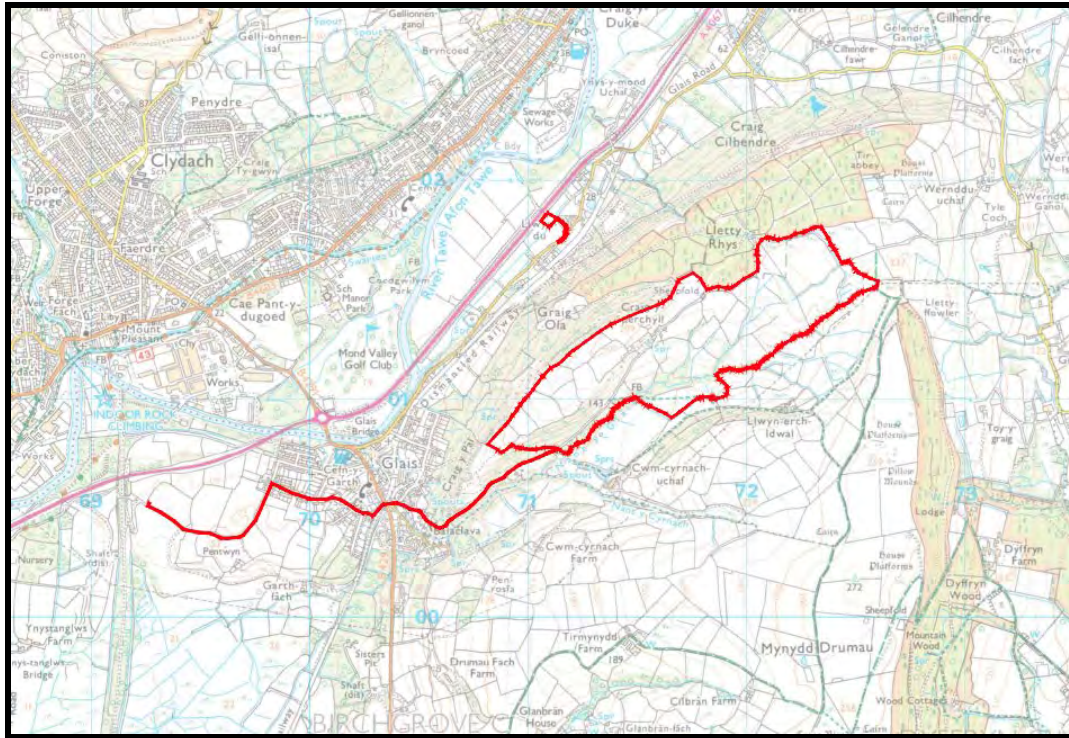


Figure 1 – Site Location



N.B. Red = Proposal site.

4.0 Proposed Development Overview

- 4.1 CYP Solar are seeking to develop a solar farm across the 67 hectares of land at Craig Y Perchych. The solar farm will generate up to 20MW of electricity, enough to power over 5,300 homes per year.
- 4.2 The solar panels will be distributed at a ratio of between 40% to 60% (ground cover ratio), and will connect into an existing overhead cable located approximately 1.6km to the south west of the site.
- 4.3 The proposal will comprise of the following as shown on the plan at Appendix 1: -
 - Photovoltaic (PV) panels;
 - Mounting frames – matt finished small section metal structure;
 - Scheme of landscaping and biodiversity enhancement;
 - Inverters and transformers and associated cabling (largely below ground);
 - Distribution Network Operator (DNO) substation and customer cabins;
 - Telecoms mast;
 - Deer fencing, sympathetic to the area, and infra-red CCTV (CCTV cameras would operate using motion sensors and would be positioned inward only to ensure privacy to neighbouring land and property);
 - Temporary set down area;
 - Internal service roads; and

- Site access for the construction, operational and decommissioning phases.

4.4 The main traffic and transport related effects of the proposal will be associated with the movement of vehicles to and from the site during the construction and decommissioning of the on-site set up phase of the development, as opposed to when the development is operational. The anticipated construction programme is expected to take 4 months to complete.

5.0 Proposed Cable Route / Connection

5.1 The proposed cable route / utilities connection to the electric grid is yet to be finalised. When established, details of its effect on the public highway network and any mitigation measures will be presented here.

5.2 Chapter 3 of the Planning Statement provides details on the cable route to the point of connection to local distribution network.

5.3 No diversions of Statutory Undertaker apparatus (e.g. Street Lighting) is expected as part of the development proposals.

6.0 Proposed Access Arrangements

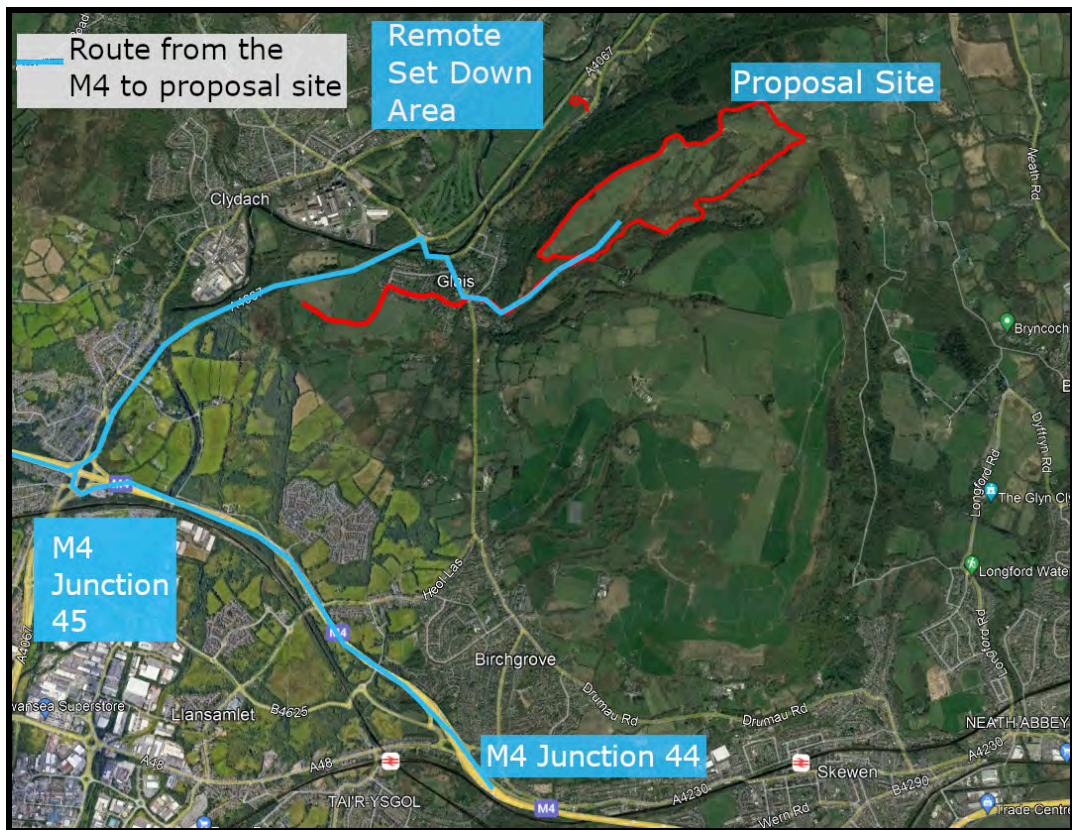
6.1 As detailed above, the site is accessible by Graig Y Pal, a single-track road accessed via Graigola Road approximately 500m southeast of the site, in the village of Glais.

6.2 Graigola Road connects to the B4291 c40m west of the junction with Graig Y Pal. Graigola Road between the B4291 and Graig Y Pal is between approximately 5.5m and 6m in width.

6.3 The B4291 has a carriageway width of approximately 7.5m and provides a route to the village of Clydach and A4067 to the north and to M4 Junction 44 to the south.

6.4 Figure 2 below details the route from the M4 to the site.

Figure 2 – M4 to Proposal Site



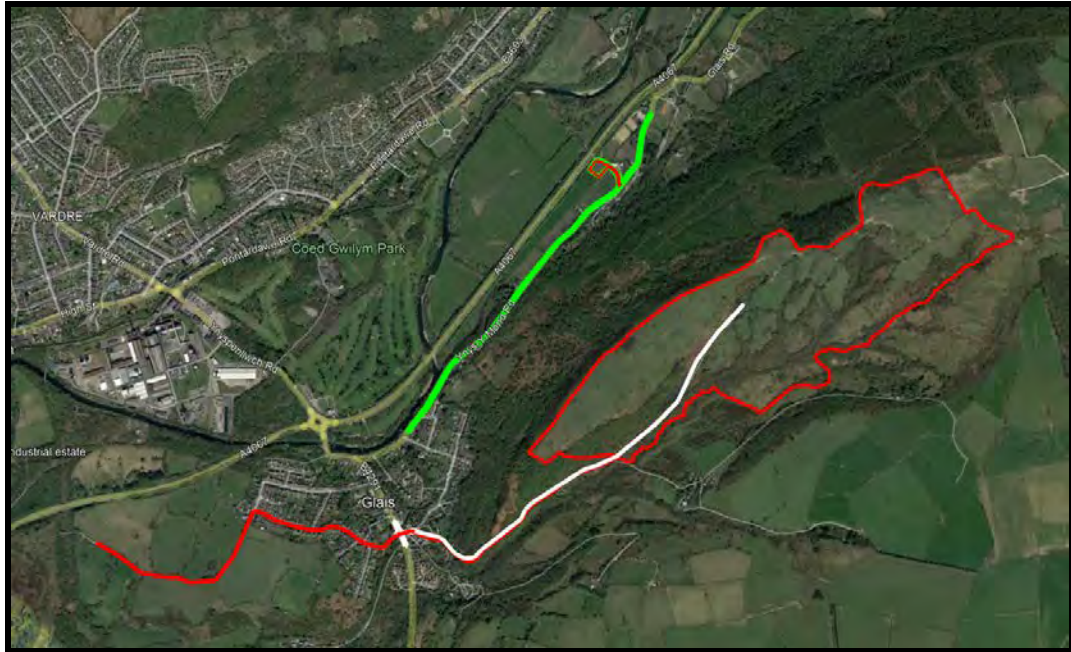
- 6.5 The critical part of the access route is Graig Y Pal. Figure 3 below shows Graig Y Pal. Due to its width, some vehicles e.g. large HGVs may not be able to access the site via Graig Y Pal, and construction traffic will need to be managed both in terms of vehicle sizes and traffic movements generally.

Figure 3 – Graig Y Pal



- 6.6 As part of the development process a topographical survey of Graig Y Pal, along with Graigola Road and its junction with the B4291, has been undertaken to determine road widths along the c1.6km road. Swept path analysis has then been used to determine the size of vehicles which can access the site via Graig Y Pal.
- 6.7 The topographical survey of Graig Y Pal and Ynys Y Mond Road (as shown at Figure 1 below) was undertaken by Berry Geomatics in February 2022.

Figure 4 – Topographical Survey Area



N.B. Red = Site, White = Topo of Graig Y Pal, Green = Topo of Ynys Y Mond Road

- 6.8 The topographical survey identified features such as the visible edge of the asphalt road, walls, trees, rocks, gates etc. It forms the basis of the swept path analysis undertaken by Connect, alongside the use of on-site photos, videos and Google Earth imagery.
- 6.9 Details of the topographical survey and swept path analysis are provided in the Connect TN01 dated 26th April 2022 (a copy of which is provided at Appendix 2).
- 6.10 A condition survey of the above routes will be undertaken if needed prior to the commencement of development.

7.0 Highway Boundary Information

- 7.1 The extent of the adopted highway on Graig Y Pal and Ynys Y Mond Road can be obtained from the Swansea Council 'online adopted highway viewer' provided here https://adoptedroads.swansea.gov.uk/web-apps/adopted_roads/. Higher resolution plans can also be obtained from Swansea Council.
- 7.2 The online plans show that both Graig Y Pal and Ynys Y Mond Road are adopted by Swansea Council.

- 7.3 It has however not been possible to align the topographical survey with the highway boundary plans to show the extent of the highway boundary on the swept path drawings.
- 7.4 If alterations to the carriageway outside of the site ownership is needed (which is not expected), it is likely Swansea Council will have to visit the site to establish the precise extent of the highway boundary.

8.0 Remote Set Down Area

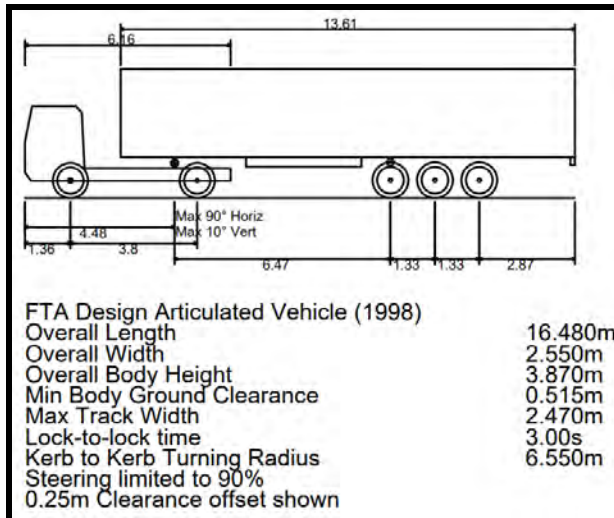
- 8.1 As the solar panels are likely to be delivered by large HGV's, it is proposed that a remote set down area will be used to transfer goods from vehicles which are too large to access the site via Graig Y Pal (up to 16.1m length) to small vehicles that can access the site via Graig Y Pal (envisaged to be up to 7.5t vehicles).
- 8.2 A remote set down area is proposed off Ynys Y Mond Road/Glais Road to the northwest of the proposal site, as shown at Figure 5 below.

Figure 5 – Remote Set Down Area



- 8.3 Again, as part of the development process a topographical survey of Ynys Y Mond Road has been undertaken to establish the size of vehicles which can access the set down area.
- 8.4 Connect TN01 dated 26th April 2022 details that access to the remote set down area located on Ynys Y Mond Road has been tracked using an FTA Design 16.48m articulated HGV detailed at Figure 6 below.

Figure 6 – FTA Design 16.48m Articulated HGV

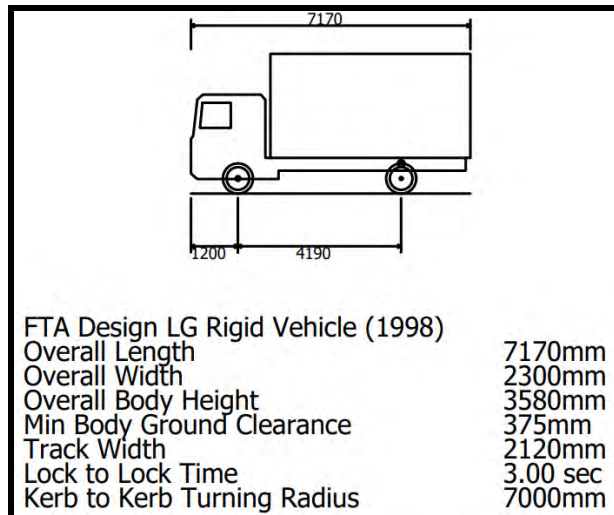


- 8.5 The swept path analysis within TN01 shows the FTA articulated vehicle travelling north on Ynys Y Mond Road into the remote set down area alongside an estate car travelling south on Ynys Y Mond Road.
- 8.6 The tracking confirms that Ynys Y Mond Road is not wide enough along all sections of the route for a car and an HGV to pass. Along the c1.2km route there are twelve 'red' sections of road, of up to c200m in length, where the AutoTrack software shows there is less than 0.25m clearance between the FTA articulated vehicle and estate car. Given the predominantly straight nature of Ynys Y Mond Road, the wider sections of the road are likely to be intervisible. Investigations into forward visibility along the route show that with the exception of one location drivers will be able to see to the far end of the section of restricted width allowing opposing vehicles to stop and wait for the car or FTA articulated HGV to pass. At the above location, an escort vehicle may need to travel ahead of the FTA articulated HGV to make sure opposing vehicles wait before the narrowing, for the HGV to pass.
- 8.7 Based on the above, the AutoTrack software shows an FTA articulated vehicle will be able to access the remote set down area and pass 'estate' sized cars along the route to and from the B4291.
- 8.8 The AutoTrack software also indicates that two FTA articulated vehicles will be unlikely to pass on Ynys Y Mond Road, and so traffic management will be needed to control HGV traffic to prevent delivery vehicles using it in opposing directions at the same time. However, no widening to Ynys Y Mond Road is envisaged based on the tracking.
- 8.9 The set down will have sufficient space onsite for turning, loading and storage of materials to ensure that the operation does not impede traffic on the highway. It also will have room within the site for vehicles to wait to avoid any backing up on the highway.
- 8.10 A detailed plan of the construction vehicle access route will be provided at the detailed design stage.

9.0 Access Via Graig Y Pal

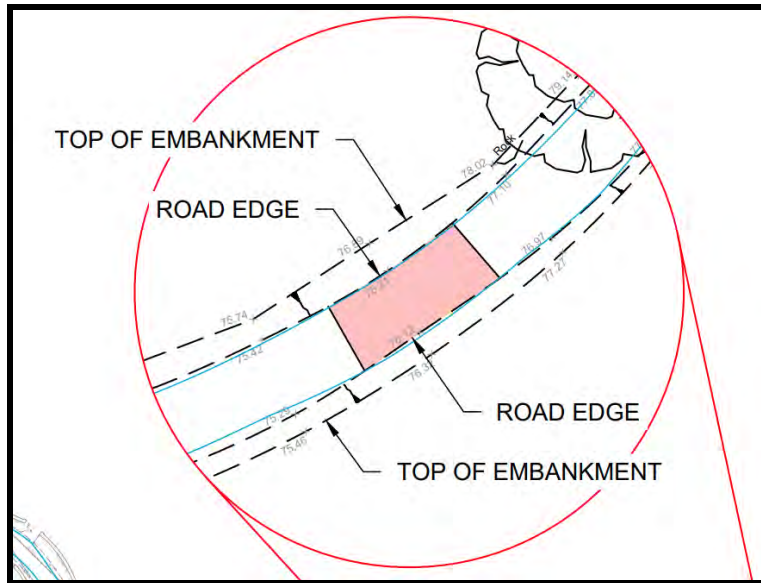
- 9.1 Access to and from the proposal site via Graig Y Pal has been tracked using an FTA Design LG 7.17m rigid vehicle as detailed at Figure 7 below. Full details of the tracking are provided in Connect TN01.

Figure 7 – FTA Design LG 7.17m Rigid



- 9.2 The AutoTrack software shows that Graig Y Pal is wide enough along the majority of the route for the FTA 7.17m rigid vehicle to travel within the carriageway as identified by the topographical survey.
- 9.3 As detailed in TN01, there are a few locations where the FTA 7.17m rigid vehicle is not fully contained within the carriageway, an overview of which is provided below and shown at Appendix 3: -
1. Approximately 250m east of the junction with Graigola Road the software shows the vehicle tracking (when travelling westbound) very marginally breaching the northern and southern carriageway edge (as detailed by the Topo). The topographical survey does however show no obstacles directly bordering the carriageway (e.g rocks or trees) and so it is plausible that the 7.17m rigid vehicle will be able to pass given the marginal breach and distance from the top of embankment. Figure 8 shows the location of the first breach.

Figure 8 – Section 1

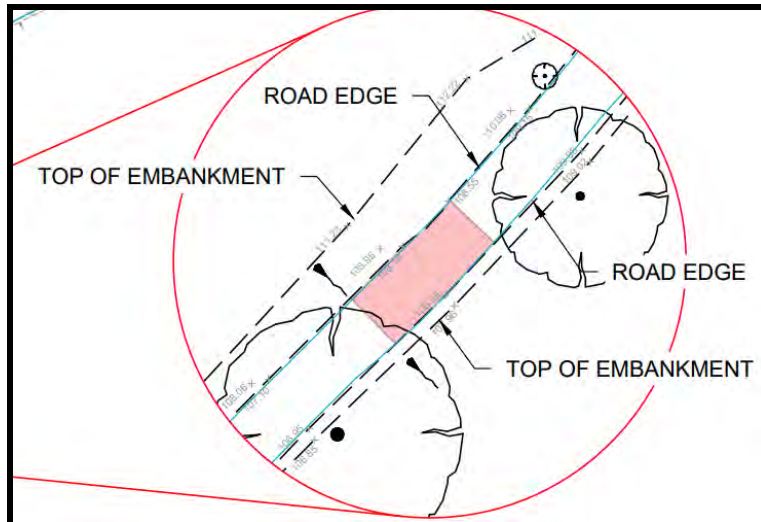


N.B Blue Line = Vehicle track.



2. Approximately 500m along Graig Y Pal there is a small section in which the AutoTrack software shows the vehicle tracking of the 7.17m rigid vehicle (when travelling westbound and eastbound) very marginally breaching the northern and southern carriageway edge (as detailed by the Topo). The topographical survey again shows that there are no obstacles directly bordering the carriageway (e.g rocks or trees) along the section and so the 7.17m rigid vehicle will be able to pass given the marginal breach. Figure 9 below shows the location, which lies to the north of the most prominent tree trunk, based on Google Earth imagery.

Figure 9 – Section 2

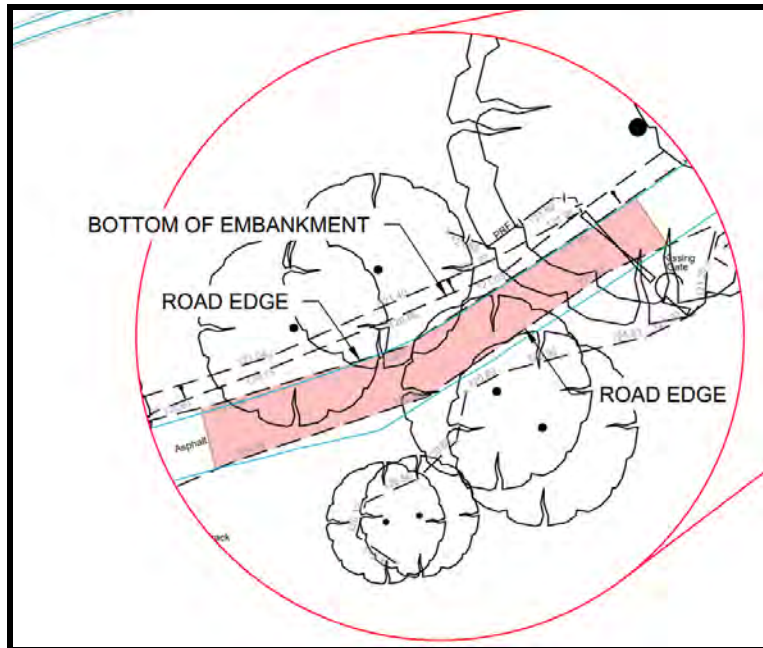


N.B Blue Line = Vehicle track



3. At the kissing gate c875m along Graig Y Pal there is a c15m long section in which the AutoTrack software shows the vehicle tracking of the 7.17m rigid vehicle breaching the northern and southern carriageway edge (as detailed by the Topo). However, Google Earth and on-site photos show gravel at the sides of the carriageway (asphalt) that could be used by the FTA 7.17m rigid vehicle when manoeuvring as shown below at Figure 10 below.

Figure 10 – Section 3



N.B Blue Line = Vehicle track



4. Beyond the fork in the road / gate (which is land within the client's control) the AutoTrack software indicates that the vehicle tracking of the FTA 7.17m rigid vehicle cannot be accommodated within the asphalt carriageway at three points. An onsite photo of the road beyond the gate is shown at Figure 11 below.

Based on the above, improvements will be able to be made by the client to widen the useable carriageway beyond the gate if needed.

Figure 11 – Graig Y Pal North of Fork in the Road / Gate



- 9.4 Based on the above and TN01, the AutoTrack software indicates that the vehicle tracking of the FTA 7.17m rigid vehicle can be accommodated along the majority of the access route. The constrained areas might also accommodate the FTA 7.17m rigid vehicle (Appendix 3) subject to investigations into the actual position of the road edge on-site as well as a on-site vehicle test using the specific vehicle to be used.
- 9.5 Tracking using an FTA Design 13/18 Tonne 10m rigid vehicle is also provided in Connect TN01. The AutoTrack software indicates that the vehicle tracking can be accommodated along some sections of the route, however there are a number of sections where the vehicle tracking is shown to not be contained within the carriageway as indicated by the topographical survey. Investigations set out in TN01 indicate that where the tracking exceeds the edge of carriageway there appears to be space for the extra width to be accommodated possibly with some minor road widening, however on-site investigation including into the extent of the highway would be needed to establish validity before an FTA 10m rigid vehicle is driven along the route.

10.0 Delivery Vehicle Time Periods

- 10.1 It is proposed that during the construction phase deliveries will occur during the following time periods (to both the site and remote set down area): -
- Monday to Friday 08:00 hours to 18:00 hours.
 - Saturdays 08:00 hours to 16:00 hours.
- 10.2 Under exceptional circumstances deliveries outside of these hours may be required.
- 10.3 If necessary, to avoid any conflict with schools in the area, deliveries by large vehicles could be timed so as to not occur during the hours of 08:15-09:15 and 15:00-16:00, during school term time.

11.0 Proposed Construction Vehicle Movements – 9-month Construction Period

11.1 The construction of the solar farm is expected to take 9 months. During this period, there will be journeys associated with the arrival and departure of site staff and the delivery of equipment and construction materials either directly to site or via the remote set down area.

11.2 It should be noted that this CTM plan will be updated in advance of construction starting.

Staff Trips – Directly to Site

11.3 During the construction period up to 50 staff will be on-site, depending on the phase of the development.

11.4 It is envisaged that staff will be from both local and regional contractors who will use shared transport such as crew cab transit vans to access the site via Graig Y Pal. The swept path analysis confirms that a crew cab transit van will be able to access the site as this is smaller than a 7.17m rigid HGV.

11.5 All vehicle parking will be provided within the temporary construction compound at the development site. There will therefore be no parking on the local highway network.

11.6 As part of the CTMP the contractor will aim to manage staff movements at the start / end of shifts to ensure that all vehicles are not released onto Graig Y Pal at the same time. This could involve releasing a small number of vehicles in five-minute intervals and asking drivers to arrive in five-minute intervals at the start of the day. It will also be assumed that most staff are likely arrive before the operating hours of the site (before 08:00) and depart after the sites close each day (after 18:00).

Construction Vehicle Movements – Directly to Site

11.7 Only small HGV's will be able to access the site directly, without using the remote set down area.

11.8 During month one of construction, it is envisaged that 10 small HGV's (likely to be less than 7.17m rigid vehicles) will deliver plant, equipment and materials to the site via Graig Y Pal. This equates to less than one vehicle per day (based on 25 working days).

11.9 During month two of construction, it is envisaged that 25 small HGV's (again likely to be less than 7.17m rigid vehicles)) will deliver further plant, equipment and materials, the security fencing and construction compound to site via Graig Y Pal. This equates to one vehicle per day.

11.10 During month three, it is envisaged that 5 small HGV's (again likely to be less than 7.17m rigid vehicles) will deliver further plant, equipment and materials to site via Graig Y Pal. This equates to less than one vehicle per day.

11.11 During month four, it is envisaged that 7 small HGV's (again likely to be less than 7.17m rigid vehicles) will again deliver further plant, equipment and materials and transformer & control equipment to site via Graig Y Pal. This equates to less than one vehicle per day.

11.12 During month five, it is envisaged that 5 small HGV's (again likely to be less than 7.17m rigid vehicles) will deliver transformer & control equipment to site via Graig Y Pal. This equates to less than one vehicle per day.

- 11.13 During months five, six, seven and 8 no deliveries are expected to site via Graig Y Pal.
- 11.14 During the final month of construction, month nine, it is envisaged that 8 small HGV's (likely to be less than 7.17m rigid vehicles) will remove on-site plant and facilities via Graig Y Pal. This also equates to less than one vehicle per day.
- 11.15 Based on the above, month two will be the busiest for small HGV's delivering directly to site with one delivery every day. An overview of the deliveries / collections to site are detailed at Table 1 below.

Table 1 – Indicative Vehicle Deliveries during Construction Phase

Construction Activity (indicative delivery vehicles)	Month									
	1	2	3	4	5	6	7	8	9	Total
Delivery of plant, equipment and materials (Likely to be a 7.17m rigid or less)	10	10	5	2						27
Erection of security fencing and construction compound (likely to be a 7.17m rigid or less)		15								15
Delivery of transformer & control equipment (Likely to be a 7.17m rigid or less)				5	5					10
Removal of plant and equipment (Likely to be a 7.17m rigid or less)									8	8
Total	10	25	5	7	5	0	0	0	8	60

Construction Vehicle Movements – To Remote Set Down Area

- 11.16 Deliveries on larger HGV's e.g., those of 16.48m in length will utilise the remote set down area oppose to accessing the site directly via Graig Y Pal.
- 11.17 During month one of construction, it is envisaged that 10 large HGV's (e.g those of 16.5m in length) will deliver plant, equipment and materials to the remote set down area. This equates to less than one delivery per day.
- 11.18 During month two of construction, it is again envisaged that 10 large HGV's (e.g those of 16.5m in length) will deliver plant, equipment and materials to the remote set down area. This equates to less than one delivery per day.
- 11.19 During month three of construction, it is envisaged that 10 large HGV's (e.g. those of 16.5m in length) will deliver further plant, equipment and materials, and cabling to the remote set down area. This equates to less than one delivery per day.
- 11.20 During the month four of construction, it is envisaged that 38 large HGV's (e.g. those of 16.5m in length) will deliver further plant, equipment and materials, frames & support posts, and solar panels to the remote set down area. This equates to three vehicles every two days during month four.
- 11.21 During the month five of construction, it is envisaged that 35 large HGV's (e.g. those of 16.5m in length) will deliver frames & support posts, and solar panels to the remote set down area. This equates to less than three vehicles every two days.

- 11.22 During the month six of construction, it is envisaged that 20 large HGV's (e.g. those of 16.5m in length) will deliver solar panels to the remote set down area. This equates to less than one vehicle per day.
- 11.23 During the month seven of construction, it is envisaged that 40 large HGV's (e.g. those of 16.5m in length) will deliver solar panels to the remote set down area. This equates to less than two vehicles per day.
- 11.24 During the month eight of construction, it is envisaged that 20 large HGV's (e.g. those of 16.5m in length) will deliver solar panels to the remote set down area. This equates to less than one vehicle per day.
- 11.25 During the month nine of construction, the final month, it is envisaged that 7 large HGV's (e.g. those of 16.5m in length) will remove on-site plant and facilities from the remote set down area. This equates to less than one vehicle per day.
- 11.26 Based on the above, month seven will be the busiest for large HGV's delivering / collecting from the remote set down area, with less than two deliveries each day. An overview of the deliveries to the remote set down area are detailed at Table 2 below.

Table 2 – Indicative Vehicle Deliveries to Remote Set Down Area

Construction Activity (indicative delivery vehicles)	Month									Total
	1	2	3	4	5	6	7	8	9	
Delivery of plant, equipment and materials (16.5m artic)	10	10	5	3						28
Cabling on site (16.5m artic)			5							5
Delivery of frames & support posts (16.1m artic)				15	15					30
Delivery of solar panels (16.5m artic)				20	20	20	40	20		120
Removal of plant and equipment (16.5m artic)									7	7
Total	10	10	10	38	35	20	40	20	7	190

- 11.27 For simplicity, at this stage it is assumed that one delivery to the remote set down area will equate to two deliveries to site, equating to a total of 380 shuttle deliveries across the nine-month construction period. When combined with the 60 direct deliveries this equates to 440 across the nine months.
- 11.28 The 440 deliveries equate to an average of approximately two per day during the nine-month period. As detailed above however, months two, four and seven are busier than the other months.

Proposed Construction Vehicle Movements – Typical Day

- 11.29 A breakdown of expected HGV movements on a typical day is provided below. It is based on the expected trip generation for month four, which is expected to be the busiest months (when the remote set down and on-site trips are combined).
- 11.30 Based on a 6-day working week during the construction phase (Monday-Saturday), there will be up to c25 working days per month.
- 11.31 Assuming that construction vehicles will avoid school drop up and pickups at 08:15-09:15 and 15:00-16:00, realistically, on a typical weekday there are seven hours (09:30-14:30 and 16:00-18:00) when construction vehicle movements can take place. On a Saturday there is an eight-hour window with no restriction, however in order to consider each working day similarly, the calculations to follow consider a seven-hour working day.
- 11.32 Based on the above, the predicted number of HGV trips to the remote set down area is shown below: -
- 38 deliveries, 76 movements in month four.
 - 25 working days in a month (Monday-Saturday) = Three movements per day (approximately).
 - Seven-hour day each working day = One movement every 138 minutes approximately.
- 11.33 The predicted number of HGV trips from the remote set down area to the site is shown below: -
- 152 movements in month four.
 - 25 working days in a month (Monday-Saturday) = Six movements per day (approx.)
 - Seven-hour day each working day = One movement every 69 minutes approximately.
- 11.34 The predicted number of HGV trips directly to the site is shown below: -
- 7 deliveries, 14 movements in month four.
 - 25 working days in a month (Monday-Saturday) = Just over one movement every two days (approx.)
 - Seven-hour day each working day = One movement every 750 minutes approximately.
- 11.35 When the direct deliveries and shuttle deliveries are combined there are 242 movements in month four, nine and a half per day, one approximately every 43 minutes.

12.0 On Site Movements

- 12.1 A network of 4m wide stone tracks will be constructed on site. These will facilitate vehicle movements on site as well as ensuring mud and debris is not carried onto the local highway network.
- 13.0 Bowsers / sprays will be used if needed during dry conditions to prevent dust and the use of wheel cleaning facilities during wet conditions to prevent mud transfer / silt and water runoff on to the highway.
- 13.1 Adequate parking will be provided on site for staff and delivery vehicles to avoid any backing up onto the highway.

14.0 Public Engagement

- 14.1 It should be noted that this CTM plan will be updated in advance of construction starting.
- 14.2 CYP Solar intend to work with residents to cause as minimal disruption as possible.
- 14.3 Prior to the commencement of the construction works, local residents and farmers who live on Graig Y Pal or use it for their business will be invited to a meeting.
- 14.4 They will be advised of the proposals and have the opportunity to explain their individual circumstances and needs which will be considered and included in the management plan as necessary e.g. when access is required etc.
- 14.5 Residents and businesses will be provided with a phone number of the site manager to raise any issues / concerns prior to or during the construction period. An email address will also be provided for communication with members of the public.
- 14.6 The residents and businesses within the village of Glais will also be consulted.
- 14.7 All will be provided with a detailed plan of the construction vehicle access route as requested by Neath Port Talbot County Borough Council.

15.0 Traffic Management on Ynys Y Mond Road

- 15.1 As detailed above, traffic management will be needed on Ynys Y Mond Road to control HGV traffic to prevent delivery vehicles using it in opposing directions at the same time.
- 15.2 In terms of the construction vehicle movements, the following preliminary procedure or similar will be carried out to manage HGV vehicle movements on Ynys Y Mond Road.
- Deliveries to the remote set down area will phone ahead to agree on an arrival time.
 - Delivery vehicles will be required to arrive within a 15-minute window of the agreed delivery time.
 - As detailed above during the busiest month two to three articulated deliveries will arrive at the remote set down area per day. Given the low levels of deliveries they will be timed to be spaced throughout the day and so not overlap.
 - Drivers will need to advise the site manager if delays have occurred (e.g due to traffic) and a new arrival time will be agreed.

- The times drivers depart the remote set down area will be checked against scheduled arrival times prior to departing the site.
- If needed a banksman, who will have a small van, will drive up / down Ynys Y Mond Road to establish whether the route is HGV free and available for vehicles to exit the site.
- Shuttle vehicles transferring materials from the remote set down area to the site will be scheduled at times to avoid the deliveries or be escorted by banksman.
- If possible, more than one shuttle vehicle will arrive / depart the site at once to speed up the above process.
- The banksmen will also be on hand for emergencies.
- All will be provided with a detailed plan of the construction vehicle access route as requested by Neath Port Talbot County Borough Council.

16.0 Traffic Management on Graig Y Pal

- 16.1 As detailed above, Graig Y Pal is a single-track road with room for a 7.17m rigid vehicle to access the site.
- 16.2 As detailed above staff will generally arrive via crew cab transit vans or similar sized vehicles before 8am in the morning and leave after 6pm at night. Given the nature of Graig Y Pal, staff will not arrive on foot or by cycle.
- 16.3 Banksmen (male or female) will be employed to help manage vehicle movements on Graig Y Pal. Residents of the dwellings accessed off Graig Y Pal and any affected businesses will be made aware of the times staff will arrive and depart the site and so will expect the associated vehicle movements.
- 16.4 In terms of the construction vehicle movements, the following preliminary procedure or similar will be carried out to manage shuttle vehicles and direct deliveries on Graig Y Pal.
- The contractor will work with local residents and users of Graig Y Pal to agree traffic management etc.
 - All will be provided with a detailed plan of the construction vehicle access route as requested by Neath Port Talbot County Borough Council.
 - Delivery movements will occur in the first 20 minutes of the hour, outbound first then inbound, so predictable etc.
 - Banksmen will be employed to co-ordinate movements on Graig Y Pal.
 - All shuttle vehicles will have radios to communicate with other shuttle vehicles and the banksmen.
 - The shuttle vehicle will radio the on-site banksmen when leaving the remote set down area.
 - The banksmen, who will have a small van, will drive up / down Graig Y Pal to establish whether the route is traffic free and available for construction traffic.

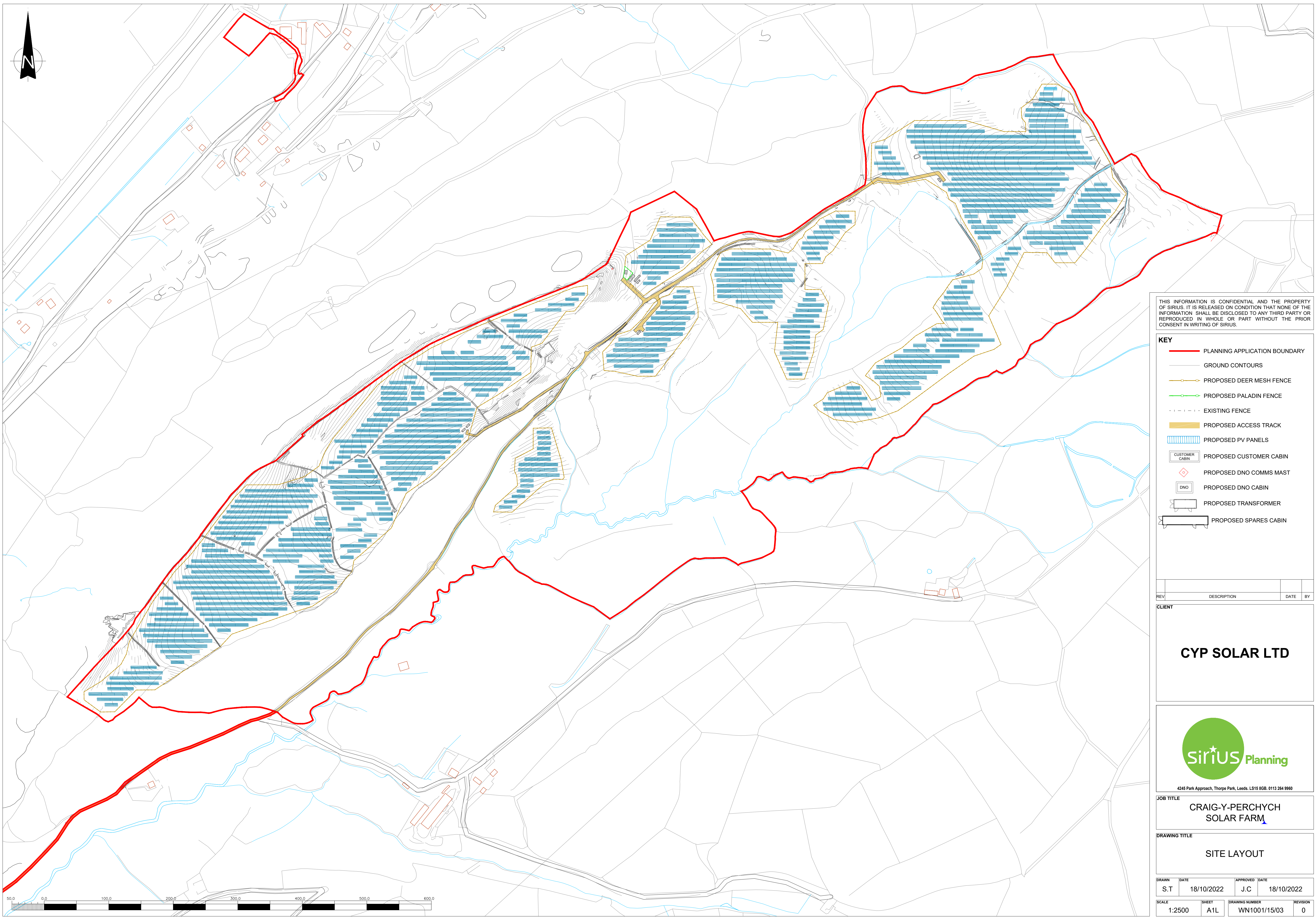
- Signage (in accordance with chapter 8 signing and guarding of the Traffic Signs Manual) will be displayed on site by the banksmen, to advise drivers not to exit the site whilst a shuttle vehicle is approaching on Graig Y Pal unless necessary.
 - The banksmen will place traffic cones (or similar) with signage next to the drives of the residential dwellings and any other accesses to ensure residents and businesses are made aware that a shuttle vehicle is approaching so they can act accordingly.
 - Once the banksmen confirm Graig Y Pal is clear and all temporary signage has been placed on Graig Y Pal, the shuttle vehicles will travel along Graig Y Pal to and from the site.
 - The banksmen will follow collecting the cones and signs.
 - If possible, more than one shuttle vehicle will arrive / depart the site at once to speed up the above process.
- 16.5 It is envisaged that the above process will take 5 to 10 minutes and so for two movements an hour, take up to 20 minutes. The remaining 40 minutes will be free from construction traffic.
- 16.6 The banksmen will also be on hand for emergencies. Signage at the bottom of Graig Y Pal will detail the largest construction vehicle that can access the site. The banksmen's phone number will also be provided on the signage. Additional signage will also detail the route into site.
- 16.7 A plan for emergency access will also be put in place, and overseen by the banksmen.

17.0 Mitigation Measures

- 17.1 The following mitigation measures will be used. These will be finalised once a contractor is appointed: -
- All will be provided with a detailed plan of the construction vehicle access route as requested by Neath Port Talbot County Borough Council.
 - The use of banksmen to help guide deliveries at the site and at the remote set down area.
 - Advisory temporary signage on the highway detailing works in the area.
 - A detailed plan of the construction vehicle access route.
 - Temporary signage along the proposed route to direct deliveries follow agreed routes.
 - Provide sufficient parking areas within the plots and adjacent to the temporary construction compound so there is no parking on the highway or potential blockage to access tracks. No parking suspensions are needed as part of the proposals.
 - Vehicles carrying loose material shall be sheeted.
 - The use of bowzers / sprays as necessary during dry conditions to prevent dust and the use of wheel cleaning facilities to prevent mud transfer on to the highway.

- Secure the site to prevent unauthorised access. Gate keepers will be used if needed.
- Regularly monitor the condition of the highway for spoil transfer or damage and rectify as required.
- Contact local residents prior to construction works commencing advising of anticipated duration and a contact number to advise of any issues/concerns.
- Turning engines off when not in use.

APPENDIX 1 – PROPOSED SITE LAYOUT



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- KEY**
- PLANNING APPLICATION BOUNDARY
 - GROUND CONTOURS
 - PROPOSED DEER MESH FENCE
 - PROPOSED PALADIN FENCE
 - EXISTING FENCE
 - PROPOSED ACCESS TRACK
 - PROPOSED PV PANELS
 - CUSTOMER CABIN
 - PROPOSED CUSTOMER CABIN
 - PROPOSED DNO COMMS MAST
 - DNO
 - PROPOSED DNO CABIN
 - PROPOSED TRANSFORMER
 - PROPOSED SPARES CABIN

REV	DESCRIPTION	DATE	BY
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CLIENT

CYP SOLAR LTD



JOB TITLE

**CRAIG-Y-PERCHYCH
SOLAR FARM**

DRAWING TITLE

SITE LAYOUT

DRAWN	DATE	APPROVED	DATE
S.T	18/10/2022	J.C	18/10/2022
SCALE	SHEET	DRAWING NUMBER	REVISION
1:2500	A1L	WN1001/15/03	0

APPENDIX 2 – CONNECT TN01

CYP SOLAR

PROPOSED SOLAR FARM, GLAIS, SWANSEA

TN01-A – SWEPT PATH ANALYSIS OF GRAIG Y PAL AND YNYS Y MOND ROAD

2ND DECEMBER 2022

1.0 Appointment of Connect Consultants

- 1.1 Connect Consultants Limited is a firm of transport planning and highway design consultants that have been instructed by Sirius Planning on behalf of CYP Solar in relation to their proposed Solar Farm on land at Craig Y Perchych, Glais, Swansea.

2.0 Proposed Development Overview

- 2.1 CYP Solar are seeking to develop a solar farm across the 67-hectare site.
- 2.2 The main traffic and transport related effects of the proposal will be associated with the movement of vehicles to and from the site during the construction and decommissioning of the on-site set up phase of the development, as opposed to when the solar farm is operational. The anticipated construction programme is expected to take 4 months to complete.
- 2.3 The site is accessible by Graig Y Pal, a single-track road accessed via Graigola Road approximately 500m southeast of the site, in the village of Glais.
- 2.4 As the solar panels are likely to be delivered by large HGV's, it is proposed that a remote set down area will be used such that the HGV's which are too large to access the site via Graig Y Pal will deliver materials to the set down area, which will then be transported to the site using smaller vehicles that can negotiate Graig Y Pal.
- 2.5 The location of the remote set down area has yet to be finalised, however a potential remote set down area under consideration is located off Ynys Y Mond Road to the northwest of the proposal site.

3.0 Construction Management Plan

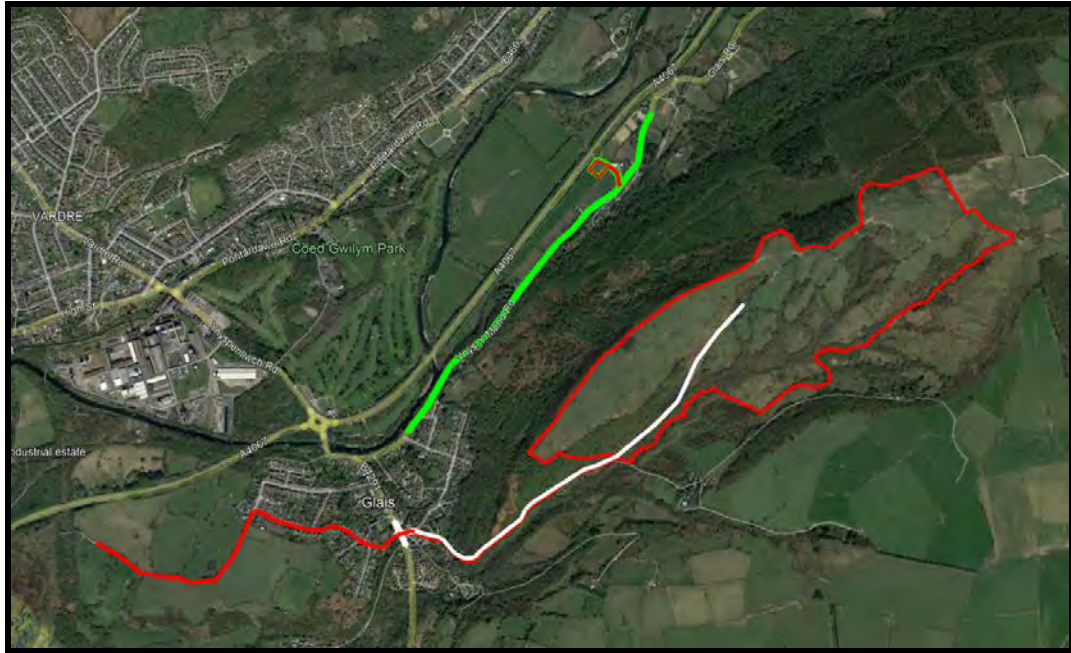
- 3.1 A Preliminary Construction Traffic Management Plan (CTMP) was produced by Connect dated 10th December 2021. It provided details of the access to the proposed solar farm, the potential remote set down area, proposed delivery vehicle time periods, construction vehicle numbers and types, details of public engagement, traffic management and mitigation measures.
- 3.2 It detailed at paragraph 4.6 that, as part of the development process, a topographical survey of Graig Y Pal will be undertaken to determine road widths along the c1.6km road. Swept path analysis will then determine the size of vehicles which can access the site via Graig Y Pal. A topographical survey was also required for the access route to the remote set down area.
- 3.3 It was identified that the CTMP would be refined as the proposals develop and also to incorporate any responses or suggestions from Swansea Council.
- 3.4 Comments were received from Swansea Council in relation to the Connect CTMP in January 2022. They also identified that swept path analysis of the access routes were required including Graig Y Pal and Ynys Y Mond Road.

3.5 This Technical Note (TN01) provides swept path analysis of the above routes.

4.0 Topographical Survey

4.1 A topographical survey of Graig Y Pal and Ynys Y Mond Road (as shown at Figure 1 below) was undertaken by Berry Geomatics in February 2022.

Figure 1 – Topographical Survey Area



N.B. Red = Site, White = Topo of Graig Y Pal, Green = Topo of Ynys Y Mond Road

4.2 The topographical survey identifies features such as the edge of the asphalt road, walls, trees, rocks, gates etc. It forms the basis of the swept path analysis undertaken by Connect, alongside the use of on-site photos, videos and Google Earth imagery.

5.0 Highway Boundary Information

5.1 The extent of the adopted highway on Graig Y Pal and Ynys Y Mond Road can be obtained from the Swansea Council 'online adopted highway viewer' provided here https://adoptedroads.swansea.gov.uk/web-apps/adopted_roads/. Higher resolution plans can also be obtained from Swansea Council.

5.2 The online plans show that both Graig Y Pal and Ynys Y Mond Road are adopted by Swansea Council.

5.3 It has however not been possible to align the topographical survey with the highway boundary plans to show the extent of the highway boundary on the swept path drawings.

5.4 If alterations to the carriageway outside of the site ownership is needed, it is likely Swansea Council will have to visit the site to establish the precise extent of the highway boundary.

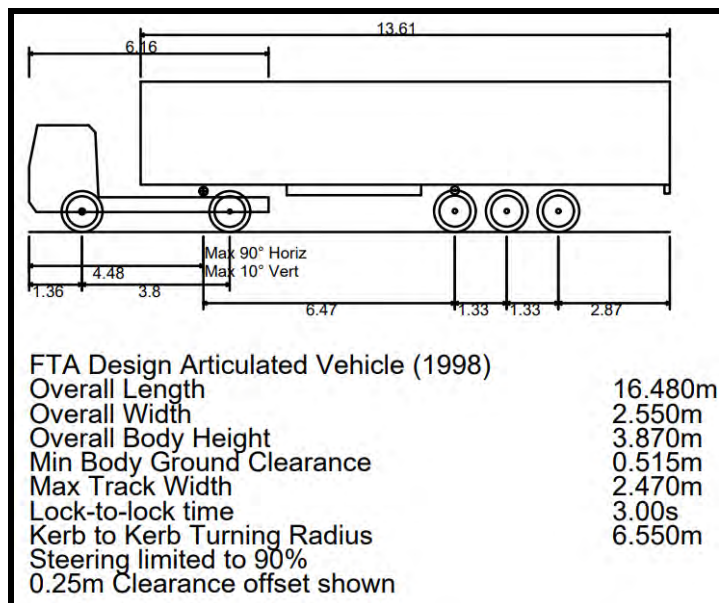
6.0 Swept Path Analysis Overview

- 6.1 Swept path analysis of both Graig Y Pal and Ynys Y Mond Road has been undertaken using the industry standard AutoTrack software to help determine the size of vehicles that can access the proposal site and remote set down area.
- 6.2 AutoTrack is a vehicle swept path analysis software program which is used for analysing the movements of vehicles including cars and HGV's, based on information such as vehicle length, width and turning radius. It provides details of the space required for a specified vehicle to travel along a specified route.
- 6.3 The AutoTrack software does however have limitations which should be considered when interpreting the swept path drawings, as detailed below: -
- The vehicle tracking is based on details of specific vehicles, the ones actually used may have different lengths, widths and turning properties. The precise vehicles intended to be used should be tracked as the project evolves.
 - Driver behaviour / ability will impact how the vehicle is actually driven and so may alter the vehicle tracking. The vehicle tracking does also not take into account driver error for example.
 - The tracking is two dimensional and so does not take into account the height of vehicles and for example overhanging trees.
 - Connect have no means by which to confirm the accuracy of the software.

7.0 Swept Path Analysis – Ynys Y Mond Road

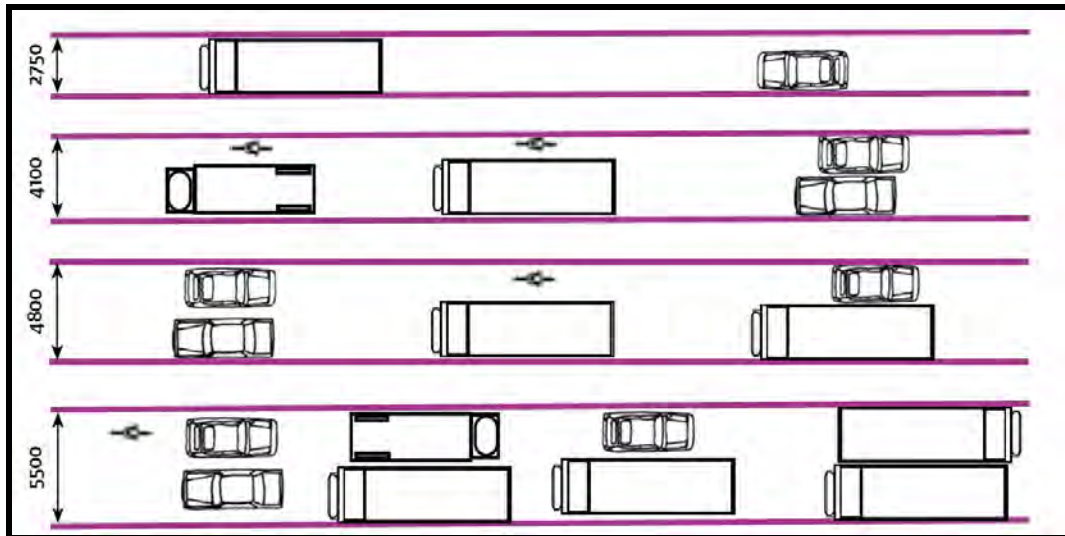
- 7.1 Access to the remote set down area located on Ynys Y Mond Road has been tracked using an FTA Design 16.48m articulated HGV detailed at Figure 2 below.

Figure 2 – FTA Design 16.48m Articulated HGV



- 7.2 The swept path analysis tracks the green route shown at Figure 1 above, from near to the B4291, northbound on Ynys Y Mond Road into the potential remote set down area.
- 7.3 The topographical survey indicates that road width along Ynys Y Mond Road varies between 3.8m and 7.7m.
- 7.3.1 Figure 3 below, taken from Manual for Streets 2 (MfS2), illustrates the different vehicles various carriageway widths can accommodate.

Figure 3 – MfS2 Passing Widths



- 7.4 The above figure and AutoTrack software indicate that Ynys Y Mond Road is wide enough for the FTA articulated vehicle to access the remote set down area from the B4291 (to the south). It can also enter and turn at the site of the remote set down area enabling it to leave and travel back to the B4291 on Ynys Y Mond Road.
- 7.5 The swept path analysis at Appendix 1 shows the FTA articulated vehicle travelling north on Ynys Y Mond Road into the remote set down area alongside an estate car travelling south on Ynys Y Mond Road.
- 7.6 The vehicle tracking of both the FTA articulated vehicle and estate car is based on 0.25m clearance from the edge of the carriageway (indicated by the Topo) on the nearside.
- 7.7 As shown at Appendix 1, Ynys Y Mond Road is not wide enough along all sections of the route for a car and an HGV to pass. The areas highlighted red indicate where there is not 0.25m clearance between the FTA articulated vehicle and estate car (less than 0.25m includes where there is nil clearance or where they overlap).
- 7.8 Along the c1.2km route there are twelve 'red' sections of road, of up to c200m in length, where the AutoTrack software shows there is less than 0.25m clearance between the FTA articulated vehicle and estate car. Between these sections, the FTA articulated vehicle and estate car have 0.25m or more clearance between them.

- 7.9 DMRB guidance presented at 'Appendix A - HS2 Rural Road Design Criteria of the Design Approach Statement – Roads' document dated July 2021 states that "*Inter-visible passing places should be provided on single-track roads at a maximum spacing of 200 metres.*" Therefore, along Ynys Y Mond Road at intervals of up to c200m, oncoming cars will have areas to wait / or room to pass the FTA articulated HGV.
- 7.10 Given the predominantly straight nature of Ynys Y Mond Road, the wider sections of the road are also likely to be intervisible. Investigations into forward visibility along the route show that with the exception of one location drivers will be able to see to the far end of the section of restricted width allowing opposing vehicles to stop and wait for the car or FTA articulated HGV to pass.
- 7.11 The only location where the widening of the road is not visible from at the previously wide section is the c200m stretch of road to the north of house number 54. Given the bend in the road and hill at this location (shown at Figures 4 and 5 below), drivers will not be able to see oncoming vehicles.

Figure 4 – View north on Ynys Y Mond Road (towards Hill and bend in road)



Figure 5 – View south on Ynys Y Mond Road (from Hill and bend in road)

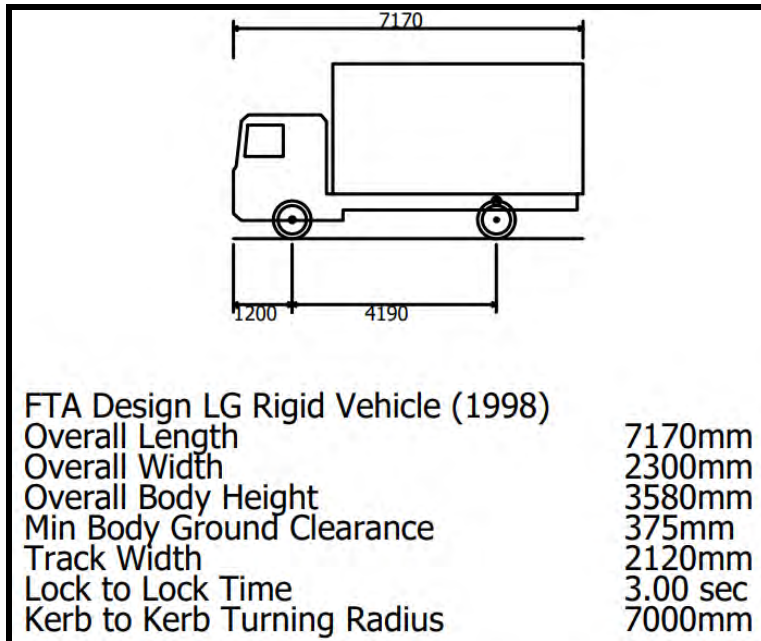


- 7.12 The walled driveway (shown at Figure 5) is located around half way along the narrow road section and could be used for a car travelling southbound to pass an HGV travelling northbound, however this is not intervisible.
- 7.13 At the above location, an escort vehicle may need to travel ahead of the FTA articulated HGV to make sure opposing vehicles wait before the narrowing, for the HGV to pass.
- 7.14 Based on the above, the AutoTrack software shows an FTA articulated vehicle will be able to access the remote set down area and pass 'estate' sized cars along the route to and from the B4291.
- 7.15 Given the above, the AutoTrack software indicates that two FTA articulated vehicles will be unlikely to pass on Ynys Y Mond Road, and so traffic management will be needed to control HGV traffic to prevent delivery vehicles using it in opposing directions at the same time. However, no widening to Ynys Y Mond Road is envisaged based on the tracking.

8.0 Swept Path Analysis – Graig Y Pal

- 8.1 Access to and from the proposal site located off Graig Y Pal has been initially tracked using an FTA Design LG 7.17m rigid vehicle as detailed at Figure 6 below.

Figure 6 – FTA Design LG 7.17m Rigid



- 8.2 The swept path analysis tracks the white route shown at Figure 1 above, from Graigola Road to land within the client's control (at the gate past the fork in the road c900m from the junction with Graigola Road).
- 8.3 The topographical survey indicates that road width along Graig Y Pal varies between 2.6m and 5.5m.
- 8.4 The swept path analysis shown at Appendix 2 shows the FTA 7.17m rigid vehicle travelling east and west on Graig Y Pal to / from the proposal site / land within the client's control. The swept path analysis is based on the FTA 7.17m rigid vehicle having 0.25m clearance from the edge of the carriageway (indicated by the topographical survey) on the nearside when travelling east and 0.25m clearance from its offside when travelling west. In both cases the 0.25m offset is on the northern side so that, in both directions, any pinch points are highlighted on the southern side.
- 8.5 A summary of the highlighting shown at Appendix 2 is provided below: -
- Green = 0.25m clearance achievable on both sides of the vehicle.
 - Yellow = 0.25m clearance is achievable on the north side of the vehicle but less than 0.25m clearance is achievable on the southern side. The vehicle can pass within the carriageway.
 - Red = 0.25m clearance is achievable on the north side of the vehicle but it is unable to pass within the carriageway on the southern side. The vehicle may be able to pass if 0.25m clearance to the north is not allowed for.

- 8.6 The red sections have been re-examined and tracked without the 0.25 clearance on the north side, on the basis that the lorry is contained within the carriageway with whatever clearance is available. Where the lorry can pass within the carriageway, these sections have been reclassified as orange as shown on the drawing at Appendix 3.
- 8.7 Therefore, the green sections on Appendix 2 are where the lorry can pass with at least 0.5m of clearance, yellow on Appendix 2 is where the lorry can pass with at least 0.25m of clearance, orange on Appendix 3 is where the lorry can pass but with less than 0.25m of clearance, and red on Appendix 3 is where the carriageway is too narrow for the FTA 7.17m rigid vehicle to pass.
- 8.8 As shown at Appendix 2 and 3, the AutoTrack software shows that Graig Y Pal is wide enough along the majority of the route for the FTA 7.17m rigid vehicle to travel within the carriageway as identified by the topographical survey. There are a few locations (highlighted red at Appendix 3) where the FTA 7.17m rigid vehicle is not contained within the carriageway, an overview of which is provided below: -

Eastbound

1. Approximately 500m along Graig Y Pal there is a 2m long section in which the AutoTrack software shows the vehicle tracking of the 7.17m rigid vehicle very marginally breaching (by around 2cm) the northern and southern carriageway edge (as detailed by the Topo).

The topographical survey shows that there are no obstacles directly bordering the carriageway (e.g rocks or trees) along the 2m long section and so the 7.17m rigid vehicle may be able to pass given the marginal breach, possibly with some minor road widening (subject to the highway boundary).

Figure 7 below shows the location, which lies to the north of the most prominent tree trunk, based on Google Earth imagery.

Figure 7 – Graig Y Pal Eastbound – c500m from junction with Graigola Road



2. At the kissing gate c875m along Graig Y Pal there is a c15m long section in which the AutoTrack software shows the vehicle tracking of the 7.17m rigid vehicle breaching the northern and southern carriageway edge (as detailed by the Topo). However, Google Earth and on-site photos show gravel at the sides of the carriageway (asphalt) that could be used by the FTA 7.17m rigid vehicle when manoeuvring as shown below at Figure 8 below.

Similar to the above location, a site review, including reviewing the highway boundary at this point should be undertaken to identify if use of the space adjoining the asphalt carriageway is possible.

Figure 8 – Graig Y Pal Fork in the Road / Gate



3. Beyond the fork in the road / gate (which is land within the client's control) the AutoTrack software indicates that the vehicle tracking of the FTA 7.17m rigid vehicle cannot be accommodated within the asphalt carriageway at some points. An onsite photo of the road beyond the gate is shown at Figure 9 below.

Figure 9 – Graig Y Pal North of Fork in the Road / Gate



Based on the above, improvements should be able to be made by the client to widen the useable carriageway beyond the gate if needed.

Westbound

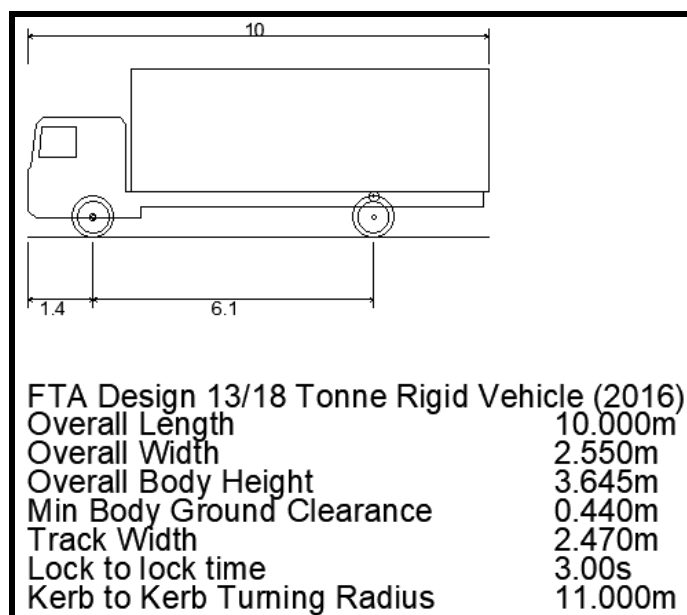
1. As detailed above, when travelling west the AutoTrack software also shows that the vehicle tracking of the FTA 7.17m rigid vehicle breaches the edge of carriageway to the east of the fork in the road and near to the kissing gate.
2. The westbound vehicle tracking also identifies the same 2m long section as being constrained.
4. An additional location is also shown to not contain the vehicle tracking of the FTA 7.17m rigid vehicle within the carriageway when travelling westbound. This location is c250m east of the junction with Graigola Road with the software showing the vehicle tracking very marginally breaching (by up to 10cm on either side) the northern and southern carriageway edge for 5m (as detailed by the Topo).

The topographical survey does however show no obstacles directly bordering the carriageway (e.g rocks or trees) along the 5m long section and so it is plausible that the 7.17m rigid vehicle will be able to pass given the marginal breach.

A site review, including reviewing the highway boundary should be undertaken at this location to confirm if some minor road widening may be required (subject to the extent of highway).

- 8.9 Based on the above, the AutoTrack software indicates that the vehicle tracking of the FTA 7.17m rigid vehicle can be accommodate along the majority of the access route. The constrained areas may also accommodate the FTA 7.17m rigid vehicle subject to further investigations including establishing the highway boundary location and some possible minor improvement works.
- 8.10 Access to and from the proposal site located off Graig Y Pal has been subsequently been tracked using an FTA Design 13/18 Tonne 10m Rigid Vehicle as shown at Figure 10 below.

Figure 10 – FTA Design 13/18 Tonne Rigid Vehicle

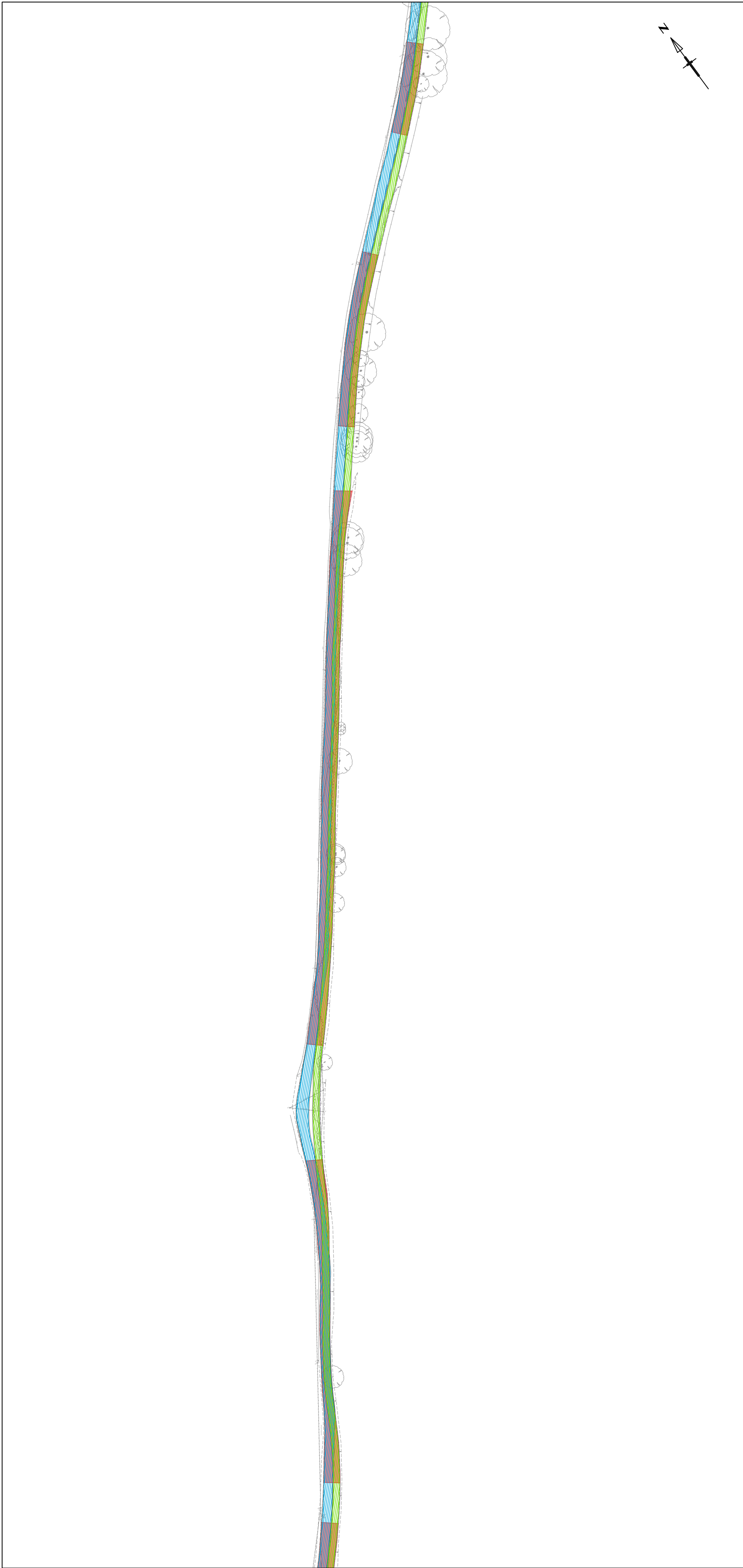
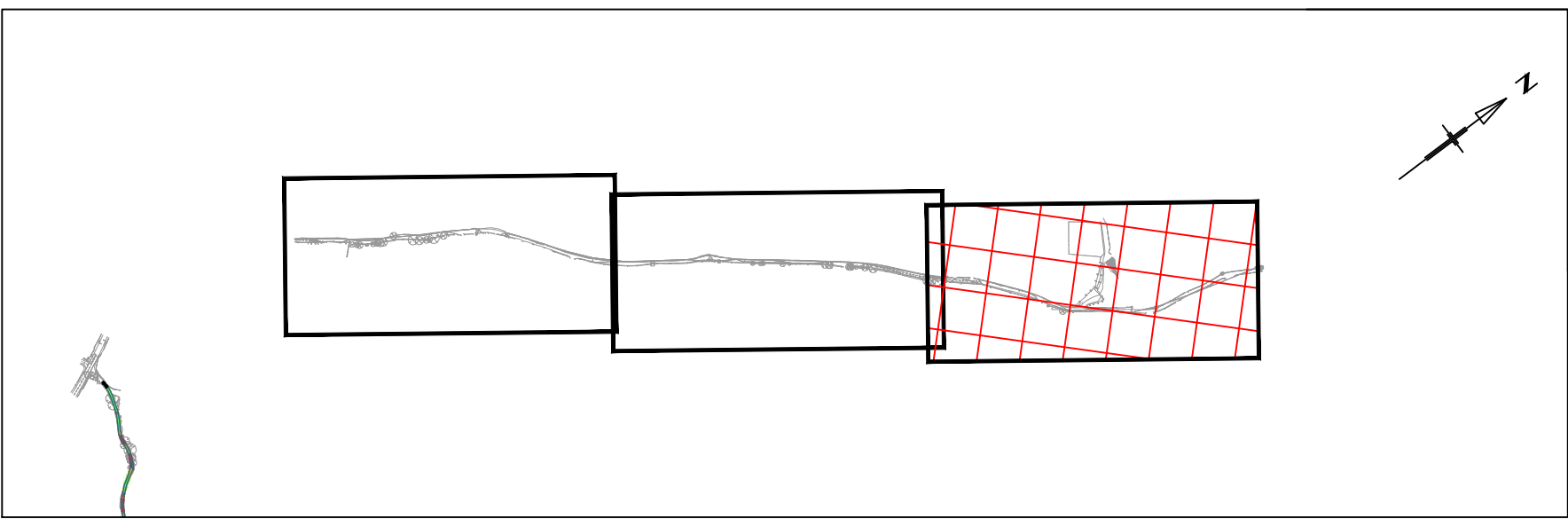
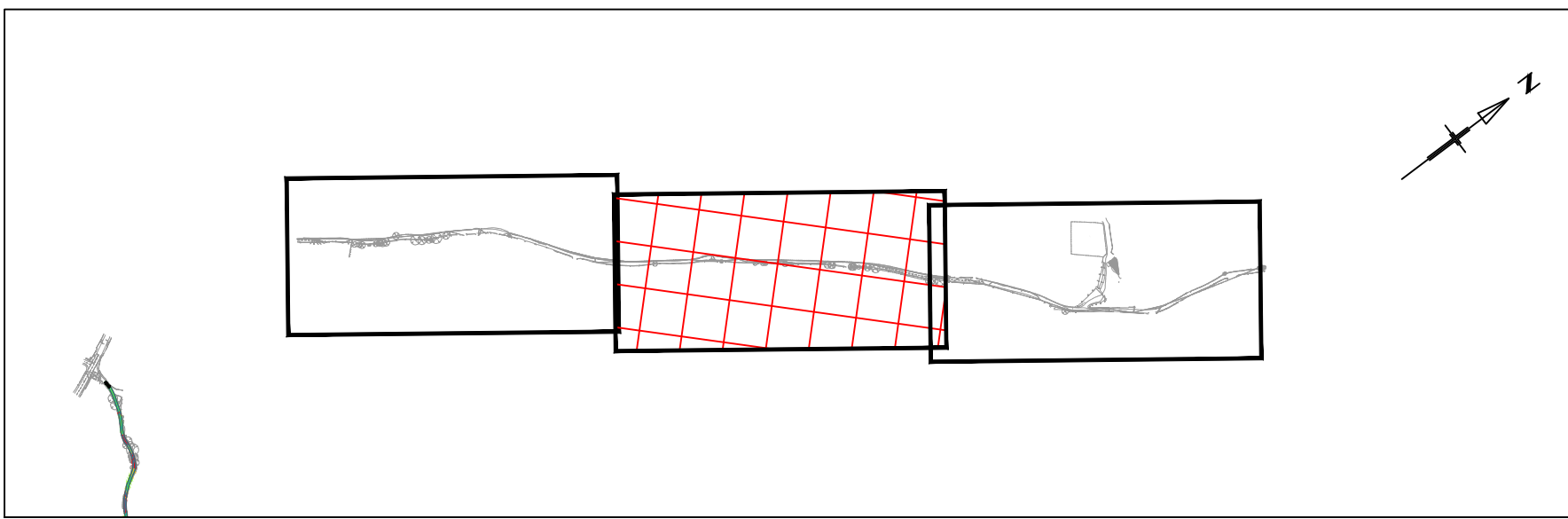
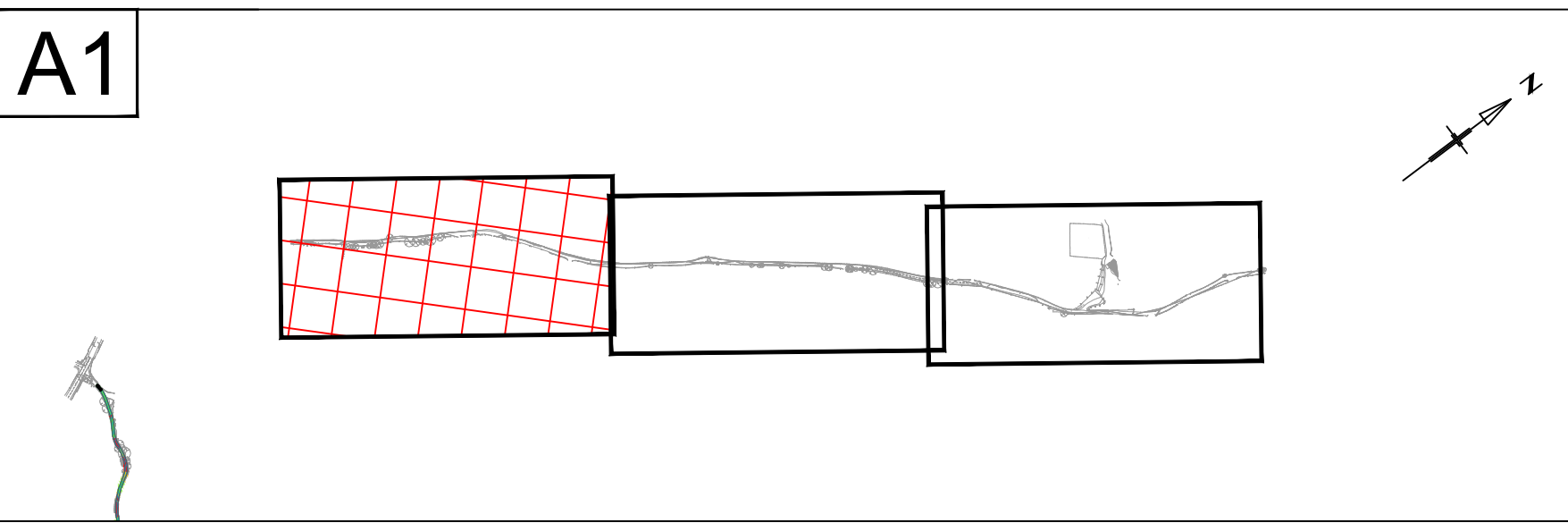


- 8.11 The swept path analysis shown at Appendix 4 shows the FTA 10m rigid vehicle travelling east on Graig Y Pal to the proposal site / land within the client's control. The swept path analysis is again based on the FTA 10m rigid vehicle having 0.25m clearance from the edge of the carriageway (indicated by the topographical survey) on the nearside with the same green, yellow, red key presented as presented at Paragraph 8.5 above.
- 8.12 The red sections have also been re-examined and tracked without the 0.25m clearance on the north side, on the basis that the lorry is contained within the carriageway with whatever clearance is available. Where the lorry can pass within the carriageway, these sections have been reclassified as orange as shown on the drawing at Appendix 5.
- 8.13 As shown at Appendix 5, the AutoTrack software shows that some sections of Graig Y Pal are not wide enough for the FTA 10m rigid vehicle to travel within the carriageway as identified by the topographical survey.
- 8.14 An overview of the red highlighted sections where the FTA 10m rigid vehicle is not contained within the carriageway is provided below: -
1. The AutoTrack software shows that the vehicle tracking marginally breaches (by up to approximately 20cm) the northern edge of carriageway (as indicated by the topographical survey) c120m to the east of the junction with Graigola Road. The topographical survey shows that there is a telegraph and electricity pole located near to the carriageway in this location however the vehicle tracking does not interact with these features. From Google Earth there appears to be room on either side of the asphalt to accommodate the vehicle tracking subject to the verge being highway and possible minor road widening.
 2. 15m further along Graig Y Pal the vehicle tracking is shown to marginally breach (by up to 20cm in each direction) the northern and southern edge of carriageway (as indicated by the topographical survey). The survey shows an electricity pole, trees and a garden wall located near to the carriageway in this location however the vehicle tracking does not interact with these features. Again, an onsite review should be undertaken to confirm if there is room for the 10m vehicle to pass possibly with some minor road widening.
 3. Adjacent to residential dwelling Number 12 the vehicle tracking is shown to marginally breach (by up to 10 cm) the northern edge of carriageway (as indicated by the topographical survey). The survey shows a wall adjacent to the northern edge of the carriageway and a small gate adjacent to the southern edge. From Google Earth there does appear to be room on the southern side of the road to accommodate the 10cm extra however an on-site review should be undertaken to establish this and whether any minor road widening is required/possible.

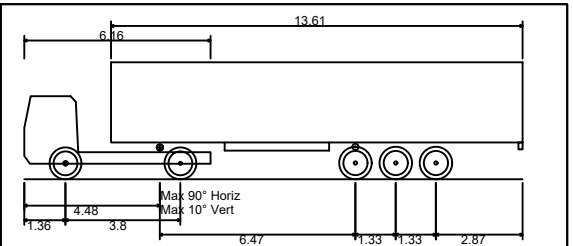
4. Between the end of the residential dwellings and the kissing gate on Graig Y Pal there are eight sections of red of up to 150m in length where the vehicle tracking is shown to marginally breach (by up to 10cm in each direction) the northern and / or southern edge of carriageway (as indicated by the topographical survey). The vehicle tracking at these locations is shown to interact with any obstacles shown on the survey near to the carriageway, including the trunks of overhanging trees however this should however be confirmed on-site. Again, some marginal road widening might be required subject to the extent of highway.
 5. The AutoTrack software shows that the vehicle tracking breaches the edge of carriageway to the north and south near to the gate, however Google Earth and on-site photos show gravel at the sides of the carriageway that could be used by the FTA 10m rigid vehicle (as above), subject to it being highway.
 6. Beyond the fork in the road / gate (which lies within the client's control) the AutoTrack software indicates that the vehicle tracking of the FTA 10m rigid vehicle cannot be accommodated within the carriageway however improvements may be able to be made by the client to widen the useable carriageway as detailed above.
- 8.15 Based on the above, the AutoTrack software indicates that the vehicle tracking of the FTA 10m rigid vehicle can be accommodated along some sections of the route, however there are a number of sections where the vehicle tracking is shown to not be contained within the carriageway as indicated by the topographical survey. The investigations above indicate that where the tracking exceeds the edge of carriageway there appears to be space for the extra width to be accommodated possibly with some minor road widening, however on-site investigation including into the extent of the highway would be needed to establish validity before an FTA 10m rigid vehicle is driven along the route.

**APPENDIX 1 - YNYS Y MOND ROAD SWEPT PATH
ANALYSIS (ARTICULATED HGV)**

A1

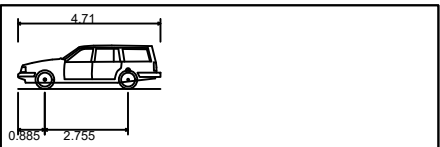


NORTHBOUND - FTA DESIGN 16.5M ARTICULATED VEHICLE



FTA Design Articulated Vehicle (1998)	
Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.215m
Max Track Width	2.470m
Lock-to-lock time	3.00s
Kerb to Kerb Turning Radius	6.550m
Steering limited to 90%	
0.25m Clearance offset shown	

SOUTHBOUND - ESTATE CAR



Estate Car (2006)	
Overall Length	4.710m
Overall Width	1.804m
Overall Body Height	1.442m
Min Body Ground Clearance	0.207m
Max Track Width	1.756m
Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.950m

AREA OF CARRIAGEWAY WHERE 0.25M CLEARANCE BETWEEN OPPOSING VEHICLE IS NOT ACHIEVABLE

rev.	amendment	by	date

connect CONSULTANTS
78 BROAD STREET, CHIPPING SODBURY, BRISTOL, BS37 6AG
Tel: 01454 320 220 Fax: 01454 320 099
Web: www.connect-consultants.com Email: bristol@connect-consultants.com



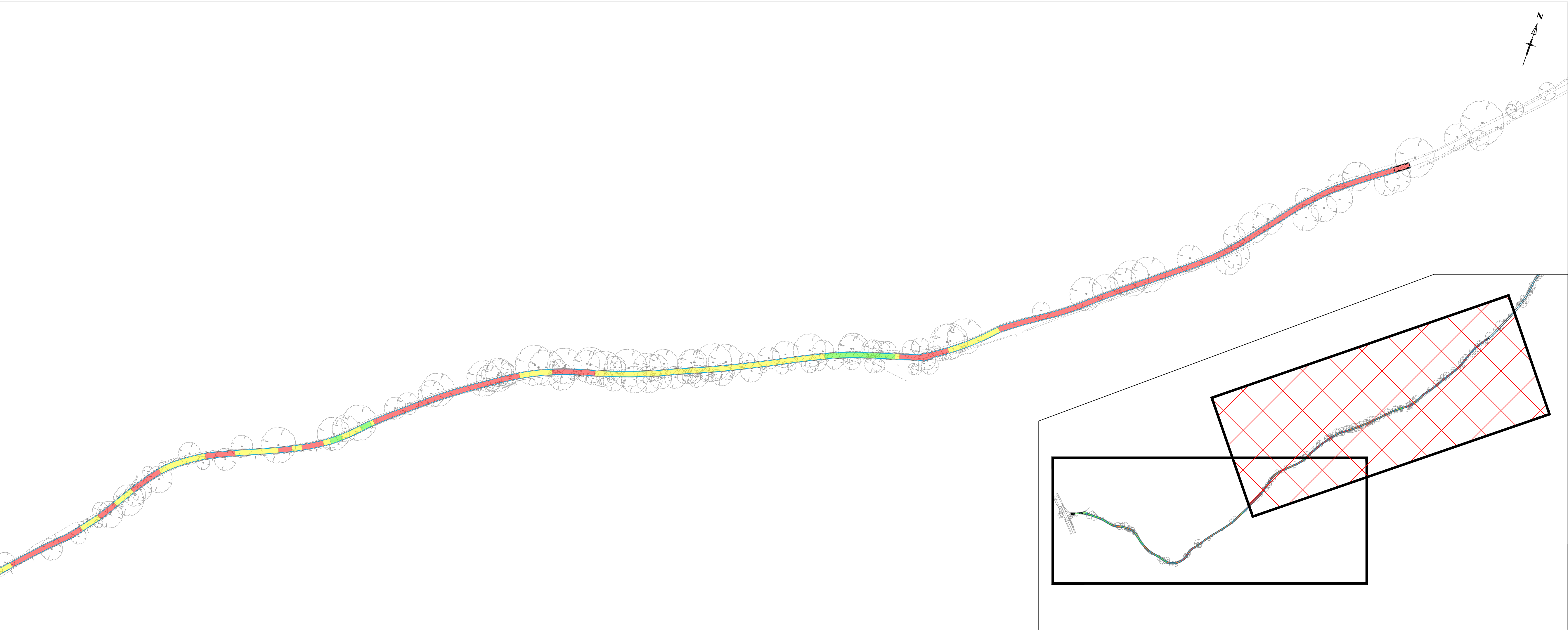
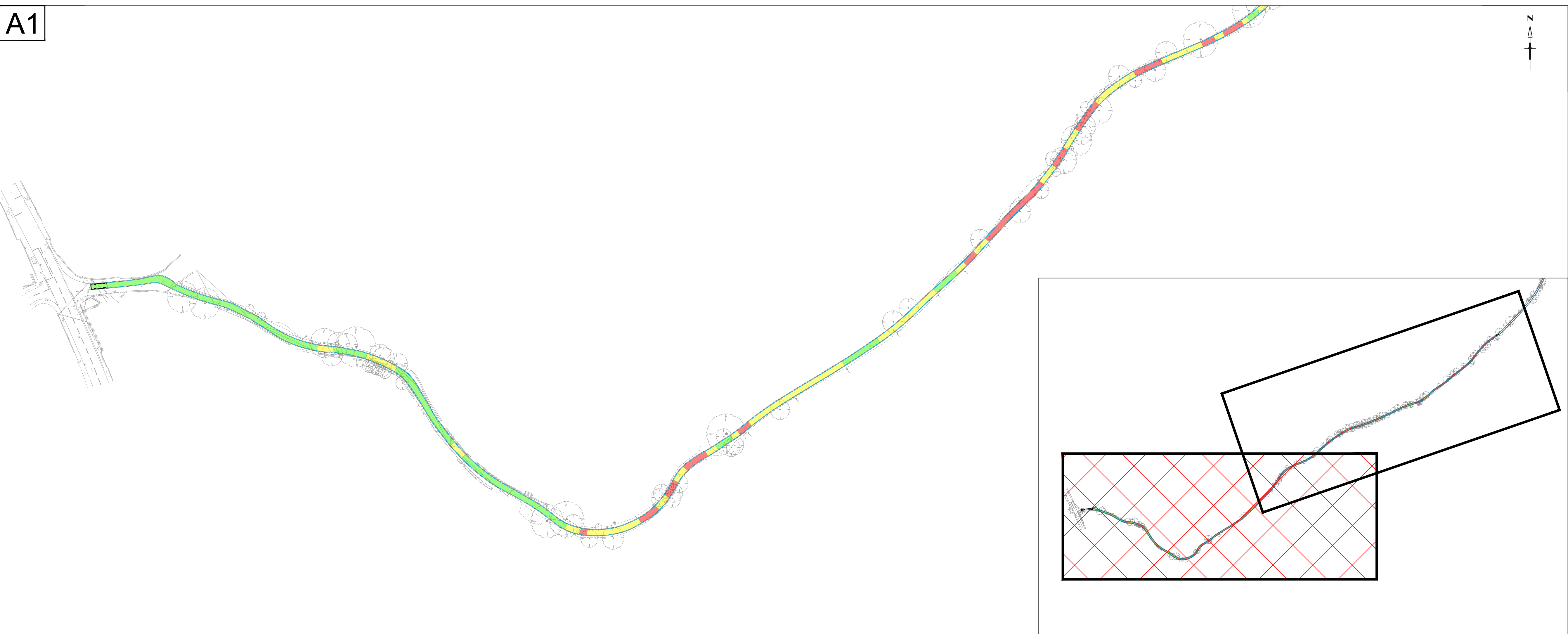
client
SIRIUS PLANNING

project
**SWANSEA
LAND AT CRAIG Y PERCHYCH**

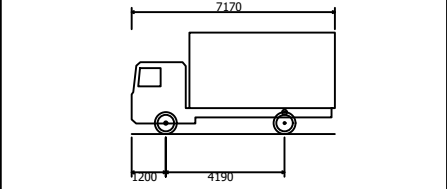
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**SWEPT PATH ANALYSIS
YNYSYMOND ROAD**

scale 1:1000	drawn by T.A.S	checked by R.H.L
date MARCH 2022	status PLANNING	
drawing number 21163 - SK220321.1		rev.

**APPENDIX 2 - GRAIG Y PAL SWEPT PATH ANALYSIS
(7.17M RIGID HGV – WITH 0.25M OFFSET)**



EASTBOUND - FTA DESIGN 7M RIGID VEHICLE



FTA Design LG Rigid Vehicle (1998)	7170mm
Overall Length	2300mm
Overall Width	3580mm
Overall Body Height	375mm
Min Body Ground Clearance	2120mm
Track Width	3.00 sec
Lock to Lock Time	7000mm
Kerb to Kerb Turning Radius	

- AREA OF CARRIAGEWAY WHERE 0.25M CLEARANCE IS ACHIEVABLE BETWEEN BOTH SIDES OF CARRIAGEWAY
- AREA OF CARRIAGEWAY WHERE 0.25M CLEARANCE IS NOT ACHIEVABLE TO BOTH SIDES OF CARRIAGEWAY
- AREA OF CARRIAGEWAY THAT IS TOO NARROW FOR VEHICLE TO PASS

rev.	amendment	by	date

connect CONSULTANTS

78 BROAD STREET, CHIPPING SODBURY, BRISTOL, BS37 6AG
Tel: 01454 320 220 Fax: 01454 320 099
Web: www.connect-consultants.com Email: bristol@connect-consultants.com

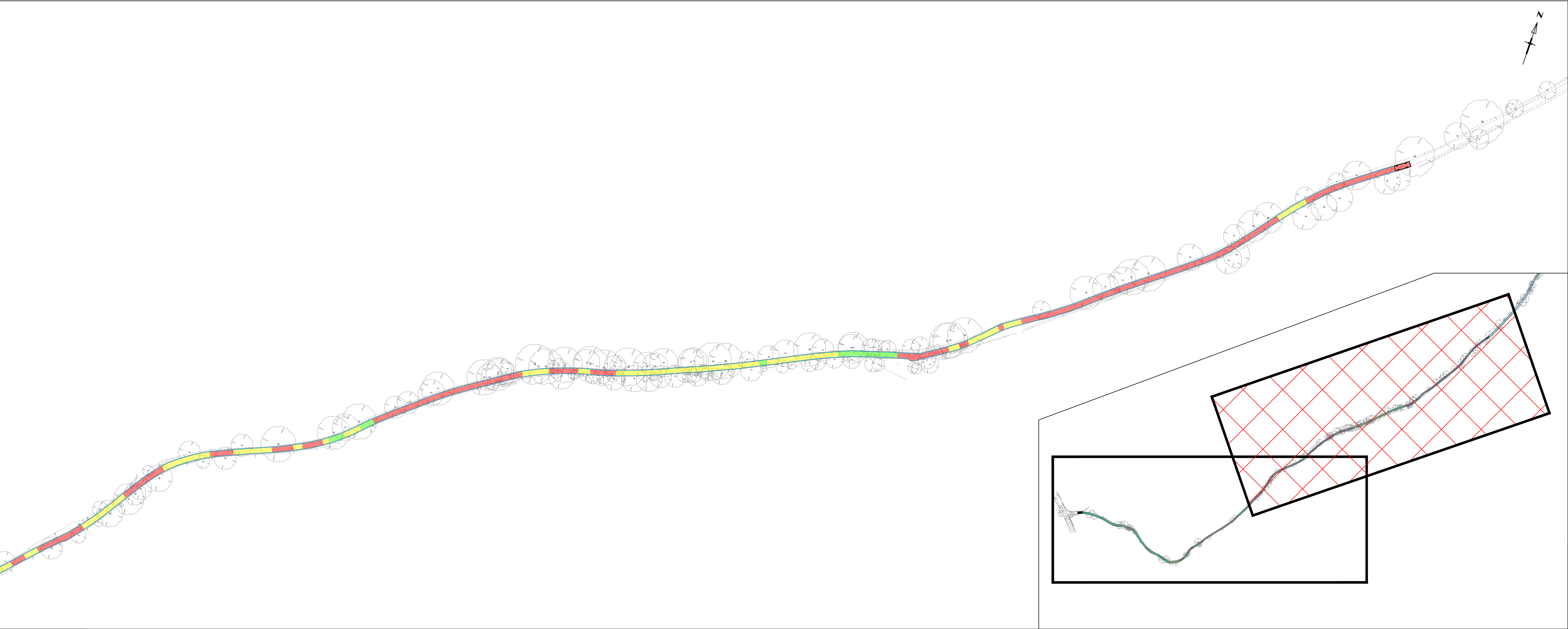
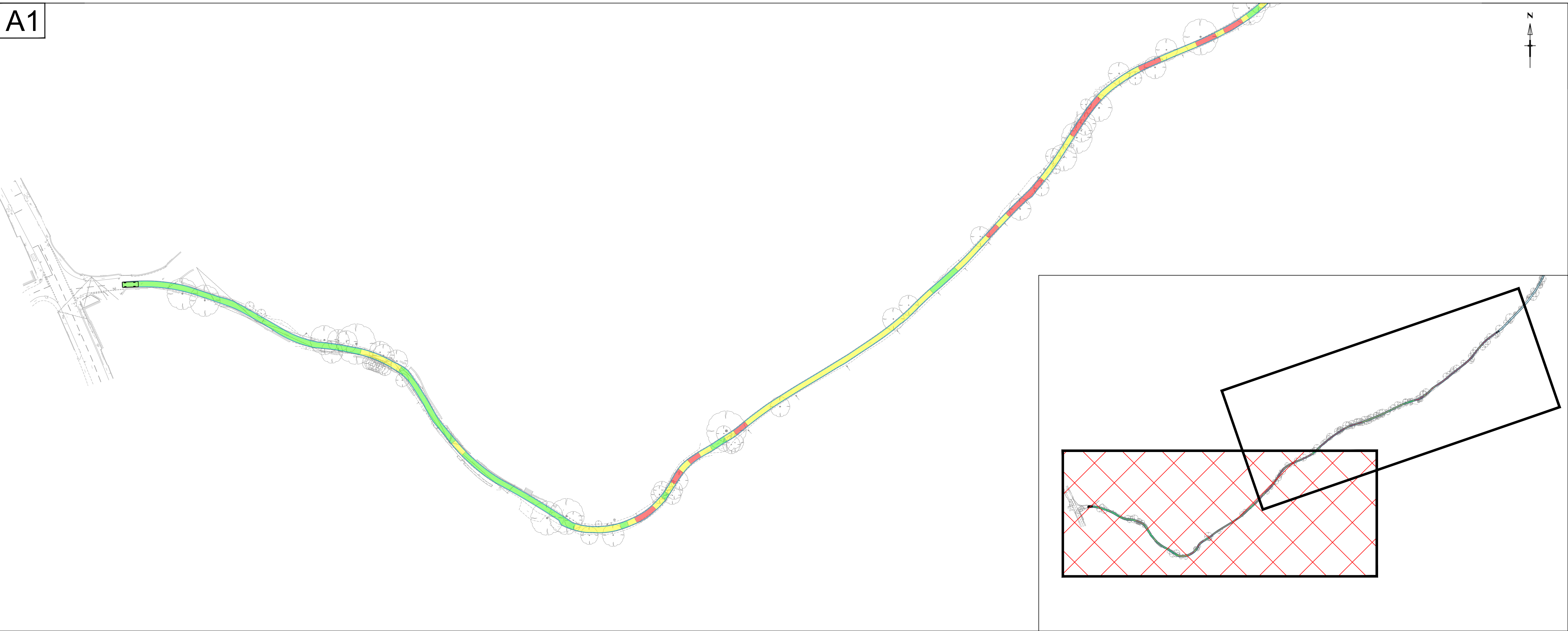


client
SIRIUS PLANNING

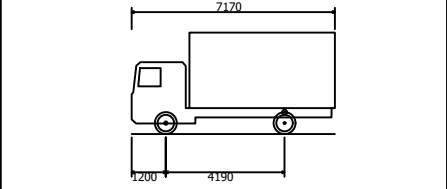
project
SWANSEA
LAND AT CRAIG Y PERCHYCH

title
SWEPT PATH ANALYSIS
GRAIGYPAL ROAD

scale 1:1000	drawn by T.A.S	checked by R.H.L
date MARCH 2022	status PLANNING	
drawing number 21163 - SK220321.2		rev.



WESTBOUND - FTA DESIGN 7M RIGID VEHICLE



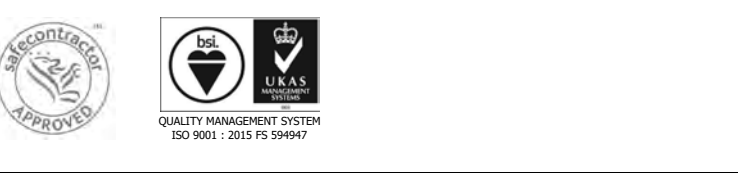
FTA Design LG Rigid Vehicle (1998)	7170mm
Overall Length	2300mm
Overall Width	3580mm
Overall Body Height	375mm
Min Body Ground Clearance	2120mm
Track Width	3.00 sec
Lock to Lock Time	7000mm
Kerb to Kerb Turning Radius	

- AREA OF CARRIAGEWAY WHERE 0.25M CLEARANCE IS ACHIEVABLE BETWEEN BOTH SIDES OF CARRIAGEWAY
- AREA OF CARRIAGEWAY WHERE 0.25M CLEARANCE IS NOT ACHIEVABLE TO BOTH SIDES OF CARRIAGEWAY
- AREA OF CARRIAGEWAY THAT IS TOO NARROW FOR VEHICLE TO PASS

rev.	amendment	by	date

connect CONSULTANTS

78 BROAD STREET, CHIPPING SODBURY, BRISTOL, BS37 6AG
Tel: 01454 320 220 Fax: 01454 320 099
Web: www.connect-consultants.com Email: bristol@connect-consultants.com



client
SIRIUS PLANNING

project
**SWANSEA
LAND AT CRAIG Y PERCHYCH**

title SWEPT PATH ANALYSIS GRAIGYPAL ROAD		
scale 1:1000	drawn by T.A.S	checked by R.H.L
date MARCH 2022		status PLANNING
drawing number 21163 - SK220321.3		rev.