Uwchraddio'r Grid
Pentir i Drawsfynydd

Pentir to Trawsfynydd Reinforcement Project

BRYNCIR

OUTLINE CONSTRUCTION TRAFFIC MANAGEMENT PLAN

September 2025

nationalgrid

Contents

Construction Traffic Management Plan

Document Properties	
Organisation	National Grid
Author	WSP
Approved by	Bev Coupe, WSP
Title	Construction Traffic Management Plan
Document Register ID	N/A
Published Document Ref	PTNO-WSP-CONS-BRYN4_-PLN-CP-000002
Data Classification	Public

Revision History

Document	Revision	Status	Description / Changes
	P01	S3	Issued for Client Review
	P02	S3	Issued for PAC
	P03		
	P04		
	P05		

1. INTRODUCTION

1.1 Background

1.1.1 National Grid Electricity Transmission plc (NGET) is submitting consent applications under the Town and Country Planning Act 1990 (TCPA) and Section 37 of The Electricity Act 1989 ('the Electricity Act') for the construction and operation of the Pentir to Trawsfynydd Reinforcement Project (the 'Project'). The Proposed Works are in the administrative boundary of Gwynedd Council and comprise the following elements:

- Underground cabling works in the existing Pentir substation.
- A new substation, replacement of tower 4ZC067 and new cables from the replaced tower down into the substation (downleads). A new 132 kV cable to connect the existing SPEN DB route to the new substation, which will be partly underground cable and partly overhead line, and removal of a section of the SPEN DB route that will no longer be required.
- An extension to the existing Wern Cable sealing End Compound (CSEC), replacement of the Glaslyn Cables, including the removal of some redundant sections of cable and making safe other redundant sections that will be left buried, a new CSEC at Minffordd and raising the floor level of a new Tunnel Head House (THH), previously consented as part of the Eryri (previously Snowdonia) Visual Impact Provision (EVIP) project, and the removal of the existing Garth CSEC.
- Replacement of downleads from tower 4ZC005, underground cabling works, installation of new equipment, including a shunt reactor, and amendments to the substation compound fence line.
- Replacement of cables and fittings ("reconductoring") on the 4ZC overhead line between towers 4ZC005 and 4ZC027, and then between towers 4ZC044 and 4ZC070 as well as replacement of the earthwire with an Optical Ground Wire (OPGW). Installation of fibre optic cables along the earthwire between towers 4ZC070 and 4ZC140.

1.1.2 This Outline Construction Traffic Management Plan (CTMP) focuses on the works at Bryncir, referred to herein as the 'Bryncir Works' or the 'Proposed Works' and will subject to agreement with the Gwynedd Council as local highway authority (LHA) (also referred to herein as 'Gwynedd Council Highways').

1.1.3 The Outline CTMP is one of a series of management plans for specific environmental topics within the Outline Construction Environmental Management Plan (CEMP) which supports the planning application for the Bryncir Works. An Environmental Statement (ES)[1] in support of the planning application has also been produced. This Outline CTMP makes reference to this, specifically Chapter 9 - Traffic and Transport (referred to herein as 'ES Chapter 9').

[1] Pentir to Trawsfynydd Reinforcement Project; Environmental Statement, Volume 3: Bryncir Substatio

1.1.4 This Outline CTMP describes and explains the approach undertaken to manage and mitigate the impacts of construction traffic arising from the Proposed Works, with specific reference to the construction and access strategy; the 'embedded mitigation' incorporated into the design of the Proposed Works and described in ES Chapter 9.

1.1.5 The full CTMP will be produced and shall need to be submitted for acceptance by NGET in consultation with Gwynedd Council Highways prior to construction. The Contractor shall carry out all mitigation and enhancements included in the CTMP and comply with all limits and thresholds where specified. This will include monitoring which is defined within the relevant sections of the CTMP.

1.2 The Project (Proposed Works)

1.2.1 The Proposed Works would be on agricultural land approximately 750 metres (m) south-west of Bryncir and 1.4 kilometres (km) west of Garndolbenmaen, in the administrative boundary of Gwynedd Council ('Bryncir works site') (see **Figure 1-1**).

1.2.2 The Bryncir Works site intersects one Public Right of Way (PRoW): the Dolbenmaen No 18 footpath, A small part of a second PRoW, Dolbenmaen No 17 footpath, falls in the Bryncir Works site at the north-eastern extent. National Cycle Route (NCR) 8 runs to the west of the Bryncir Works site.

1.2.3 A summary description of the Bryncir Works is provided below.

- Construction of a new 400 kV substation: topsoil removal, stone capping, and installation of perimeter fencing, followed by foundation works, and installation of the underground earth grid, and erection of support structures and electrical equipment;
- Relocation of Tower 4ZC067 80 m north-west of its current position: relocated Tower 4ZC067 would be built with excavation, concrete foundations, steel assembly, and stringing of overhead conductors, followed by dismantling the existing tower.
- Realignment of the SPEN DB route to connect into the new substation: includes installation of 132 kV underground cables and overhead lines via trenching and pole erection. The redundant section of DB line will be dismantled and the ground fully reinstated.
- Access Road: – the Bryncir works site will be accessed from the north via a new access road from the A487. The construction access will be made into permanent access with a bell mouth wide enough for two cars. The access road will be finished in an asphalt surfacing course and will be approximately 250-300 m long and a maximum width of 6 m in width. The access road will have crossing points to enable the landowner to cross and to move stock.
- Diversion of the Dolbenmaen No 18 footpath: the footpath will be closed during construction works and will be permanently diverted during operation. The diversion will be initially along the proposed substation access road, then across a field to cross a field boundary via new kissing gates. It would then follow the proposed Bryncir Substation boundary fence before re-joining the existing alignment of the footpath south-west of the proposed Bryncir Substation.
- Landowner Track: to allow the landowner access across field boundaries south of the proposed Bryncir Substation, a hardcore track extending an existing track will be provided to the south-west of the proposed Bryncir Substation.

1.2.4 The Proposed Works will require two construction compounds, the main compound will be immediately north to north-east of the proposed Bryncir Substation and will contain site offices and welfare facilities, storage and laydown areas and car parking. The secondary compound will be west of the main site entrance, immediately south of the A487 and will be used for the earthworks phase.

1.2.5 Construction activities would take place between 7.00 am – 7.00 pm over an 18 – 20-month period, anticipated to be between 2026 –2027 for the civil works and into 2028 for the substation installation. A summary of the pre-construction and construction activities is provided below.

- Preliminary works – further site investigation preconstruction surveys required to be undertaken in advance of construction.
- Mobilising site - development of the site access, forming a temporary hardstanding just off A487. Short term temporary facilities including site offices, welfare, laydown and plant storage will be in place to enable the construction of the earthworks phase of activities.
- Vegetation clearance and earthworks - This will include: the diversion of services, de-vegetation and topsoil strip, land owner track construction, new bellmouth construction, access road construction, earthworks drainage, substation platform construction, hardstandings to main temporary site and laydown areas.
- Main civil engineering works – all reinforced concrete works (foundations, slabs etc), below ground earthing, drainage, ducts, troughs, permanent buildings (including services), boundary fence, internal roads, footpaths and car parking etc.
- Mechanical and electrical work – this will include all primary and secondary electrical plant and equipment and all Stage 1 and Stage 2 testing and commissioning.
- Site reinstatement and landscape works – this will include removal of site offices and temporary facilities, land reinstatement and landscape works.

1.2.6 During operation, the Bryncir Substation would typically be unmanned; maintenance works would be undertaken every three years and visual checks would be undertaken on a monthly basis.

1.3 Scope of the Outline CTMP

1.3.1 This Outline CTMP supports the planning application by NGET to construct the Proposed Works and will need to be agreed with Gwynedd Council Highways. This document presents the approach and application of traffic management and mitigation for the construction phase of the Proposed Works. The Outline CTMP aims to ensure that adverse effects on local communities and users of the transport network arising from the construction phase of the Proposed Works are minimised.

1.3.2 The Outline CTMP has been prepared in accordance with the construction mitigation measures identified during the environmental assessment phase and in accordance with NGET's Environmental Management System (EMS).

1.3.3 This Outline CTMP establishes good practice principles to be implemented to mitigate, so far as reasonably practicable, the potential environmental effects of traffic during the construction phase of the Proposed Works. As a consequence, it is intended to consider

the construction phase of the Proposed Works only; although reference is made to operation and maintenance activity and the decommissioning phase where relevant.

1.3.4 The measures included within this Outline CTMP are not intended to be exhaustive and the Contractor will be required to actively engage with NGET and Gwynedd Council Highways to ensure appropriate measures are implemented during the construction phase.

1.3.5 On this basis, and prior to the construction phase, in consultation with Gwynedd Council Highways, the Contractor shall produce a detailed CTMP based on the outline plan which is to be implemented and monitored throughout the construction programme. The detailed CTMP shall ensure that all traffic associated with the construction phase of the Proposed Works' operates in a safe and compliant manner at all times and shall be signed by the Contractor and Gwynedd Council Highways.

1.4 Objectives of the Outline CTMP

1.4.1 The objectives of the Outline CTMP are to:

- Ensure that movements of people, plant and materials are achieved in a safe, efficient, timely and sustainable manner;
- Ensure that any impact to the local communities and local tourism industry is reduced so far as reasonably practicable;
- Ensure construction traffic levels are acceptable;
- Reduce and control construction vehicle trips where practical;
- Ensure strategies and mitigation measures are implemented and adhered to through continued monitoring, review and improvement of the CTMP; and
- Limit the effects of construction traffic on the road network.

1.4.2 Building upon the objectives and information contained within this outline CTMP, the detailed CTMP development by the appointed contractor shall include working procedures and measures to:

- Ensure the effects on residents, properties, businesses and schools caused by construction traffic, where practicable, are kept to an absolute minimum;
- Maximise safety in all aspects of the project associated with the movement of traffic;
- Ensure all third-party traffic interfacing with the project are kept safe from the on-going works;
- Include clear liaison with the Local Authority regarding traffic caused by construction works;
- Identify suitable signage and traffic controls to be used for all access points; and
- Include a Driver Information Pack covering a variety of topics and providing information on the requirements of working on the project.

1.5 Study Area

1.5.1 The ‘Study Area’ referred to henceforth in this Outline CTMP has been defined by identifying the links that construction traffic would be required to use in order to access the Proposed Works. The highway network within the Study Area comprises:

- Strategic Road Network (SRN) – roads maintained by Welsh Government;
- Local Road Network (LRN) – roads maintained by Gwynedd Council; and
- Temporary access tracks - a network of temporary and existing access tracks which link the working areas of the Proposed Works to the LRN.

1.5.2 The most appropriate and likely routes for vehicles to access and egress the Proposed Works were identified considering their likely origins and destination points, the type of vehicles concerned, and the elements of the Proposed Works concerned.

1.5.3 Based on the extent of the Bryncir Works site, several roads on the LRN and SRN were identified in the environmental assessment as roads that could be used by traffic associated with the Proposed Works. The roads identified cover likely routes to the Bryncir works site from the SRN and from local and regional population centres between a 30–45-minute drive time of the Bryncir works site. This is the likely catchment area for construction traffic.

1.5.4 The roads in the Study Area comprise the following:

- A487 north of B4411.
- A487 east of B4411.
- B4411 south of A487.

1.6 Structure of the Outline CTMP

1.6.1 The Outline CTMP is structured as follows:

- **Section 2** sets out details regarding the construction traffic and highways works;
- **Section 3** summarises relevant policies and procedure;
- **Section 4** sets out the roles and management structure for the CTMP;
- **Section 5** outlines the mitigation measures; and
- **Section 6** presents a monitoring and review strategy.

2. Construction Traffic & Highways Works

2.1 Introduction

2.1.1 This section of the Outline CTMP sets out information on the traffic associated with the construction phase of the Proposed Works, including vehicle classification, traffic generation and routeing on the road network.

2.2 Construction Vehicle Classification

2.2.1 A wide variety of vehicle types would be used for the construction phase of the Proposed Works. Vehicles would be required to transport people, equipment and materials. Volumes of Light Vehicles (LVs) and Heavy Goods Vehicle (HGVs) associated with the construction phase of the Proposed Works are detailed and assessed in ES Chapter 9.

2.2.2 For the purposes of the assessment, construction vehicles have been classified as follows, in accordance with the Driver and Vehicle Standards Agency (DVSA) *Lorry types and weights guide*[2]:

- LV = Vehicles 3.5 tonnes (t) or below in gross weight; and
- HGV = Vehicles above 3.5 t in gross weight.

2.2.3 **Table 2-1** outlines the vehicle classification and typical vehicle types that would be required for the construction phase of the Proposed Works. These have been identified based on experience of those used for similar National Grid projects.

Table 2-1: Project Vehicle Classification

Vehicle Classification	Example
LV (i.e. 3.5 t or below)	Car, van, 4x4 pick up, welfare van
HGV (i.e. over 3.5 t)	Excavator, HIAB/winch tractor, tractor and trailer, 10 m and 12 m rigid vehicles, 20 t tippers, concrete mixers, 14 m and 16.5 m articulated vehicles, low loaders, small and large cranes (250 t and 300 t)

2.2.4 In addition, the Proposed Works will require the delivery of an abnormal indivisible load (AIL), namely the Transformer. An abnormal load vehicle has one or more of the following:

- A weight of more than 44,000kg;

[2] A Simplified Guide to Lorry Types and Weights

- An axle load of more than 10,000kg for a single non-driving axle and 11,500kg for a single driving axle;
- A width of more than 2.9 metres; and
- A rigid length of more than 18.65 metres.

2.3 Construction Traffic Generation

2.3.1 Further information on the volume of traffic of each type forecast to be generated by the Proposed Works is contained within ES Chapter 9. However, peak traffic volumes are described below in order to provide an indication of traffic volumes of HGVs and LVs during construction.

2.3.2 Generally, construction activities will be undertaken during daytime periods only, from Monday to Friday 7.00 am – 7.00 pm (including an hour set up and hour shut down). No bank holiday or weekend working will be undertaken, unless agreed with the Local Planning Authority.

2.3.3 There may be some periods of extended or 24-hour working, for example oil filling of the transformer. However, this would be by agreement with the Local Planning Authority.

Construction Staff

2.3.4 The number of staff on the Bryncir works site would vary according to the construction phase and activities being undertaken; some activities may be run concurrently. It is anticipated that the following would be required for each phase of work:

- Preliminary works – two staff and four operatives.
- Site establishment and earthworks – four staff and 10 operatives.
- Main civil engineering works – eight staff and 24 operatives.
- Mechanical and electrical work – four staff and 10 operatives.
- Site reinstatement and landscape works – two staff and six operatives.

2.3.5 As indicated above, peak of construction is likely to be during the main civils and cabling works phase which will have an approximate duration of ten months. During this phase, a peak of 32 full-time equivalent (FTE) workers will be on-site per day at the Bryncir works site.

2.3.6 To minimise the number of vehicle trips generated, it is expected that car-sharing measures will be promoted by the contractor during peak construction stages. As set out in ES Chapter 9, it is assumed that approximately 50% of the workforce (16 out of 32 workers) will participate in car-sharing. This estimate is informed by car-sharing uptake observed at other relevant infrastructure projects in the wider area. A realistic car-sharing ratio of 1.5 workers per vehicle has been applied. This results in an estimated 11 one-way daily car movements for the car-sharing workers.

2.3.7 For the remaining 16 workers who do not engage in car-sharing, it is assumed they will travel individually by private vehicles. Adding these 16 movements to the 11 movements generated by car-sharing workers results in a total of 27 one-way daily vehicle movements, per day, for the workforce.

2.3.8 For the purposes of this assessment, it is assumed that the Proposed Works will generate a total of 54 two-way daily vehicle movements (27 in and 27 out) during the peak of construction.

Construction HGVs

2.3.9 During construction a range of vehicles will be accessing the Bryncir Works site. **Table 2-2** provides an indication of the number and type of vehicle movements at each phase of the Proposed Works

Table 2-2 – Number and Types of Vehicles Movements at each Phase of the Proposed Works

Phase	Type	Frequency	Approximate Duration
Preliminary works	4x4 vehicles, towed trailers, small ground survey plant	-	Two weeks
Site establishment and earthworks	Plant deliveries, HGVs	Up to 15 per day	Four months
Main civil engineering works	Plant deliveries, HGVs, Concrete Truck mixer	Up to 10 per day	10 months
Mechanical and electrical work	Plant deliveries, HGV's, AIL (Transformer) delivery	Up to five per day	Eight months
Site reinstatement and landscape works	HGV's	Up to two per day	One month

Note – staff and visitor vehicles are not included in this table.

2.3.10 The peak of construction is likely to be during the mobilising and earthworks phase, which will have an approximate duration of four months. In terms of HGVs, it is estimated there would be a peak of up to 15 HGV deliveries (including waste removal) per day during this phase which will result in 30 two-way HGVs, (15 inbound and 15 outbound).

2.3.11 As identified in Table 2-2, there is expected to be one AIL movement associated with the transformer being delivered to the Bryncir Works site.

Total Vehicles

2.3.12 In summary, the total daily number of vehicles expected during the peak of construction are shown in **Table 2-3** below.

Table 2-3 – 24-hour AADT Trip Generation by Vehicle Type

Vehicle Type	In	Out	Total (Two-Way)
Cars	27	27	54
HGVs	15	15	30
Total	**42**	**42**	**84**

2.4 Construction Traffic Routing Strategy

2.4.1 Site visits and audits have taken place along the proposed construction traffic routes and at construction access points. Matters which have been considered to inform the construction traffic routing are as follows:

- Height and weight restrictions;
- Highway classification;
- Highway structures;
- Highway layout (width and horizontal/vertical alignments);
- Traffic calming measures;
- Built environment indicators (BEIs) adjacent to the highway;
- Visibility constraints;
- Speed limits and surveyed traffic speeds;
- PRoW; and
- Other road users (pedestrians, cyclists and equestrians).

2.4.2 The sections below summarise the forecasting of how vehicle trips will be distributed across the road network.

Construction Staff

2.4.3 Construction staff will be encouraged to take the most direct route to the Bryncir works site using 'higher' order roads, such as A and B classified roads. ES Chapter 9 sets out the methodology for identifying traffic routing based on a gravity model approach within a 90-minute estimated drive time and use of an interactive mapping tool for fastest routes.

Constructions HGVs

2.4.4 Construction HGVs will travel to the Bryncir works site firstly via the SRN, then appropriate routes on the LRN. Travelling from the SRN to the Bryncir works site, HGVs will use the A487 to access the Bryncir works site. The following HGV traffic distribution is identified in ES Chapter 9:

- A487 from the north – 50%.
- A487 from the east – 50%.

Total Vehicles

2.4.5 The daily two-way movements are presented in **Table 2-4**.

Table 2-4 – Daily profile of Total Two-Way Construction Traffic Link by Link*

ATC	Link	Daily (Two-Way)	
		All Vehicles	HGV
3.1	A487 north of B4411	39	15
3.2	A487 east of B4411	28	15
3.3	B4411 south of A487	17	0

** Note, the numbers have been rounded to the nearest whole number*

2.5 Public Highway Works

2.5.1 In addition to impacts relating to construction traffic movements the Project will impact on the LRN through highways works relating to the construction of the site access.

2.5.2 Prior to the main construction works, access to the site will be required off the A487. The junction bell mouth would be designed in accordance with the relevant standards outlined in the Design Manual for Roads and Bridges (DMRB) CD 123 Geometric Design of At-Grade Priority and Signal-Controlled Junctions[3] in consultation with the LHA. This would help mitigate any potential safety risks associated with construction activities.

2.5.3 Traffic management measures required to construct the access will be identified in consultation and agreement with the LHA. This may require partial road closures at off-peak times.

2.5.4 In addition, any improvements required to accommodate the AIL delivery vehicle will be identified through swept path analysis and an access strategy will be produced in consultation and agreement with the highway authorities. This may include the temporary removal of street signs and furniture.

2.6 Public Rights of Way

2.6.1 The Bryncir Works site intersects one PRoW, the Dolbenmaen No 18 footpath and Dolbenmaen No 17 footpath, falls in the Bryncir Works site at the north-eastern extent.

2.6.2 Temporary diversions to both PRoWs will be required during construction.

2.6.3 A permanent diversion of Dolbenmaen No 18 footpath will be required. The footpath will be diverted initially on an alignment adjacent the proposed substation access track until it reaches the substation at which point it follows the boundary to the south of the proposed drainage pond before connecting back into the existing right of way west of the substation. The footpath would not be surfaced. The diverted footpath would not be substantially longer than the current route.

[3] DMRB CD 123 - Geometric design of at-grade priority and roundabouts

3. Policies and Procedure

3.1 Introduction

3.1.1 The CTMP will comply with the policies and procedures set out by Gwynedd Council Highways for any traffic management works on the public highway. This section sets out the policies and procedure relating to standard loads HGVs and vehicles carrying AIL/abnormal loads.

3.2 Normal Loads

3.2.1 The co-ordination and notification of accommodation works, traffic controls and temporary road closures is covered under the *New Roads and Street Works Act,* 1991. The Code of Practice for the Coordination of Street and Road Works (updated 2023) is based on this Act and sets out that at least three months' notice will be required for temporary road closures and traffic management procedures. This will allow the highway authority sufficient time to advertise and process the appropriate orders and notify the emergency services and other traffic authorities.

3.2.2 The full CTMP will set out the works required for the construction phase of the Proposed Works and the contractor will comply with the LHA procedures regarding traffic management and accommodation works.

3.3 Abnormal Loads

3.3.1 The Proposed Works will require the delivery of one AIL. Actions to be taken include the following:

- A review of current procedures for the movement of abnormal loads by road, and sources for further information and formal notifications. This must be undertaken prior to the movement of the AIL to ensure that the correct procedures are followed and approvals obtained;
- Appropriate assessment of proposed transport route for the AIL delivery to the Bryncir Works site; and
- Early and continuous communication with the required stakeholders including the Police and highway authorities whose network will be used by the AIL delivery vehicle, including Gwynedd Council Highways and Welsh Government, to notify of the intention to transport an AIL and determine any mitigation measures including but not limited to escort vehicles.

3.3.2 The approved haulage contractor will be required to consult with the appropriate authorities to ensure that all relevant permissions are obtained prior to the transportation of any abnormal loads. The responsibility for ensuring that a route is suitable for the transportation of abnormal loads and ensuring the correct notifications are given rests with the haulier.

4. Responsibilities & Management Structure

4.1 Introduction

4.1.1 This section outlines the proposed roles and responsibilities for implementing the CTMP during the construction phase of the Proposed Works. It is important that a strong management structure is in place to ensure the CTMP objectives are met and that continued monitoring and review of the CTMP is maintained. Information on this will be included in the full and final CTMP which will be submitted to the LHA.

4.2 Transport Co-Ordinator

4.2.1 The Transport Co-ordinator (TCO) will be appointed prior to the commencement of the works, will be identified in the CTMP and will have the following responsibilities:

- Ensuring the CTMP is implemented by the relevant and responsible parties;
- Liaising with LHAs and the Welsh Government, as relevant; and
- Resolving issues and problems, and implementing agreed mitigation measures, through the liaison with relevant stakeholders and the client.

4.3 Site-Based Staff

4.3.1 In addition to any specific duties assigned by the TCO, all site-based staff shall receive training to cover the following aspects.

- Ensure familiarity with the themes and requirements of the CTMP;
- Monitor and encourage colleagues to ensure compliance with the environmental requirements of the CTMP and intervene or request supervisory/ Health, Safety, and Environment (HSE) office intervention if environmentally damaging activities or actions that are non-compliant with any Project construction traffic are witnessed;
- Report any environmental incidents or concerns to the appropriate line manager.

4.4 Sub-Contractors

4.4.1 All sub-contractors will be required to comply with the CTMP and undertake the following:

- Ensure the nominated sub-contractor HSE Manager is fully familiar with the requirements and manages their implementation; and
- Liaise with the TCO on a regular basis to ensure any changes in scope that have environmental implications, or new environmental requirements are accounted for and managed and to advise the TCO of any activity or the need to deviate from any requirement within this CTMP.

5. Mitigation Measures

5.1 Introduction

5.1.1 This section of the Outline CTMP sets out mitigation measures to minimise the impact of construction traffic that the Contractor will be required to implement in agreement with the highway authorities and relevant stakeholders. These are aligned to the objectives of the CTMP as set out in **Section 1.4**. It is anticipated that further detail will be set out within the full CTMP at the appropriate time prior to construction commencement.

5.1.2 Mitigation is either 'Embedded' (i.e. incorporated into the design of the Proposed Works) or 'Proposed' (i.e. measures that will be implemented and measures that could be implemented to mitigate the impact of construction traffic).

5.2 Mitigation Measures

5.2.1 The mitigation measures are set out in the following sections.

Construction Traffic Routes

5.2.2 Only prescribed routes will be used by construction HGVs. Appropriate self-enforcement and monitoring measures will be included within the conditions of contract of the Contractor and sub-contractors and penalties would apply for non-compliance.

Physical Highway Improvements

5.2.3 Physical highway changes to be implemented where considered necessary at access locations and improvements to carriageways to accommodate the swept path of construction vehicles, including temporary measures for the AIL delivery vehicle.

5.2.4 Where deemed hazardous, overgrown vegetation and grass verge encroachment onto the edge of carriageway along construction traffic routes would be managed during consultation with the Ecological Clerk of Works.

Public Rights of Way Management

5.2.5 As previously identified, temporary diversions to PRoWs Dolbenmaen No 17 and 18 will be required during construction and a permanent diversion of Dolbenmaen No 18 footpath will be required post-construction.

5.2.6 The temporary diversions will be discussed and agreed with the Gwynedd Council Rights of Way officer.

5.2.7 An application for the permanent diversion will be undertaken based on the procedure set out by Gwynedd Council in compliance with requirements set out in the Highways Act 1980. As identified previously, the diverted footpath will be approximately 100 m longer than the current route and is proposed to route adjacent to the proposed substation access road to the substation where it follows the boundary to the south of

the proposed drainage pond before connecting back to the existing. The footpath would not be surfaced.

Community Engagement and Public Information

5.2.8 Information regarding construction activities and traffic movements would be provided to the public and would include appropriate road safety information. The means of communication could include online updates, letter drops, information boards and details of key contacts.

Temporary Traffic Management

5.2.9 As set out in **Section 2.**5, anticipated public highways works relate to the construction of the site access. Appropriate traffic management measures required for this will be identified in agreement with the LHA. The agreed mitigation will be detailed within the final CTMP.

5.2.10 In the event that additional traffic management measures are proposed, for example at Site access points, these will be agreed with the LHA prior to construction and temporary traffic regulation orders procured prior to the traffic management being implemented.

Temporary Traffic Signage

5.2.11 *The Traffic Signs Manual* ('the Manual') provides advice on the use of traffic signs and road markings on the highway network in the UK. Mandatory requirements are set out in the *Traffic Signs Regulations and General Directions* 2016 (as amended) (TSRGD).

5.2.12 Chapter 8 of the Manual4 provides essential guidelines for the design and management of temporary traffic management systems during road works. As identified in the general principles of temporary traffic management design (Section 2.1 in Chapter 8 of the Manual), whilst the complexity of traffic management arrangements varies from scheme to scheme, the primary objective and secondary objectives are as follows:

i. to maximise the safety of the workforce and the travelling public.

ii. to keep traffic flowing as freely as possible'

5.2.13 Temporary signage will be erected on the construction traffic route, where required to provide directional routing information for construction vehicle drivers.

5.2.14 Temporary signage will be placed in the vicinity of the site accesses to warn other road users of the likely presence of construction vehicles. Temporary signage will be installed in accordance with standards and in agreement with the highway authorities.

Wheel and Road Cleaning

5.2.15 If required wheel wash cleaning stations will be provided at the site access to minimise the potential for mud and dirt to be transferred to the LRN.

[4] Traffic signs manual chapter 8 part 1 road works and temporary situations: designs

5.2.16 Transfer of on-site debris onto the LRN will be monitored. If issues are identified with the transfer of site material onto the highway, then mechanical road sweeping will be engaged to remove this, where it is clearly linked to the Proposed Works.

Working Hours and Timing of Vehicle Movements

5.2.17 As previously identified, construction activities would take place between 7.00 am – 7.00 pm over an 18 – 20-month period, anticipated to be between Quarter 1 2026 – Quarter 3 2027.

5.2.18 The hours will be defined within the full CTMP, with the potential need for some extended working hours for certain activities subject to relevant agreements or for emergency works.

5.2.19 HGV movements to/from the Bryncir Works site will be occur throughout the day and will minimise the impact during the network peak hours. In the interests of road safety and reducing possible nuisance, where required due to sensitive receptors such as schools, HGV construction traffic will be subject to a timing restriction whereby vehicles will not be able to gain access into the proposed work area or depart from the proposed work area at certain times of the day. This may include, for example, peak congestion times on the LRN and local school drop off/pick up times where practical.

AIL Vehicles

5.2.20 Temporary traffic management would be provided during AIL delivery where required, along with appropriate communications with the local community.

5.2.21 The AIL delivery vehicle is anticipated to be accompanied by escort vehicles, should this be deemed necessary. Night deliveries would be undertaken where required, to reduce disruption and maintain safety on the LRN and SRN.

5.2.22 The Electronic Service Delivery for Abnormal Loads (ESDAL) system would be used for route planning, notifications and approvals.

5.2.23 The full CTMP will set out the anticipated procedures based on liaison with the highway authorities.

Road Condition Surveys

5.2.24 To establish if there is any damage to the roads along the construction vehicle route caused as a result of construction traffic movements, a road condition survey will be undertaken at locations agreed with the LHAs prior to construction.

5.2.25 To ensure any damage to the highway is attributable to Proposed Works construction traffic rather than general wear and tear, surveys will be taken at intervals throughout the construction period to the satisfaction of the LHA, at the agreed locations established in the initial survey.

5.2.26 A final survey will be undertaken post construction which will be compared to the original survey and surveys undertaken during the construction period. The outcome of which will be to identify areas where there has been a deterioration to the road surface and or edge which can be attributed to the Proposed Works construction traffic. This will be used to design a scheme that returns the road to its original state should such action

be necessary. Consideration will need to be given to any other construction work in the study area which have vehicles using the routes.

5.2.27 An appropriate method will be identified for the process of the road condition surveys.

Construction Information Packs & Communications

5.2.28 Information packs will be provided to all contractors/site staff and will form part of the contractual agreement between the contractors and the client. The information pack will contain the details of the CTMP requirements including:

- Construction traffic routes that have been identified and agreed with the LHA;
- Non-compliance procedure including enforcement and corrective measures;
- Complaints procedure;
- CTMP protocols and Code of Good Practice;
- Guidance on standard communication procedures between contractors and site; and
- CTMP contacts (emergency and non-emergency).

5.2.29 Information packs will be shared with the LHA ahead of any construction works.

Sustainable Travel

5.2.30 Contractors will be encouraged to minimise the impact of workforce travel by considering and promoting alternative modes of transport to the Site. Due to the rural location of the Site and nature of the Project it is anticipated that sustainable travel will be best achieved through the promotion of car sharing/minibus use.

6. Monitoring & Review

6.1 Introduction

6.1.1 This section sets out the likely monitoring and review strategy for the CTMP, along with mechanisms for failure to comply with the requirements of the CTMP.

6.2 Monitoring And Review Strategy

6.2.1 The TCO will undertake monitoring as necessary to ensure compliance with the requirements of the CTMP and this will include the maintenance of records and traffic management measures.

6.2.2 The client will ensure that a suitable, qualified, member of staff is employed to conduct surveys and monitor construction vehicle activity at specific locations along the construction route network to ensure adherence to the CTMP. This will include the monitoring of construction vehicles on the LRN and speed enforcement monitoring.

6.2.3 The TCO will monitor and review the CTMP. These reviews are required to ensure that the CTMP delivers on the commitments and achieves the agreed goals as set out in the CTMP document.

6.3 Compliance

6.3.1 As part of the CTMP, a series of mechanisms will be established to provide all parties with a clear understanding of the enforcement procedures that will be applied if the requirements contained within the CTMP are not achieved. It is anticipated that these mechanisms will be determined at a later stage but are likely to include the following.

Risk Assessment Method Statement (RAMS) procedures

6.3.2 The contractor, through the TCO, will implement the CTMP, adhere to the requirements and meet the goals through management practices. This will include:

- Site inductions for contractors;
- Briefing on the obligations of standards;
- Induction and adherence to RAMS procedures;
- Delivery Management System (DMS) briefing;
- Driver inductions; and
- Compliance guidance.

Contractual conditions

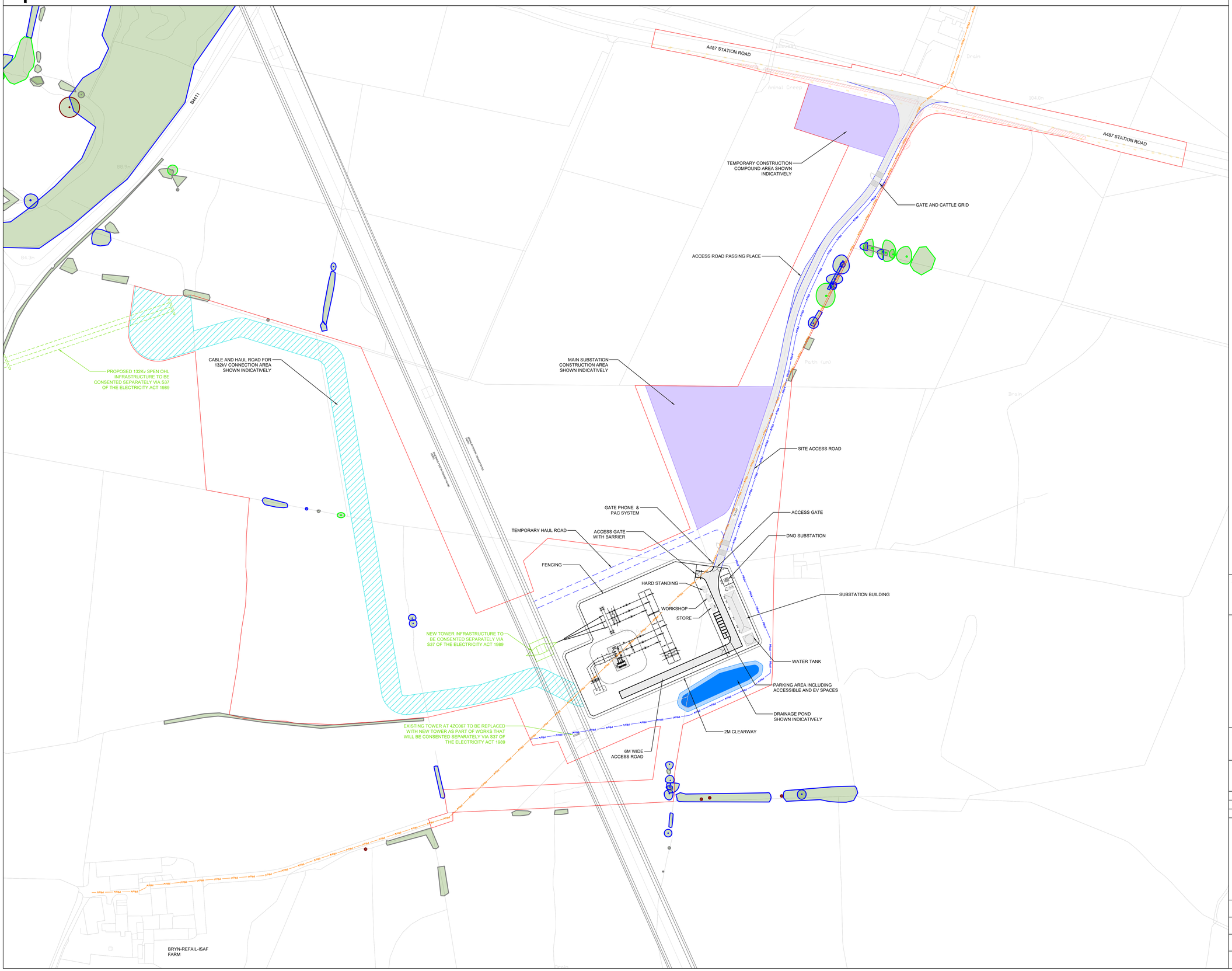
6.3.3 Contractual conditions to be employed as part of the CTMP compliance methodology and will be built into the contractors' contract, this will be subject to a performance review by the client.

Actions

6.3.4 Actions to be employed if the commitments of the CTMP are breached.

6.4 Enforcement & Corrective Measures

6.4.1 The TCO will ensure that appropriate measures are taken to ensure that contractor behaviour and performance is monitored and where appropriate, corrective measures are taken to resolve, redress and enhance service performance which is in breach of the standards within the CTMP.



Legend

- APPLICATION SITE BOUNDARY
- PROPOSED SUBSTATION ACCESS ROAD EDGE OF CARRIAGEWAY
- PROPOSED OVERHEADLINE TEMPORARY HAUL ROAD EDGE OF CARRAIGEWAY
- EXISTING PUBLIC RIGHT OF WAY(PROW)
- PROPOSED DIVERTED PUBLIC RIGHT OF WAY (PROW)
- JUNCTION HORIZONTAL VISIBILITY SPLAY
- AREA FOR CONSTRUCTION COMPOUND SHOWN INDICATIVELY
- AREA FOR CABLE ROUTE AND HAUL ROAD SHOWN INDICATIVELY
- GATE AND CATTLE GRID INDICATIVELY SHOWN
- VEGETATION TO BE REMOVED
- CATEGORY A VEGETATION
- CATEGORY B VEGETATION
- CATEGORY C VEGETATION

Notes:

1. CONCEPT DESIGN ONLY, I.E.: FEED / NDP4.3. NOT FOR CONSTRUCTION.
2. ALL MEASUREMENTS ARE IN METRES.
3. SITE CLEARANCE REQUIRED WITHIN JUNCTION VISIBILITY PLAY SHOWN.
4. ACCESS POINTS HAVE BEEN DESIGNED IN ACCORDANCE WITH DMRB. DETAILED DESIGN AND CONSTRUCTION TO BE IN ACCORDANCE WITH TS 2.10.08, ITS REFERENCES AND LOCAL REQUIREMENTS
5. VEHICLE TRACKING HAS BEEN CARRIED OUT FOR 16.48m ARTICULATED LORRY AND 10m HGV. AT THIS STAGE AIL MOVEMENTS HAVE BEEN ACCOUNTED FOR BASED ON TS 2.10.08. JUNCTION MOUTH RADI ARE BASED ON TURNING CIRCLE FOR 16 AXLE GIRDER FRAME TRAILER
6. ROAD DESIGN IS SUBJECT TO CHANGE DUE TO LACK OF TOPOGRAPHICAL DATA AND SUBSEQUENT ABNORMAL LOAD VEHICLE TRACKING.
7. ADDITIONAL AREA REQUIRED WITHIN REDLINE BOUNDARY IS SUBJECT TO CHANGE ONCE TOPOGRAPHICAL DATA IS AVAILABLE TO FINALISE ALIGNMENT.
8. IT IS ASSUMED PROW WILL BE TEMPORARILY CLOSED DURING CONSTRUCTION.

Notes

This drawing is scaled at paper size A0, therefore any prints taken at smaller sizes will affect accuracy of the measurement units and should not be scaled against

Scale Bar

20m 10m 0m 50m 100m

1:1000

Issue	Date	Remarks	Drawn	Checked	Approved
P01	12/09/25	FIRST ISSUE	TM	MT	RW

Title

FIGURE 1-1: BRYNCIR PROPOSED OVERALL LAYOUT (FOR TCPA)

nationalgrid

Figure Number

PTC1 / PTNO - BRYNCIR

Drawing Reference

PTNO-WSP-SS50-C00484-DRW-CP-000005

Scale	Sheet Size	Sheet	Issue
1:1000	A0	SHEET 1 OF 1	1