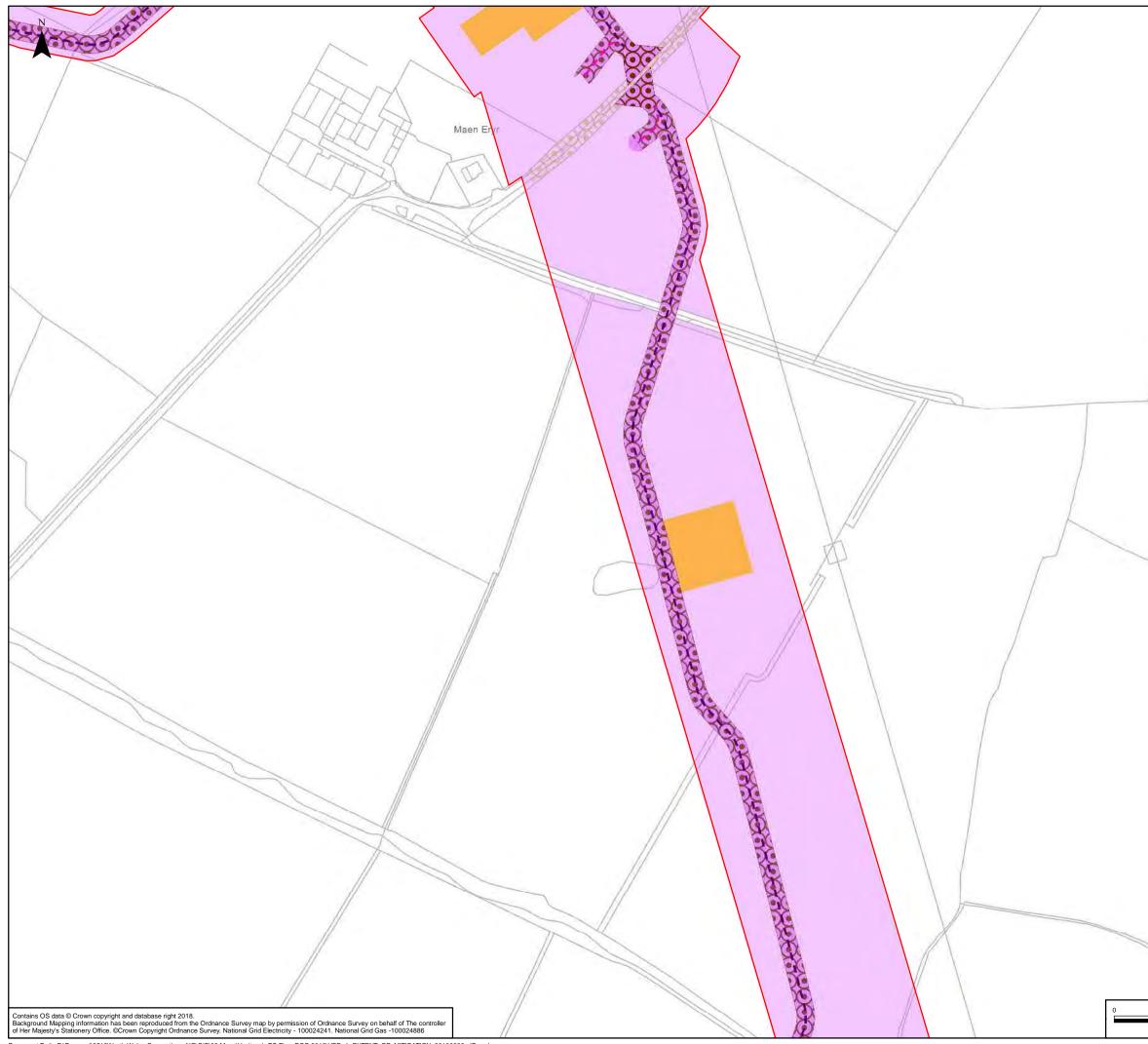




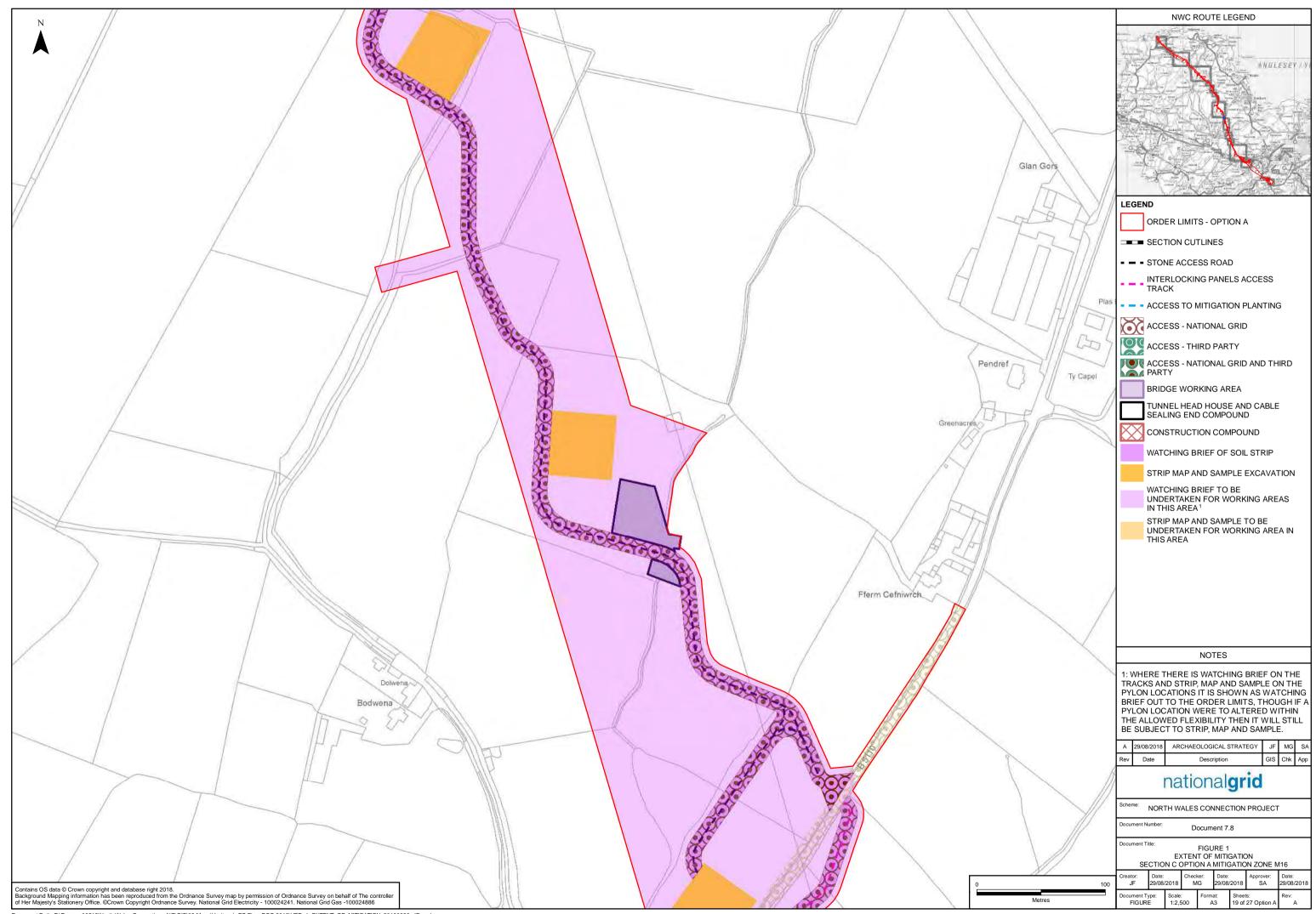


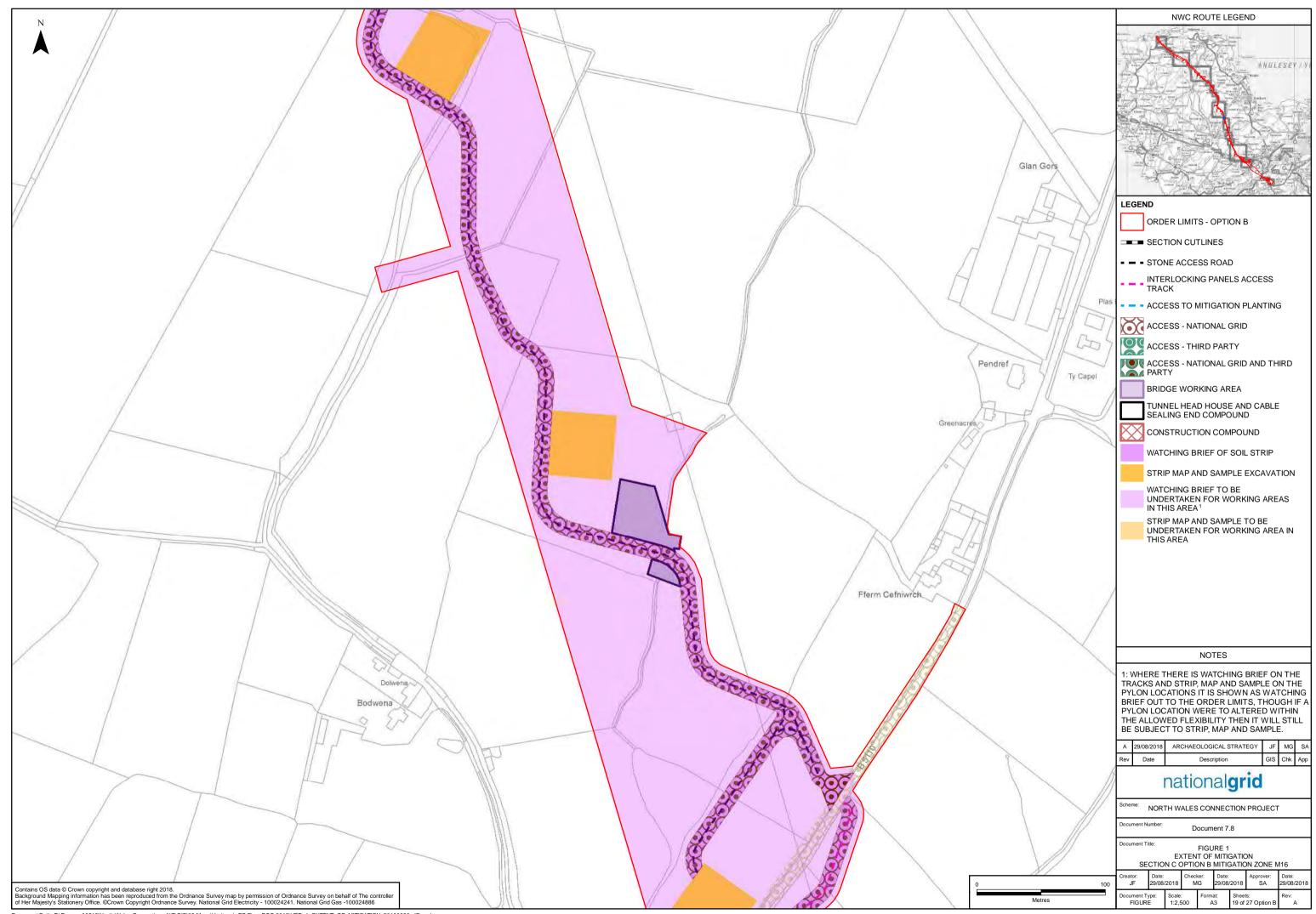


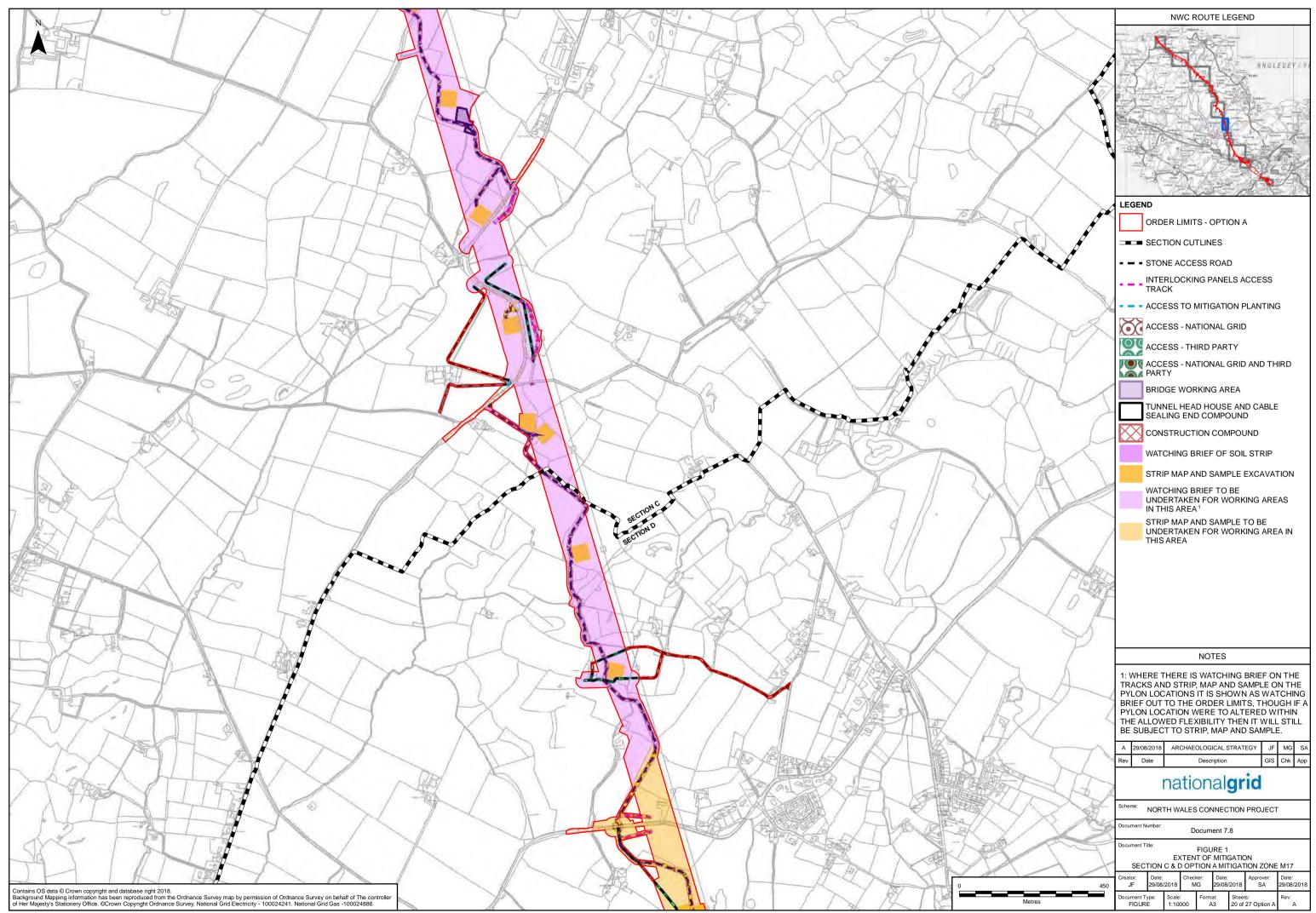
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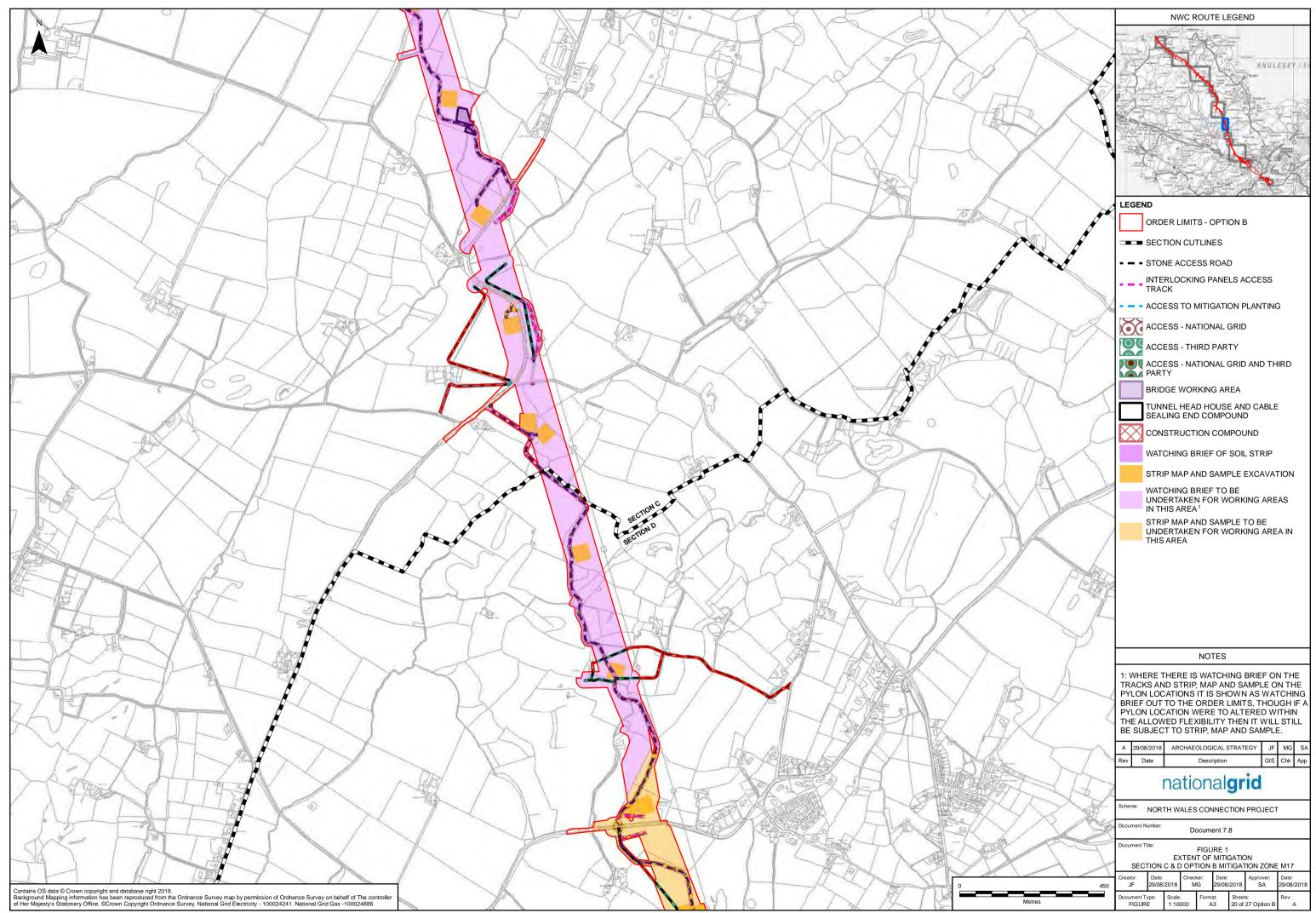
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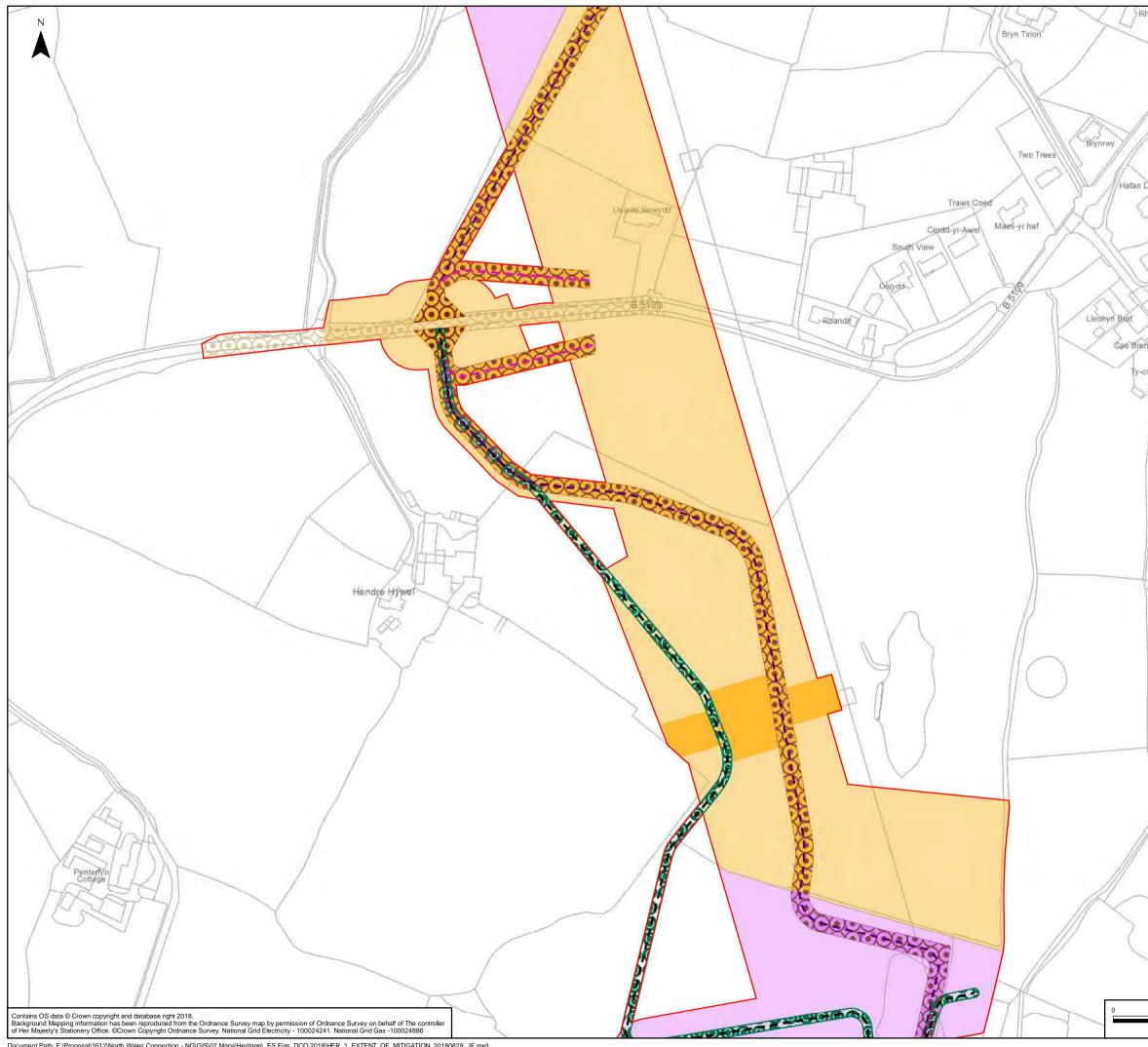




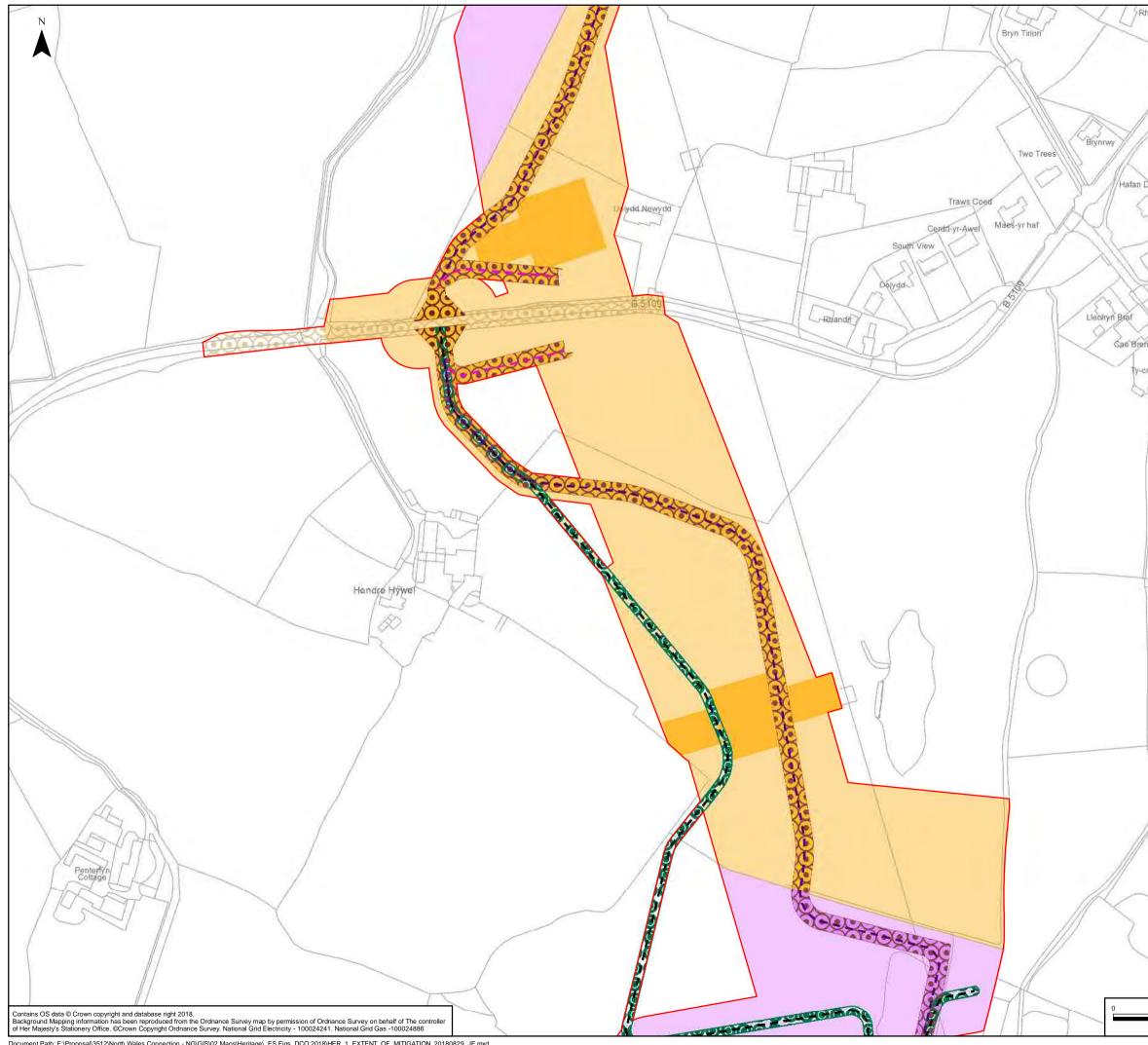
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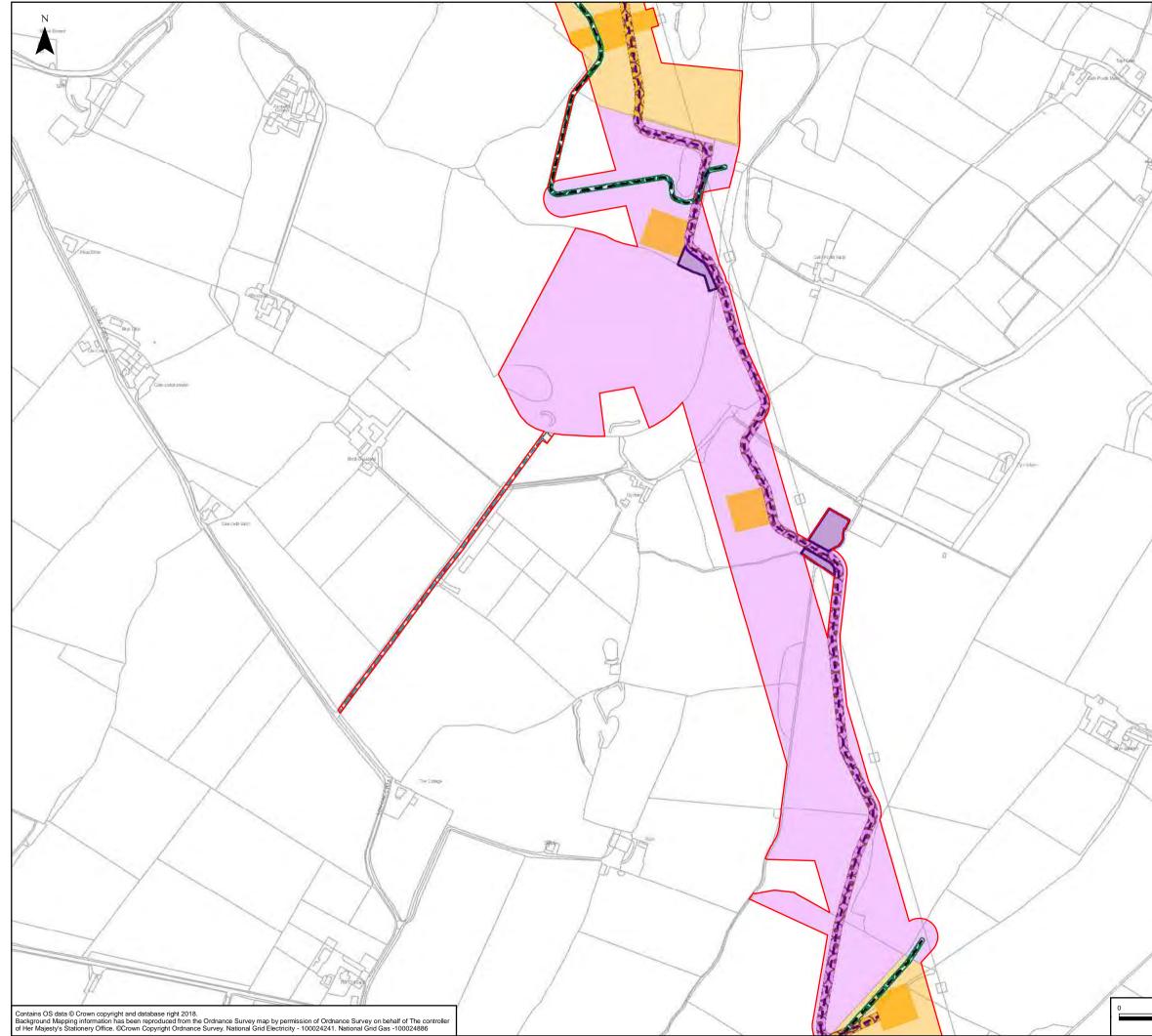
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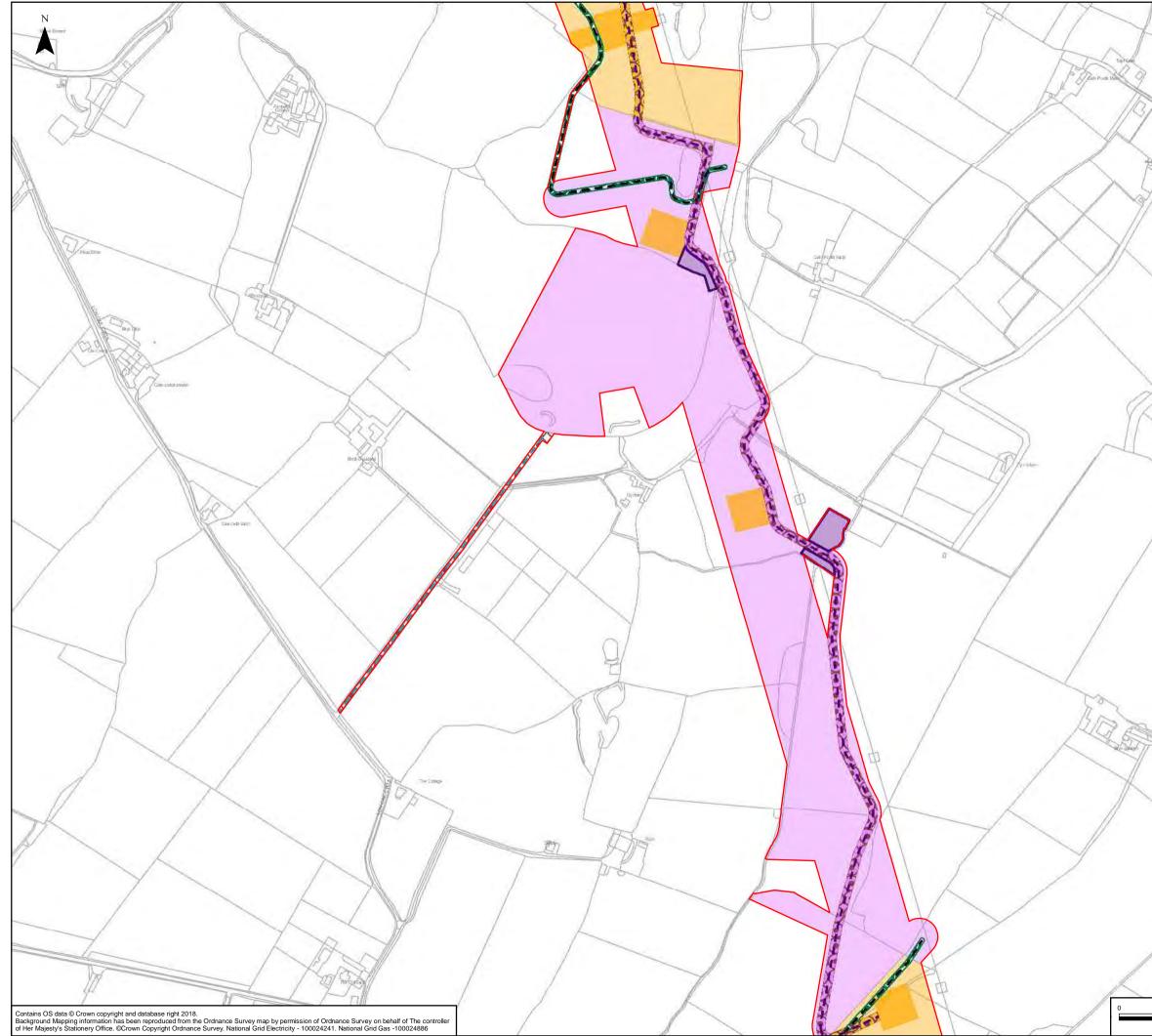


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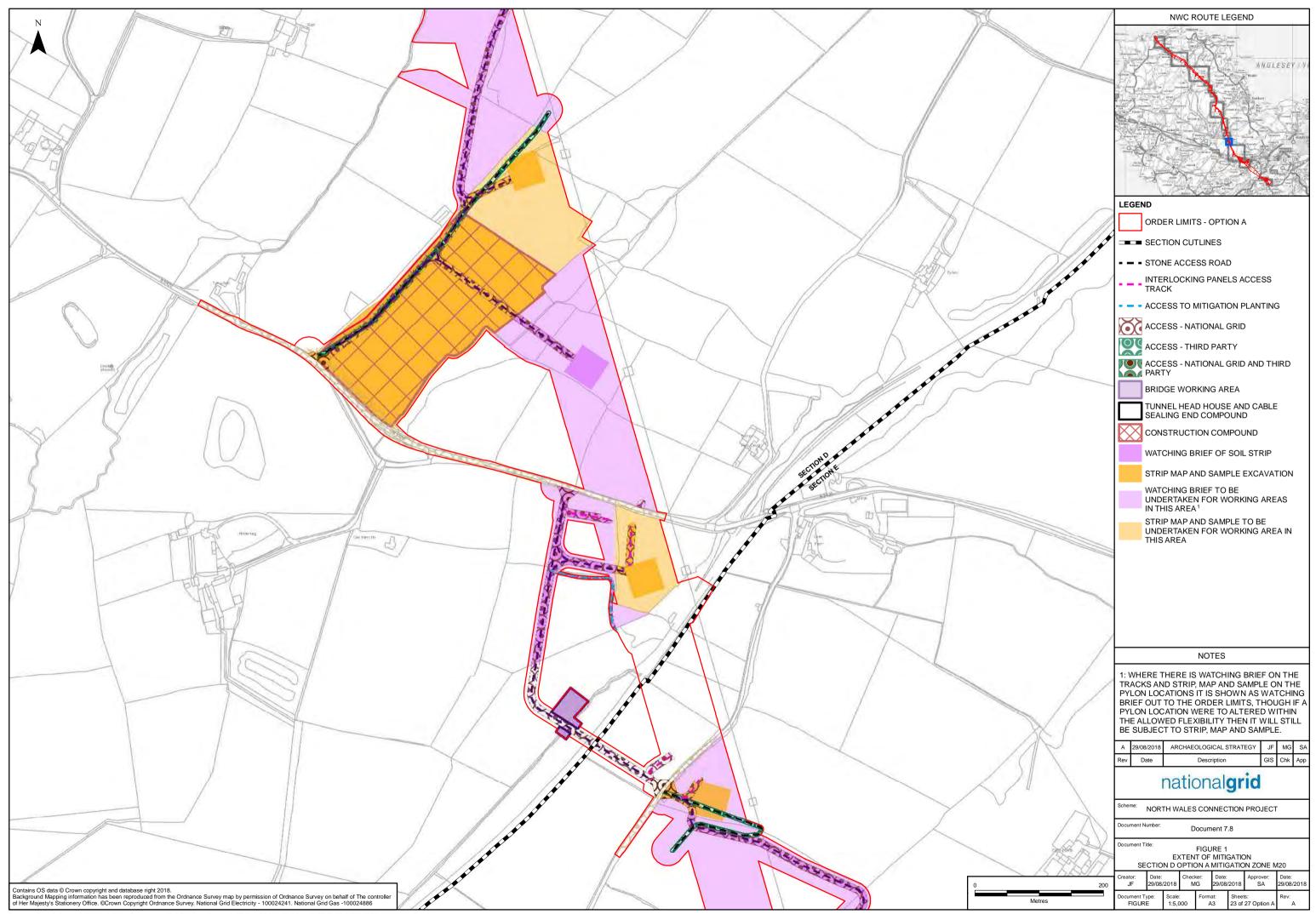
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200	Creator: Date: Checker: Date: Approver: Date: JF 29/08/2018 MG 29/08/2018 SA 29/08/2018
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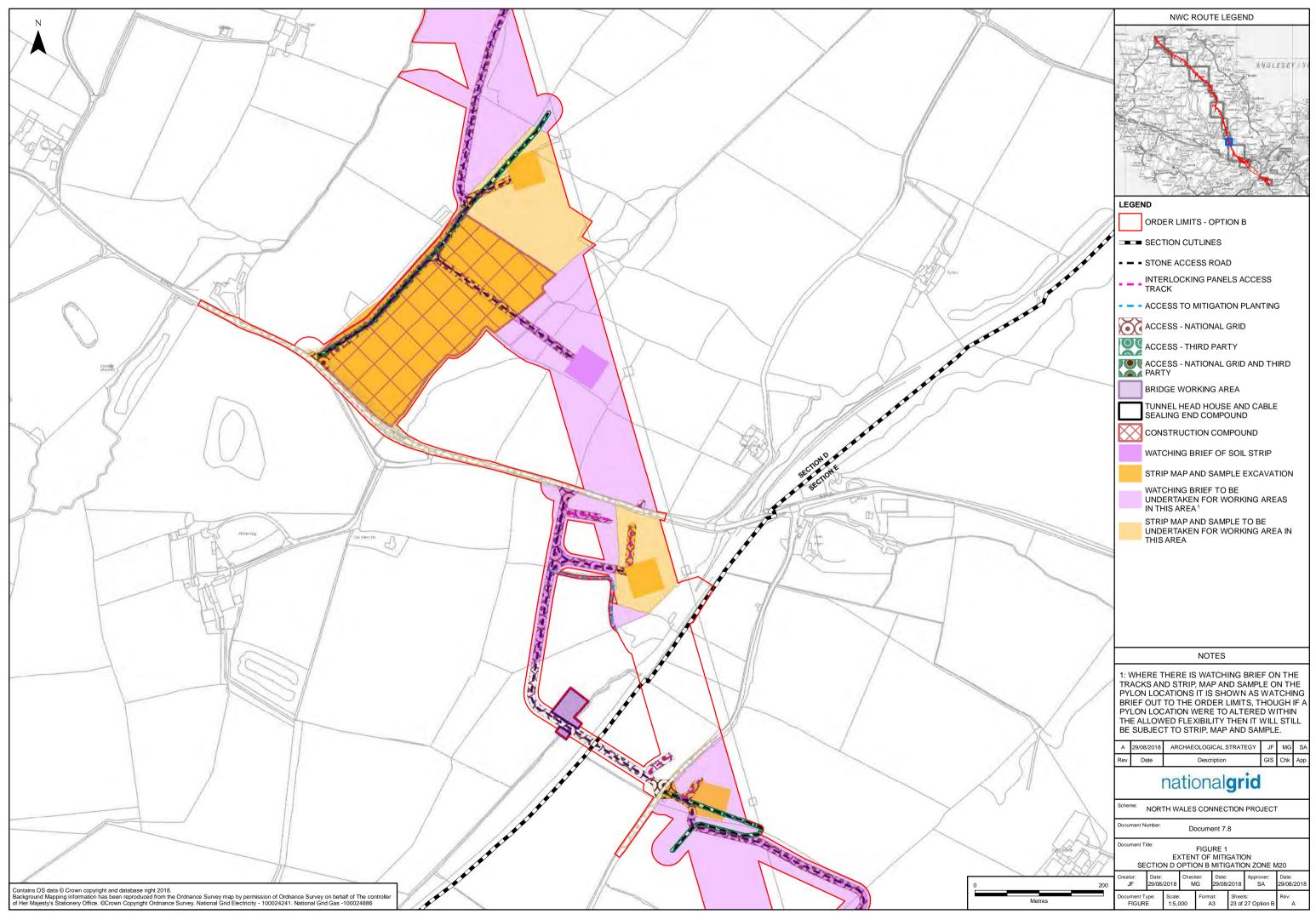


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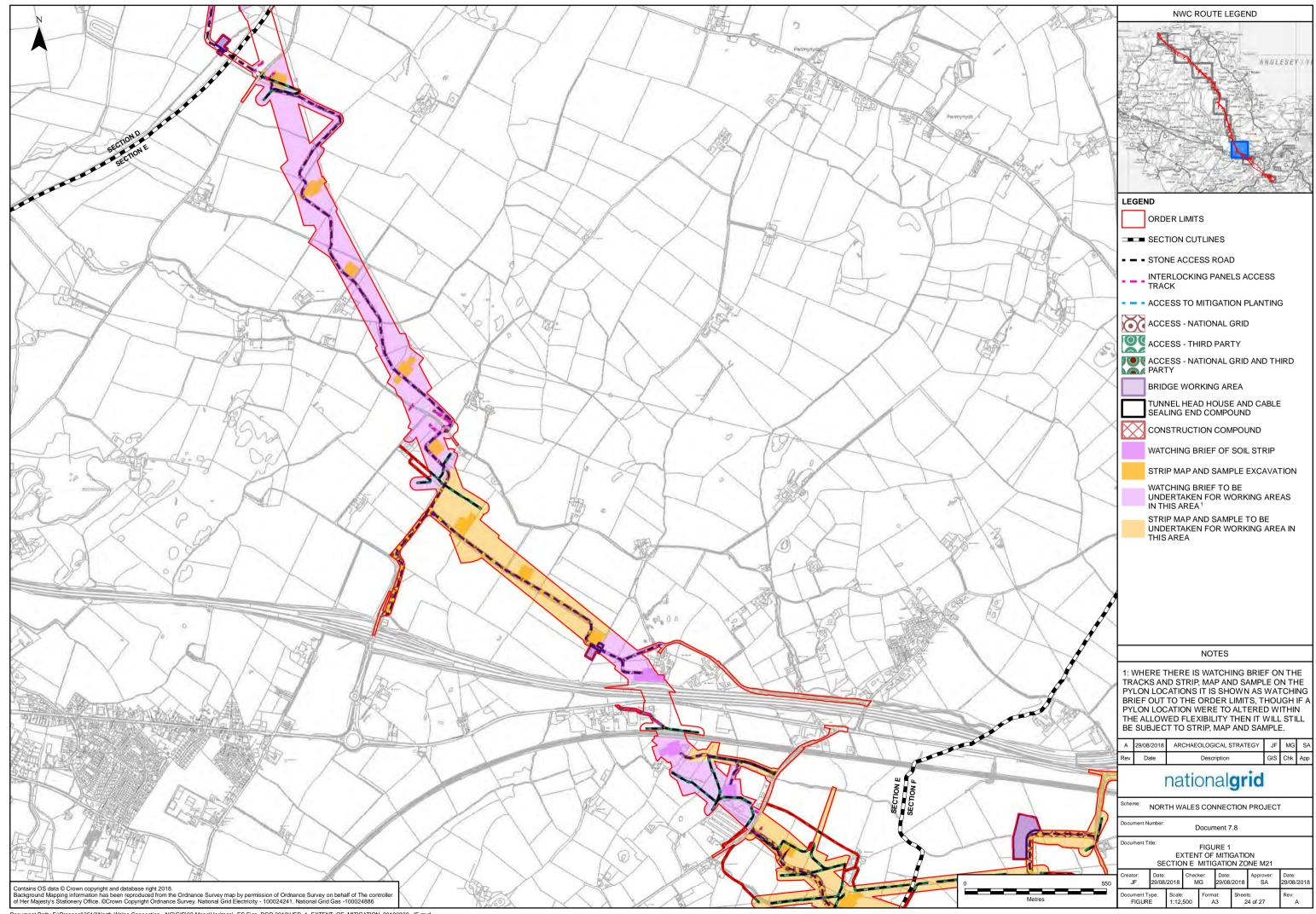
-11-	NWC ROUTE LEGEND
	INGLESEY / V)
	LEGEND
	ORDER LIMITS - OPTION B
<pre></pre>	
	STONE ACCESS ROAD
	INTERLOCKING PANELS ACCESS
	ACCESS TO MITIGATION PLANTING
\nearrow	ACCESS - NATIONAL GRID
$\langle \langle \rangle$	ACCESS - THIRD PARTY
	CCESS - NATIONAL GRID AND THIRD
	PARTY
~51	
X	TUNNEL HEAD HOUSE AND CABLE SEALING END COMPOUND
M	
	WATCHING BRIEF OF SOIL STRIP
	STRIP MAP AND SAMPLE EXCAVATION
	WATCHING BRIEF TO BE UNDERTAKEN FOR WORKING AREAS
	IN THIS AREA ¹
	STRIP MAP AND SAMPLE TO BE UNDERTAKEN FOR WORKING AREA IN THIS AREA
	-
Z	
	NOTES
	1: WHERE THERE IS WATCHING BRIEF ON THE TRACKS AND STRIP, MAP AND SAMPLE ON THE
	PYLON LOCATIONS IT IS SHOWN AS WATCHING BRIEF OUT TO THE ORDER LIMITS, THOUGH IF A
\prec	PYLON LOCATION WERE TO ALTERED WITHIN THE ALLOWED FLEXIBILITY THEN IT WILL STILL
	BE SUBJECT TO STRIP, MAP AND SAMPLE.
	A 29/08/2018 ARCHAEOLOGICAL STRATEGY JF MG SA
7	Rev Date Description GIS Chk App
/	Scheme: NORTH WALES CONNECTION PROJECT
	Document Number: Document 7.8
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	FIGURE 1 EXTENT OF MITIGATION
	FIGURE 1 EXTENT OF MITIGATION SECTION D OPTION B MITIGATION ZONE M19 Creator: Date: Checker: Date: Approver: Date:
	FIGURE 1 EXTENT OF MITIGATION SECTION D OPTION B MITIGATION ZONE M19

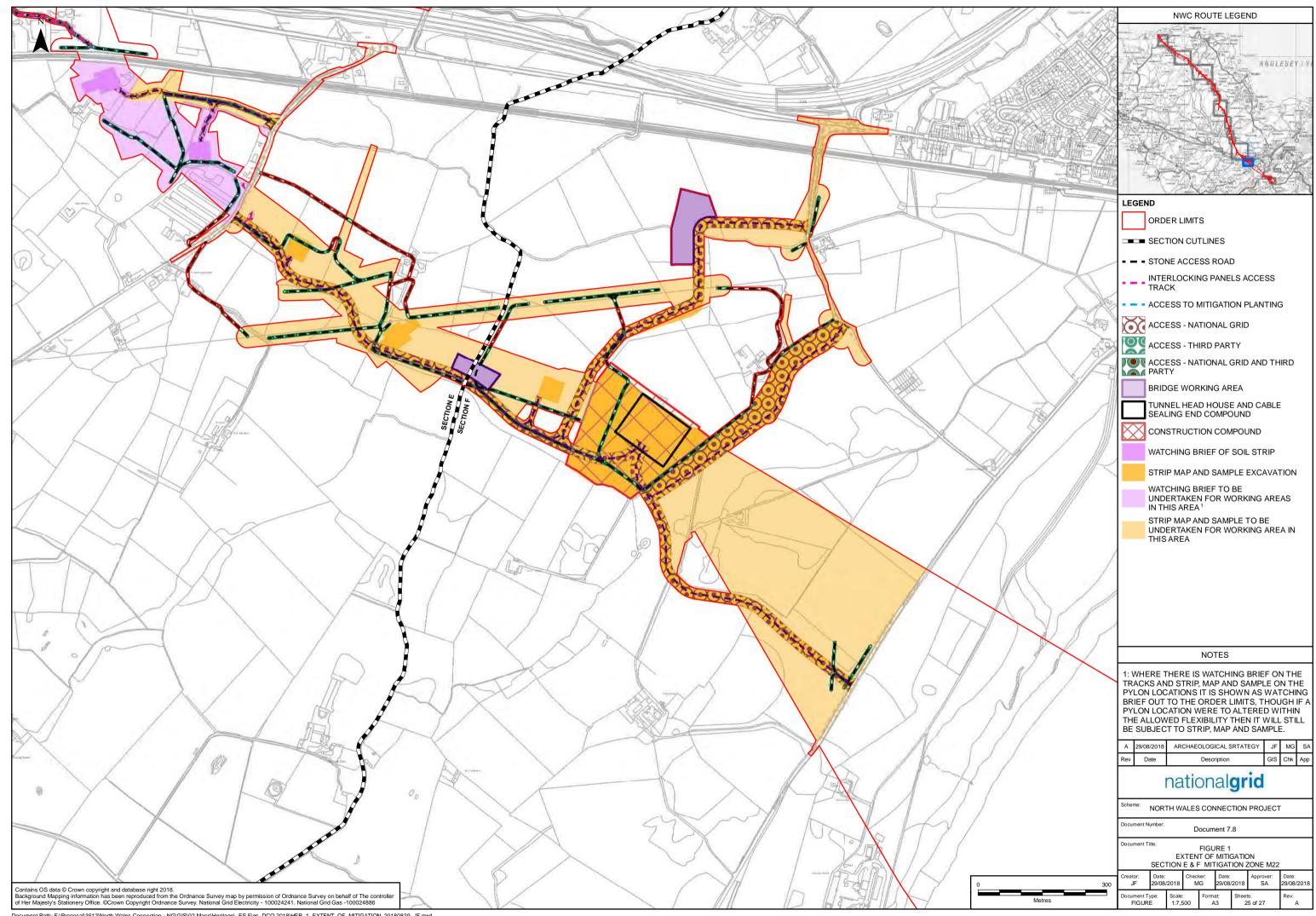


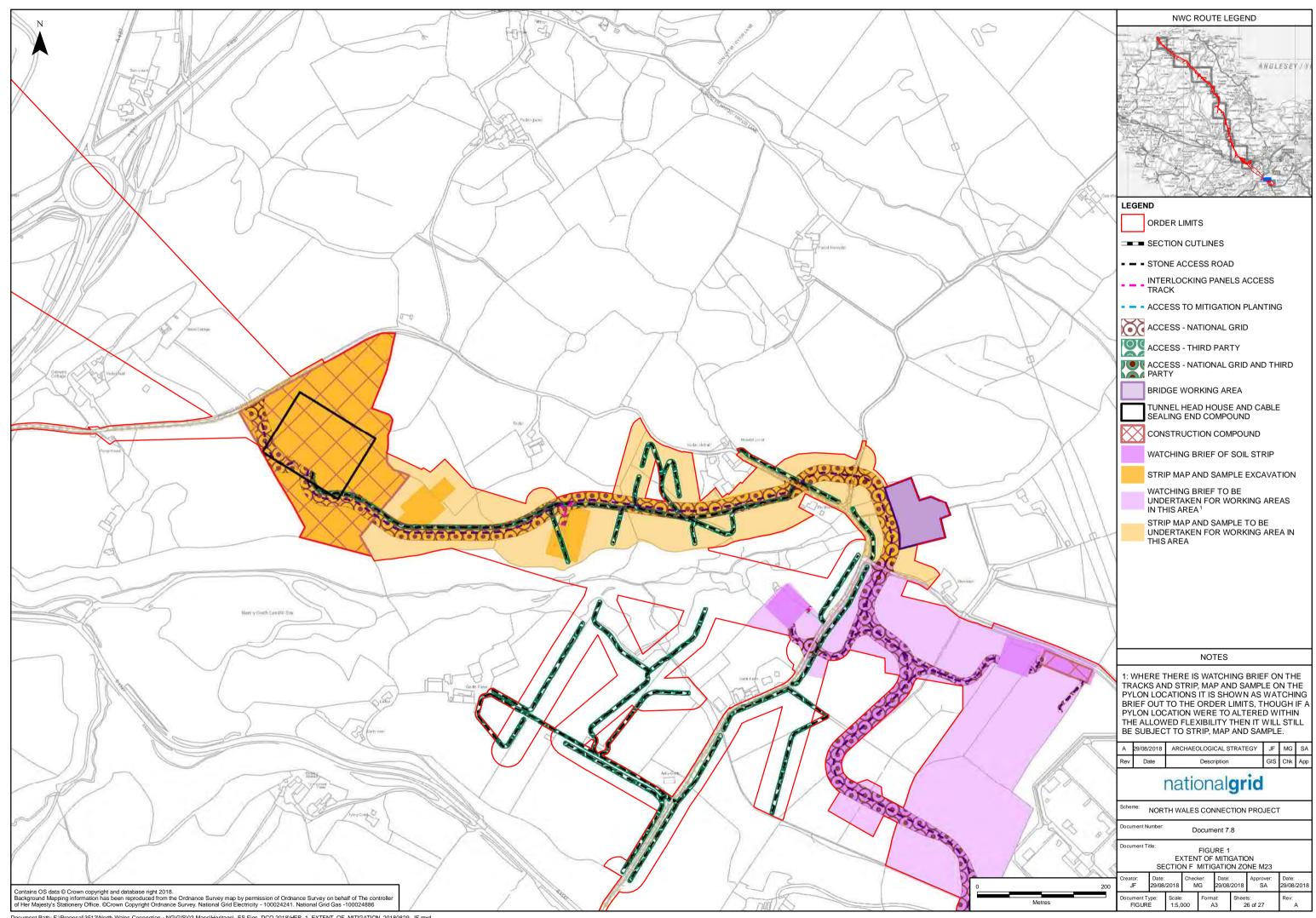
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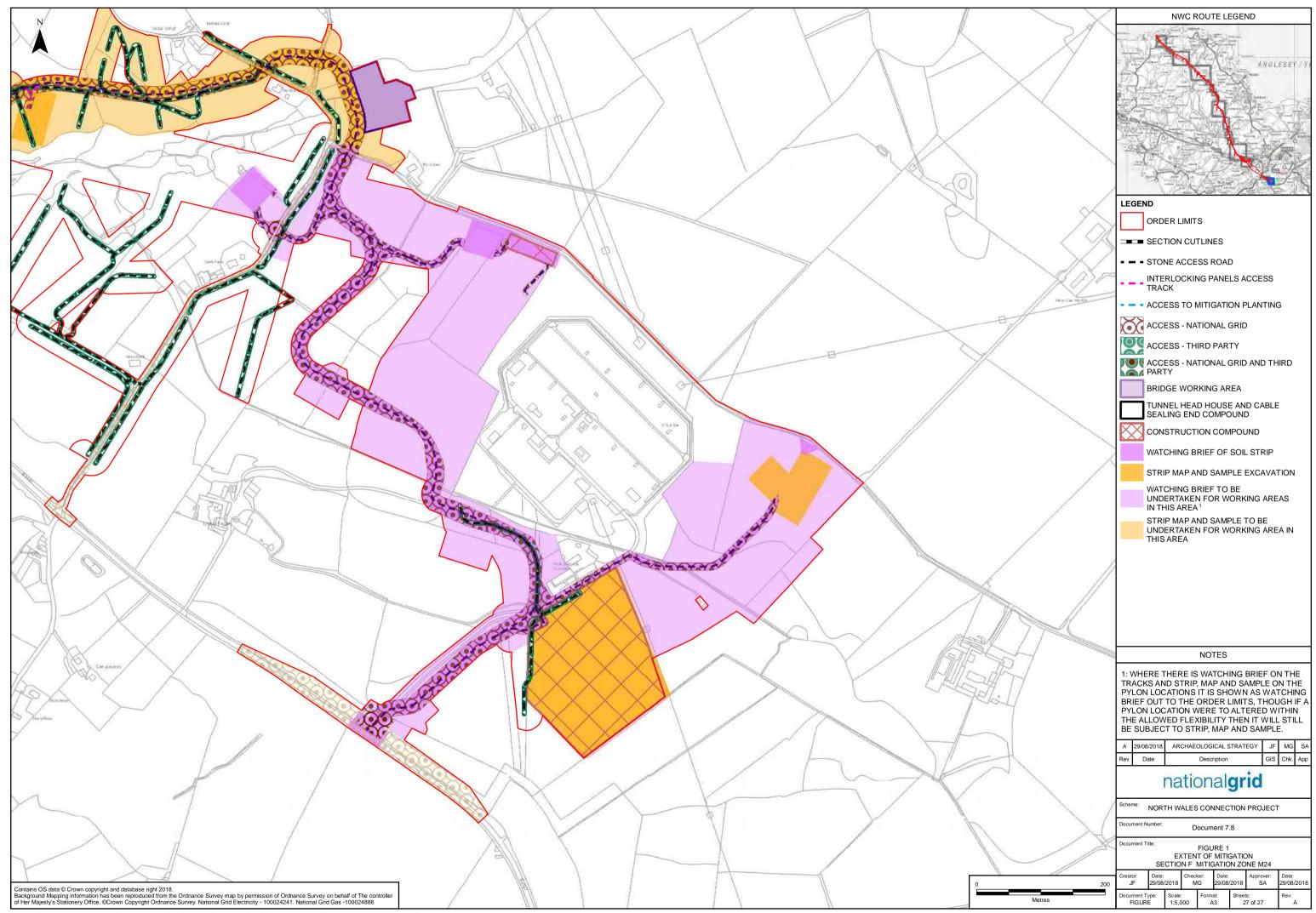
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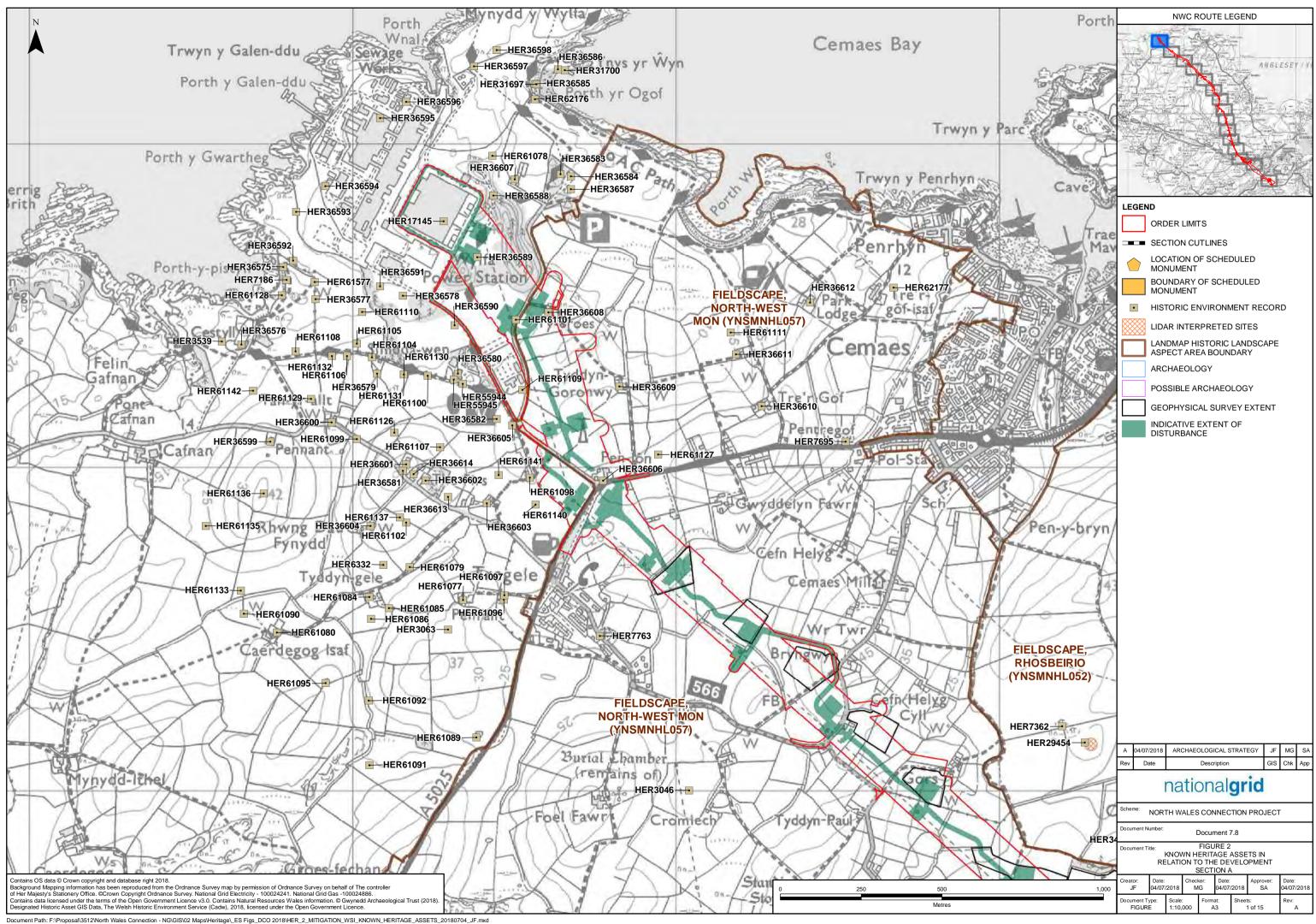


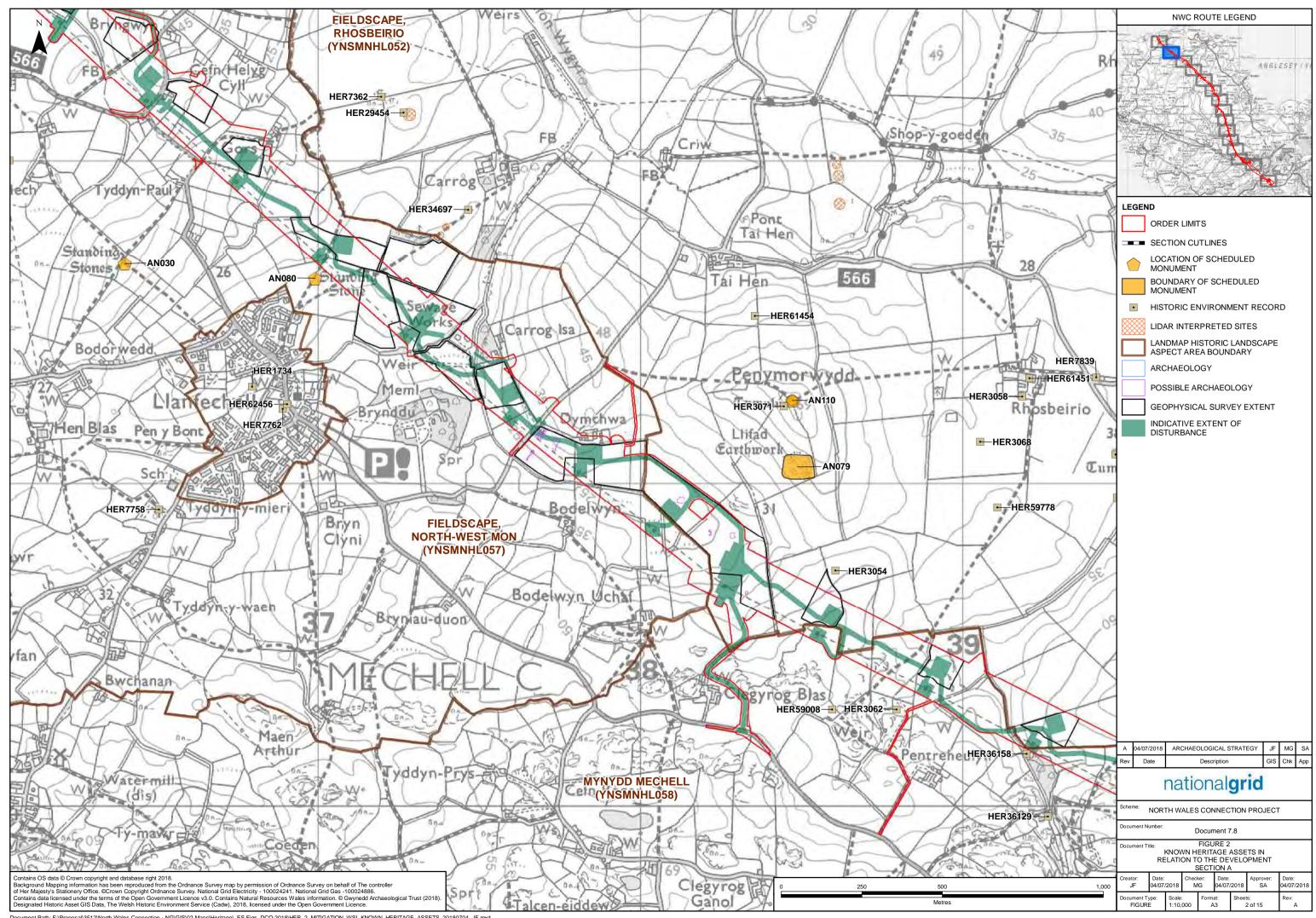


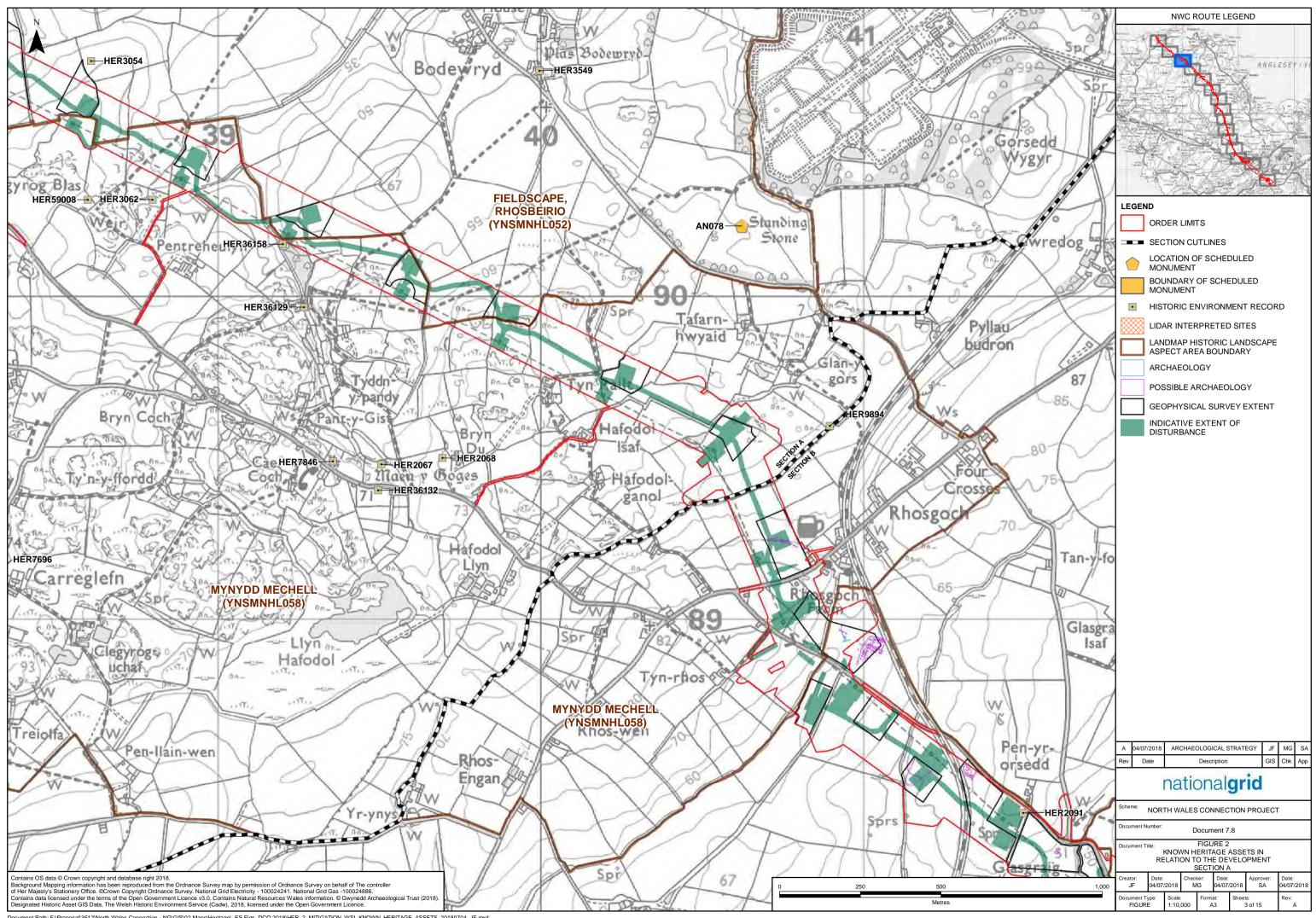
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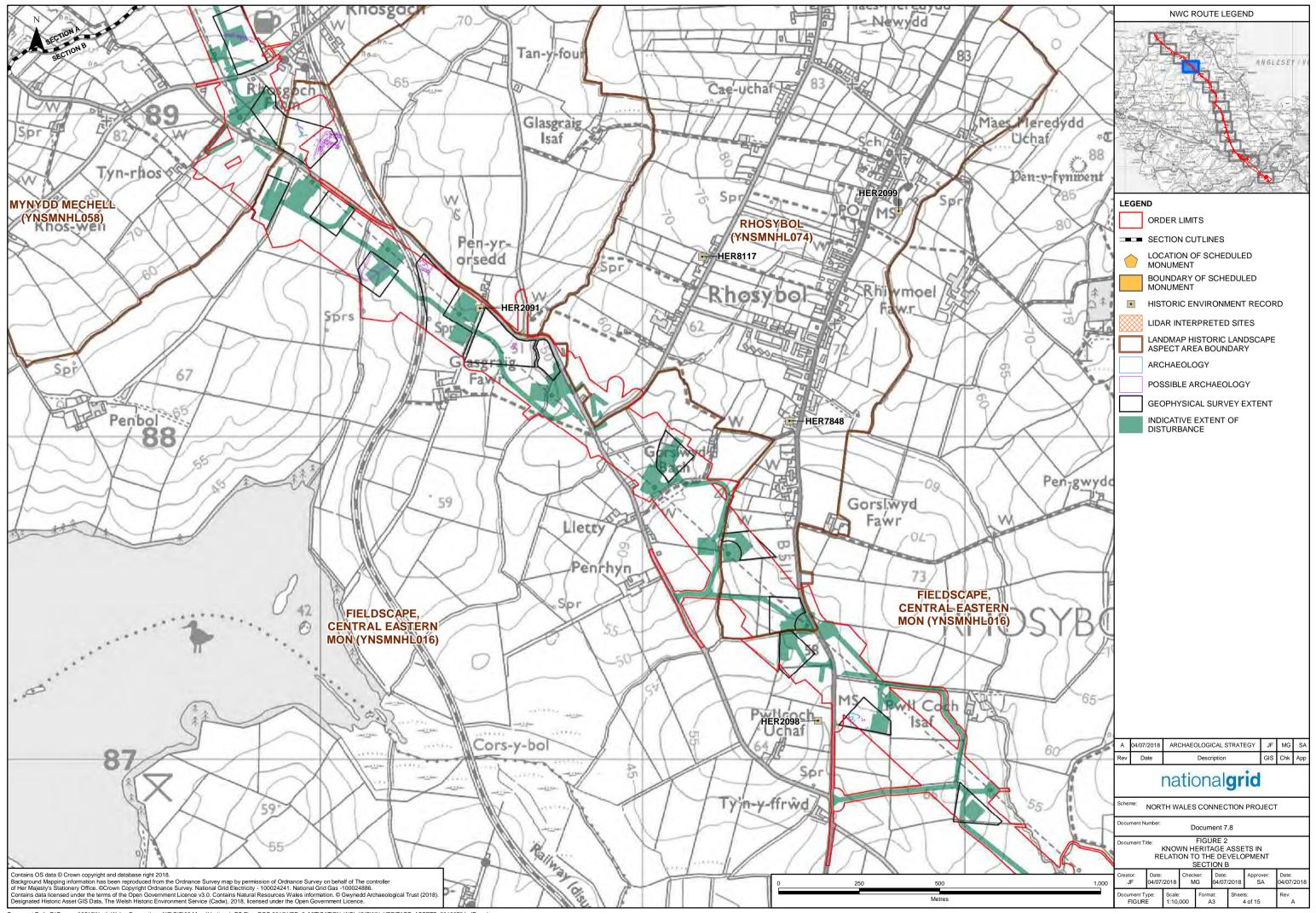


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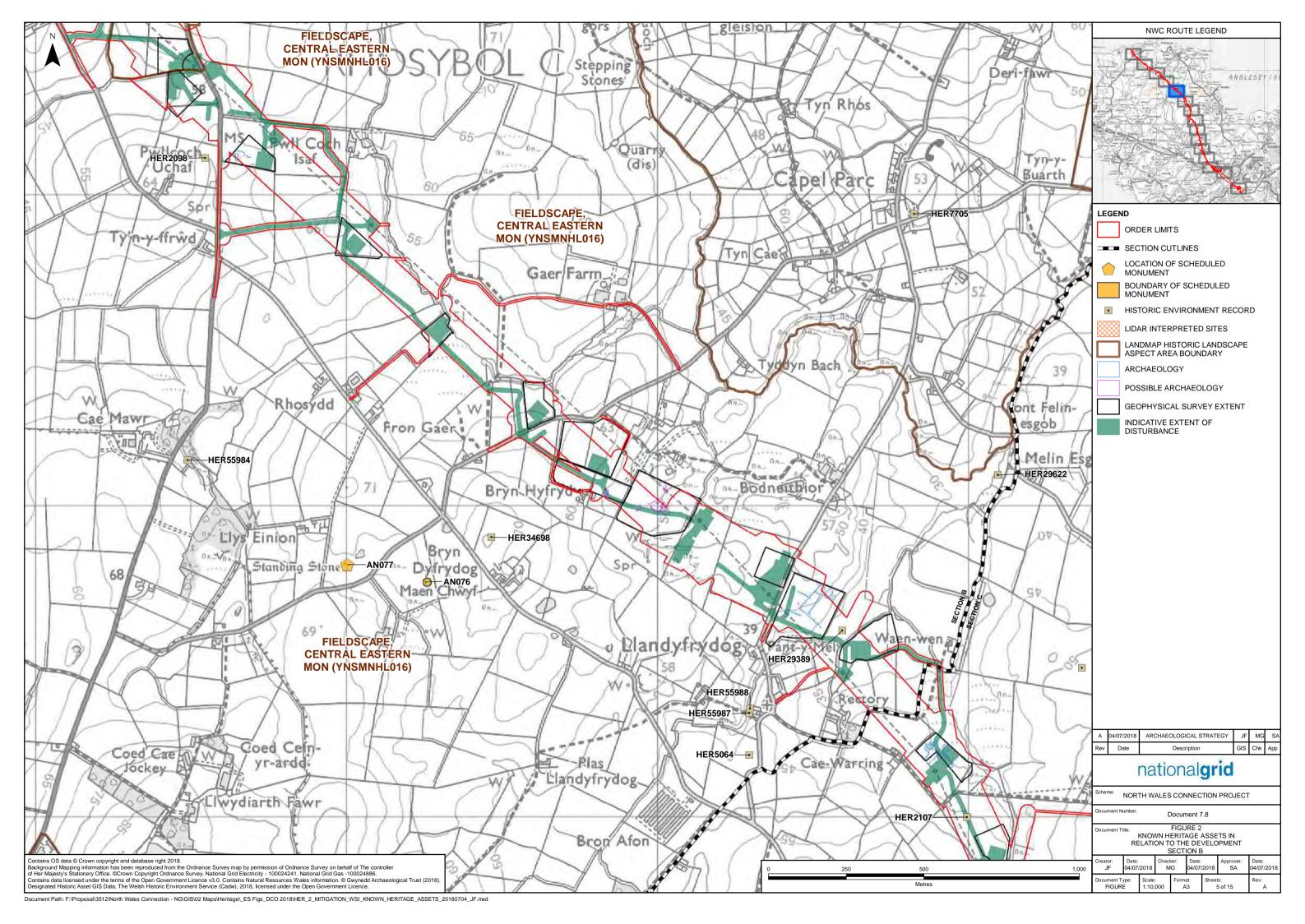


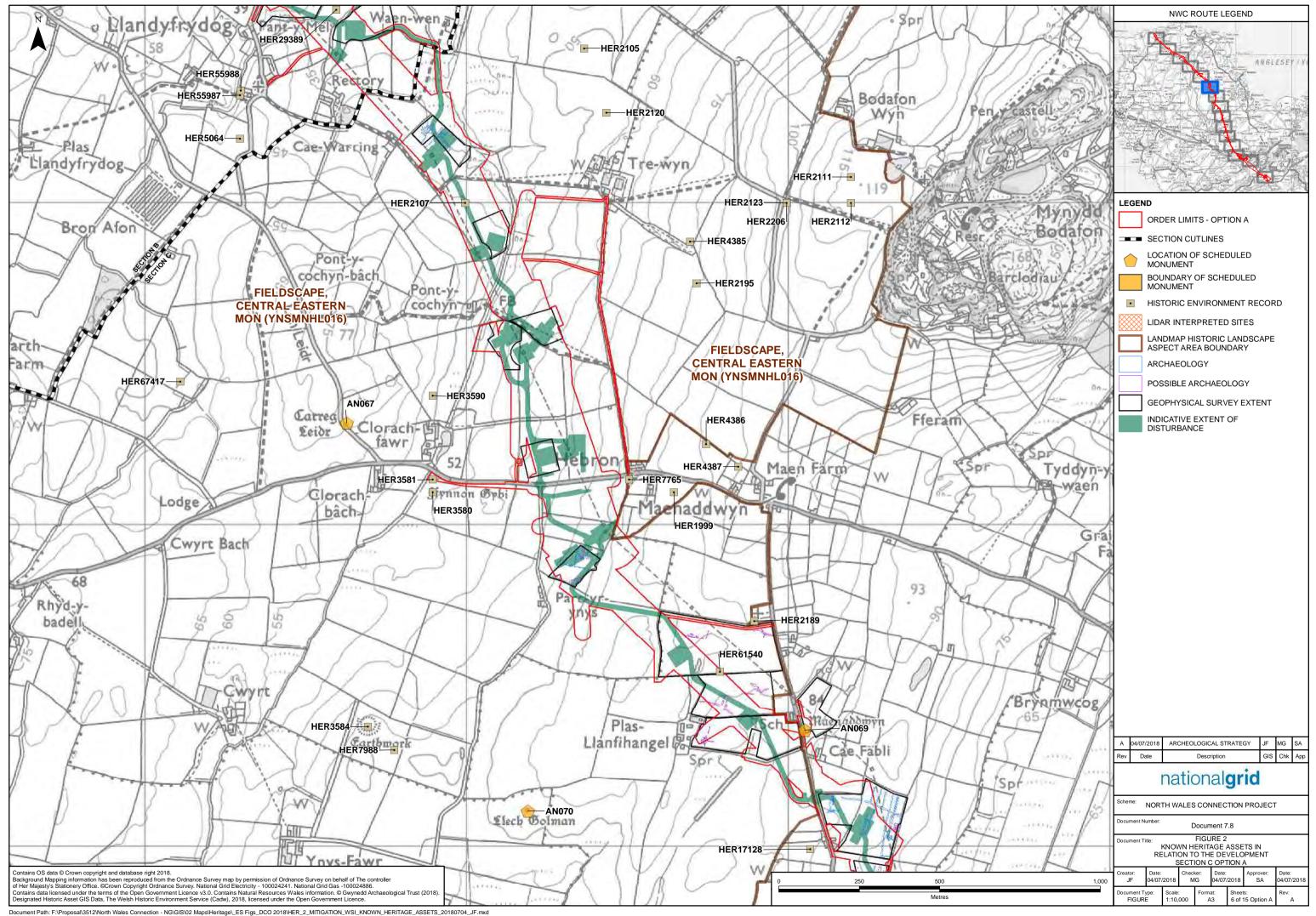


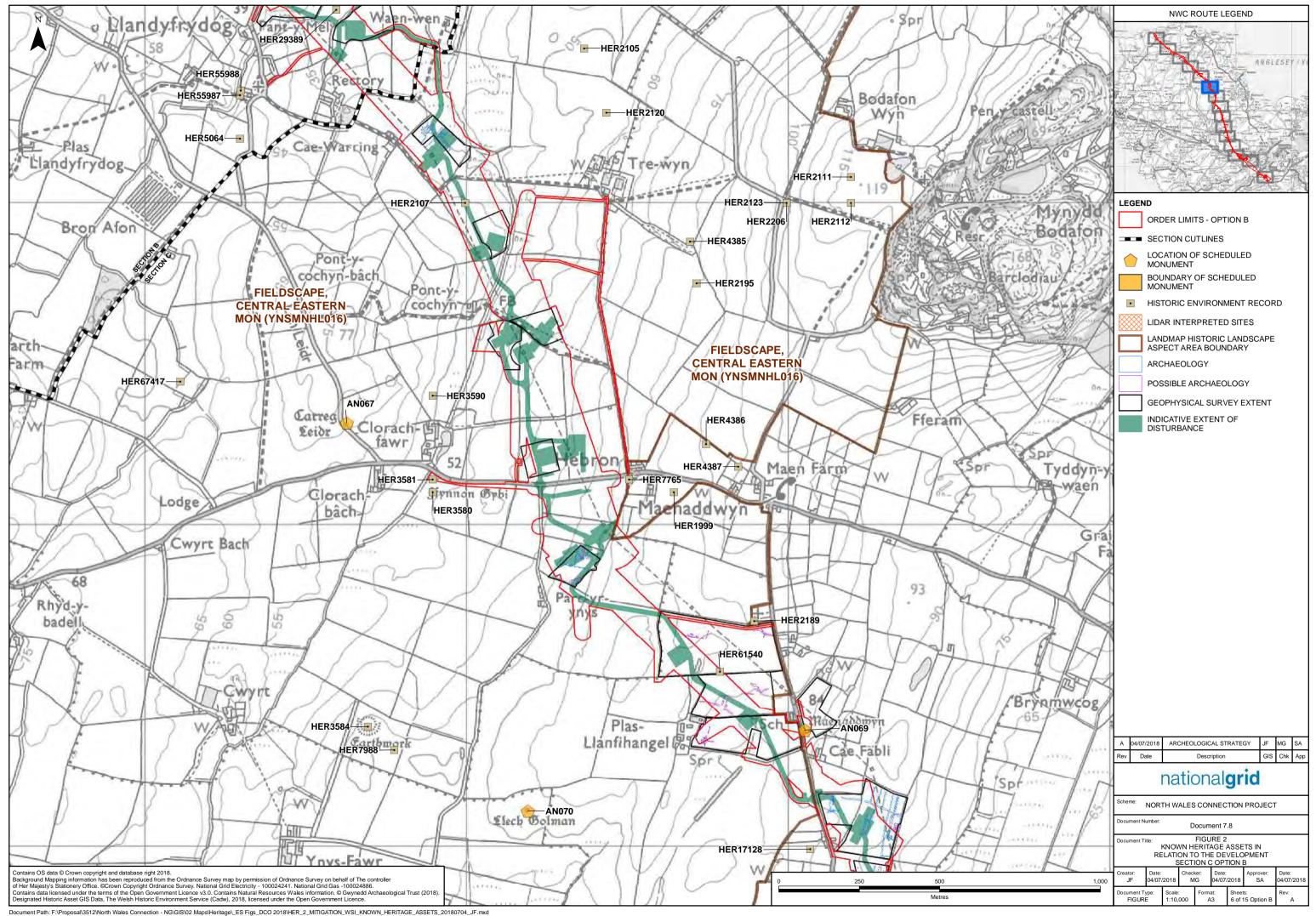


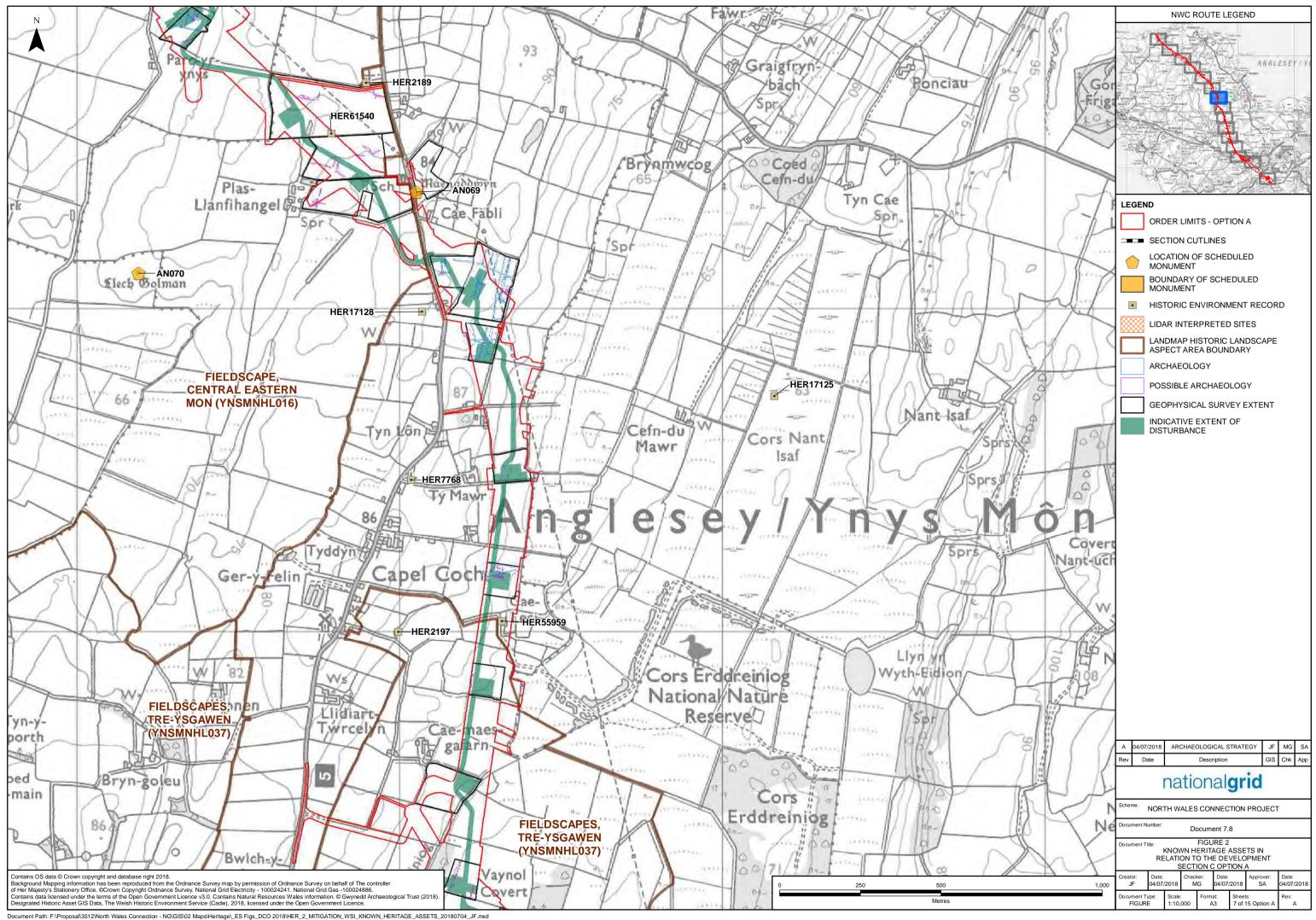


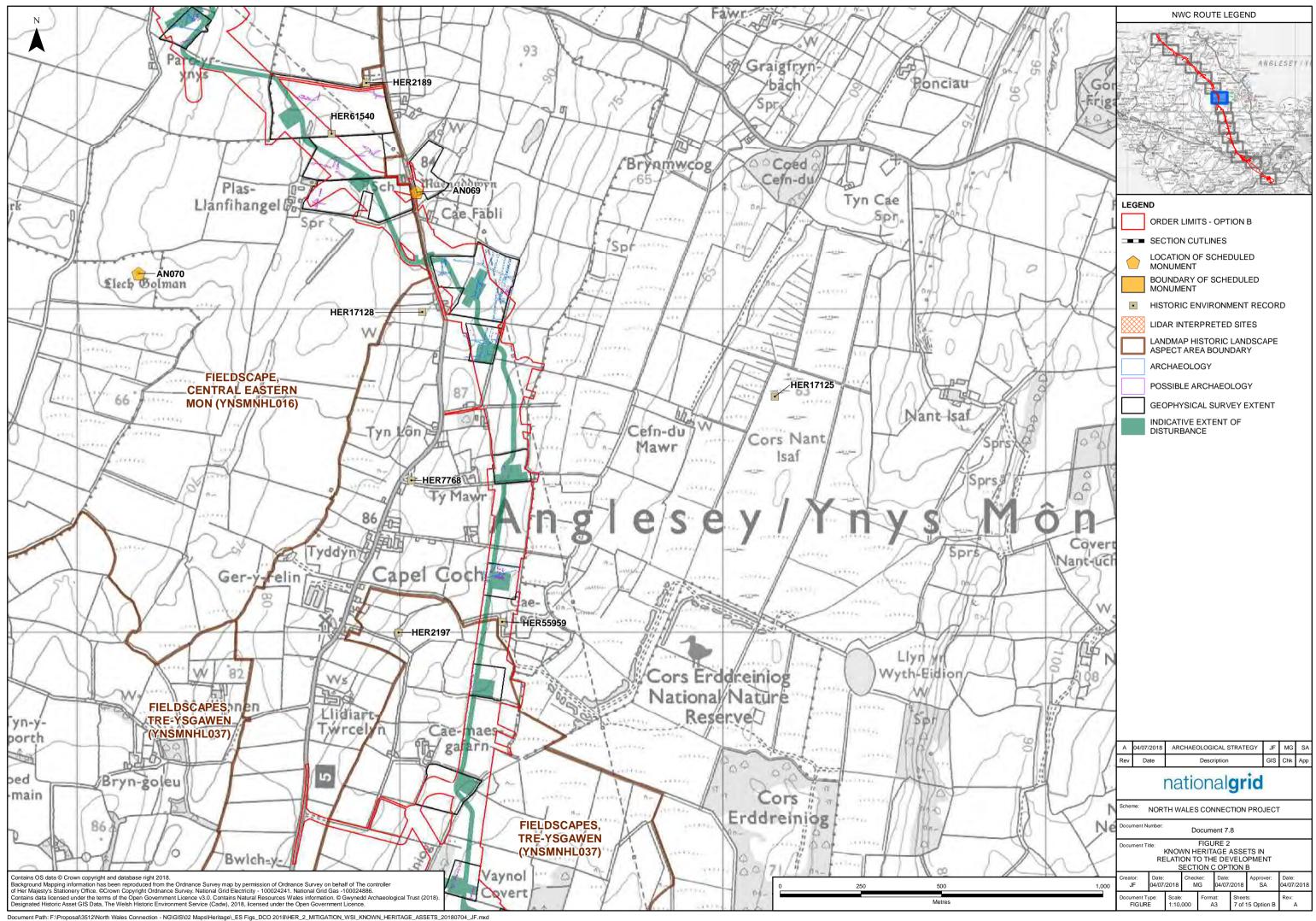
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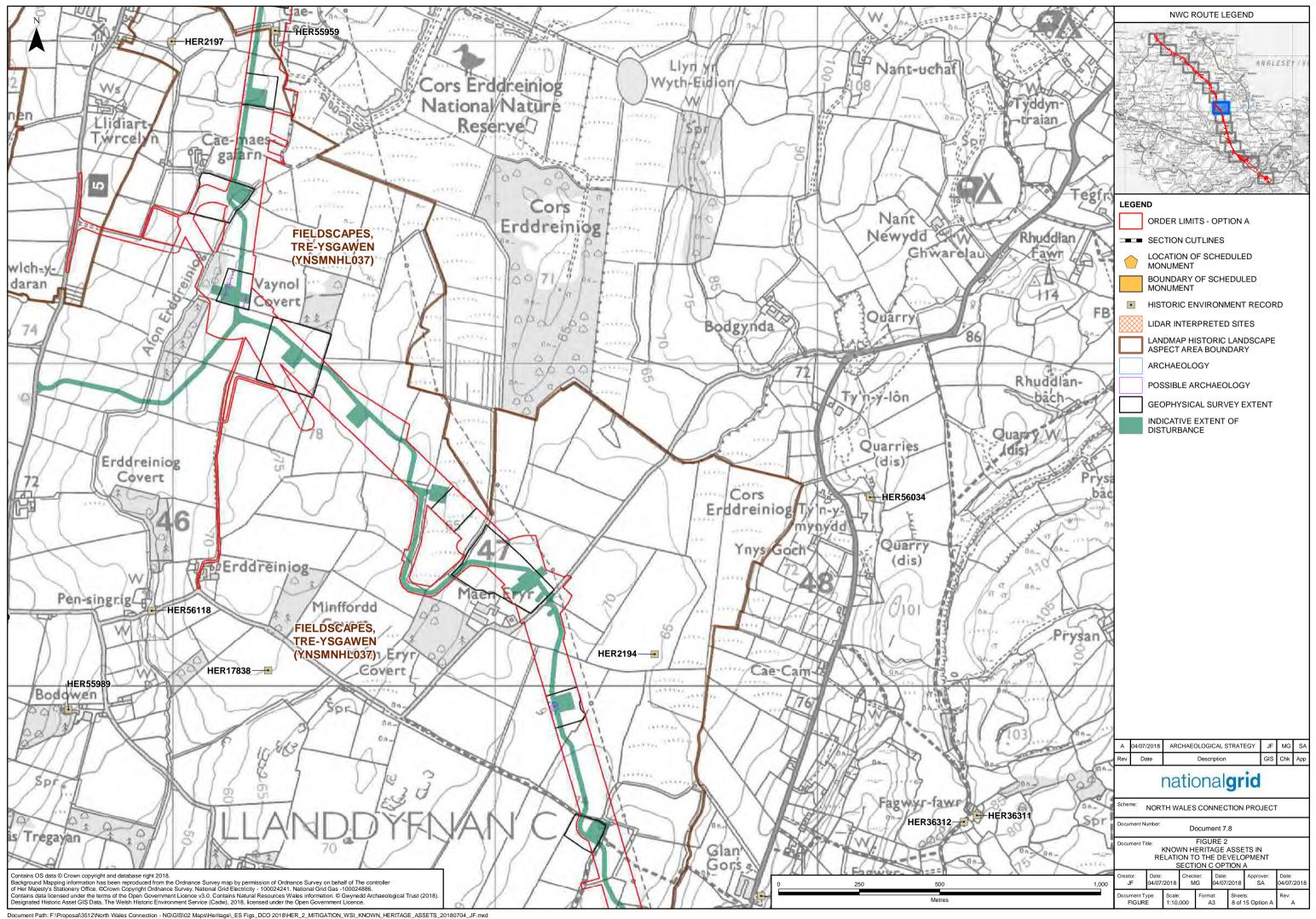


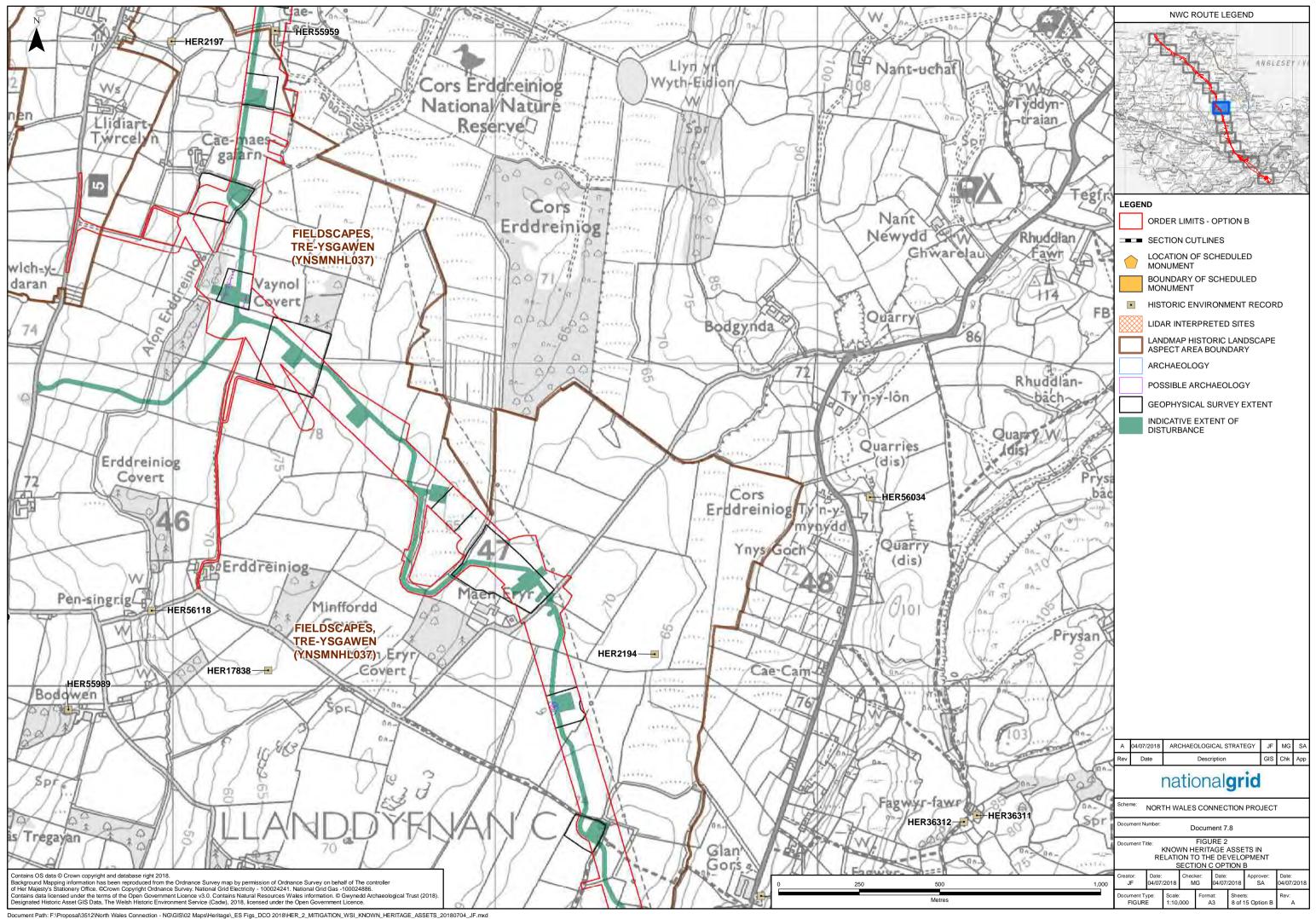


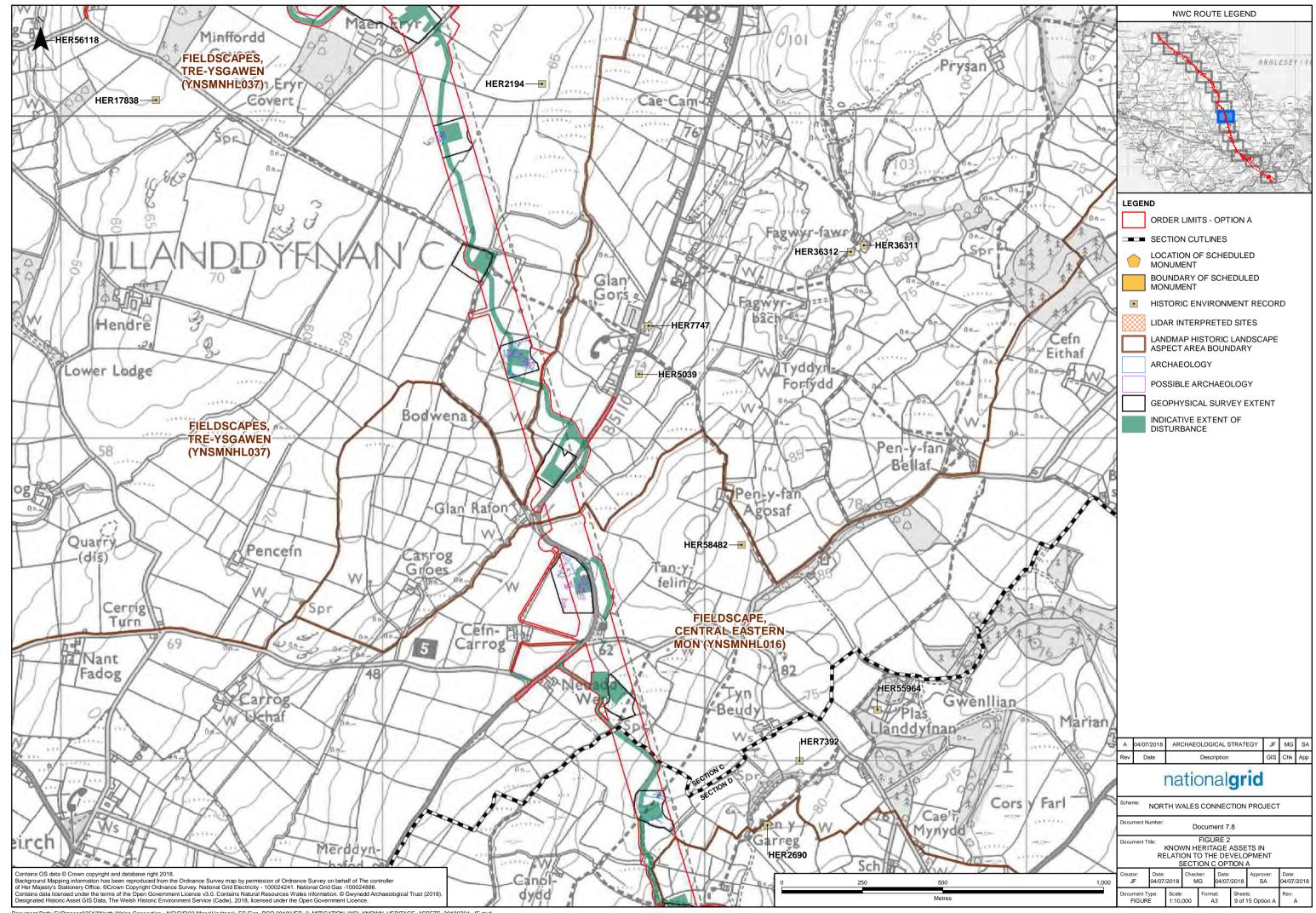


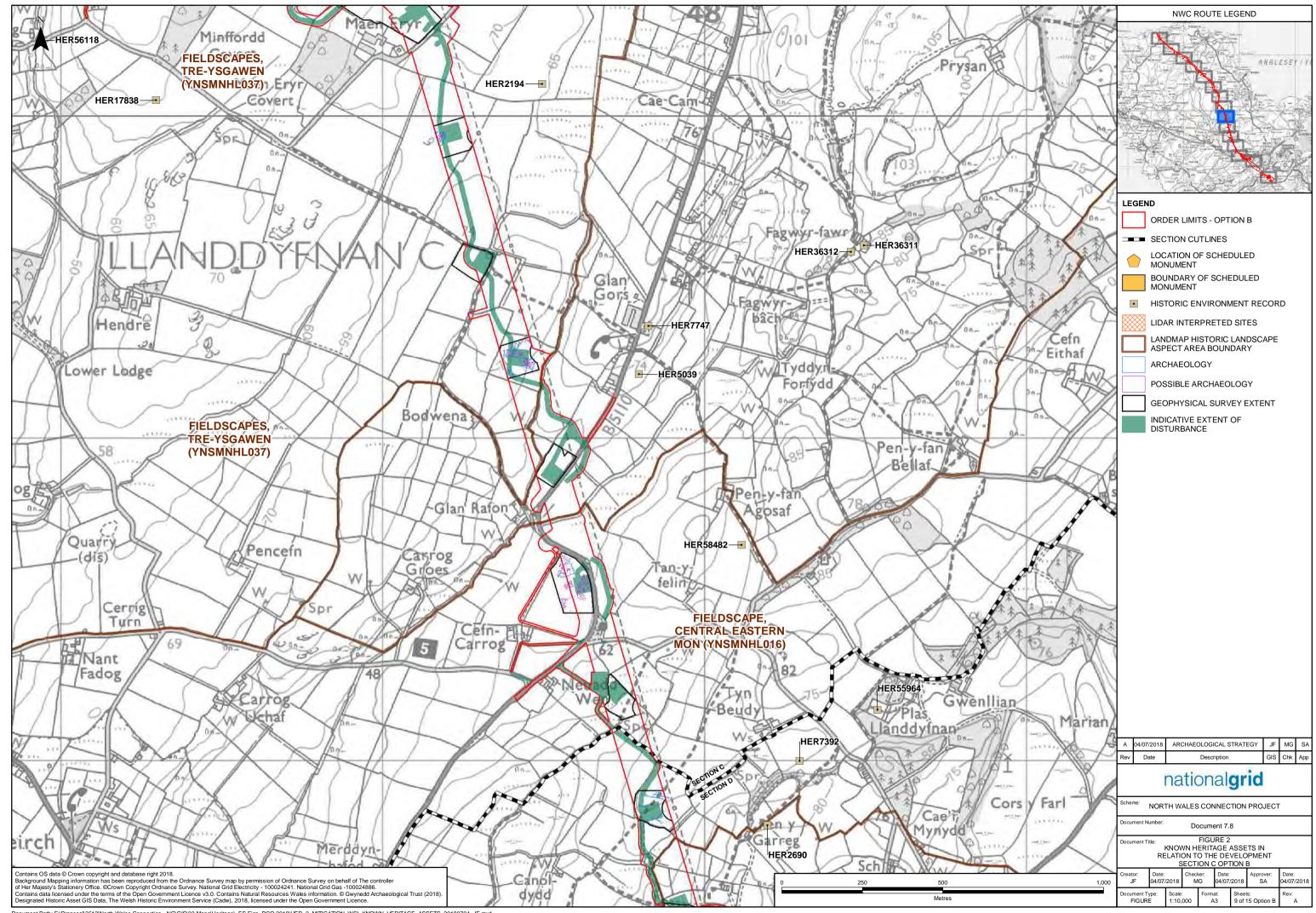


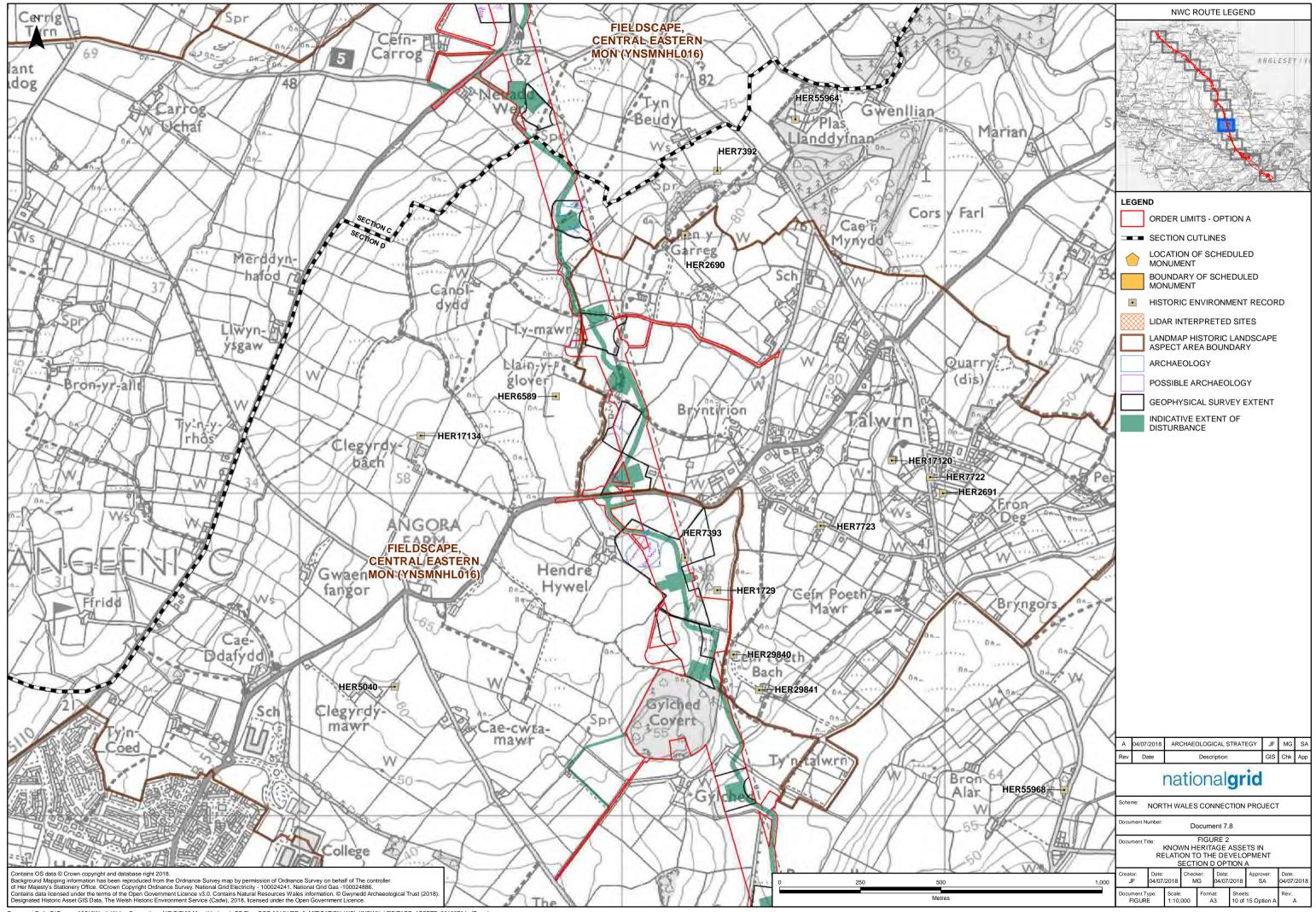


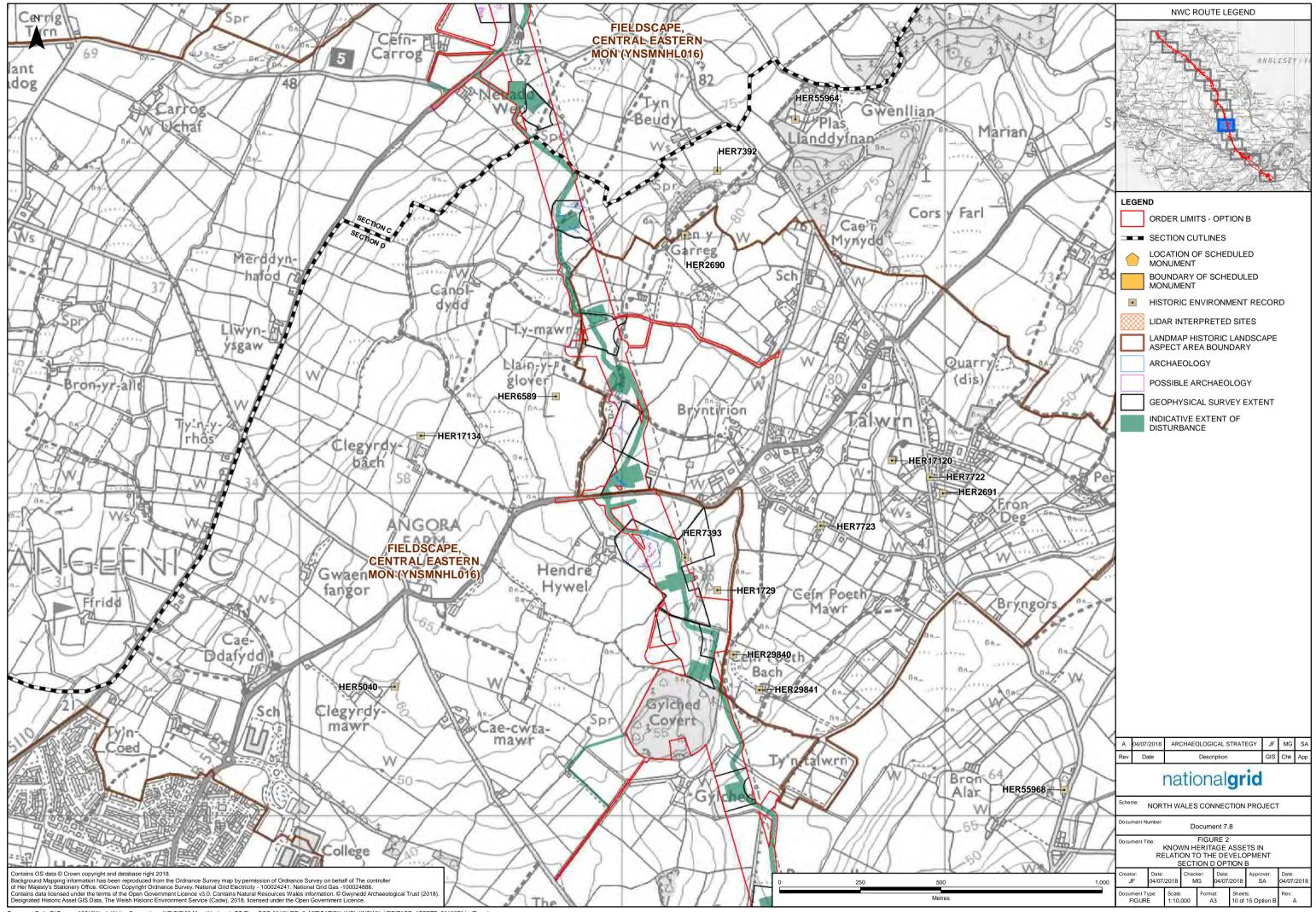


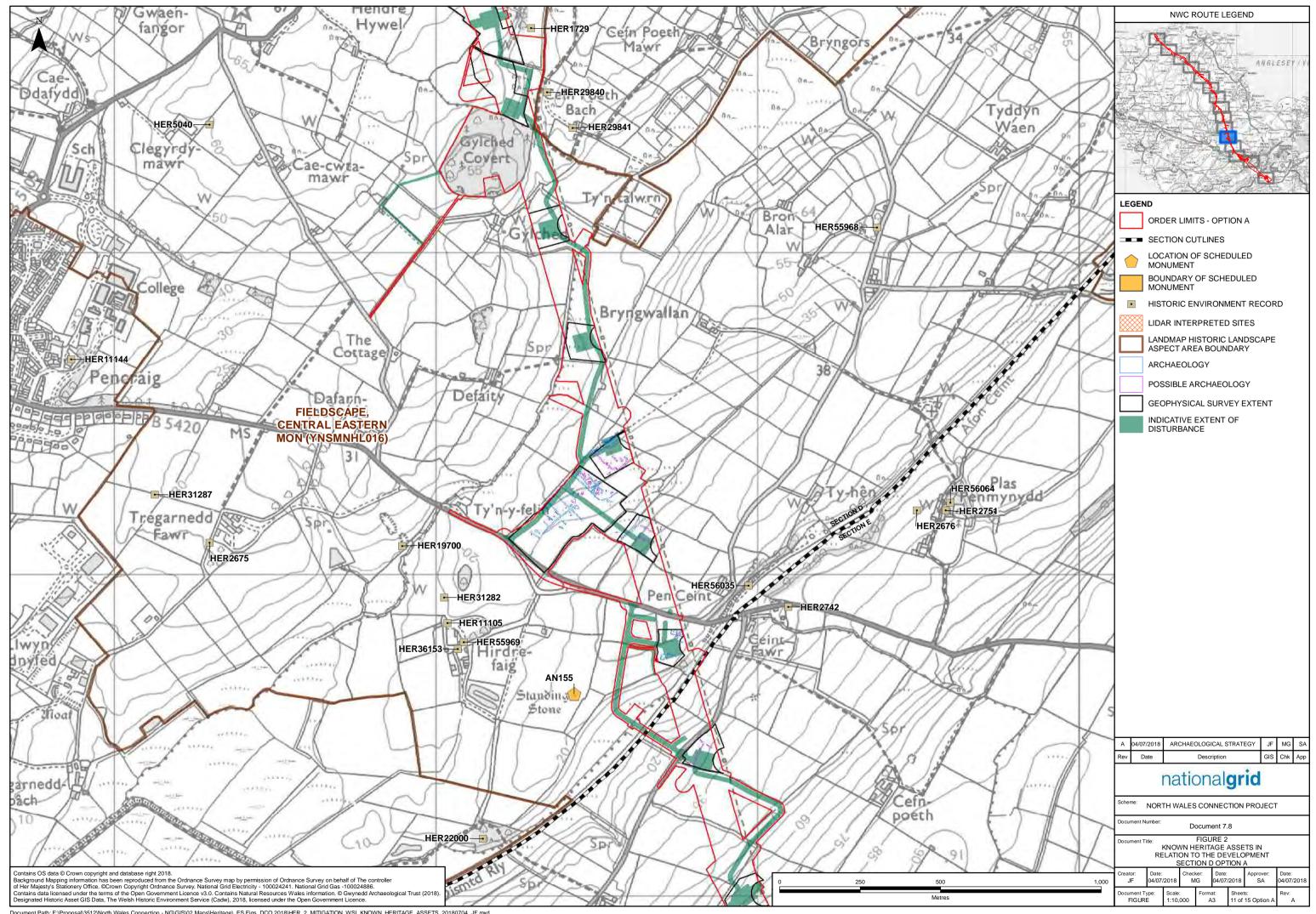




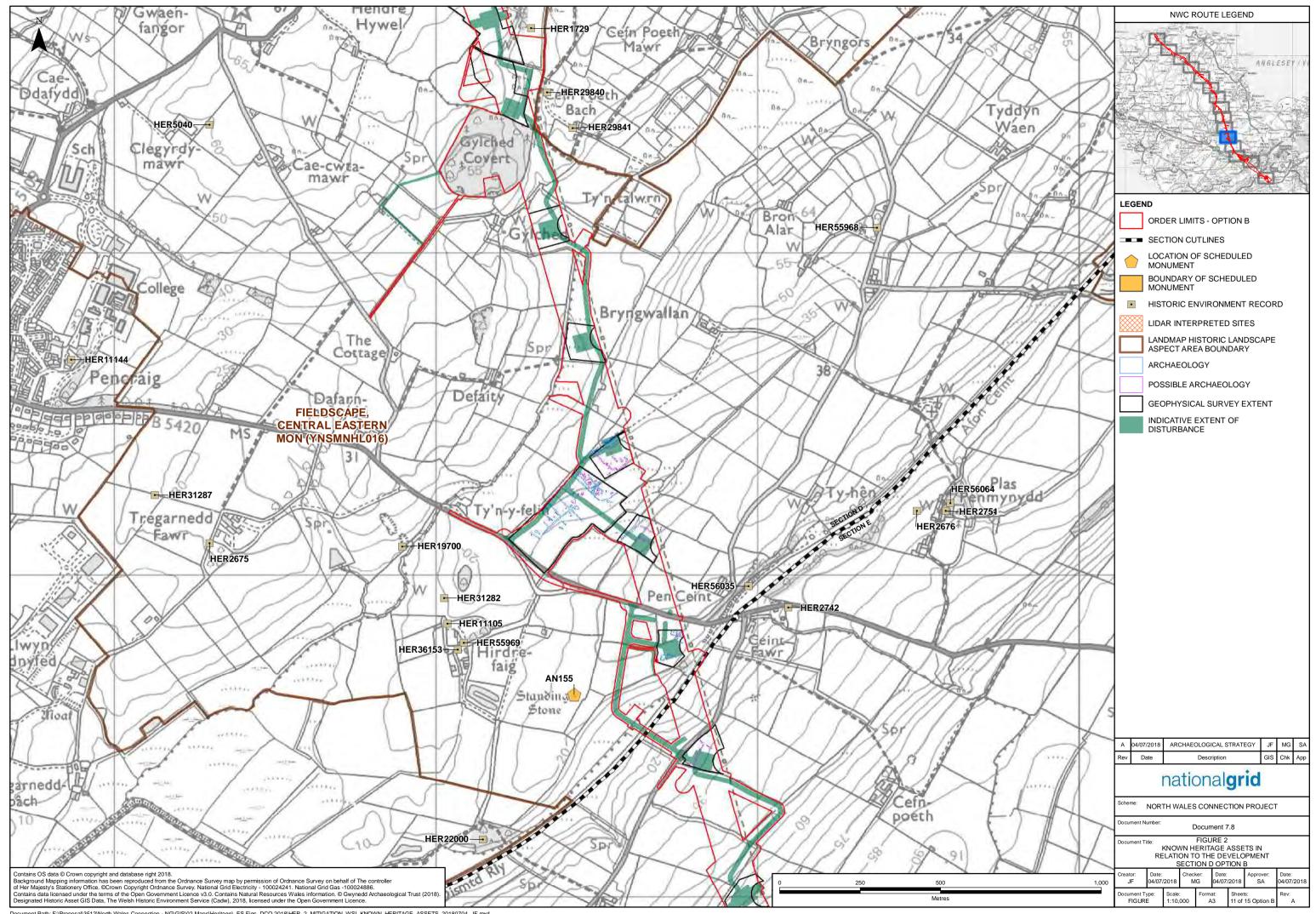




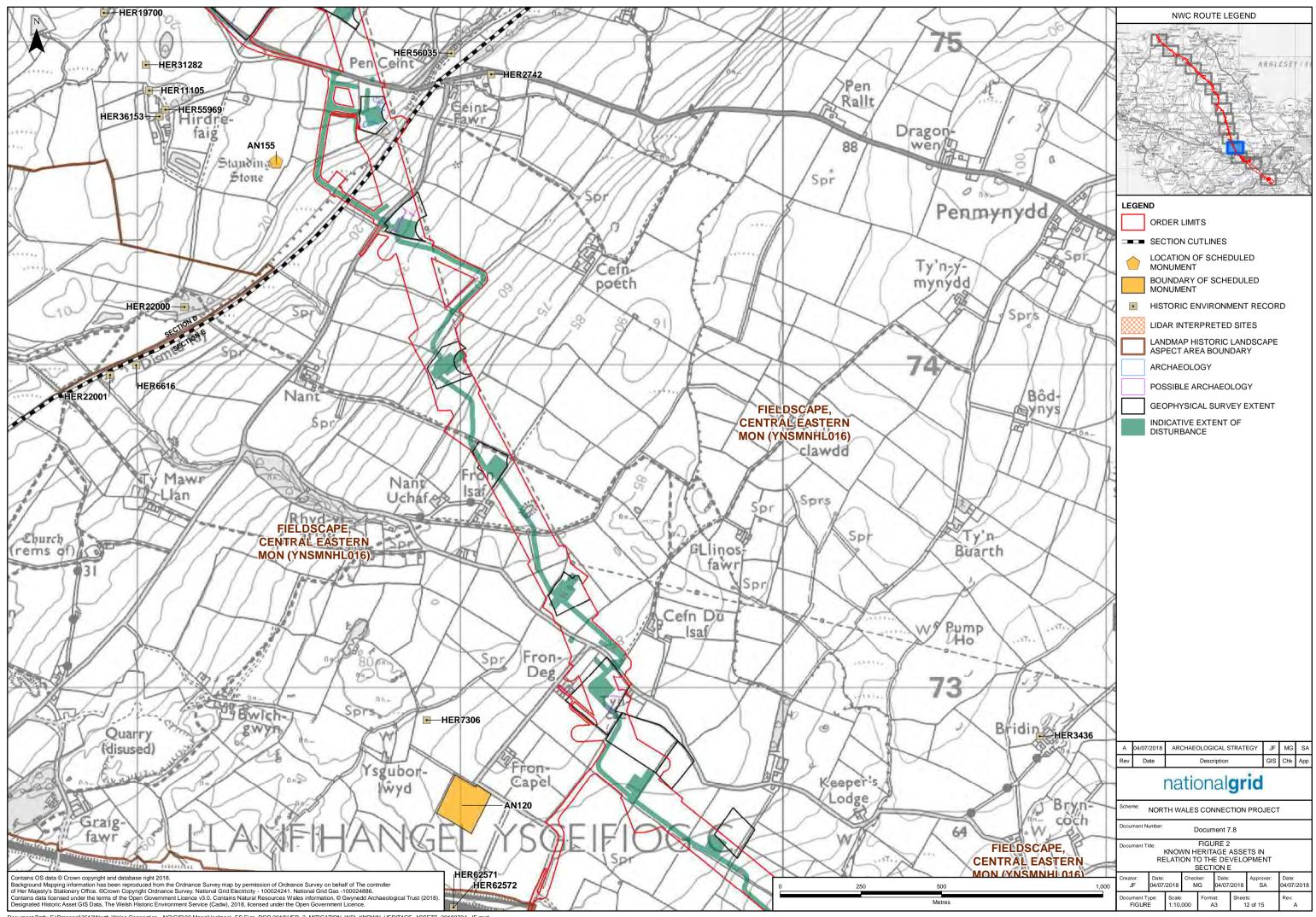




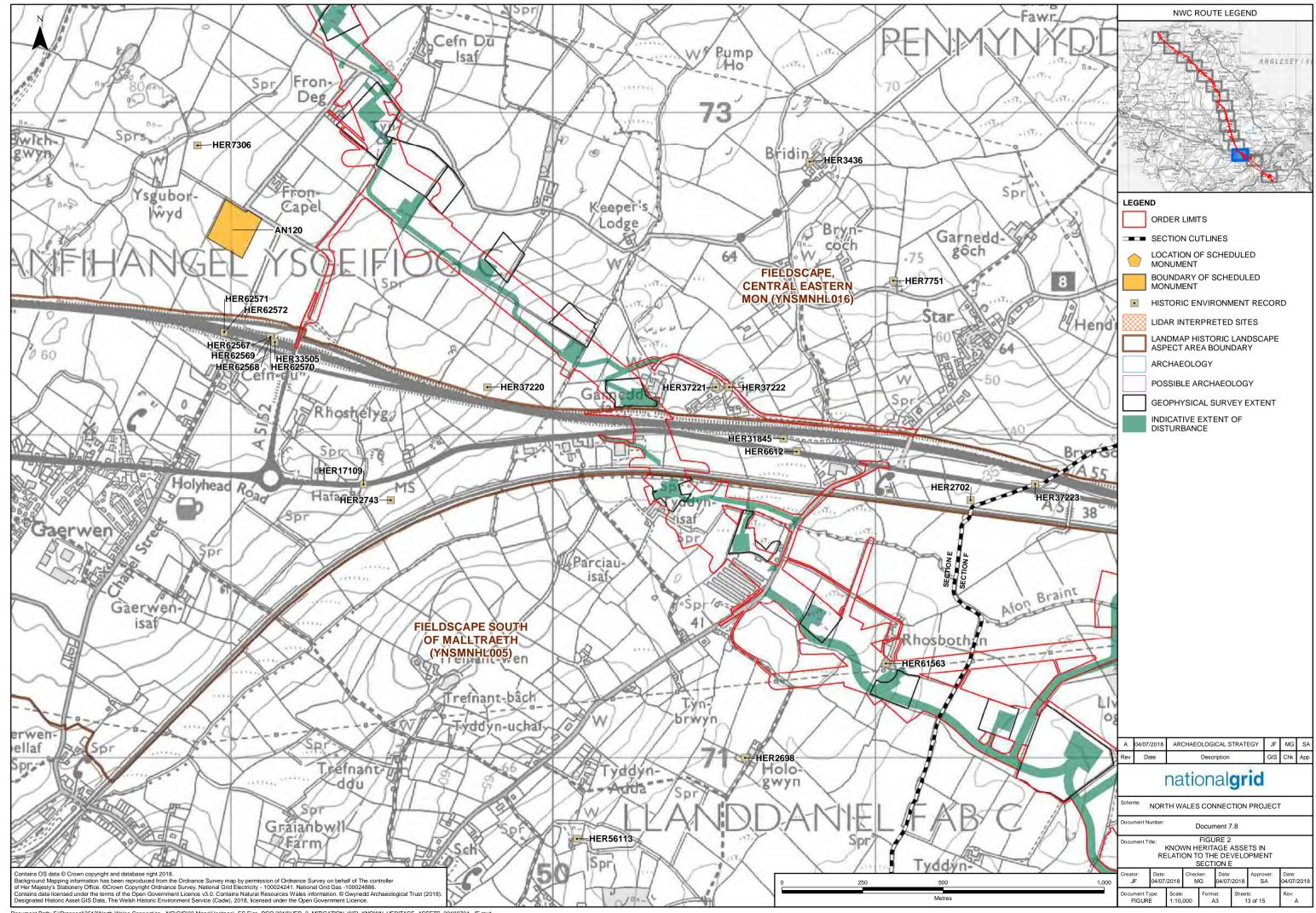
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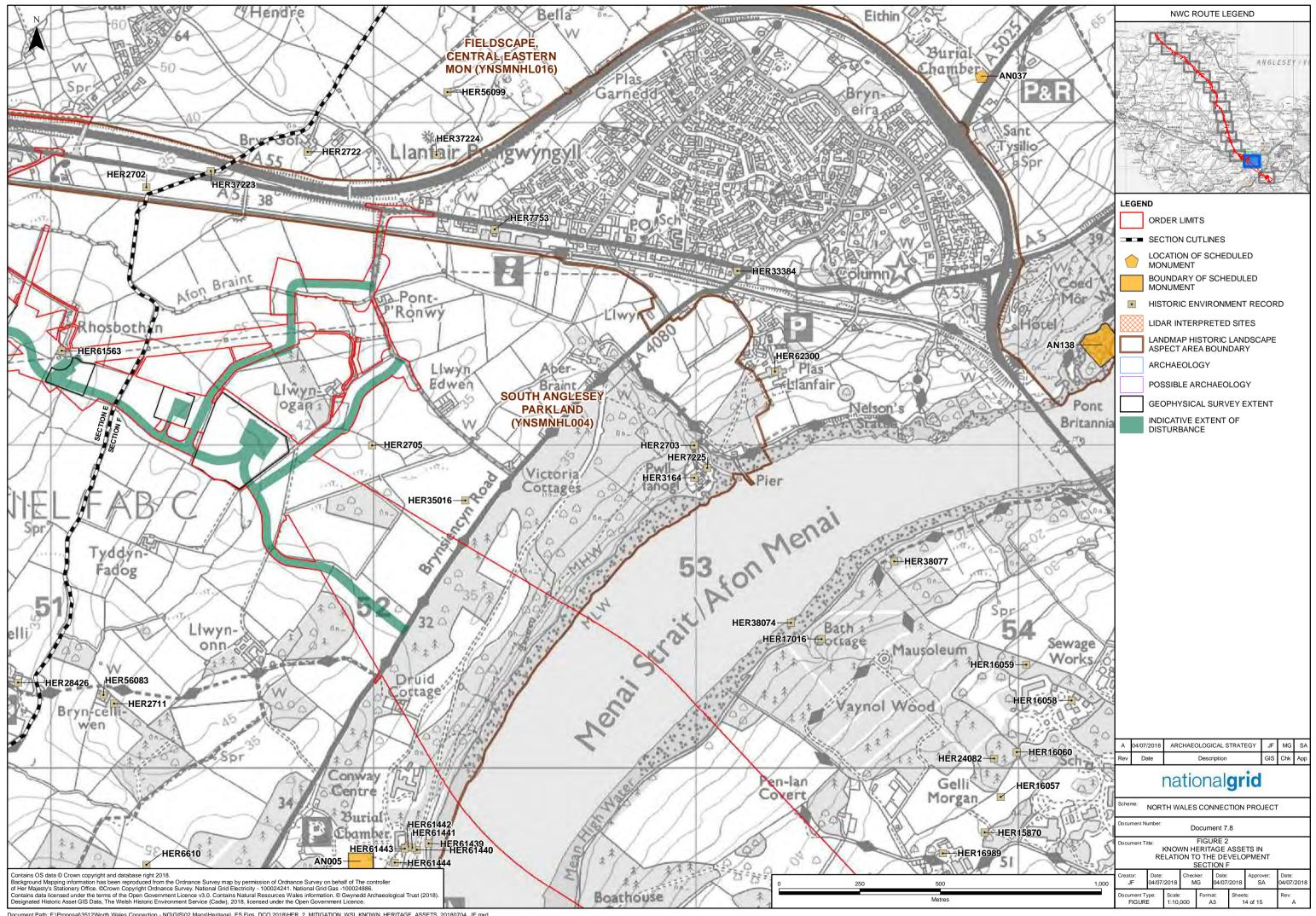
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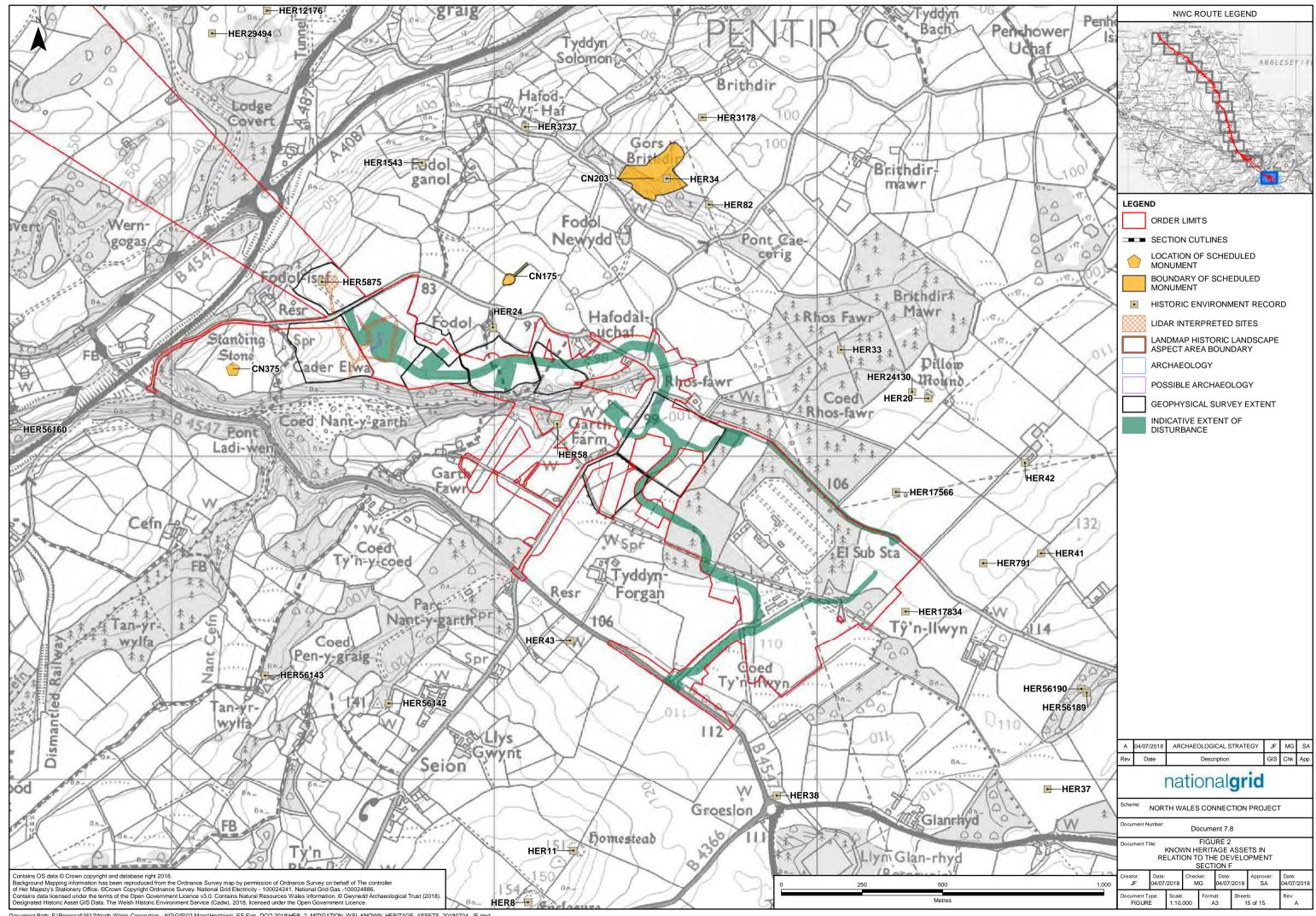
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