

The North Wales Wind Farms Connection Project

Environmental Statement Chapter 2 – Description
of Proposed Development Technical Appendices
Outline Traffic Management Plan – Tracked
Change Version

Application Reference: EN020014

Deadline 4 Submission
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Environmental Statement Chapter 2 – Description of Proposed Development Technical Appendices
Outline Ecological Management Plan – Tracked Change Version

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The Planning Act 2008
 The Infrastructure Planning (Applications: Prescribed Forms and Procedure)
 Regulations 2009
 Regulation 5(2)(a)

The North Wales Wind Farms Connection Project
 Appendix 5 - Outline Traffic Management Plan

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<u>Date</u>	<u>Version</u>	<u>Status</u>	<u>Description / Changes</u>
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<u>16/10/15</u>	<u>2</u>	<u>Live</u>	<u>Updated version following Issue Specific Hearings. Updated:</u> <ul style="list-style-type: none"> • <u>Section 2.4.4 to provide for the timing of deliveries to be agreed with the relevant planning authorities and manage construction traffic in the context of milk deliveries</u> • <u>Section 2.4.4 to ensure construction traffic does not use those parts of the highway network affected by school pick-up/dropping off times.</u> • <u>Section 2.4.12-2.4.16 updated to include pre and post commencement highway surveys</u> • <u>Section 2.4.27 to include for provision of bilingual signs</u>

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1 INTRODUCTION

1.1 Traffic Management Plan

- 1.1.1 This outline Traffic Management Plan (TMP) supports the application by SP Manweb PLC. ("SP Manweb") under the Planning Act 2008 for the North Wales Wind Farms Connection Development Consent Order (the "DCO").
- 1.1.2 The whole project is known as the North Wales Wind Farms Connection Project. That part of the North Wales Wind Farms Connection Project that is the subject of the application for a DCO, is known as the Proposed Development. The Proposed Development will carry the power from four proposed wind farms at Clocaenog Forest, Brenig, Nant Bach, Derwydd Bach due to be constructed in North Wales by 2017. The Proposed Development will provide the capacity necessary for the electricity distribution network in the area to transport increased power flows and meet predicted energy demand levels.
- 1.1.3 The TMP sets out the traffic management measures which SP Manweb will require its contractors to adopt and implement for relevant construction works for the Proposed Development, including site preparation works, infrastructure construction and commissioning of the Project. The Proposed Development is described in the overarching Construction Environmental Management Plan (CEMP) (document reference 6.18).
- 1.1.4 The TMP is designed to maintain a good level of environmental protection and limit disturbance (to both people and the environment) from construction activities as far as reasonably practicable.
- 1.1.5 The TMP is an appendix to the CEMP which has been prepared with the objective of securing environmental management controls in one cohesive document for the construction works associated with the Proposed Development and securing mitigation identified in the Environmental Statement (ES) to mitigate the impact of the development.
- 1.1.6 The TMP should be read in conjunction with the CEMP and Chapter 12 Traffic and Transport of the Environmental Statement (document reference 6.12).

1.2 Purpose of TMP

- 1.2.1 The purpose of the TMP is to set out proposed mitigation measures to be implemented during the construction of the Proposed Development. The plan will provide a link between the design phase of the Proposed Development, the consenting process and construction. The outline TMP has been prepared to ensure that the management and mitigation measures contained within this document minimise the impact of the construction of the Proposed Development on existing users of the public highway network. An outline TMP is provided in support of the DCO application to illustrate the proposed structure and to ensure this is sufficiently comprehensive. A requirement to the DCO will require a final document to be prepared and submitted for approval to the local planning authority, such document to be in accordance with this outline TMP.

1.2.2 The TMP focusses on the construction phase of the Proposed Development. High volumes of traffic will not be required for operation of the Proposed Development and therefore has not been considered.

1.3 Construction Traffic

1.3.1 A number of vehicle types will be used for the construction traffic. Table 1.1 below details each vehicle likely to be used for the construction based on previous similar projects.

Table 1.1 Typical Construction Vehicles

Light (LGVs)	Medium (MGVs)	Heavy (HGVs)
4x4 pick up	Trailer/wood chipper	All terrain crane
	Agricultural tractor	Low loader
	JCB Excavator	Tipper lorry
	6 tonne dumper	Tracked excavator
	Winches/tensioner (towed)	Hiab lorry
	Road Sweeper	

1.3.2 LGV and HGV traffic movements have been assessed as part of the Traffic and Transport assessment present in the ES Chapter 12 (document reference 6.12). No abnormal loads are required for the construction of the Proposed Development.

1.3.3 Construction is anticipated to run over a 16 month period. Details of the construction activities and timescales are given in the Design and Construction Report (document reference 7.1).

1.4 Potential Impacts

1.4.1 The construction activities will include the establishment of a temporary construction compound which will include welfare facilities for the workforce, portable cabins and a material store. A site has been identified at Broadleys Farm (see Works Plans, document reference 2.3, sheet 6). The existing St Asaph substation and the proposed Collector Substation will be utilised as temporary storage areas.

1.4.2 Temporary lay down areas will be required along the Proposed Development for the dispersal of plant and equipment.

1.4.3 Materials required for the Proposed Development, such as the conductors, steelwork, insulators and fittings will be centrally stored and delivered to site by a general purpose 4x4 lorry.

1.4.4 Potential impacts created by increased construction traffic include;

- Congestion in sensitive residential areas leading to increased noise and air pollution;
- Use of unsuitable roads by construction traffic

- Limited visibility at accesses
- Impact on pedestrians and cyclists and equestrians on local routes

1.4.5 The potential adverse impacts identified will be mitigated through this outline TMP.

2 TRAFFIC MEASURES

2.1 Introduction

2.1.1 Access and Rights of Way Plans (ARoW Plans) (document reference 2.4) identified the proposed areas for access required for the Proposed Development and highlights where new temporary accesses will be required from the highway to the Proposed Development. The Design and Construction Report (document reference 7.1) details what works are required to those accesses and how they will be constructed.

2.1.2 The Design and Construction Report also explains how the Proposed Development will be constructed and the likely construction activities that will be undertaken as part of the development. It describes the likely vehicles to be used during construction and how construction traffic will be managed during construction to minimise potential effects on local residents.

2.2 Governance

2.2.1 The Construction Contractor will be required to follow the general principles for good working practice and site operations outlined in the Construction Environmental Management Plan (CEMP) and the supporting Management Plans (Hedgerow and Ecological).

2.2.2 As set out in the CEMP, the Environmental Clerk of Works (ECoW) will be responsible for ensuring the responsibilities of this TMP are met.

2.3 Consultation

2.3.1 The detail of this outline TMP shall be completed in consultation with the relevant local authorities (Denbighshire County Council and Conwy County Borough Council).

2.4 Proposed Construction Works

Programme

2.4.1 The programme shall minimise the overlap between activities that generate higher flows on the road network.

2.4.2 Where practical all large vehicle movements will be minimised to avoid areas of high congestion during busy periods.

2.4.3 The CEMP sets out the core working hours for the construction activities. This shall apply to construction traffic also.

Construction Traffic

2.4.4 Construction traffic will use the public highway network to access the Proposed Development, subject to:

- Access to the main construction compound and storage areas at St Asaph substation and the new Collector Substation will be limited to the defined haulage routes as described below;
- HGVs may not use the restricted routes described below.
- The timing of delivery of poles to individual laydown areas along the route of the 132kV Overhead Line, excluding the main construction compound and storage areas at St Asaph substation and the new Collector Substation, to be agreed with the relevant planning authorities.
- As provided for in section 3.6 of the CEMP, the Agricultural Liaison Officer will ascertain the milk tanker delivery/pick-up times for those farms along the route of the Proposed Development. These times will then be passed onto the contractors to manage the delivery times of the poles to the Order Limits.

2.4.5 As provided for in section 8.3 of the CEMP, the Community Liaison Officer will establish, in conjunction with the relevant highway authority, the road network that is affected by school drop offs and pick ups and the period when that road network should not be used by construction traffic for the Proposed Development. SP Manweb will ensure that traffic associated with the construction of the Proposed Development does not use the identified road network during the school drop offs and pick ups period.All construction vehicles shall be to Euro standard IV class.

2.4.6 A road sweeper shall be made available for the duration of the construction works to ensure minimisation of construction material on the local road network. If the road network is not kept clean enough utilising a road sweeper, the construction contractor shall investigate the use of wheel cleaning facilities at the main construction compound and storage areas.

2.4.7 Banksman shall be used at required locations such as the construction compound or laydown areas to guide construction traffic.

2.4.8 The CEMP sets out Environmental Emergency Response and Incident Management Procedures. These requirements will apply to construction vehicles and traffic movements also.

Construction Traffic Routes

2.4.9 To provide safe and responsible construction vehicle access to the main construction compound and storage areas at St Asaph substation and the new Collector Substation at Clocaenog Forest proposed traffic routes have been derived. These routes use the main roads to the construction compound and storage areas wherever possible, minimising the potential effects on the local sensitive receptors.

2.4.10 The construction contractor shall ensure that the haulage routes for access to the main construction compound and storage areas at St Asaph substation and the new Collector Substation are used by all HGV construction traffic and are clearly communicated to all construction and delivery staff.

2.4.11 Haulage routes from the A55 and A5 to the main construction compound at Broadleys Farm and the storage areas at St Asaph substation and the new Collector Substation at Clocaenog Forest are illustrated at Appendix 1. For each route a description is given in Table 2.1 of the route to be taken. Deliveries of material by HGVs for the construction of the Proposed Development should follow the haulage routes as set out the appendix and detailed below.

Table 2.1 Haulage routes to the construction compound at Broadleys Farm and storage areas at St Asaph substation and Clocaenog Forest substation.

Clocaenog Forest (Route A1)	
Road	Direction
A55 – North Wales	Exit junction 27A westbound onto the A 525

Expressway	
A525	Continue onto Upper Denbigh Road
A525	Continue onto St Asaph Road
A525	Continue onto Rhyl Road and at roundabout continue on A543
A543	Through Denbigh and turn left onto B4501
B4501	At junction of the B5435 turn left towards Saron at the Nantglyn cross roads
Unclassified	After approximately 200m turn right toward Clocaenog Forest
Unclassified	Storage compound in Clocaenog Forest
Total distance (km) from junction 27A – 21 km	
Clocaenog Forest (Alternative Route A2)	
Road	Direction
A483	Exit Junction at A5 to Llangollen
A5	Exit at Cerrigydrudion on the B4501
B4501	Turn right (east) approximately 1.5km before A543 towards Saron still following B4501
B4501	At junction of the B5435 turn right towards Saron at the Nantglyn cross roads
Unclassified	After approximately 200m turn right toward Clocaenog Forest
Unclassified	Storage compound in Clocaenog Forest
Total distance (km) from A5 junction - 62.3 km	

Broadleys Compound (Route B1)	
Road	Direction
A483	Exit Junction at A5 to Llangollen
A5	Exit at Cerrigydrudion on the B4501
B4501	At junction of A543 turn right (east) towards Denbigh
A543	Continue pass Groes for approximately 2km and turn right into Broadleys construction compound.
Total distance (km) from A5 junction - 73 km	
Broad Leys Compound (Alternative Route B2)	
Road	Direction
A55 – North Wales Expressway	Exit junction 27A westbound onto the A 525
A525	Continue onto Upper Denbigh Road
A525	Continue onto St Asaph Road
A525	Continue onto Rhyl Road
A525	Turn right onto A543 through Denbigh
A543	After approximately 1.5 miles turn left into Broadleys construction compound
Total distance (km) from junction 27A - 12.5 km	

St Asaph (Route C1)	
Road	Direction

A55 – North Wales Expressway	Exit junction 26
Unclassified	Continue south along William Morgan Road
B5381	At roundabout turn east along Glascoed Road toward St Asaph
Cwttir Lane	After approx. 400m turn left into Cwttir Lane to St Asaph Grid Substation
Total distance (km) from junction 26 - 2.2 km	

~~2.4.12 The Construction Contractor shall discuss and agree with the relevant local authorities the need and methodology for highway condition surveys.~~

2.4.12 In line with established construction practice pre-construction visual inspections of the unclassified road network (and adjacent features, grass verges, hedges, signs etc.) leading to the access points to accurately record the condition of such assets will be undertaken prior to the commencement of construction activity.

2.4.13 This inspection will include photographs and video surveys of the unclassified roads to be utilised for delivery of plant, materials and resource.

2.4.14 Following completion of construction, post construction inspections will then be undertaken and the results compared against the pre-construction inspection results to determine if any damage has occurred on the unclassified road network as a consequence of the Proposed Development construction works.

2.4.15 Visual inspections will be timed such that they are undertaken immediately before and after the works at each section and move along the route of the 132kV Overhead Line as works progress.

2.4.16 Should the post construction visual inspections identify any damage on the unclassified road network that occurs as a result of the construction works of the Proposed Development SP Manweb will repair that damage.

Accesses

2.4.17 ~~2.4.13~~ Wherever possible accesses have been located at existing field gates located within the Order Limits. These may be required to be extended from a standard gate to create a 5m wide gated access. Where no access exists, a new temporary 5m wide gated access will be required.

2.4.18 ~~2.4.14~~ All access created for the Proposed Development will be temporary and used during construction activities. Accesses will be gated. On completion of the development, all new accesses will be removed and reinstated. The access have been set at 5m to ensure suitable visibility is available for all construction vehicles.

2.4.19 ~~2.4.15~~ The areas where work is to commence will be signed to show the times the operational traffic will be in the area and any routes that may be affected.

2.4.20 ~~2.4.16~~ Narrow roads shall be accessed using escort vehicles to highlight the approach of larger pole carrying or material vehicles to ensure conflicts are removed or reduced.

2.4.21 ~~2.4.17~~ Safe access points have been identified and are contained within the Order Limits (ARoW Plans document reference 2.4). These shall be utilised for the duration of the construction activities.

2.4.22 ~~2.4.18~~ Appendix 2 sets out the key local transport routes and the potential tree works that are required to ensure access.

Restrictions

2.4.23 ~~2.4.19~~ It is acknowledged that some of the local road network is not suitable for construction vehicles. Appendix 3 contains a plan identifying roads that are not to be used during construction of the Proposed Development by HGV construction vehicles.

2.4.24 ~~2.4.20~~ The construction contractor shall ensure that the restricted routes are clearly communicated to all construction and delivery staff.

2.4.25 ~~2.4.21~~ Prior to commencement of construction the construction contractor shall carry out further site visits to identify any roads with the following restrictions:

- Height restrictions
- Weight restrictions
- Traffic calming features
- Restricted access
- Speed limits
- Large gradient changes
- Poor visibility
- If any additional restrictions are identified they will be communicated to the drivers of construction vehicles

Signing

2.4.26 ~~2.4.22~~ Temporary signing shall be erected along construction traffic routes, if required, to provide directional access information. This will be to ensure construction vehicles and staff are able to travel according to the required haulage routes.

2.4.27 ~~2.4.23~~ Signage may also be provided in the vicinity of accesses from the local road network into the construction compound, storage areas and accesses into the Order Limits as a warning to other road users of the likely presence of construction vehicles. Temporary signage will be bilingual and produced and agreed with the relevant local authority.

Temporary Traffic Management

2.4.28 ~~2.4.24~~ Where required temporary traffic management will be utilised to enhance safety conditions on the local road network at laydown areas and where access is taken from the road network into the Order Limits. Methods used will include temporary traffic signals, manned stop and go boards and road narrowing.

2.4.29 ~~2.4.25~~ It is anticipated that the main requirement for temporary traffic management will be during the construction of new accesses of the local road network and during delivery of materials to laydown areas.

2.4.30 ~~2.4.26~~ Where required, temporary traffic management measures will be discussed with the relevant local authority.

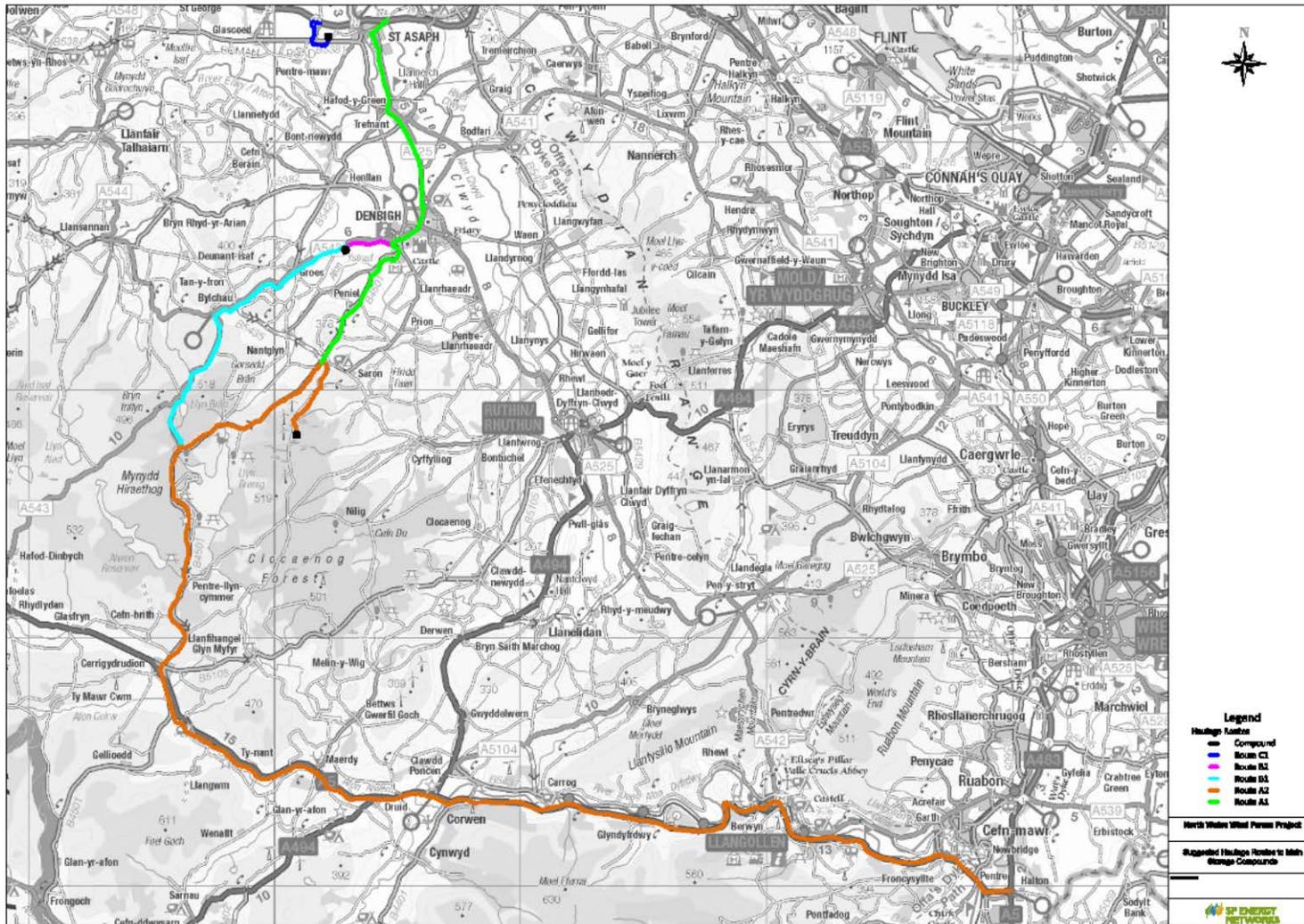
2.5 Communication

- 2.5.1 It is the responsibility of the construction contractor to control the construction traffic and ensure that the required haulage routes are followed and that the restricted routes are avoided.
- 2.5.2 The construction contractor will be provided with this outline TMP and it will form part of the information provided to all companies invited to tender for the construction works.
- 2.5.3 The construction contractor shall include emergency and non-emergency contacts in the finalised TMP. This information shall be clearly displayed in the main site office, located at the construction compound along with the TMP and other relevant consents and plans.
- 2.5.4 It is likely that some areas within the Order Limits will be out of mobile phone range. The construction contractor shall develop a standard communication procedure between contractor and site and ensure that the potential for no mobile reception is included in the TMP.
- 2.5.5 The communication procedure shall also set out how haulage routes and restrictive roads will be communicated to all delivery vehicles as it is anticipated that some may only deliver to site once or twice over the construction programme and will not be directly employed by the construction contractor.

2.6 Management

- 2.6.1 It will be the Construction Contractor responsibility to ensure that the TMP requirements are met. The ECoW or an equivalent person within SP Manweb will oversee the development and execution of the TMP.
- 2.6.2 The Construction Contractor will monitor the TMP and update if required. The Construction Contractor will resolve issues and problems through liaison with relevant stakeholders.
- 2.6.3 It is not anticipated that a traffic management group would be required due to the level of construction traffic and the lack of abnormal loads.

TMP Appendix 1 –Proposed Haulage Routes to Storage Compounds



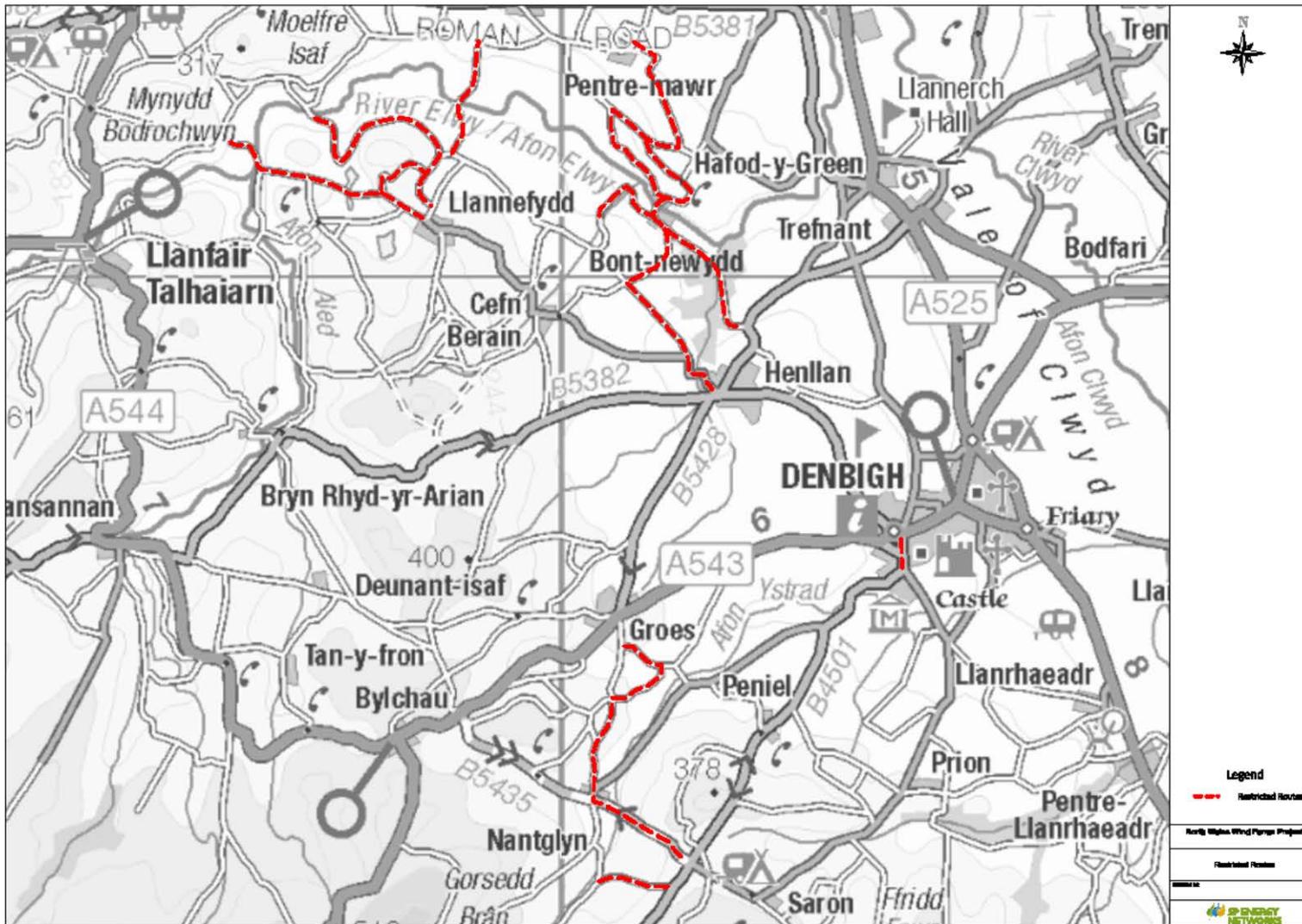
Suggested haulage routes to the storage compounds

TMP Appendix 2 – Local Transport Routes

Route	Tree Trimming Requirements	Approximate Grid Reference	Access to Pole Numbers
Access from Denbigh or Clocaenog along the B4501. Access to Hafoty Ddu Rd.	No work required	n/a	1 to 33
Access from Denbigh or Clocaenog along the B4501. Access to Nantglyn to Saron Rd	No work required	n/a	34 to 45
Access from Denbigh or Clocaenog along the B4501. Access to Bwlch Road.	No work required	n/a	46 to 69
Access from Prion via Denbigh and Ystrad, Access to Bwlch Road and Prion Rd.	Reduce Holly and Hazel unmaintained hedge that overhangs road. Clear overhanging Ash trees.	SJ 04630 61818	51 to 69
Access from Denbigh or Clocaenog along the B4501 or onto the Bwlch Road and Prion Rd	For pole deliveries from the Denbigh direction along the B4501. Clear overhanging branches..	SJ 04242 64975	51 to 83
Access from Denbigh along the B4501 Denbigh to Nantglyn Rd	For pole deliveries from the Denbigh direction along the B4501. Clear overhanging branches	SJ 04242 64975 SJ 03475 64583	83 to 86
Access via Denbigh (A543) opposite Gwaenynog Bach. Ffordd to Gwaenynog	Reduce part unmaintained coniferous hedge around garden.	SJ 02453 65585	87 to 108
Access from Denbigh (A543) Lon Llywelyn	No work required	n/a	95 to 130
Access routes from Henllan or Groes	No work required	n/a	113 to 132
Access routes from Henllan or Groes			133 to 136
Access could be considered along existing	Overhanging trees and private hedge of	SJ 01693 67093	

Route	Tree Trimming Requirements	Approximate Grid Reference	Access to Pole Numbers
Eriviat Bach Lane	Eriviat Bach Isa will need reducing or clearing		
Access routes from Henllan	No work required	n/a	137 to 167
Turn North North East at SH 99555 69815 on the Henllan to Llanefydd Road.	Clear overhanging branches (Oak)	Sh 99684 70132	159 to 193
Suggested access route for heavy plant via Llanefydd (SH 98220 70625)	No work required	n/a	194 to 203
South off Glascoed Rd at SJ 00564 73907, West at SJ 00221 73397, South at SH 99965 73436	Clear overhanging branches (Oak)	SH 99551 73797	204 to 218
Access from Glascoed Road	Clear overhanging branches. (Mainly Ash) Clear overhanging branches (Oak)	SJ 00819 73333 SJ 00995 73445	218 and underground cable works

TMP Appendix 3 Routes Deemed Unsuitable for HGV Construction Vehicles



Restricted Transport Routes