

Construction Traffic Management Plan

New Hall Solar Farm.

Land at New Hall Farm, New Hall Lane, Overton, Wakefield, WF4 4RP.

On behalf of Boom Developments Ltd.

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1. Introduction

- 1.1. This Construction Traffic Management Plan (CTMP) has been prepared by Pegasus Group on behalf of Boom Developments Ltd. It addresses the transport issues associated with the construction of a solar farm on land a New Hall Farm, Overton, Wakefield, WF4 4RP.
- 1.2. The site is located around one kilometre south of the village of Overton and around eight kilometres southwest of Wakefield.
- 1.3. The proposal is for the construction, operation, and maintenance of a 22.4 Megawatt (MW) solar farm. Further details of the proposal and technology used together to the proposed site layout are provided separately as part of the planning submission.
- 1.4. Access to the site during the construction and operational phases of the solar farm will be taken from Old Road.
- 1.5. This CTMP describes the arrangements that are proposed for the period of construction and operational activities at the site and sets out the following:
 - i. Site access arrangements.
 - ii. Routing for construction traffic.
 - iii. Vehicle numbers, size and frequency; and
 - iv. Proposed mitigation measures, including condition surveys.
- 1.6. It will be the responsibility of the applicant and appointed contractor to comply with all statutory regulations and guidelines as appropriate, in relation to construction and movement activities.
- 1.7. The appointed contractors will be provided with a copy of this CTMP and will adhere to it as part of the planning consent. The CTMP will form part of the information provided as part of construction personnel's on-site induction processes. The contact details of the contractor and those of the highway department at Wakefield Council will be exchanged before commencement of the works on site.

2. Site Context

Site Location and Description

- 2.1. The site is situated to the south of the village of Overton, approximately eight kilometres to the southeast of Wakefield. The site location in the context of the wider area is shown at **Figure 2.1**.
- 2.2. The site comprises agricultural fields at New Hall Farm. New Hall Lane bisects the site in a north to south direction. The site is bound by Old Road to the west, Smithy Lane and agricultural land to the north, Coxley Beck watercourse and Stony Cliffe Wood to the east and New Hall Approach to the south.

Local Highway Network

Old Road

- 2.3. Old Road is single carriageway which is subject to a 40mph speed limit. It measures approximately six metres wide with a footway provided on the western side of the carriageway.
- 2.4. To the south, Old Road becomes Hardcastle Lane connecting to the A637 Barnsley Road at Flockton Green via a priority junction. To the north it becomes Cross Road connecting to the A642 New Road via a signalised junction within Overton.
- 2.5. Bus services 232, 232S and HA1 operate along the route approximately every hour between Huddersfield and Wakefield.

New Hall Lane

- 2.6. New Hall Lane bisects the site in a north-south direction. It is an unmarked single lane carriageway private road, measuring around three metres wide.
- 2.7. In the south New Hall Lane forms a priority junction with the A637 Bar Lane and provides access to HMP New Hall. In the north, New Hall Lane becomes Smithy Lane.
- 2.8. The road is subject to a 10mph speed limit with speed cushions present along the carriageway commencing at the junction with the A637 in the south until the New Hall Lane and New Hall Approach junction in the north.

New Hall Approach

- 2.9. New Hall Approach is an unmarked single carriageway private road which measures approximately three metres wide. It is subject to 20mph speed limit and is illuminated. In the west New Hall Approach forms a priority junction with Hardcastle Lane and in the east it becomes New Hall Lane.
- 2.10. There are a number of informal passing bays located on both of the northern and southern side of the carriageway.

Public Rights of Way

- 2.11. The site is crossed by a number of public rights of way (PRoW). This includes bridleways Sitlington 13 and Sitlington 26 and footpaths Sitlington 20, Sitlington 25 and Sitlington 27.
- 2.12. Bridleway Sitlington 13 follows the alignment of New Hall Lane which runs southwest to northeast across the site from the A637 to Coxley Lane.
- 2.13. Bridleway Sitlington 26 runs southwest to northeast across the western section of the site from Hardcastle Lane to New Hall Lane.
- 2.14. Footpath 20 runs east to west from Highfield Crescent to an unnamed track, Footpath 25 bisects the northern section of the site and bounds the north of the eastern section of the site.
- 2.15. Footpath 27 runs from northwest to southeast across the western section of the site. Footpath 27 connects with Bridleway 26 to the northwest and Bridleway 13 to the southeast.
- 2.16. Footpath 25 runs from south to north and bisects the western section of the site. In the south Footpath 25 provides access to New Hall Approach and in the north to Smithy Lane.
- 2.17. A copy of Wakefield council PRoW Map is included in **Appendix A**.
- 2.18. Measures to manage and mitigate the impacts of the construction phase on the PRoW are set out in **Chapter 5**.

Highway Safety

- 2.19. Personal Injury Collision (PIC) records have been obtained using the Crash Map database. This shows that there have been no PICs recorded within approximately 150 metres either side of the proposed site access on Old Road, in the most recent five year period.

3. Proposed Site Access Arrangements

Construction Phase

- 3.1. Vehicular access to the site during the construction phase is proposed via a new access from Old Road located approximately 160 metres northeast of the junction between Old Road and Grange Lane Junction. The proposed site access arrangement is shown in **Figure 3.1**.
- 3.2. The access will be six metres wide with a six metre radii on the northern side and a 24 metre taper on the southern side. These radii's have been provided based on the proposed construction traffic routing plan as set out in **Section 4**, which confirms that construction traffic will access and egress the site from the south only. All construction vehicles will enter and egress the site in a forward gear, as shown on **Figure 3.1** which shows Swept Path Assessments for a 16.5m heavy goods vehicle (HGV) accessing and egressing the site from the south. This is the largest vehicle that will need to access the site during the construction phase.
- 3.3. **Figure 3.1** confirms that visibility splays of 2.4m x 120 metres can be achieved to the nearside kerb in both directions, commensurate with Design Manual for Roads and Bridges (DMRB) requirements for the 40mph speed limit on Old Road. The visibility splay shown to the south crossed land controlled by the applicant, and this will be maintained clear of any trees or vegetation in perpetuity.
- 3.4. Banksmen will be provided at the access to assist the largest HGVs entering and exiting the site and signage will be located to warn drivers of the construction access.
- 3.5. The first 20m of the access will be provided with a hard bound surface. Should a gate be provided, it is proposed that it would open inward and would be provided to the rear of the hard bound surface, which would allow for the largest vehicle size anticipated to be associated with the construction phase to be accommodated off of the Old Road carriageway.

Internal Roads

- 3.6. The solar farm layout will include permanent four metre wide access tracks throughout the site allowing for the movement of construction and maintenance vehicles. These will be completed during the initial stages of construction, so temporary haul routes will not be necessary.
- 3.7. The tracks will enable the loads of HGVs and plant and reduce the propensity of debris being taken on to the local highway network. Internal access tracks will be constructed of processed rockfill.

Construction Compound

- 3.8. A temporary construction compound will be located within the site. The compound will be suitable size for an articulated vehicle to enter and turn in a forward gear.

- 3.9. A temporary car parking area (including spaces for minibuses) will be provided on the site within a contractor's compound. Parking will therefore be contained within the site and no unnecessary parking will occur on the local highway network. The compound will also include areas for the storage of plant and equipment.
- 3.10. If ground conditions dictate, wheel washing facilities will be provided within the construction compound to prevent vehicles taking mud and dirt on to the local highway network.

Operational / Maintenance Site Access

- 3.11. Once operational, the site will continue to be accessed from Old Road in the position shown on **Figure 3.1**.
- 3.12. As set out further in **Chapter 6**, once operational, the solar farm will be associated with approximately two visits per month by 4x4 or small van.
- 3.13. These vehicles are of a size already using Old Road and the additional visits to the site will be infrequent once the solar farm is operational. Therefore, the operational access is considered suitable.
- 3.14. Whilst the contractor's compound will have been removed, space will remain within the site for vehicles to turn around to ensure that reversing will not occur onto the adjacent highway. Any gates will be set back at least 10 metres from the edge of the highway.

4. Construction Traffic Routing

4.1. The PV panels and frames will be shipped in 40ft containers which are typically carried to the site on 16.5m long articulated HGVs. This is the largest vehicle which will access the site.

4.2. The designated route for construction traffic accessing the site from the Strategic Road Network is shown at **Figure 2.1** and summarised below:

- i. From the M1 junction 38, exit the Haigh Roundabout on the A637 continuing northbound until reaching the junction with Hardcastle Lane.
- ii. Turn right onto the Hardcastle Lane.
- iii. Continue north for circa 1.1 kilometres before turning right into site access.

4.3. The construction route will be utilised in reverse for construction vehicles exiting from the site.

4.4. There are no signed height or weight restriction on the route and no road closures will be required.

Construction Route Mitigation

4.5. The arrival and departure of HGVs at the site will be strictly managed by the site manager. Drivers will adhere to a delivery schedule and will be required to call ahead to ensure that any emerging HGVs can be held within the construction compound. No HGVs will be permitted to wait on the public highway.

4.6. No construction traffic will be permitted to turn right out of the site access and signage will be placed within the site advising drivers of this. This will ensure that all construction traffic proceeds to / from the Strategic Road Network as soon as possible.

4.7. Banksman will direct construction traffic from/to the south and drivers will be advised not to use Sat-Navs to reach the site.

5. Proposed Mitigation Measures During the Construction Phase

HGV Management

- 5.1. The arrival and departure of HGVs at the site will be strictly managed by the site manager. Drivers will adhere to a delivery schedule and will be required to call ahead to ensure that any emerging HGVs can be held within the construction compound. No HGVs will be permitted to wait on the public highway.
- 5.2. If considered necessary by the highway authority, deliveries to the site can be limited to outside the typical peak hours on the local highway network on Monday to Friday (i.e. between 09:00-15:00) and on Saturdays between 08:00-13:00 to avoid school hours and busy commuter roads where possible. No deliveries will take place on Sundays or Public Holidays.
- 5.3. Banksmen will be located at the site access points to assist the largest vehicles entering and exiting the site. HGVs will only be permitted to enter and exit the site when Old Road is clear of traffic. Existing traffic on Old Road will be always given priority over construction traffic.
- 5.4. As set out in **Chapter 1**, the contact details of the contractor, including an emergency contact number, and those of the highway department at Wakefield Council will be exchanged before commencement of works on site.

Signage

- 5.5. Temporary signage will be erected in the vicinity of the site during the construction phase. Diagram 7301 'WORKS TRAFFIC ONLY' in the Traffic Signs Regulations and General Directions (TSRGD) will be used to indicate that heavy construction vehicles are turning. Signage will be white text and red background 1050 x 750mm mounted in 'A' frames, as illustrated at **Appendix B**.

Dust and Dirt

- 5.6. Wheel washing facilities will be provided on site. A hose or pressure washer will be provided upon exit of the construction compound in order to enable wheel washing to take place before vehicles exit on to the local highway network.
- 5.7. A road sweeper will be deployed on Old Road as required.

Public Rights of Way Management and Mitigation

- 5.8. The PRoWs within the site are proposed to remain open during the construction phase. Management and mitigation measures are proposed to ensure the continued safe use of the PRoW during the construction phases. All management and mitigation measures set out within this report will be implemented prior to construction activities at the site commencing.

- 5.9. The construction compound will be located to the south of PRow Bridleway Sitlington 26. As such, HGVs will be required to cross the PRow to access the compound.
- 5.10. HGVs will offload materials in the compound, and they will then be decanted on to smaller vehicles, such as tractor and trailer, and moved around the site.
- 5.11. PRow Footpath 25 and Bridleway Sitlington 13 will need to be crossed by smaller vehicles during the construction and operational phases of development.
- 5.12. It is proposed that the PRow will be fenced off during construction activities and vehicles will only be permitted to cross the PRow at designated crossing points.
- 5.13. The landowner already uses these routes with agricultural vehicles, but the crossing points will be formalised during the construction phase for safety reasons. The majority of agricultural vehicle trips which route along and/or cross the PRow will no longer be required and will be temporarily replaced by the construction traffic associated with the proposed solar farm.
- 5.14. For the duration of the construction phase, the surfacing of the PRow at crossing points will be protected by temporary ground protection matting. The matting will be non-slip on the upper side for PRow users. The matting will protect the surface of the PRow beneath and will be removed upon completion of the construction phase.
- 5.15. Signage will be erected at either end of the PRow in the vicinity of the site advising users of ongoing construction activities at the site and asking them to keep to the footpaths and further signage will be positioned on the approach to either side of each crossing point for both construction traffic and PRow users.
- 5.16. Two temporary gates will be installed at each of the designated crossing points to safely segregate construction vehicles and users of the PRow. The crossing points will be supervised by banksmen and the gates will be re-opened after each crossing by a construction vehicle to ensure minimum disruption to PRow users. Users of the PRow will always be given priority over construction traffic.
- 5.17. Once operational, the PRow will be retained within the layout. The definitive widths will be retained within the solar farm scheme with an additional buffer to any fencing.

6. Vehicle Trip Attraction

Construction Phase

- 6.1. The applicant has confirmed that the solar farm will take approximately six months to complete. This includes the preparation of the site, erection of security fencing, assembly and erection of the PV strings, installation of the inverters/transformers and grid connection. The applicant has confirmed that there will be a six week period where construction traffic movements will be at their highest intensity.
- 6.2. An average of around 50 construction workers are forecast to be on site at peak times during the construction period. As set out in **Chapter 2**, a temporary construction compound will be provided for storage, parking for contractors and the turning of HGVs. Parking will therefore be contained within the site.
- 6.3. The location of where staff will travel from is unknown at this stage as it will depend on the appointed contractor. However, it is anticipated at this stage that the non-local workforce will stay at local accommodation and general operatives will be transported to the site by minibuses to minimise the impact on the local highway network. The number of car trips to the site will be minimised to those senior staff such as project managers and the Health and Safety Executive.
- 6.4. The construction period will include the use of HGVs to bring equipment onto the site and this will be strictly managed to ensure that vehicle movement is controlled and kept to a minimum. It should be noted that unlike wind farms, the construction of a solar farm does not require equipment to be delivered by abnormal loads (i.e. vehicles over 16.5m in length). The route identified at **Chapter 4** for construction traffic means that large vehicles will utilise A-roads as far as possible, with impacts on local residential areas minimised.
- 6.5. The site construction opening times will be as follows:
- Site open for non invasive works - no heavy machinery or deliveries:
 - Monday to Friday between 07:30-18:30;
 - Saturdays between 07:30-16:30.
 - Site will be fully open for all works including heavy machinery and deliveries:
 - Monday to Friday between 08:30-17:30;
 - Saturdays between 09:00-13:00.
 - No deliveries will take place on Sundays or Public Holidays.
- 6.6. From experience elsewhere, the Applicant has advised that around 119 construction traffic movements (238 two way) will be associated with the construction of the site.

6.7. It is anticipated that there will be a total of 57 deliveries (114 two-way movements) by the largest HGVs; 16.5m long articulated vehicles.

6.8. A summary of the construction traffic movements is set out in **Table 6.1**.

Table 6.1 – Heavy Goods Vehicles Movements – Construction Period

Activity	Type of Vehicle	Total Number of Deliveries	Two-Way movements
Solar Farm Modules & Mounting Structures	Max. 16.5 metre Articulated	57	114
Crane		1	2
Transformers	10m Rigid	4	8
Inverters		6	12
Internal Access Tracks		30	60
Other (cabling, construction material, waste)	12m Rigid	20	40
General	Front End JCB by Low Loader	1	2
Total		119	238

6.9. As a worst case, assessing the six week period (36 days) where construction traffic will be at its highest intensity, this equates to on average around four HGVs, or around eight two-way vehicle movements per day by the largest vehicles.

Operational Phase

6.10. It is currently anticipated that once the site is operational, there will be two visits per month for equipment maintenance. The largest vehicles that are likely to be used during the operational phase is expected to be no larger than a transit van or 4x4 vehicles.

6.11. Whilst the contractor's compound will have been removed, space will remain within the site for such a vehicle to turn around to ensure that reversing will not occur onto the adjacent highway.

Summary

- 6.12. It is expected that there will be up to around eight two-way movements per day by large vehicles at the site (i.e. an average of four arrival and four departures) over a six week period. There will also be construction workers arriving at the site first thing in the morning and departing in the evening, although the numbers involved are forecast to be relatively low on a day-to-day basis and minibuses will be provided for general operatives.
- 6.13. The level of traffic during the temporary construction phase is not considered to be material and it is considered that this will not have a detrimental impact on the safety or operation of the local or strategic highway network.

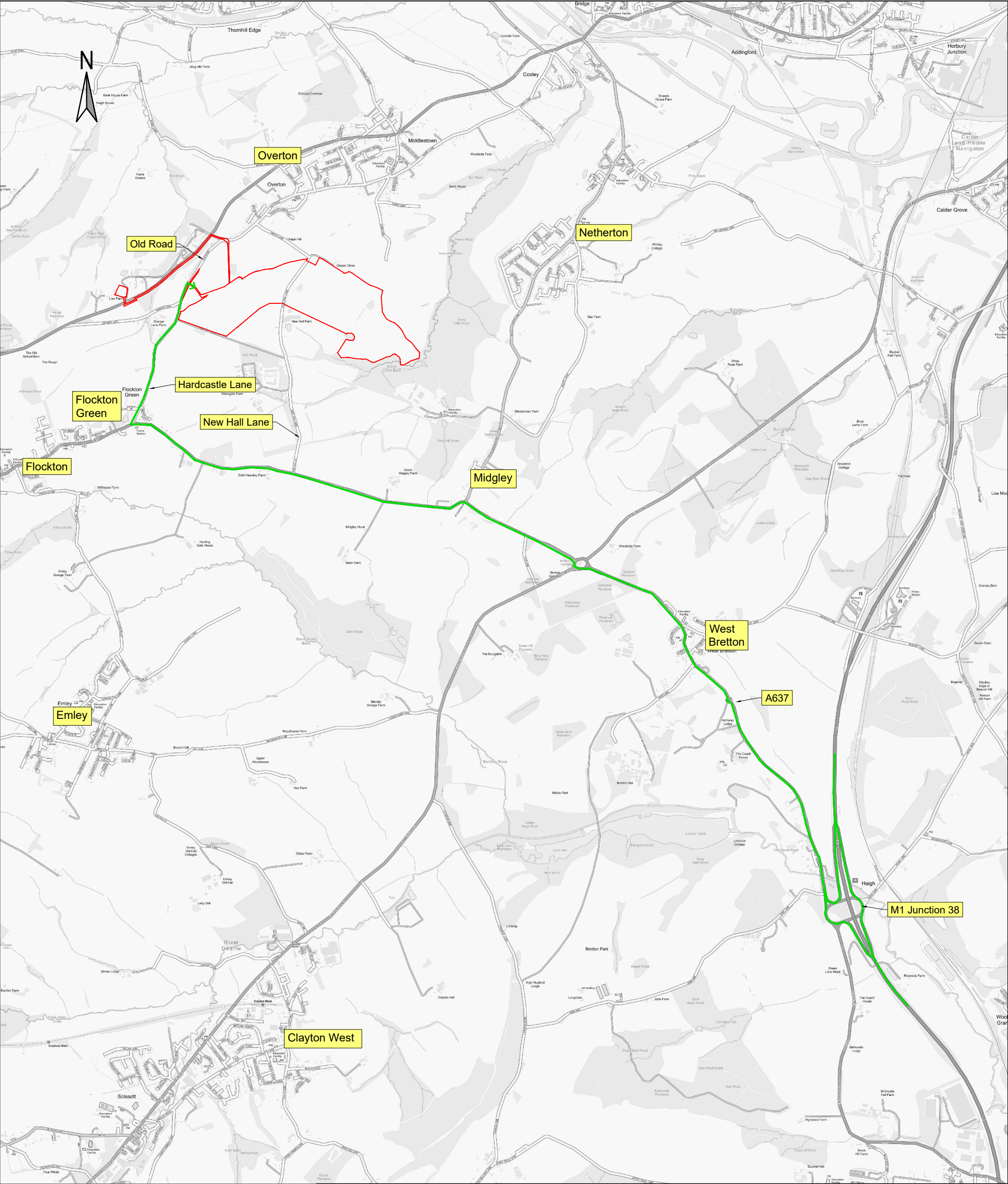
7. Condition Survey

- 7.1. A pre-commencement Walk-Over Condition Survey on the local highway network will be carried out to assess the baseline condition of the adopted highway before construction activities commence. At this stage it is envisaged that the extents of the survey will be Old Road between the site access point and the A637 at Flockton Green.
- 7.2. The survey will incorporate photographic records as appropriate. The survey will be accompanied by Highway Officers at Wakefield Council, as required, and a date for this survey will be agreed before construction activities commence.
- 7.3. This process could also be carried out with Public Rights of Way Officers, as appropriate, in order to assess the baseline condition of the footpath which crosses the site.
- 7.4. This would be followed by a further Condition Survey with a further photographic record covering the same extents as previously assessed at the end of construction activities, in order to identify and agree any remedial works reasonably attributable to construction activities. A date for this survey will be agreed once construction of the site is complete.



Figures

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- Key:**
- Approximate Site Boundary
 - Construction Route

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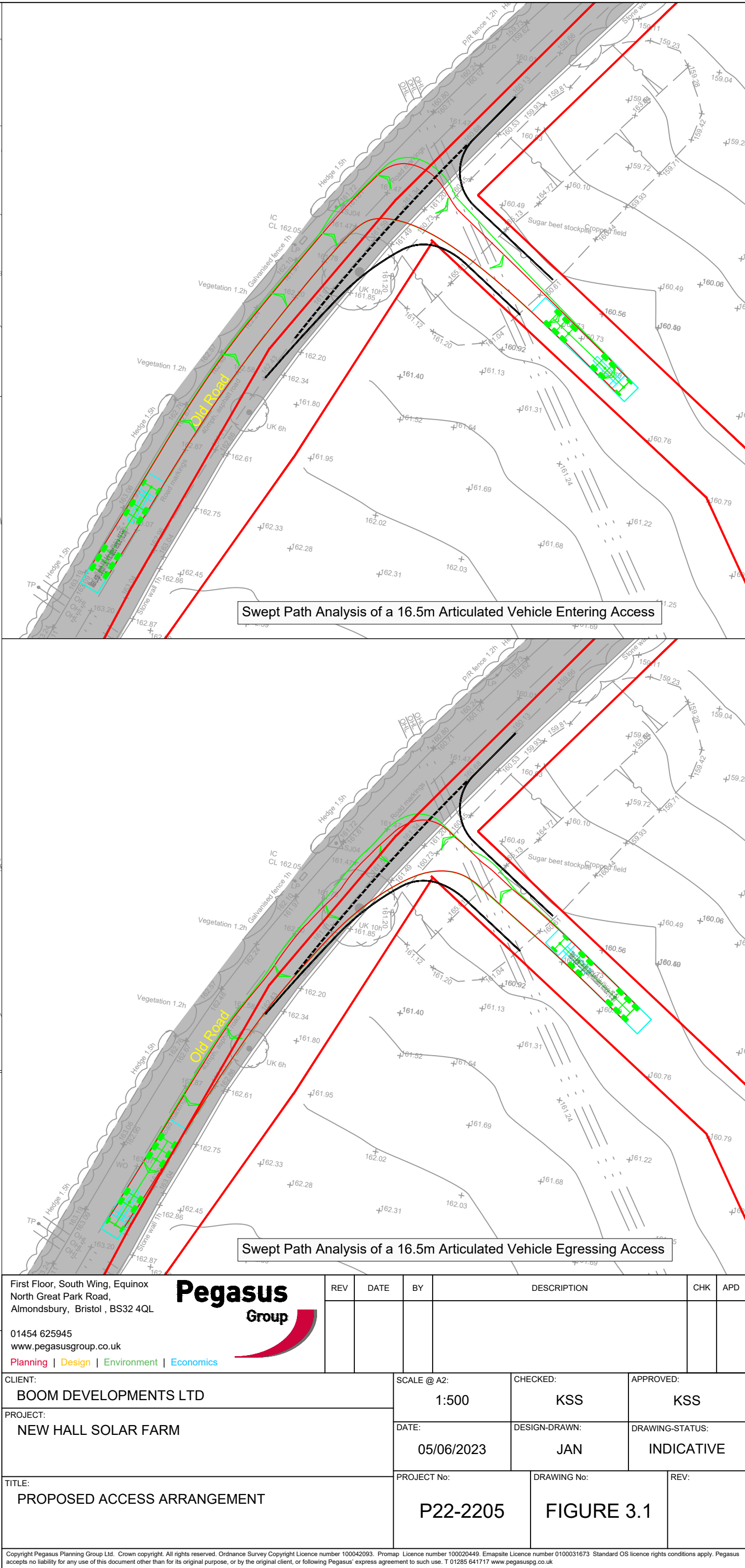
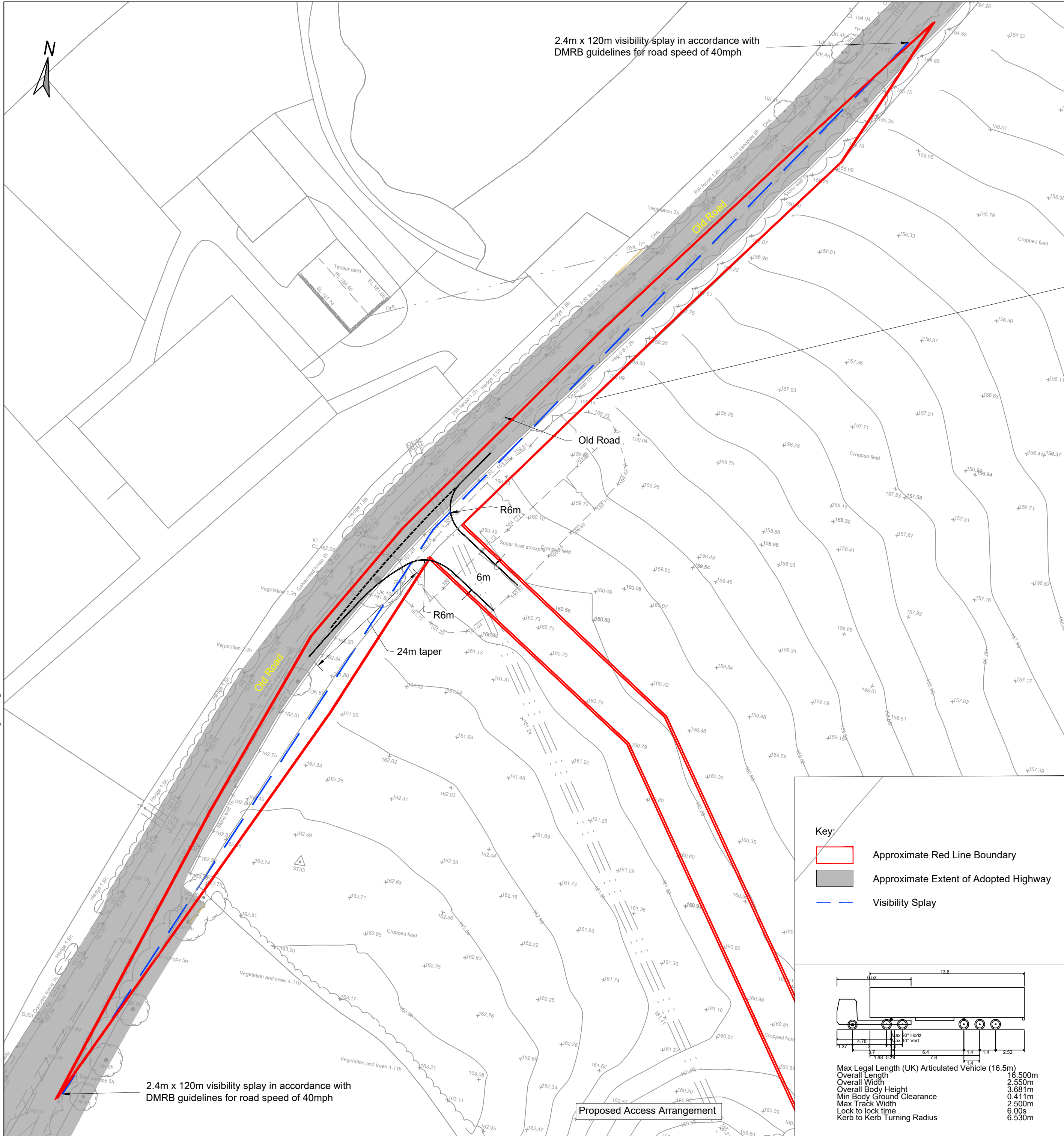
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CLIENT:		SCALE @ A3:		CHECKED:		APPROVED:	
BOOM DEVELOPMENTS LTD		1:25,000		TR		KSS	
PROJECT:		DATE:		DESIGN-DRAWN:		DRAWING-STATUS:	
NEW HALL SOLAR FARM		05/06/2023		AG		FOR INFO	
TITLE:		PROJECT No:		DRAWING No:		REV:	
SITE LOCATION AND PROPOSED ROUTING PLAN		P22-2205		FIGURE 2.1		-	

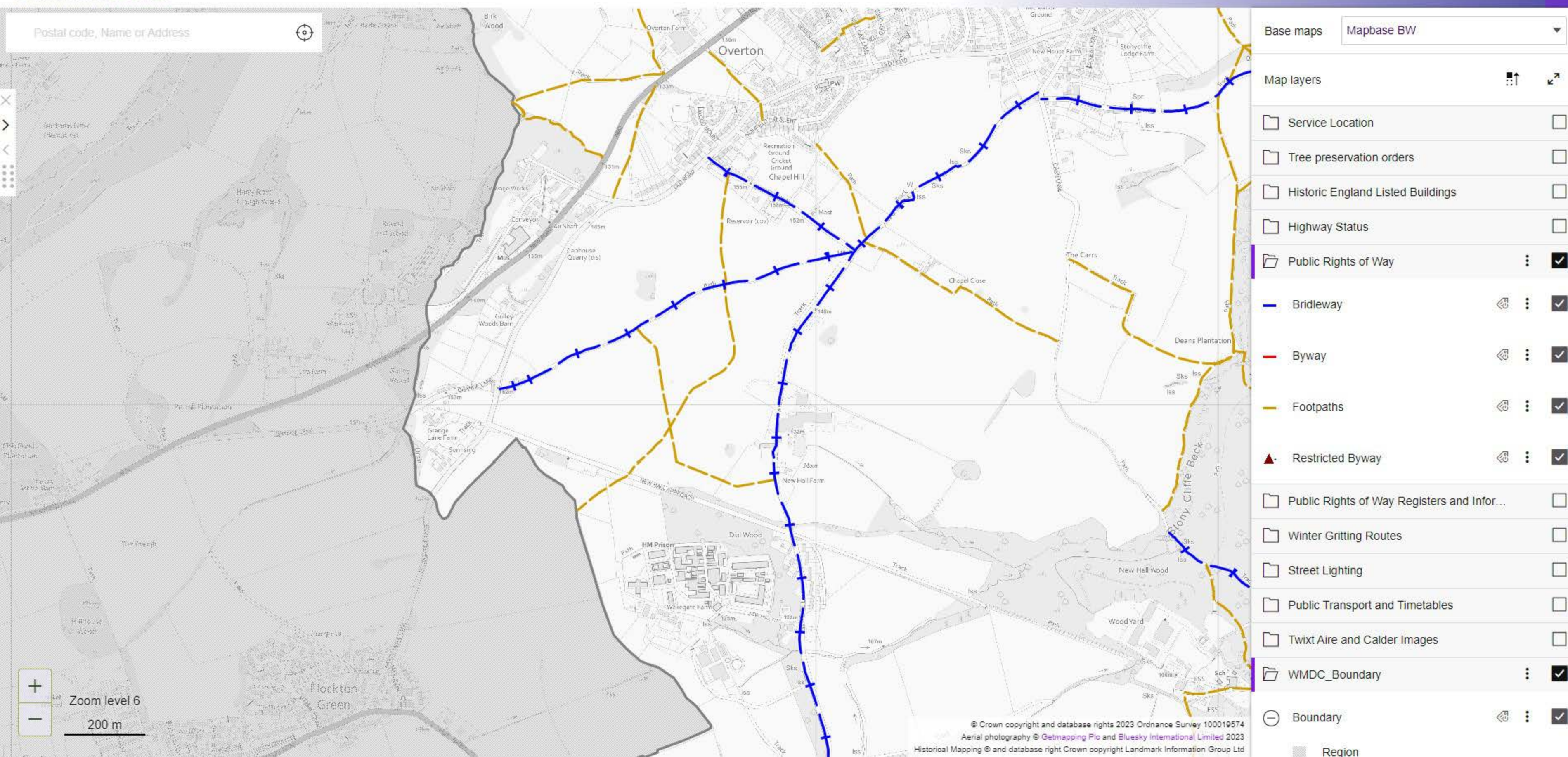
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Appendix A





Appendix B



1. Temporary Construction Traffic signage (Diagram 7301 'WORKS TRAFFIC' in the TSRGD)

Bristol

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