

Appendix A.7

Outline Construction Traffic Management Plan



Outline Construction Traffic Management Plan

Job Name: Bodelwyddan Solar & Energy Storage

Job No: 333101605

Note No: Outline CTMP 01A

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Subject: **Outline Construction Traffic Management Plan – Proposed Battery Energy Storage System and Solar Electricity Generating Facility at Bodelwyddan**

1. Introduction

- 1.1. Stantec UK Limited (Stantec) has been commissioned by Bodelwyddan Solar & Energy Storage Limited (the 'Applicant'), a Special Purpose Vehicle (SPV) owned by Island Green Power UK Limited, to produce an Outline Construction Traffic Management Plan (Outline CTMP) to support a full planning application for a proposed Solar Electricity Generating Facility (Solar Site) with a generation capacity of approximately 110 megawatts (MW) and a Battery Energy Storage System (BESS) with a storage capacity of 110 (MW) and ancillary infrastructure. A full table of acronyms used in this note is provided in **Appendix A**.
- 1.2. The Proposed Development comprises a BESS Site, and Solar Site is situated over six land parcels (one of which includes an ecological mitigation and enhancement area). The BESS and Solar Sites will be connected by a Cable Corridor (CC) of approximately 8km in length
- 1.3. The BESS Site is located entirely within Denbighshire County Council (DCC). The Solar Site is a cross-boundary Site within both Conwy County Borough Council (CCBC) and Denbighshire County Council.
- 1.4. The Outline CTMP provides an overarching document for the management of construction vehicle movements to and from the Proposed Development during the construction phase. The goal of a Outline CTMP is to reduce the impacts of construction vehicles on the local highway network. In summary, the objectives of this Outline CTMP aims to:
 - Protect the amenity of neighbouring properties;
 - Ensure that construction traffic impacts on the local highway network are minimised; and
 - Maintain safety for all road users.
- 1.5. It is understood that the submission of a detailed Construction Traffic Management Plan (CTMP) will likely be a conditional requirement attached to the planning permission.
- 1.6. This Outline CTMP has been prepared and should be read in conjunction with the Transport Statement also submitted as part of the application.

2. Local Highway Network

- 2.1. The existing land where the BESS Site and Solar Site are to be located are currently occupied by undeveloped agricultural land. An assessment of the local highway networks has been provided for each land-use and the location of the Proposed Development in a general context is shown in **Figure 1** below.

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BESS Site

- 2.2. **Figure 2** shows the BESS Site location in context with the local highway network.
- 2.3. The BESS Site is to be accessed from an unnamed carriageway which runs south of Glascoed Road (B5381), via a simple priority junction. The existing unnamed carriageway is a single rural road which has no road markings. The carriageway has two passing places on the east side. The carriageway provides connections to Glascoed Road approximately 260m to the north via a priority junction.
- 2.4. It is noted that at present there is signage at the northern end of the unnamed road, which states that the road is unsuitable for Heavy Goods Vehicles (HGVs).
- 2.5. Glascoed Road is a single two-way carriageway road. Glascoed Road is subject to the National Speed Limit (60mph) within proximity of the Glascoed Road / unnamed road priority junction. Glascoed Road reduces to 30mph approximately 130m east of the Glascoed Road / unnamed carriageway priority junction.
- 2.6. Glascoed Road connects to the Ffordd William Morgan / Glascoed Road / Ffordd Richard Davies four arm roundabout junction approximately 215m east of the Glascoed Road / unnamed road priority junction.
- 2.7. In addition, approximately 2.1 km to the west of the Proposed BESS, Glascoed Road terminates as the minor arm of a three-arm priority junction with Engine Hill. Engine Hill runs north, providing access to Bodelwyddan village centre and Junction 25 of the North Wales Expressway (A55). Alternatively, the B5381 continues west as Roman Road (B5381) which provides connections to Moelfre and the A548 approximately 7.7 km west of the BESS Site.
- 2.8. Ffordd William Morgan is a single two-way carriageway which is subject to a 20mph speed limit and has street lighting at regular intervals along the road. Ffordd William Morgan runs north of the four arm Glascoed Road / Ffordd Richard Davies / Ffordd William Morgan roundabout junction and provides access to Junction 26 of the North Wales Expressway (A55), located approximately 950m to the north of the roundabout junction.
- 2.9. The North Wales Expressway (A55) is a dual carriageway road which forms part of the strategic highway network. The A55 serves as a key route linking Llandudno and Conwy to the west and Chester to the east. Within the vicinity of the BESS Site, the North Wales Expressway provides access to Saint Asaph to the southeast and Abergele to the northwest. The road is subject to the National Speed Limit (70mph).
- 2.10. Due to the operational nature of the BESS Site, pedestrian and cycle access will be negligible. A review of the Public Rights of Way (PRoW) maps identified that there are no existing PRoWs within close proximity to the Proposed BESS Development.

Solar Site

- 2.11. **Figure 3** shows the Solar Site location in context with the local highway network.
- 2.12. The northern and southern Solar Site are proposed to be accessed from Rhuddlan Road (A547). Rhuddlan Road is a single two-way carriageway road subject to the National Speed Limit (60mph). Rhuddlan Road links to the Ffordd Abergele / St Asaph Avenue roundabout junction approximately 1.1 km to the east of the Proposed Solar Site. In addition, approximately 3 km to the west of the Proposed Solar Site, Rhuddlan Road links to Junction 24 of the North Wales Expressway (A55) via the Faenol Interchange roundabout junction, providing access to the strategic highway network.
- 2.13. Ffordd Abergele is a two-way single carriageway which is subject to the National Speed Limit (60mph). Ffordd Abergele runs east of the Rhuddlan Road/Ffordd Abergele/St Asaph Avenue roundabout junction and terminates at the St Asaph Road (A525)/Station Road roundabout junction, located approximately 2.5 km east of the proposed Solar Site in Rhuddlan.

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- 2.14. Due to the operational nature of the Proposed Development at the Solar Site, vehicle, pedestrian and cycle access will be negligible.
- 2.15. A review of the PRow maps identified one PRow route in the vicinity of the Site, named the Quarry Line Path. The Quarry Line Path is situated north of Rhuddlan Road and runs along the eastern boundary of the northern part of the Solar Site. The PRow routes north from Rhuddlan Road towards the seaside resort of Towyn. The PRow does not fall within the existing or proposed site boundaries, as shown in **Figure 3**.

3. Proposed Development

BESS Site

- 3.1. The BESS Site is located approximately 2.5 km southeast of Bodelwyddan and can be accessed via an unnamed road which runs south of Glascoed Road (B5381). The Proposed Development at the BESS Site measures an area of 6.5 hectares. The BESS Site is bound by an unnamed road to the north, Bodelwyddan Substation to the east and agricultural land to the south and west.
- 3.2. The BESS Site is proposed to capture and store excess electricity generated from the Solar Site and also from the National Grid Bodelwyddan Substation. The electricity is proposed to be stored in the batteries and transferred to the grid when demand is required.
- 3.3. The Proposed Development at the BESS Site comprises:
- BESS units;
 - BESS inverters or PCU;
 - Substation, transformer and ancillary buildings;
 - Fencing, gates, CCTV and internal access tracks;
 - Drainage and water storage tank;
 - Access;
 - Landscaping and biodiversity mitigation and enhancement;
 - Cables; and
 - Associated ancillary development.

Solar Site

- 3.4. The Solar Site is situated across six plots of land north and south of Rhuddlan Road (A547) (approximately 2 km northwest of Bodelwyddan). The Solar Site (including the interconnecting cables and ecological mitigation and enhancement area) measures an area of 168.95 hectares. The northern Solar Site (Parcels 1-3 shown within the Site Location Plan Ref. 01 which forms part of the planning drawing pack) is bound by agricultural land to the north and east of the Site, with an existing Solar Farm and Rhuddlan Road situated to the south. The southern Solar Site (Parcels 4-6) is bound by agricultural land to the south, Rhuddlan Road (A547) to the north, St George carriageway to the west, and an unnamed road to the east.
- 3.5. The Proposed Development at the Solar Site will comprise the following elements.
- Solar photovoltaic ('PV') panels and mounting structures – these will convert sunlight / daylight into electrical current;

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- Solar inverters and transformers (or 'power conversion units' ('PCU'));
- Switchroom building(s);
- Fencing, gates, CCTV and internal access tracks;
- Access;
- Landscaping and biodiversity mitigation and enhancements;
- Cables; and
- Associated ancillary development.

Cable Corridor

- 3.6. The Cable Corridor (CC) will comprise underground electrical cabling to connect to the BESS and the Solar Site. The CC will measure approximately 8 km in length between the two sites with the BESS at the southeast end of the CC and the Solar Site at the northwest end of the CC.
- 3.7. As part of the construction phase, a combination of large articulated vehicles and smaller rigid vehicles are required to access the Proposed Development, with the use of an abnormal indivisible loads to deliver the transformers to the Proposed BESS Development.

BESS Access

- 3.8. Vehicle access to the Proposed Development at the BESS Site is to be taken from the unnamed carriageway that runs south of Glascoed Road (B5381).
- 3.9. In the vicinity of the unnamed road priority junction, Glascoed Road is subject to the National Speed Limit (60mph). In accordance with the Design Manual for Roads and Bridges (DMRB), a visibility splay of 2.4m x 215m would be required in both directions to achieve the 'Desirable Minimum' standard, or 2.4 m x 160 m to meet 'one step below the Desirable Minimum' standard.
- 3.10. **Drawing 333101605/100/100** shows the existing visibility splay achievable at the Glascoed Road / unnamed road priority junction. As can be seen, a visibility splay of 2.4 m x 16.5 m to the west and 2.4 m x 215 m to the east can be achieved. At present the visibility spay achievable at the existing junction to the west is therefore significantly sub-standard when compared with DMRB standards.
- 3.11. As part of the proposal, improvements are required to the visibility splay to the west of the junction. **Drawing 333101605/100/101** shows the required visibility splay of 2.4 x 160m visibility splay to the west, which is in accordance with the 'one step below the Desirable Minimum' standard for roads subject to 60mph speed limits. This will represent a significant improvement in comparison with the existing situation.
- 3.12. At present, there is signage at the northern end of the unnamed road, which states that the road is unsuitable for HGVs. In order to accommodate HGV traffic, land is to be acquired to widen sections of the unnamed road to allow suitable movement of HGVs and Abnormal load vehicles.
- 3.13. **Drawing 333101605/100/102** shows the swept path analysis of an articulated vehicle entering and exiting the Glascoed Road / unnamed carriageway priority junction. The drawing also shows the vehicle travelling along the unnamed road and accessing the Site.
- 3.14. **Drawing 333101605/100/103** shows the swept path analysis of an abnormal indivisible load (AIL) vehicle entering and exiting the Glascoed Road / unnamed carriageway priority junction and entering and exiting the site in forward gear.

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- 3.15. Due to the operational nature of the proposals, vehicular, pedestrian and cycle access to the Proposed BESS will be negligible.

Solar Site Access

- 3.16. Vehicle access to the Solar Site parcels is proposed to be taken from Rhuddlan Road at five proposed access points. Two access points are noted as primary accesses, and three alternative access points are noted as secondary access points for emergency access. Three access points are to be taken from the northern side of Rhuddlan Road, and two are to be taken from the southern side of Rhuddlan Road. The proposed access points are shown within **Drawing 333101605/100/104**.
- 3.17. The proposed access points highlighted in **Drawing 333101605/100/104** have been designed in accordance with DMRB standards.
- 3.18. The first access location is shown in **Drawing 333101605/100/105A**. The drawing shows that an articulated HGV is able to enter and exit the Site in forward gear. The drawing also shows that a visibility splay of 2.4 m x 215 m is achievable in both directions, which is in accordance with the 'Desirable Minimum' for roads subject to 60mph speed limits.
- 3.19. The primary access (option 2) location is shown in **Drawing 333101605/100/106A**. The drawing shows that an articulated HGV is able to enter and exit the Site in forward gear. The drawing also shows that a visibility splay of 2.4 m x 215 m is achievable to the left which is in accordance with 'Desirable Minimum' for roads subject to 60mph speed limits. The visibility to the right is measured at 2.4 m x 160 m which is 'one step below the 'Desirable Minimum' for 60mph road speeds.
- 3.20. The 'secondary access 1' location is shown in **Drawing 333101605/100/107A**. The drawing shows that an articulated HGV is able to enter and exit the proposed Site in forward gear. The drawing also shows that a visibility splay of 2.4 m x 215 m is achievable in both directions which is in accordance with the 'Desirable Minimum' for roads subject to 60mph speed limits.
- 3.21. The 'secondary access 2' location is shown in **Drawing 333101605/100/108A**. The drawing shows that an articulated HGV is able to enter and exit the proposed Site in forward gear. The drawing also shows that a visibility splay of 2.4 m x 215 m is achievable in both directions, which is in accordance with the 'Desirable Minimum' for roads subject to 60mph speed limits.
- 3.22. The 'secondary access 3' location is shown in **Drawing 333101605/100/109A**. The drawing shows that an articulated HGV is able to enter and exit the proposed Site in forward gear. The drawing also shows that a visibility splay of 2.4 m x 215 m is achievable in both directions, which is in accordance with DMRB standards for roads subject to 60mph speed limits.
- 3.23. Due to the operational nature of the proposals, vehicular, pedestrian and cycle access to the sites will be negligible.

4. Construction Programme and Methodology

- 4.1. At this stage, the details of the construction programme are not known and will need to be confirmed in a detailed CTMP once a Main Works Contractor (MWC) has been appointed, which is subject to planning permission being granted.
- 4.2. The construction trip generation assessment has therefore been based on a 24-month construction phase. The estimated construction phase period includes for six working days (Monday to Saturday), operating between 0700-1800 during weekdays and 0800-1300 on Saturdays with no construction vehicle movements permitted during peak hours.
- 4.3. It is noted that the construction phase typically sees a peak period which comprises the most construction vehicles and staff accessing a development. The peak period for the construction phase is anticipated to be during the period of compound set up, excavation of materials for set up, and the arrival of materials for construction.

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5. Estimated Vehicle Movements

- 5.1. This section provides a forecast of the trip generation associated with the existing Site and the Proposed Development. A first principles approach has been carried out to demonstrate the likely traffic impact of the Proposed Development on the local road network.
- 5.2. The Transport Statement, produced in support of the Proposed Development and to be read in conjunction with this document, includes the detailed methodology and trip generation assessment.

Total Trip Generation

- 5.3. To establish the proposed total trip generation, the proposed construction HGV daily peak trip generation and proposed staff daily trip generation have been combined.
- 5.4. **Table 1** summarises the proposed peak daily trip generation during the Construction phase of the development.

*Table 3: Proposed Peak Daily Trip Generation (*Subject to rounding discrepancies)*

Total Vehicles	BESS	Solar Site	Cable Corridor
HGVs - Total Vehicles	1	4	6
HGVs - Total Vehicles (Two-Way)	3	8	12
Staff - Total Vehicles	3	36	3
Staff – Total Vehicles (Two-Way)	6	72	6
Combined - Total Vehicles	4	40	9
Combined - Total Vehicles (Two-way)	8	80	18

- 5.5. In summary, the BESS Site and CC are proposed to generate low levels of peak daily trips.
- 5.6. Whilst the Solar Site forecasts 80 two-way trips across a peak day, it is noted that eight vehicle movements are to be across the operational day. Additionally, as it is noted that the contractor will encourage staff to car share and reduce single occupancy vehicle use, the number of staff vehicles anticipated could reduce. As part of mitigation measures, staff will arrive outside of peak hours.
- 5.7. It is also noted that the routing of construction vehicle trips will travel directly to and from the strategic highway network via the most direct route avoiding (where applicable) sensitive areas (residential, schools etc.) which has been outlined within **Section 6** of this Outline CTMP.
- 5.8. As the construction and staff trips are proposed to avoid peak hours, no further assessment of the traffic impact is required.

6. Proposed Construction Vehicle Routing

- 6.1. Vehicle routes will adhere to the Trunk Road network wherever possible. These vehicle routes have been reviewed with respect to minimising potential impacts, conflicts, and hazards with sensitive points. The construction vehicle routing plan for the BESS Site and Solar Site has been included as **Figure 4** and **Figure 5** respectively.
- 6.2. Hauliers and suppliers will be informed that these routes are always required to be followed unless otherwise agreed or diversions are in place.

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- 6.3. All vehicles (vans, HGVs, and abnormal loads) are anticipated to use the same routes to reach the Site.
- 6.4. Construction vehicles for both the BESS Site and Solar Site will arrive at the Site outside of the typical road network peak hours to reduce the impact of the construction of the Proposed Development on the local road network.
- 6.5. The spoil management arrangements will be set out within a Spoil Management Plan (SMP), which is expected to be a conditional requirement attached to the planning permission .
- 6.6. At this stage, construction vehicle parking provision and layout has not been established. As part of the detailed CTMP, parking provision and layout will be provided in further detail. However, upon arrival of construction vehicles to the Site, the contractor will ensure that construction vehicle parking will be monitored and managed in accordance with the CTMP.

BESS Routing

- 6.7. Construction vehicles will arrive to the BESS access situated along the unnamed carriageway south of Glascoed Road (B5381). Construction vehicles will:
- Exit the North Wales Expressway (A55), leaving at Junction 26;
 - Follow Ffordd William Morgan south to the Ffordd William Morgan / Glascoed Road (B5381) / Ffordd Richard Davies roundabout;
 - At this roundabout, vehicles will take the western Glascoed Road (B5381) arm west, until the unnamed carriageway / Glascoed Road priority junction; and
 - Vehicles will route south along the unnamed carriageway to access the Site.
- 6.8. Construction vehicles leaving the BESS will take the same routing towards the North Wales Expressway (A55) at Junction 26.

Solar Site Routing

- 6.9. Construction vehicles will arrive to the relevant Solar Site accesses situated along Rhuddlan Road (A547). Construction vehicles will:
- Exit the North Wales Expressway (A55) at Junction 24; and
 - Travel east onto Rhuddlan Road where the vehicles will enter one of the five Solar Site access points.
- 6.10. Construction vehicles leaving the Solar Site will take the same routing towards the North Wales Expressway (A55) at Junction 24.

7. Management Strategy

Commencement

- 7.1. Construction traffic management measures and the management strategy will be in place from the start of the construction period and shall be maintained throughout the period, rather than retrofitted, to react to issues as they arise.

Outline CTMP Coordination

- 7.2. The Proposed Development comprises the BESS Site, Solar Site and Cable Corridor, for which there may be separate contractors.

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- 7.3. The Site Manager/s of each compound will be the dedicated point of contact and be responsible for Outline CTMP implementation for the duration of the construction period including mobilisation. There is flexibility to delegate this role to a suitably qualified individual if appropriate. The Site Manager/s can delegate tasks to other members of the Contractor's Environmental Team and/or suitably qualified sub-contractor.
- 7.4. It is a good practice requirement that the detailed CTMP coordination is in place before works at the Proposed Development. This is necessary so that there is someone responsible for undertaking tasks prior to commencement, to ensure that joining instructions are prepared and distributed to all personnel. The Site Manager/s or their delegates will act as the promoter of the detailed CTMP to the construction staff and visitors and provides a key point of contact.
- 7.5. Before start of construction, the Site Manager/s will work in partnership with the project team and others to undertake the following:
- Manage the implementation of measures set out in the detailed CTMP;
 - Prepare and deliver training for people driving to and on Site, scheduling and avoidance of peak hours, including onsite speed limits, safe manoeuvring in forward gear, use of level crossings and consideration for non-motorised users where construction access routes come close to Public Rights of Way (PRoW) where applicable;
 - Prepare and produce induction material for staff, sub-contractors and visitors;
 - Deliver training and information for staff regarding the Staff Travel Plan; and
 - Set up appropriate management arrangements, contact arrangements, and agreement of any pre-construction road condition surveys with the local highway authorities if required.

8. Outline CTMP Measures

Overview Planned Measures

- 8.1. **Table 2** provides information on which measures the contractor will observe and install to manage vehicle visits and delivery / collections at the Site. Those measures adopted or not considered are outlined in subsequent paragraphs.

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Table 1: Planned Measures Checklist

Planned Measures Checklist	Committed	Proposed	Consider
Measures influencing construction vehicles and deliveries			
Safety and environmental standards and program	x		
Adherence to designated routes	x		
Delivery scheduling		x	
Re-timing for out of peak deliveries		x	
Re-timing for out of hours deliveries		x	
Measures to encourage sustainable freight			
*Freight by Water			x
*Freight by Rail			x
Material procurement measures			
Re-use of material on Site		x	
Smart procurement		x	
Implement a staff travel plan			x

**If site, consolidation centre or holding areas are within 100m of foreshore of navigable water-way or rail freight siding.*

Safety and Environmental Standards and Programmes

- 8.2. The applicant is committed to ensuring all contractor and sub-contractor vehicles arriving at Site comply with relevant safety measures and requirements relating to Work Related Road Risk.
- 8.3. Industry best practice will be adopted wherever possible to support the construction phase of the development. This will be achieved by ensuring that through the procurement process the sub-contractors and supply chain will be members of or signed up to relevant best practice schemes and initiatives including, for example:
- **Considerate Constructors Scheme (CCS):** Promotes best practice that relates to on-site activities and those in the vicinity of the Site. It is noted that the Site will be registered under this scheme.
- 8.4. **Fleet Operator Recognition Scheme (FORS):** For suppliers that deliver to, and hauliers that visit the Site, the contractors will mandate these businesses to be members of FORS before they could deliver to Site. FORS bronze will be a minimum requirement with a preference given to those suppliers who reach the silver or gold standard, which would mean they also reach the Cconstruction Logistics and Community Safety (CLOCS) standard as set out below.
- **Construction Logistics and Community Safety (CLOCS):** CLOCS brings the construction logistics industry together to revolutionise the management of work-related road risk and ensure a road safety culture is embedded across the industry. The aim is to ultimately help protect vulnerable road users who share the roads with construction vehicles.

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Adherence to designated construction traffic routes

- 8.5. The proposed construction traffic routes are set out in **Section 6** of this report. These access routes have been reviewed with respect to minimising potential impacts, conflicts and hazards.
- 8.6. The appointed contractors would provide a route plan to all suppliers when orders are placed to ensure drivers are fully briefed on the required route to take. The supplier will be made aware that these routes are always required to be followed unless otherwise agreed or diversions are in place.
- 8.7. Haulage contractors undertaking deliveries to the Proposed Development will be informed of the relevant routes by the Site Manager/s or delegated representative/s as part of their delivery instructions (and signage along the route will reinforce this information).
- 8.8. Contractor staff will be given the construction routes as part of their joining instructions. It is the responsibility of the Site Manager/s to ensure that all visitors to the Site are aware of the construction traffic routes prior to travelling to the Site.

Delivery scheduling

- 8.9. The Proposed Development is anticipated to generate a low number of daily construction vehicle movements. Contractors should check that no construction vehicles are to arrive during the morning and evening peak hours to reduce any impact on the local highway network.
- 8.10. The detailed trip generation has been detailed within the Transport Statement associated with this application and within **Section 5**.
- 8.11. It is anticipated that deliveries and collections will be scheduled in advance by booking the vehicle visits with a logistics manager using the Virtual Booking Management System (VBMS). It will likely be required that suppliers and hauliers pre-book delivery or collection slots at least 24 hours in advance or agree on a pre-planned vehicle visit schedule.
- 8.12. Deliveries that turn up without a booking will be turned away from Site – the relevant supplier/hauler will be notified of the requirement to book a delivery slot. Continued failure to comply with this requirement will result in suppliers/hauliers being removed from the project. Longer booking periods will also be available where there is certainty on the requirements of specific materials.
- 8.13. The specification of the VBMS and booking requirements will be confirmed in the detailed CTMP subject to planning permission being granted.

Re-timing for out of Peak Deliveries

- 8.14. Timing of peak deliveries are yet to be determined and will be provided in the detailed CTMP.
- 8.15. Delivery and collections should be scheduled at appropriate times across the day and are to be outside of peak hours (typically 08:00-09:00 and 17:00-18:00).
- 8.16. Deliveries should be coordinated to avoid multiple vehicles arriving or departing at Site at the same time.

Freight by Water and Rail

- 8.17. The BESS Site and Solar Site are situated further than 1 km from facilities to provide freight by water or by rail. The use of freight by water or rail has therefore not been considered in further detail.

Re-use of Material on Site

- 8.18. Where possible, any aggregate or material generated will be re-used on-site during the construction phase.

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Smart Procurement

- 8.19. The suppliers should be members of best practice schemes such as FORS and CLOCS.
- 8.20. In addition, the applicant will seek to use local suppliers if deemed efficient and appropriate and meets the contractor's standards for materials and operations.

Staff Travel to Work

- 8.21. Given the Site location and limited access by pedestrian, cycle and public transport, it is expected that the construction staff will travel using only vehicle modes.
- 8.22. Contractors are to encourage staff to car share, and the potential for shuttlebus travel should be offered to staff.
- 8.23. The final arrangements for construction worker travel will be confirmed in the detailed CTMP subject to planning permission being granted. This also includes for details on parking provision for staff during the construction phase.

Working Hours

- 8.24. The anticipated Site working hours have been set out below. However, these working hours are to be confirmed in the detailed CTMP:
- 0700-1800 Monday to Friday
 - 0800-1300 Saturday
 - No working on Sunday or Bank Holidays
- 8.25. If work needs to be undertaken outside of the confirmed hours, the contractor will obtain permission from the Local Authority before the work takes place.
- 8.26. Contractors should check that no construction vehicles are to arrive during the morning and evening peak hours to reduce any impact on the local highway network.

Access and Internal Management

- 8.27. Traffic Marshalls will be available for the management of vehicles entering and exiting the site and to assist with vehicle manoeuvring. Further information regarding the scheduling, marshalling, and management of vehicle access will be provided within the detailed CTMP.
- 8.28. Wheel washing equipment will be available and used on-site within the construction compound, as required. This will prevent the transfer of dirt and stones onto the public road. All drivers will be required to check that their vehicle is free of dirt, stones and dust prior to departing from the Site. Wheel washing facilities and management will be detailed further within the CTMP.
- 8.29. Internal haul roads will be dampened as required to minimise dirt and dust and drivers will adopt driving practices that minimise dust generation including a 5mph speed limit. Further information regarding the internal haul roads, signage, speed limits and parking are to be provided within the detailed CTMP.
- 8.30. As aforementioned in **Section 6**, construction vehicle parking provision and layout has not been established. As part of the detailed CTMP, parking provision and layout will be provided in further detail. However, upon arrival of construction vehicles to the Site, the contractor will ensure that construction vehicle parking will be monitored and managed in accordance with the CTMP.

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9. Outline Delivery Management Plan

Outline Delivery Management Plan (DMP)

- 9.1. Deliveries will not be undertaken outside Site operational hours or during peak hour periods, except by prior agreement with the highway authority. Exceptions where prior agreement will need to be sought are likely to be Abnormal Loads deliveries, which are typically transported overnight to avoid disruption on the local highway network.
- 9.2. Signage will inform delivery drivers and local traffic of the construction access points.
- 9.3. Training and delivery route maps and instructions will be provided to drivers. This will include:
- What to do in the event of a road accident or road closure;
 - Consideration for non-motorised users on local roads and where construction access routes cross or come close to PRow;
 - No parking on the public highway;
 - No turning in private accesses;
 - Load covering requirements;
 - Wheel washing arrangements;
 - On-site speed limits;
 - On-site manoeuvring in forward gear;
 - Use of traffic marshals and banksmen;
 - On-site parking and unloading facilities; and
 - Points of contact.
- 9.4. Site access and egress points and on-site parking will be managed by the Site Manager/s to keep routes through the Site and at compounds clear.
- 9.5. For delivery management and emergencies, a 24-hour contact number for the Site Manager will be provided alongside a contact number for the Local Highway Authorities. Communication with the public and in the event of a complaint is addressed as part of the wider Outline CTMP in **Section 11**.
- 9.6. The detailed DMP will be agreed as part of the detailed CTMP.

Outline Abnormal Indivisible Loads Delivery Management Plan (AIL DMP)

- 9.7. Whilst Abnormal Indivisible Loads (AILs) are anticipated to access the sites, it is noted that these vehicles are typically transported overnight to avoid disruption on the local highway network.
- 9.8. Road based AILs fall within three classifications, including:
- Special Order Load – AILs greater than 150 tonnes or are measured over 6.1m in width, or over 30m in length;
 - Special Type General Order – AILs over the weight limit for the number of axles, measuring more than 4.3m in length, or are longer than 27.5m; and,

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- Construction and Use – Loads that are not in the Special-Order categories but do not qualify as an HGV movement due to their size.
- 9.9. The AILs used for the Proposed Development are to transport transformer deliveries to and from the Site. The movement of AILs over the construction phase will be infrequent.
- 9.10. At present, there is signage at the northern end of the unnamed road, which states that the road is unsuitable for HGVs. In order to accommodate HGV traffic, land is to be acquired to widen sections of the unnamed road to allow suitable movement of HGVs and Abnormal load vehicles.
- 9.11. Vehicle swept path of an AIL has been assessed within **Section 3**. It is acknowledged that AIL routing will follow direct routes to the Strategic Road network and these vehicle routes have been reviewed with respect to minimising potential impacts, conflicts, and hazards with sensitive points (residential areas, schools etc.).
- 9.12. The detailed CTMP will provide further detail on the management of AIL vehicles accessing the Proposed Development and internal routing.

10. Outline Construction Staff Travel Plan

- 10.1. It is understood that the submission of a detailed Staff Travel Plan for staff during the construction phase will likely be a conditional requirement attached to the planning permission if granted.
- 10.2. The Staff Travel Plan will encourage workers to travel to the site via sustainable travel or car share to reduce single occupancy vehicle use.
- 10.3. It is noted that due to the location of the Proposed Development, there is limited access to public transport and active travel modes for both the BESS Site and Solar Site. On this basis, the Travel Plan should focus on the car sharing opportunities for staff.
- 10.4. At this stage, the following objectives have been set out:
- Reduce single occupancy car travel by construction staff;
 - Increase car sharing;
 - Contractor to consider a shuttlebus provision to be offered to staff; and
 - Increase awareness and knowledge of the opportunities of car sharing.
- 10.5. A Travel Plan Coordinator will be appointed to oversee the implementation of the Travel Plan. The role of the Travel Plan Coordinator includes:
- Implement the measures set out within the detailed Travel Plan;
 - Raise awareness and promote the Travel Plan; and
 - Provide advice to construction workers regarding car sharing opportunities and work with the contractor to establish any further mitigation measures to reduce single occupancy vehicle use.
- 10.6. The detailed Travel Plan will be agreed with the local highway authority (DCC and CCBC) for both the BESS Site and Solar Site.

Outline Construction Traffic Management Plan

11. Monitoring and Reporting

- 11.1. An appointed Construction Logistics Manager will oversee the managing and monitoring of construction vehicles on behalf of the Main Works Contractor. A record will be kept of vehicle visits to Site to provide evidence on the number and type of vehicles, and the efficiency and accuracy of the visits made. The information collected of vehicle movements may include:
- Total vehicle count by day;
 - Vehicle type/ size /age; and
 - Vehicle arrival, departure and dwell time.
- 11.2. Breaches and complaints including:
- Vehicle routing;
 - Unacceptable queuing;
 - Unacceptable parking; and
 - Supplier FORS and CLOCS accreditation.
- 11.3. Safety including:
- Logistics-related accidents;
 - Record of associated fatalities and serious injuries; and
 - Vehicles and operations not meeting safety requirements.

Compliance Arrangements

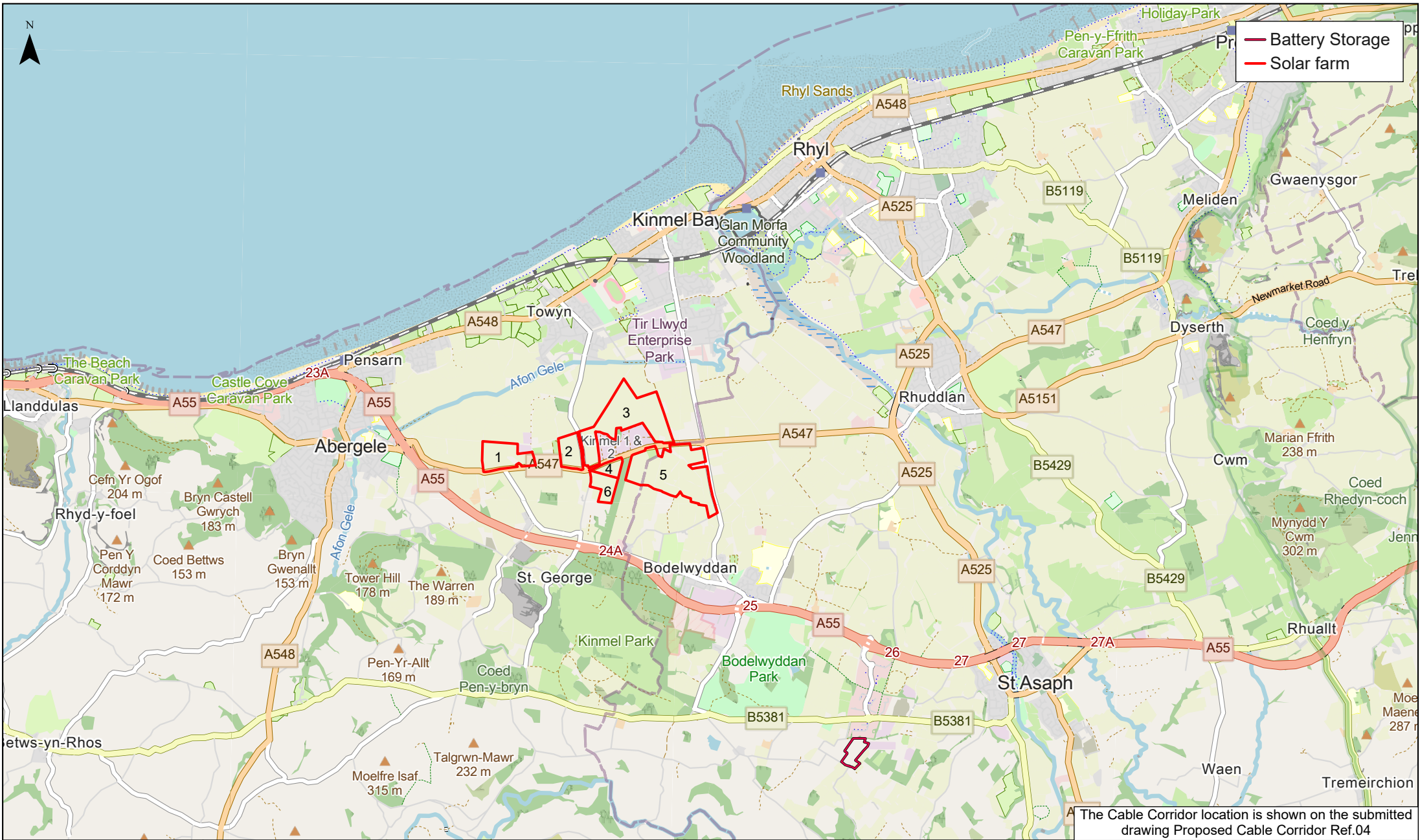
- 11.4. For those suppliers and hauliers that fail to follow advice to avoid delivering during peak periods or conform to other instructions, the site manager will liaise with these operators to seek improvements in their level of compliance. Should no improvement be forthcoming the supplier may be removed from the contract.
- 11.5. An incident/complaints register will be created into which incidents/complaints can be recorded. Once entered, the incident/ complaint will be dealt with using the normal procedures that the main contractor has in place for its development site construction works.

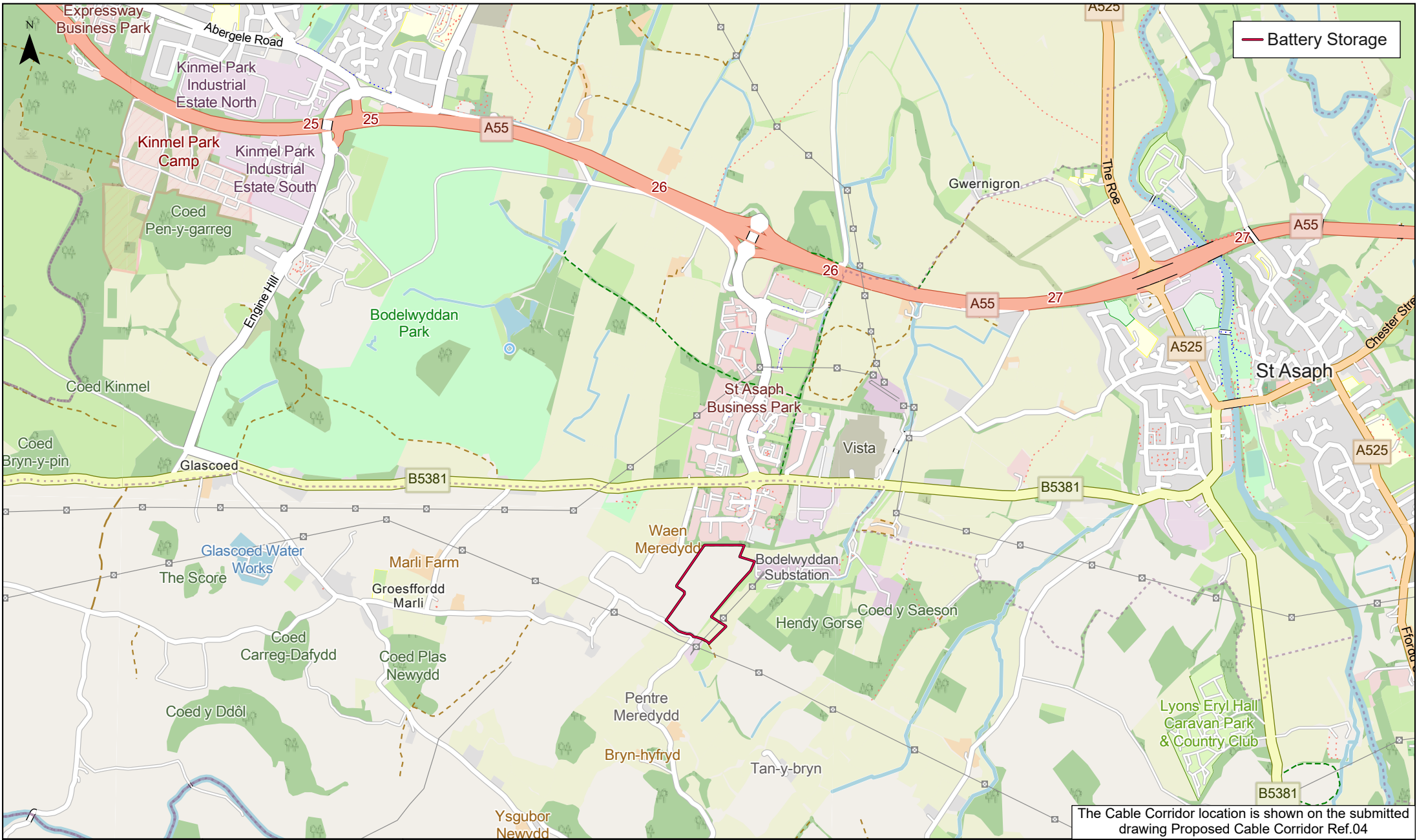
Reporting & Review Arrangements

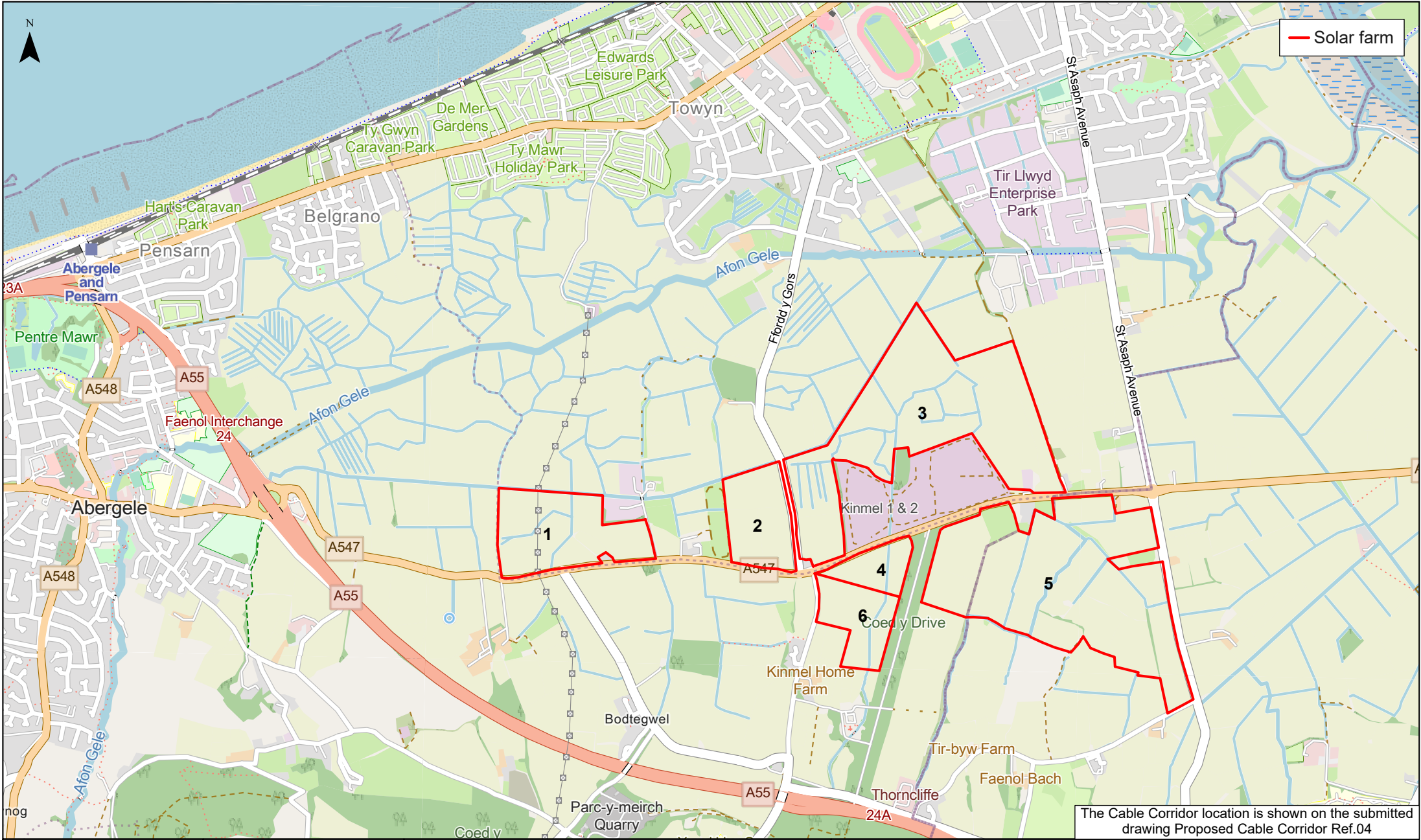
- 11.6. Weekly reviews of vehicle activity will be held between the site management group using the data collected as stated above. Where an issue or complaint is identified, the site management group and the Construction Logistics Manager will implement remedial actions to provide a resolution.

Outline Construction Traffic Management Plan

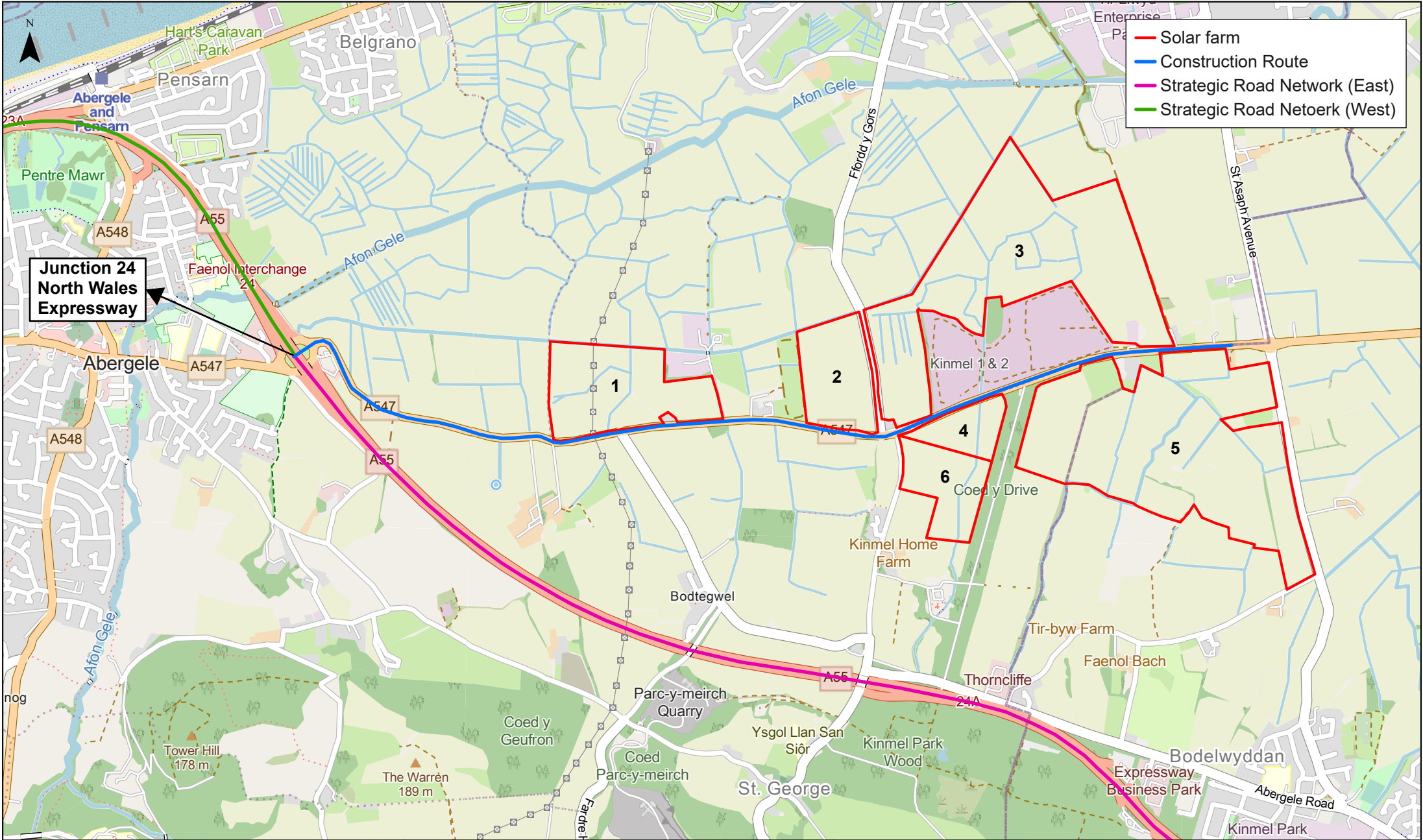
Figures

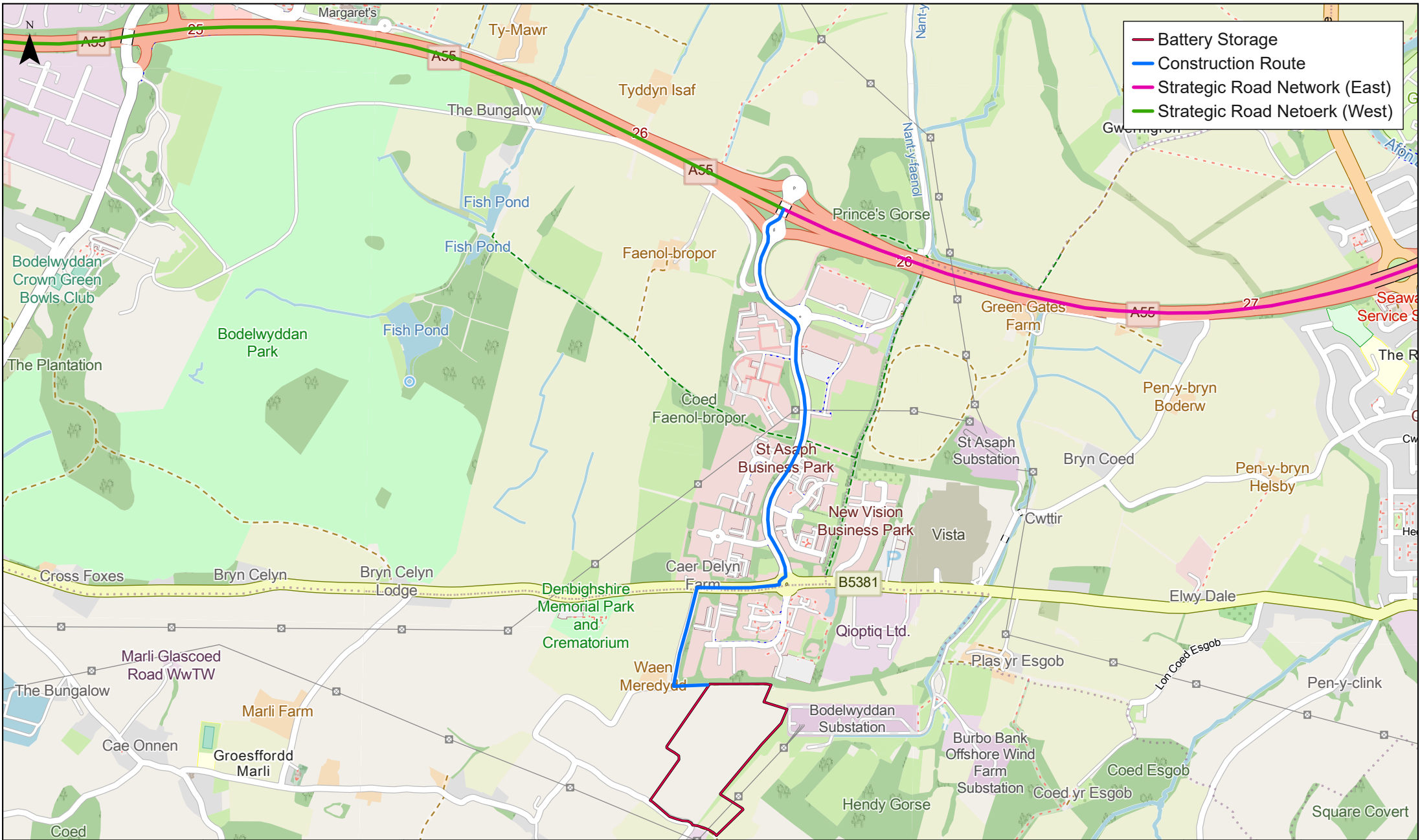






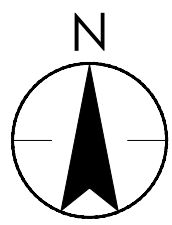
The Cable Corridor location is shown on the submitted drawing Proposed Cable Corridor Ref.04





Outline Construction Traffic Management Plan

Drawings

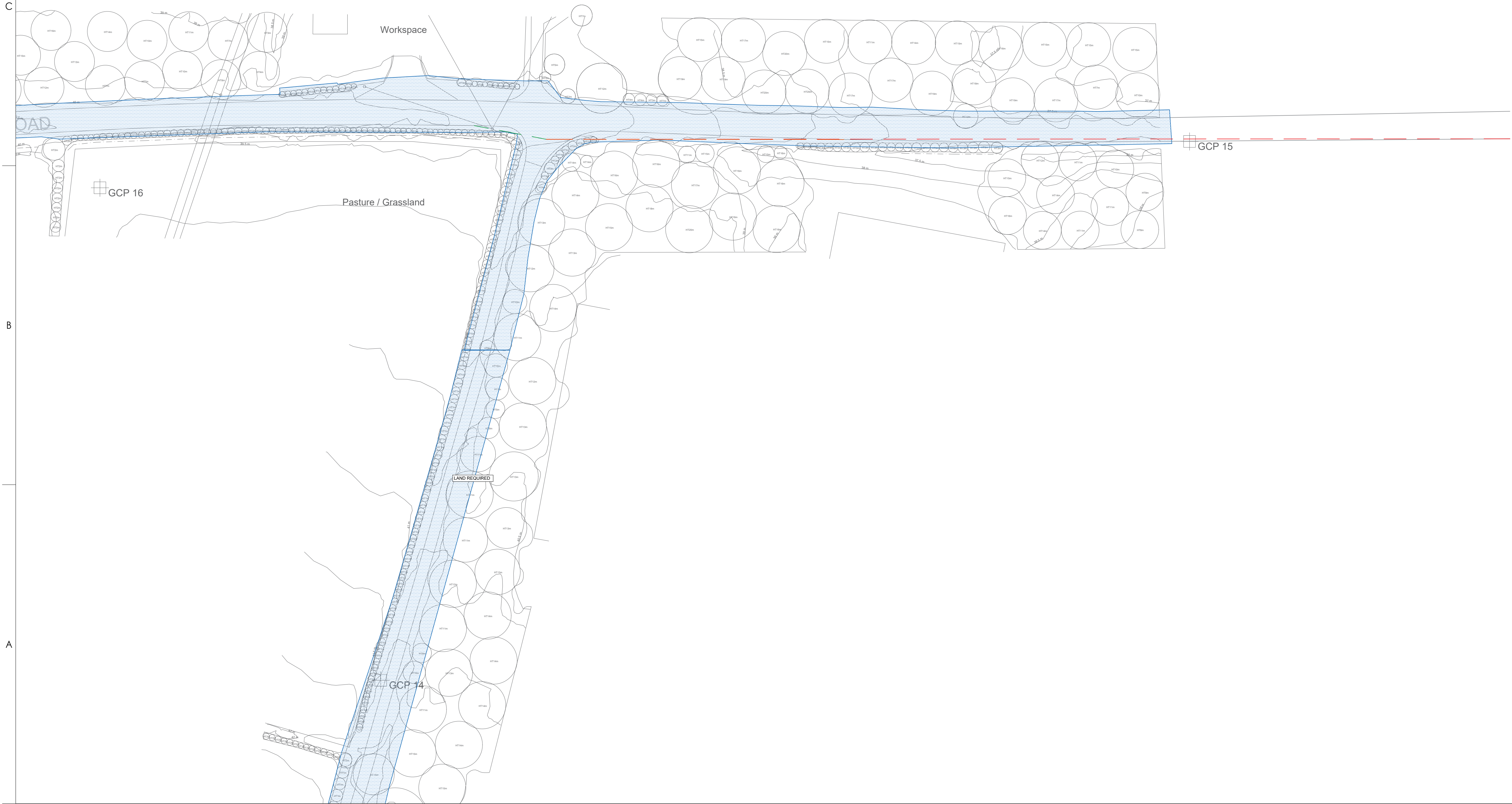


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KEY:

- 2.4M X 215M VISIBILITY SPLAY TO RIGHT
- 2.4M X 16.5M VISIBILITY SPLAY TO LEFT
- 2.4M X VISIBILITY TO TANGENT
- HIGHWAY BOUNDARY

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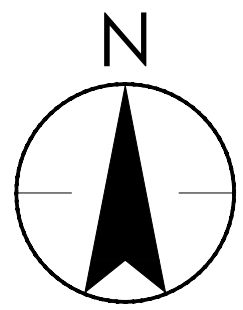


Client/Project

BODELWYDDAN SOLAR AND BESS

Title
EXISTING GLASCOED ROAD/UNNAMED ROAD PRIORITY JUNCTION

Project No. 333101605	A1 Scale 1:500
Revision -	Drawing No. 33310605/100/100



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- HIGHWAY BOUNDARY

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Title
PROPSOED GLASCOED
ROAD/UNNAMED ROAD PRIORITY
JUNCTION

Project No. 333101605	A0 Scale 1:500
Revision	Drawing No.
	33310605/100/101



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VEHICLE ENTERING THE SITE

VEHICLE EXITING THE SITE

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KEY:
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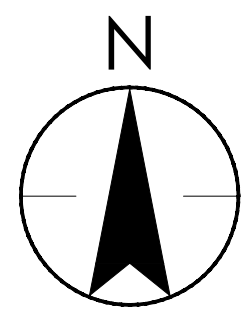
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BODELWYDDAN SOLAR AND BESS
Title
**BESS SITE:
SWEEP PATH ANALYSIS,
16.5M ARTICULATED VEHICLE**

Project No. 333101605 A4 Scale 1:500
Revision Drawing No. 33310605/100/102

Revised: 2025-07-30 10:00:00 333101605-100/102
Copyright: 2025-07-30 10:00:00 333101605-100/102

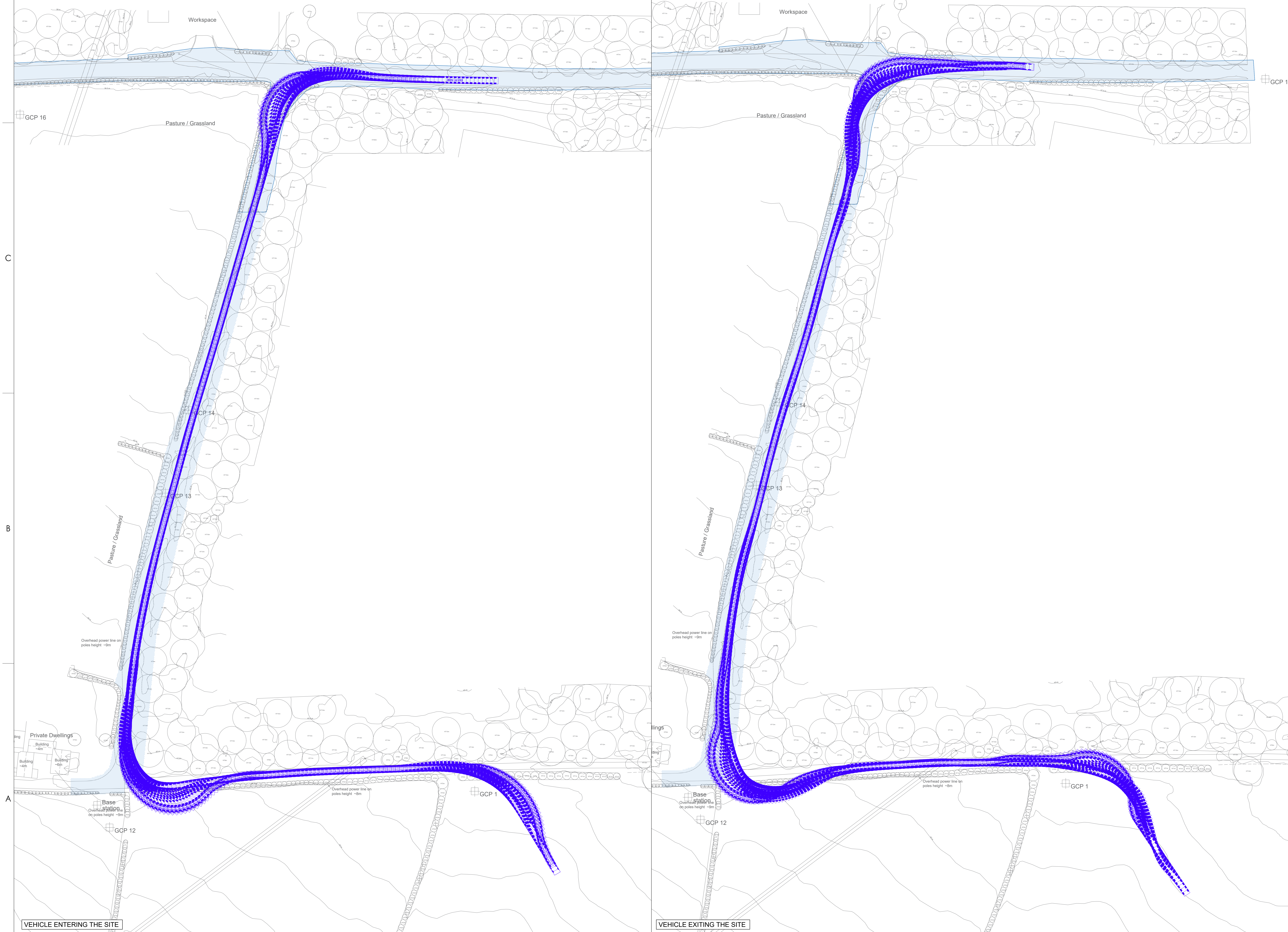


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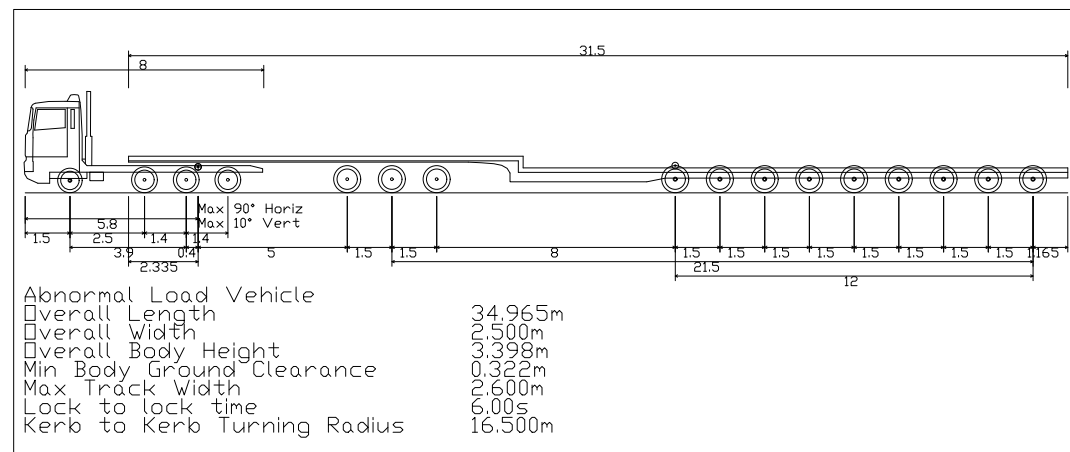
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- FORWARD GEAR

VEHICLE DETAILS:



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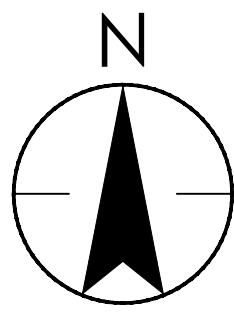
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BODELWYDDAN SOLAR AND BESS

Title

BESS SITE:
SWEEP PATH ANALYSIS:
ABNORMAL LOAD VEHICLE

Project No.	A2 Scale
333101605	1:500
Revision	Drawing No.
-	333101605/100/103

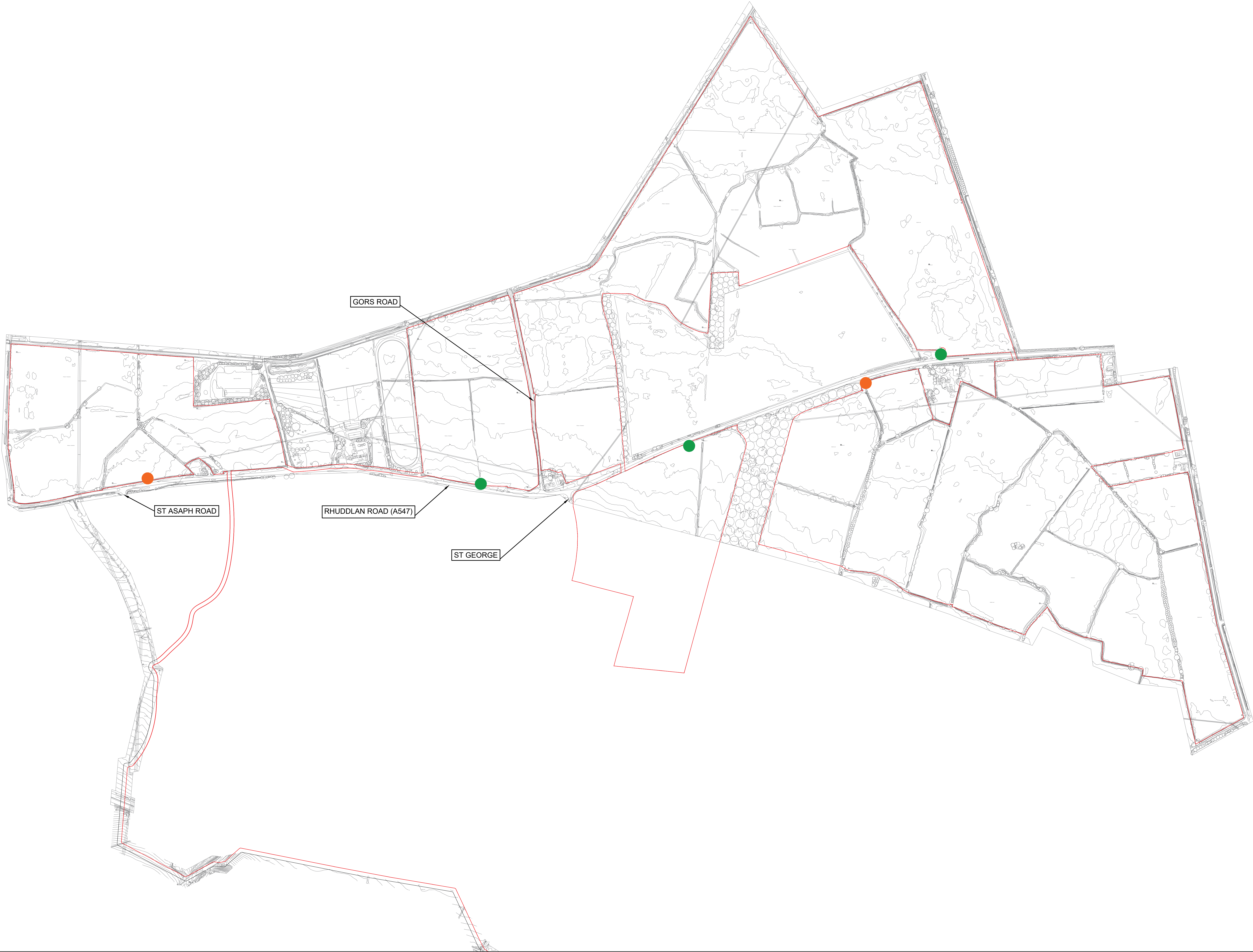


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KEY:

RED LINE BOUNDARY

PRIMARY SITE ACCESS LOCATION

SECONDARY SITE ACCESS LOCATION

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BODELWYDDAN SOLAR AND BESS

Title

PROPOSED SITE ACCESS POINTS:
RHUDDLAN ROAD

Project No. 333101605	A0 Scale N.T.S
Revision -	Drawing No. 333101605/100/104



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 2.4M X 215M VISIBILITY SPPLAY TO THE LEFT (60MPH)
 2.4M X VISIBILITY TO TANGENT
 RED LINE BOUNDARY
 FORWARD GEAR (5MPH VEHICLE SPEED)
 PUBLIC ADOPTED HIGHWAY

FTA Design Articulated Vehicle (2016)

Overall Length	16.480m
Overall Width	4.550m
Overall Body Height	4.870m
Min Body Ground Clearance	0.515m
Max Track Width	4.270m
Lock to Lock Time	4.01s
Kerb to Kerb Turning Radius	6.600m

A UPDATED RED LINE BOUNDARY		IG	BL	2025.08.21
Issued/Revision		By	Appd	YYYY.MM.DD
		AL	TA	2025.07.30
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BODELWYDDAN SOLAR AND BESS

Title
RHUDDLAN ROAD:
PROPOSED SECONDARY SITE ACCESS
ONE

Project No. 333101605	A0 Scale 1:500
Revision A	Drawing No. 333101605/100/107

Permit: 22/08/2022 2022.08.29 9:54:46 AM By: Greeney, Isobelle
ORIGINAL SHEET - 3330101605-100.dwg
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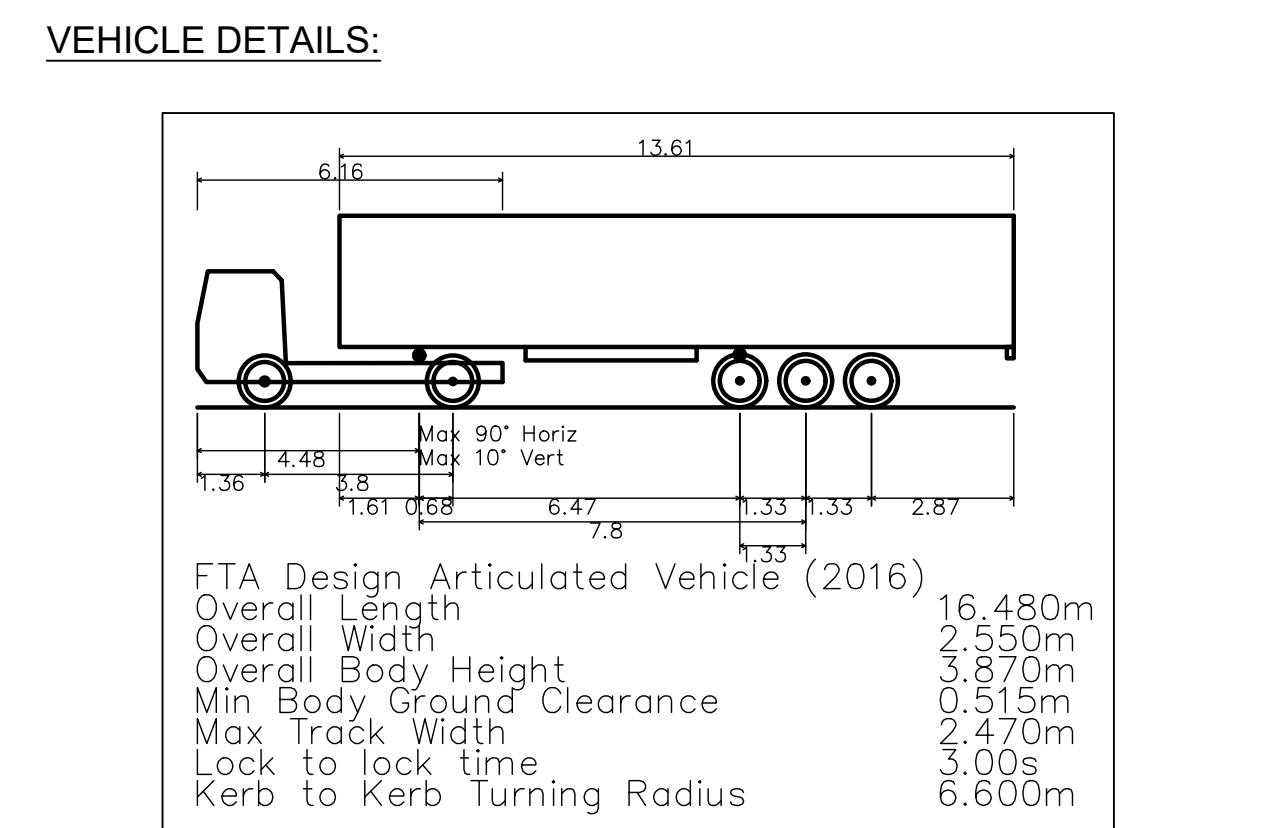


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 - RED LINE BOUNDARY
 - FORWARD GEAR (5MPH VEHICLE SPEED)
 - PUBLIC ADOPTED HIGHWAY



A	UPDATED RED LINE BOUNDARY	IG	BL	2025.08.21
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Title

**RHUDDLAN ROAD:
PROPOSED SECONDARY SITE ACCESS
THREE**

Project No.	A0 Scale
333101605	1:500
Revision	Drawing No.
A	333101605/100/109

Outline Construction Traffic Management Plan

Appendix A – Table of Acronyms

Acronym	Abbreviations
AIL	Abnormal Indivisible Load
BESS	Battery Energy Storage System
CCS	Considerate Constructors Scheme
CLOCS	Construction Logistics and Community Safety
CLP	Construction Logistics Plan
CC	Cable Corridor
CTMP	Construction Traffic Management Plan
DGC	Dumfries and Galloway Council
FORS	Fleet Operator Recognition Scheme
HGV	Heavy Goods Vehicle
LDP2	Local Development Plan
LGV	Light Goods Vehicle
MWC	Main Works Contractor
NPPF	National Planning Policy Framework
Outline CTMP	Outline Construction Traffic Management Plan
PPE	Personal Protective Equipment
VBMS	Virtual Booking Management System

**Alphabetical Order*
