Cottam Solar Project

PEIR – Volume 2 Appendices to Chapter 14: Transport and Access

Prepared by Transport Planning Associates, WYNNS

June 2022





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14.1 Outline Construction Traffic Management Plan



A Planning Application by

COTTAM SOLAR PROJECTS LIMITED

In respect of

Cottam Solar Farm, LINCOLNSHIRE

Outline Construction Traffic Management Plan

June 2022



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Document Management

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1 Introduction

- 1.1 This Outline Construction Traffic Management Plan (CTMP) has been prepared by Transport Planning Associates (TPA) on behalf of Cottam Solar Project Limited (the 'Applicant') in relation to a proposed solar farm near Cottam Power Station (the 'Site'). It forms part of the Preliminary Environmental Information Report (PEIR) prepared for the project.
- 1.2 The Site is situated within the jurisdiction of West Lindsey District Council, who act as the local planning authority. Lincolnshire County Council is the highway authority.

Site Location

- 1.3 A Site location plan is shown in **Figure 1.1**.
- 1.4 The Site, as a whole, will be known as Cottam Solar Farm and is split into three 'areas', as follows:
 - Cottam 1 (C1)
 - Cottam 2 (C2) and
 - Cottam 3 (C3).
- 1.5 All three areas are situated to the west of the A15 between Lincoln and Scunthorpe. The southernmost point of Cottam 1 is approximately 11km to the north of the centre of Lincoln. The northern most tip of Cottam 3 is approximately 15km to the south of the centre of Scunthorpe.

Development Proposals

- 1.6 The Proposed Development comprises the construction, operation, management and decommissioning of a grid connected solar farm with battery storage and associated infrastructure. A full description of the development is provided in Chapter 4 of Volume 1 of the PEIR document.
- 1.1 The proposed development exceeds the 50MW threshold for energy generating projects in England to be considered under the provision of the Town and Country Planning Act 1990. Therefore, it constitutes a Nationally Significant Infrastructure Project (NSIP) and will be considered via a Development Consent Order ('DCO').

Consultation

1.2 This outline CTMP has been prepared following detailed discussions with officers at Lincolnshire County Council. Details of the consultation comments and response are included with Chapter 14 of the Preliminary Environmental Information Report (PEIR).

Need for Secondary Consents

1.3 Any secondary consents that may be required will be considered at the DCO stage.

Construction Traffic Management Plan

- 1.4 This Outline CTMP provides a framework for the management of construction vehicle movements to and from the Site, to ensure that the effect of the construction phase on the local highway network is minimised.
- 1.5 This CTMP sets out the strategy for the following;
 - Site access:
 - Construction vehicle routing;
 - Site compound and internal routing;
 - Construction vehicle trip generation and dimensions; and
 - Proposed mitigation measures.
- 1.6 It will be the responsibility of the appointed contractor to comply with all statutory regulations and guidelines in relation to construction and movement activities.
- 1.7 A Final CTMP, based on the principles set out in this Outline CTMP, will be agreed with Lincolnshire County Council prior to construction commencing. The Site manager's details will be provided to the highway authority as part of the Final CTMP.

2 Construction Site Access Arrangements

2.1 This section sets out the details of the construction vehicle access arrangements.

Site and Access Locations

- 2.2 A Site location plan is shown in **Figure 1.1**. The location of all of the access points is shown in **Figure 2.1**.
- 2.3 Access drawings for each location have been prepared and are shown in **Appendix A**.
- 2.4 The access locations and characteristics are summarised in **Table 2.1.** Each of the proposed access point is an existing agricultural access that will be formalised and widened, where appropriate, to accommodate construction vehicles. The proposed access arrangements, visibility splays and swept path analysis of a 16.5m articulated vehicle are all shown in the drawings. Banksmen will be provided at each access point to assist with the safe movement of vehicles in and out of the Site.

Table 2.1 Summary of Construction Vehicle Access Arrangements

Drawing Reference	Figure 2.1 Reference	Location	Description	
Cottam 1				
Drawing SK01	1	Thorpe Lane	Existing agricultural access which will be widened and formalised.	
Drawing SK02	2	Fleets Lane	Existing agricultural access which will be widened and formalised.	
Drawing SK03	3	Fleets Lane	Existing agricultural access which will be widened and formalised.	
Drawing SK04	4	Stow Lane	Existing agricultural access which will be widened and formalised.	
Drawing SK05	5	Ingham Road	Existing agricultural access which will be widened and formalised.	
Drawing SK06(1)	6(1)	Existing farm track west of Coates	Existing agricultural access which will be widened and formalised.	
Drawing SK06(2)	6(2)	Existing farm track west of Coates	Existing agricultural access which will be widened and formalised.	
Drawing SK07	7	South Lane	Existing agricultural access which will be widened and formalised.	
Drawing SK08	8	Willingham Road	Existing agricultural access which will be widened and formalised.	
Drawing SK09	9	Willingham Road	Existing agricultural access which will be widened and formalised.	
Drawing SK10	10	Willingham Road	Existing agricultural access which will be widened and formalised.	
Cottam 2				
Drawing SK11	11	A631 to the east of Corringham	Existing agricultural access which will be widened and formalised.	
Cottam 3				
Drawing SK12	12	B1205, to the east of Blyton (East)	Existing entrance to Blyton Park Driving School	
Drawing SK13	13	B1205, to the east of Blyton (West)	Existing agricultural access which will be widened and formalised	
Drawing SK14	14	Station Road	Existing agricultural access which will be widened and formalised.	

2.5 A description of the access strategy for each area is provided below.

Cottam 1

- 2.6 Cottam 1 is the largest of the three areas and is made up of seven land parcels. The land parcels broadly adjoin each other. The area is located to the north of the A1500, a single carriageway road running in an east to west alignment, whereby the national speed limit applies. A number of more rural roads also operate throughout the Site, including the B1398, Stow Lane and Willingham Road.
- 2.7 Cottam 1 area will be accessed via 11 points on the local highway network. The access arrangement drawings are shown in **Appendix A**. The drawing references are as follows:
 - Drawing SK01: Thorpe Lane to land north of Till Bridge Lane;
 - Drawing SK02: Fleets Lane to land south of Ingham Road;
 - Drawing SK03: Fleets Lane to land south of Ingham Road;
 - Drawing SK04: Stow Lane to land north of Stow Lane;
 - Drawing SK05: Ingham Road to land north of Ingham Road;
 - Drawing SK06(1&2): Existing Farm Track to the west of Coates to land east of B1241;
 - Drawing SK07: South Lane To land south of Fillingham Lane;
 - Drawing SK08: Willingham Road To land north of Willingham Road;
 - Drawing SK09: Willingham Road To land north of Willingham Road;
 - **Drawing SK10:** Willingham Road To land north and south of Willingham Road.
- 2.8 All access points are existing agricultural accesses that will be formalised and widened, to accommodate construction vehicles. The proposed access arrangements, visibility splays and swept path analysis of a 16.5m articulated lorry are all shown in the drawings. Banksmen will be provided at all access points to assist with the safe movement of vehicles in and out of the Site.
- 2.9 No Personal Injury Collisions (PIC's) have been recorded in the vicinity of any of the accesses during the most recent five-year period.

Cottam 2

- 2.10 Cottam 2 is located to the north of the A631. This is a single carriageway road running in an east to west alignment, whereby the national speed limit applies.
- 2.11 Cottam 2 will be accessed via a single access point on an unclassified rural road to the north of the A631. The access arrangement drawing is shown in **Appendix A**. The drawing reference is as follows:
 - Drawing SK11: Unclassified rural road to the north of A631

- 2.12 The access is an existing agricultural access that will be formalised and widened, to accommodate construction vehicles. The proposed access arrangement, visibility splays and swept path analysis of a 16.5m articulated lorry are all shown in the drawing. Banksmen will be provided at the access point to assist with the safe movement of vehicles in and out of the Site.
- 2.13 No Personal Injury Collisions (PIC's) have been recorded in the vicinity of the access during the most recent five-year period.

Cottam 3

- 2.14 Cottam 3 is located to the north and west of the B1205 Kirton Road and the east of Blyton village. The B1205 is also a single carriageway road running in an east to west alignment, whereby the national speed limit applies.
- 2.15 Cottam 3 will have three access points from the local highway network. The access arrangement drawings are shown in **Appendix A**. The drawing references are as follows:
 - Drawing SK12 (Eastern Access): Kirton Road to access land north of Kirton Road
 - Drawing SK13 (Western Access): Kirton Road to access land north of Kirton Road
 - Drawing SK14: Station Road to access land to the east of Station Road
- 2.16 All access points are existing agricultural accesses that will be formalised and widened, to accommodate construction vehicles. The proposed access arrangements, visibility splays and swept path analysis of a 16.5m articulated lorry are all shown in the drawings. Banksmen will be provided at all access points to assist with the safe movement of vehicles in and out of the Site.
- 2.17 No Personal Injury Collisions (PIC's) have been recorded in the vicinity of any of the accesses during the most recent five-year period.

Summary of Access Arrangements

- 2.18 In summary, the proposed access arrangements are considered suitable for the following reasons:
 - The accesses are regularly used by agricultural vehicles and are therefore considered appropriate for use by construction vehicles, with formalisation and widening as required;
 - No Personal Injury Collisions (PIC's) have been recorded in the vicinity of any of the accesses during the most recent five-year period;
 - Banksmen will be deployed at each access whenever construction vehicles are accessing or egressing the Site; and
 - All construction vehicles will access and egress the Site in a forward gear.

2.19 Temporary signage will be erected in the vicinity of the accesses during the construction phase. Diagram 7301 'WORKS TRAFFIC' in the Traffic Signs Regulations and General Directions (TSRGD) will be used to indicate the access and will read 'WORKS TRAFFIC LARGE VEHICLE TURNING'. These signs will be white text and red background 1050 x 750 mm mounted in 'A' frames. The temporary signs will be in place for the duration of the construction phase.

Public Rights of Way

- 2.20 There may be instances whereby construction traffic is required to cross local footpaths and Public Rights of Way. Where this occurs, the following measures will be implemented:
 - Speeds will be limited to 10mph;
 - Drivers will stop and give-way to any pedestrian, equestrian and cyclist that they encounter;
 - Appropriate signage will be installed along the bridleway to make users aware of the construction activity. This will include information on operating times;
 - Banksmen will also be present to ensure the safe movement of all users;
 - The PROWs will be kept clear outside of construction hours;
 - Any damage to the surface of the bridleway will be repaired immediately. The surface will be returned to its original condition following construction.

Operational Phase

2.21 Once operational, maintenance vehicles will access the Site via the same access arrangements as described above for the construction phase. A maintenance vehicle, likely a transit van, will access each Site only a handful of times per month during the operational phase.

Decommissioning Phase Access

- 2.22 The Proposed Development will operate for a temporary time period of up to 40 years prior to decommissioning.
- 2.23 At this time, a Decommissioning Traffic Management Plan (DTMP) will be prepared. This will follow the principles set out in this Outline CTMP. It is expected that the same accesses as the construction phase will be used.

3 Construction Vehicle Routing

3.1 The details of the construction vehicle routes are set out in this Section. Drivers will be made aware of the route in advance of driving to the Site. The identified routes are considered the most appropriate for use by HGVs. Alternatives have been considered and discounted.

Route Overview

- The designated routes for all vehicles associated with the construction phase is shown **Figure 3.1.**Delivery drivers, contractors and visitors will be advised of the route in advance of driving to the Site.

 The route has been designed to utilise the most appropriate roads available, avoid designated or protected areas, height and weight restrictions and residential area.
- 3.3 A summary of the construction vehicle route for each area is set out below:
 - Cottam 1: A15 → A1500 Till Bridge Lane or B1398
 - Cottam 2: A15 → A631 → unclassified road;
 - Cottam 3: A15 →B1205 and Station Road.
- 3.4 The reverse of each route will be followed for outbound movements.
- 3.5 A description of the route to each area of the Site is provided below.

Cottam 1

Via Tillbridge Lane and Thorpe Lane

- 3.6 Vehicles accessing the southern plots of the Cottam 1 area will travel along Tillbridge Lane (A1500) before turning right onto Thorpe Lane, where the access is located.
- 3.7 Till Bridge Lane is a single carriageway road, where the national speed limit applies. The road already accommodates HGV use with the two-way movement of vehicles.
- 3.8 Thorpe Lane is a single carriageway road used to serve a small number of dwellings, as well as agricultural land. After the dwellings, the road narrows to a single lane before the access to the plot. Table 3.1, shown below, indicates that Thorpe Lane has low traffic volumes. Just 83 movements were

observed over an average weekday (24hr). Of these, 37% were classified as HGV, most likely agricultural vehicles.

Via Ingham Lane/Stow Lane

- 3.9 Vehicles traveling to the northern plots of the Cottam 1 area will travel to the Site via Ingham Lane/Stow Lane, which connects directly onto the A15. It is a rural road with no central line markings. However, it is generally wide enough for two vehicles to pass.
- 3.10 Approximately 1.35km to the west of the A15, Ingham Lane connects to the B1398, via a priority junction. The B1398 is wider than Ingham Lane, with central line markings.
- 3.11 After approximately 700m, vehicles will join Stow Lane. Stow Lane has similar characteristics to Ingham Lane. It is rural in nature, but generally wide enough for two vehicles to pass.

Cottam 2

3.12 Vehicles going to the Cottam 2 area, will access the Site via the A631. This road links directly to the A15. The A631, is a single carriageway road which is currently used by HGVs. Approximately 1km to the east of Corringham, vehicles will turn right onto an unclassified road, where the access is located. This road is rural in nature, serving existing agricultural land.

Cottam 3

- 3.13 Vehicles going to the Cottam 3 area, can access the Site via three points, two on the B1205 Kirton Road and one on Station Road. The B1205, links directly to the A15, and is a single carriageway with central line markings. Table 3.1 indicates that the B1205 (Kirton Road) currently accommodates 1,606 two-way movements over a 24-hour period, 19% of which were classified as HGV.
- 3.14 To get to the final land parcel that makes up the Cottam 3 area, vehicles will continue along the B1205, before turning left onto Station Road. Once vehicles have travelled under the railway line, which has a height restriction of 3.9m, the access to the final land parcel is on the left.

Baseline Traffic Flows

3.15 In order to help establish the appropriate routes, Automatic Traffic Count (ATC) Surveys were undertaken for all roads within the vicinity of the Site, between 2nd November 2021 and 8th November 2021. In addition, DfT data has been reviewed for the wider road network, including the A15 and A631.

This data was taken from 2019. The average weekday two-way traffic count for the main roads within the vicinity of the Site is set out in **Table 3.1**.

Table 3.1 Baseline Traffic Flows: Average Weekday (24 hr), Two Way

Link	Cottam Area	Total Vehicles	%HGV*		
A15	Cottam 1,2,3	12,661	17%		
Cottam 1 Routes	Cottam 1 Routes				
Ingham Road	Cottam 1	759	20%		
Fleets Lane	Cottam 1	63	25%		
East of Coates	Cottam 1	8	23%		
Willingham Road	Cottam 1	122	25%		
Stow Lane	Cottam 1	688	25%		
Thorpe Lane	Cottam 1	83	37%		
Cottam 2 Routes					
A631	Cottam 2	9,958	6%		
Corringham (North of A631)	Cottam 2	70	3%		
Cottam 3 Routes					
Pilham Lane	Cottam 3	92	18%		
Kirton Road	Cottam 3	1,606	19%		
Station Road	Cottam 3	2,159	18%		

^{*%}HGV includes OGV1 and OGV2

3.16 The ATC and DfT data shows all of the roads identified for the routes to the Site already accommodate HGV movement.

Route Signage

- 3.17 Temporary road signing will be implemented along the designated route to inform background traffic of the ongoing construction works and to direct construction traffic to and from the Site. The signs will be located at key points along the route, including junctions.
- 3.18 All signage will be compliant with Chapter 8 of the Traffic Signs Manual where applicable. The following points will be considered when locating signage:

- The position of the sign in relation to the highway;
- Possible distraction to drivers; and
- The proximity to junctions and roundabouts.
- 3.19 The signage strategy will be agreed with Lincolnshire County Council through the final CTMP.

Management of Deliveries

- 3.20 Due to the relatively low number of vehicles associated with the construction phase there is not anticipated to be any significant delay to background traffic.
- 3.21 The phone number of the Site Manager will be made available to all drivers of vehicles that will be accessing the Site. The drivers of the construction vehicles will be required to call ahead once stationary. Drivers will be advised to stop and call ahead at the laybys located on the A46 or A15. This will allow sufficient time for banksmen at the Site accesses.
- 3.22 The following procedure will be initiated when deliveries are made to the Site:

Procedure for Arrival to Site

- Driver to call ahead to Site when stopped at appropriate layby;
- The banksmen are mobilised and will go to position at the relevant Site Access;
- Driver will be informed the operators are in place and it is appropriate to travel to the Site via the agreed route;
- All operatives will communicate with each other, as necessary; and
- Banksmen will assist HGV's to manoeuvre into the Site access but will not direct general traffic.
- The following procedure will be initiated when HGV's are leaving the Site: 3.23

Procedure for Leaving the Site

- Before drivers depart, the Site Manager will be notified. They will then mobilise the banksmen at the relevant Site access;
- Drivers will be advised when the banksmen and operatives are in place and will leave the Site; and
- Banksmen will guide the drivers when exiting the Site.
- 3.24 Banksmen will also be present at each of the accesses identified in Chapter 2 and will indicate to drivers when it is safe to egress onto the local highway.

Abnormal Loads

- 3.25 There will be a requirement for some abnormal load deliveries to transport the transformers to the Site. An abnormal load is one where the vehicle exceeds 44 tonnes, the width is over 2.9m or the length is more than 18.65m.
- 3.26 A review of the abnormal load routes and requirements has been undertaken by Wynns AlL. This shown in Appendix 14.2 of the PEIR.

Summary

- 3.27 The proposed construction vehicle route provides the most direct and appropriate route from the strategic highway network to the Site.
- 3.28 The use of any roads other than the designated and signposted route shall not be permitted and this shall be enforced through the agreement of the CTMP.

4 Site Compound, Internal Routing and Cable Connection

Construction Workers

- 4.1 Approximately 400 construction workers are anticipated to be required on Site on an average day. The location where staff will travel from is unknown at this stage as it will depend on the appointed contractor. However, it is envisaged that the majority of non-local workforce will stay at local accommodation and be transported to the Site by minibuses to minimise the impact on the strategic and local highway network.
- 4.2 A Construction Worker Travel Plan will be implemented, to encourage construction workers to travel to the Site via sustainable modes of transport, where possible.

Contractors Compound

- 4.3 Construction compounds will be set up within each area, near to the Site access locations. This will accommodate storage, parking, offices and welfare facilities.
- 4.4 Appropriate parking will be provided within each construction compound. No parking by contractors, visitors or delivery vehicles will be permitted on the local highway network or the Site access road at any time during the construction phase, and visitors will be advised of the parking arrangements in advance of travelling to the Site. The Site Manager will monitor that parking is taking place in the designated area on a regular basis.

Internal Routing

- 4.5 The Proposed Development will include internal access roads throughout the Site allowing for the movement of construction and maintenance vehicles.
- 4.6 All public rights of way within the Site will remain open, and will be managed through signage and banksmen;
- 4.7 The internal access road will be completed during the initial stages of construction so that temporary haul routes are not necessary.
- 4.8 During the construction phase, appropriate turning areas will be provided in the vicinity of the internal access road to ensure all vehicles egress the Site in a forward gear.

4.9 A wheel washing facility, in the form of a drive through bath, will be provided at the end of each access road, ahead of the egress onto the local highway network.

Cable Connection

4.10 An underground cable will be installed to connect the Solar Farm to the Cottam Substation. Where this follows the public highway, all appropriate licences will be obtained, including a Section 50 licence. Through this process, any required traffic management will be agreed with the highway authority.

5 Construction Vehicle Trip Generation

Construction Phase

- 5.1 The Applicant has advised that the construction phase will take approximately 78 weeks. Construction activities and deliveries will be carried out Monday to Friday 08:00-18:00 and between 08:00 and 13:30 on Saturdays. No construction activities or deliveries will occur on Sundays or Public Holidays. Where possible, construction deliveries will be coordinated to avoid construction vehicle movements during the traditional AM peak hour (08:00-09:00) and PM peak hour (17:00-18:00).
- 5.2 The construction phase will include the use of HGVs to bring the equipment onto the Site and this will be strictly managed to ensure that vehicle movement is controlled and kept to a minimum. Deliveries to the Site shall be reported to the Site Manager and will be made by the smallest possible vehicles for the particular item of plant or material.
- 5.3 The construction vehicle trip generation is still being calculated. Full details will be provided at the DCO stage. However, there is a general rule of thumb that there will be approximately 18 HGV deliveries per MW installed. Whilst there will be some peaks, deliveries/HGV movements are generally consistent throughout the construction period. This is because solar PV panels are typically brought to the Site on a 'just-in-time' basis. Therefore, they are typically installed shortly after they arrive on Site.
- 5.4 Based on this, Table 5.1 summarises the likely number of construction HGV trips to the three areas that make up the Cottam Solar Project, during the construction phase.

<u>Table 5.1 Forecast Construction Vehicle Trip Generation</u>

Area	Forecast Vehicle Movements	Average Vehicle Movement per Day*
Cottam 1	10,800	23
Cottam 2	1,440	3
Cottam 3	1,800	4

^{*78} equates to 468 working days (six working days per week)

5.5 Table 5.1 shows that there will be, on average, 23 vehicle movements per day at Cottam 1, three per day at Cottam 2, and four per day at Cottam 3. This includes arriving and departing vehicles.

Construction Worker Trips

There will also be travel associated with construction workers by car/LGV. The location of where staff will travel from is unknown at this stage as it will depend on the appointed contractor. However, it is envisaged that the majority of non-local workforce will stay at local accommodation and be transported to the Site by minibuses to minimise the impact on the strategic and local highway network.

Abnormal Loads

- 5.7 There will be a requirement for some abnormal load deliveries to transport the transformers to the Site. An abnormal load is one where the vehicle exceeds 44 tonnes, the width is over 2.9m or the length is more than 18.65m.
- 5.8 A review of the abnormal load routes and requirements has been undertaken by Wynns AlL. This shown in Appendix 14.2 of the PEIR.

Construction Vehicle Movements Timings

5.9 Where possible, construction deliveries will be coordinated to avoid construction vehicle movements during the traditional AM peak hour (08:00-09:00) and PM peak hour (17:00-18:00). Due to the Site operational hours (08:00-18:00), construction worker travel will occur outside of the peak hours.

Operational and Decommissioning Phases

- 5.10 Once operational, maintenance vehicles will access the Site via the same access arrangements as described in Section 2 for the construction phase. A maintenance vehicle, likely a transit van, will access each Site only a handful of times per month during the operational phase.
- 5.11 Space will be available within the Site on the access road for such a vehicle to turn around to ensure that reversing will not occur onto the highway.
- 5.12 The traffic management elements of the decommissioning phase will be addressed in the DTMP.

Summary

5.13 It is expected that there will be approximately 23 vehicle movements per day at Cottam 1, three per day at Cottam 2, and four per day at Cottam 3. This includes arriving and departing vehicles. There will

also be construction workers arriving at the Site in the morning and departing in the evening. These movement will occur outside of the peak hours.

6 Mitigation Measures

- 6.1 The contractor will introduce measures to minimise the impact resulting from construction activities. It will be the responsibility of the Project Manager and Site Manager to oversee the implementation of the mitigation measures.
- 6.2 The likely mitigation measures that will be adopted are set out below. Mitigation measures will be confirmed at the DCO application stage.

Signage

- (i) Signs to direct construction vehicles associated with the development will be installed along the construction traffic route. Delivery drivers, contractors and visitors will be provided with a route plan in advance of delivering to Site to ensure that vehicles follow the identified route. The signage strategy will be agreed with the local highway authorities prior through the Final CTMP;
- (ii) All signage on the designated route will be inspected daily by the Site Manager, to ensure they are kept in a well maintained condition and located in safe and appropriate locations;

Vehicle Movement

- (iii) Where possible, construction deliveries by HGV will be coordinated to avoid the network peak hours of 08:00-09:00 and 17:00-18:00;
- (iv) Banksmen will be provided at the Site accesses to indicate to construction traffic when it is safe for them to enter and exit the Site;
- (v) A Construction Worker Travel Plan will be implemented, to encourage construction workers to travel to the Site via sustainable travel, where possible.

Booking System

(vi) A booking system will be set up to manage arrivals and departures to the Site. A log will be kept as part of the booking system;

Parking

(vii) Advisory signs informing contractors and visitors that parking is not permitted on-street in the vicinity of the Site or on the Site access road. Contractors and visitors will be advised that parking facilities will be provided on-Site in advance of visiting the Site and that they should not park on-street;

Wheel Wash Facility

- (viii) A wheel washing facility in the form of a drive through bath will be provided. This will be located at the end of each access road, ahead of the egress onto the local highway network. In the unlikely case the wheel wash facility breaks down for a short period, construction workers will spray wheels using a power hose, before they re-enter the public highway;
- (ix) A visual inspection of vehicles will be undertaken before they depart the Site, to ensure that they are not carrying any residual debris onto the highway;
- (x) If required a road sweeper will be provided for the area surrounding access to alleviate any residual debris generated during the construction phase, as required;

Noise Reduction and Air Quality

- (xi) When on Site and when not in use, vehicle engines will be switched off;
- (xii) Vehicles carrying material off-Site will be sheeted to prevent the spread of dust;
- (xiii) In dry conditions, areas near to the Site access will be sprayed with water supplied to prevent the spread of dust;

Site Security

(xiv) The Site will be secured at all times via a perimeter fence or temporary fencing. CCTV will be operational within the construction compound;

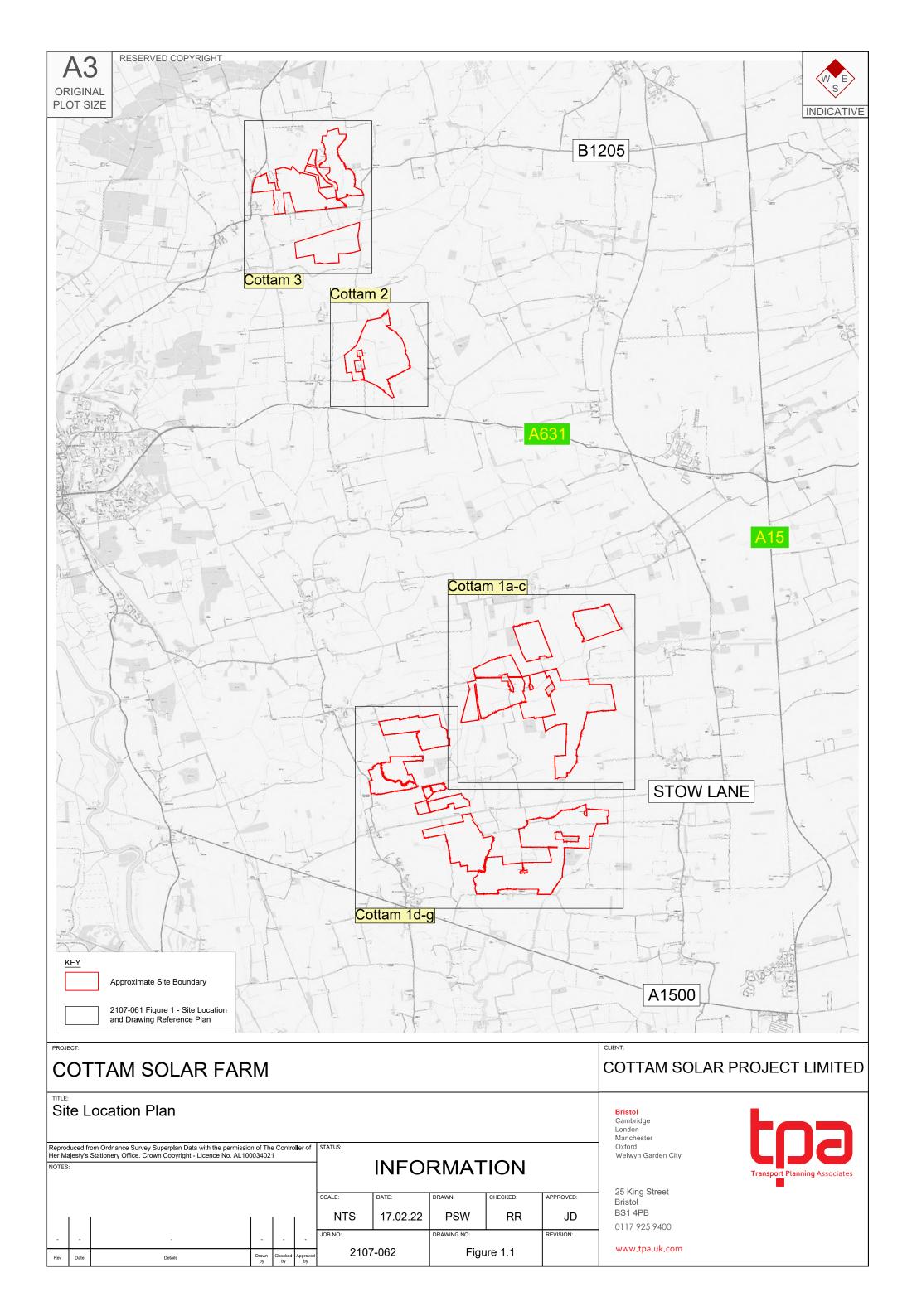
Road Condition Survey

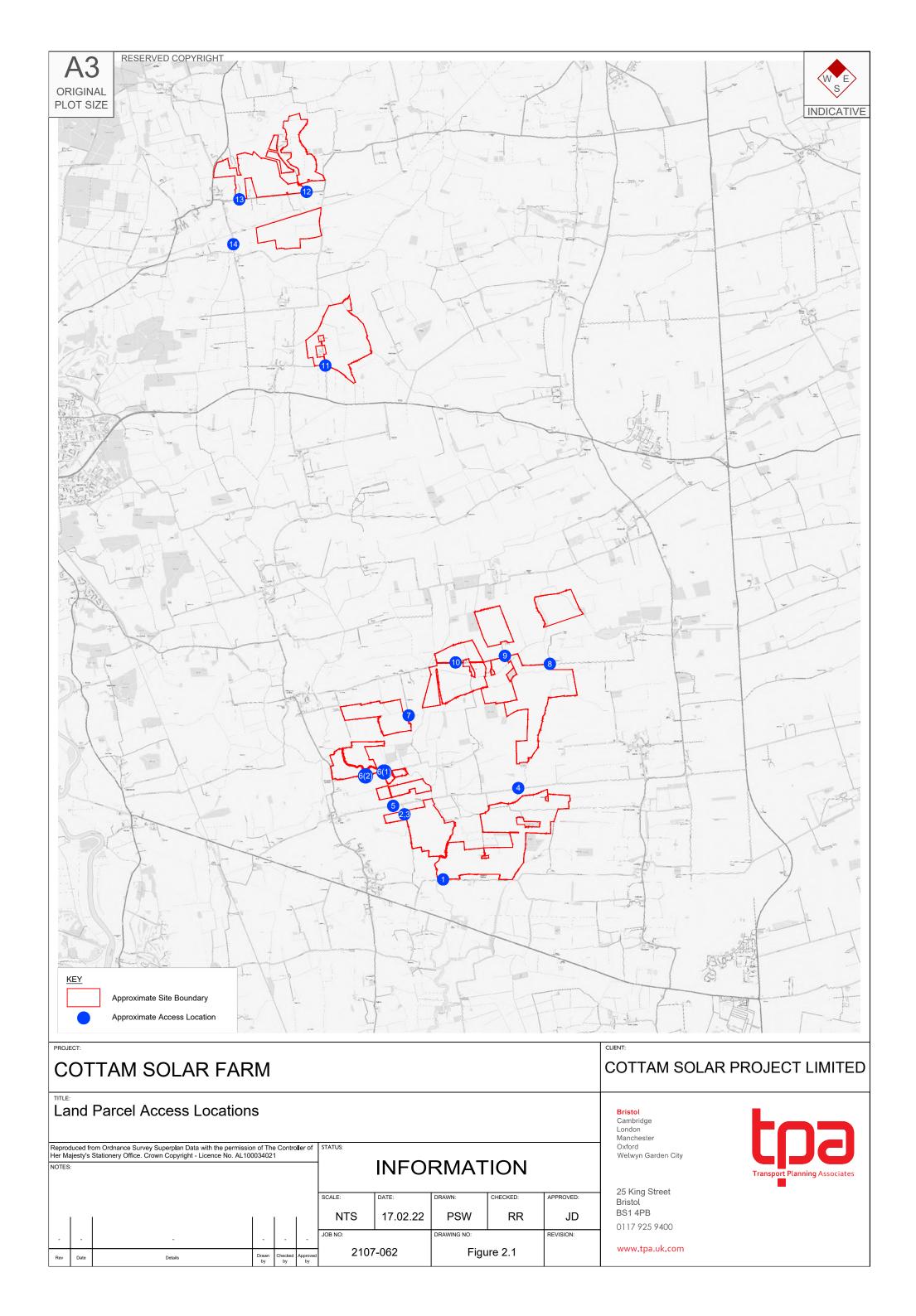
(xv) A pre-construction road condition survey will be carried out on the local highway network via video two weeks before the construction phase commences. The extent of the survey will be agreed with the local highway authority prior to commencement. Once construction is complete, a post-construction condition survey will be undertaken in order to identify any additional defects that can reasonably be attributable to construction activities at the Site. Any identified highways defects resulting from construction activities associated with the Site will be corrected to the satisfaction of the local highway authority.

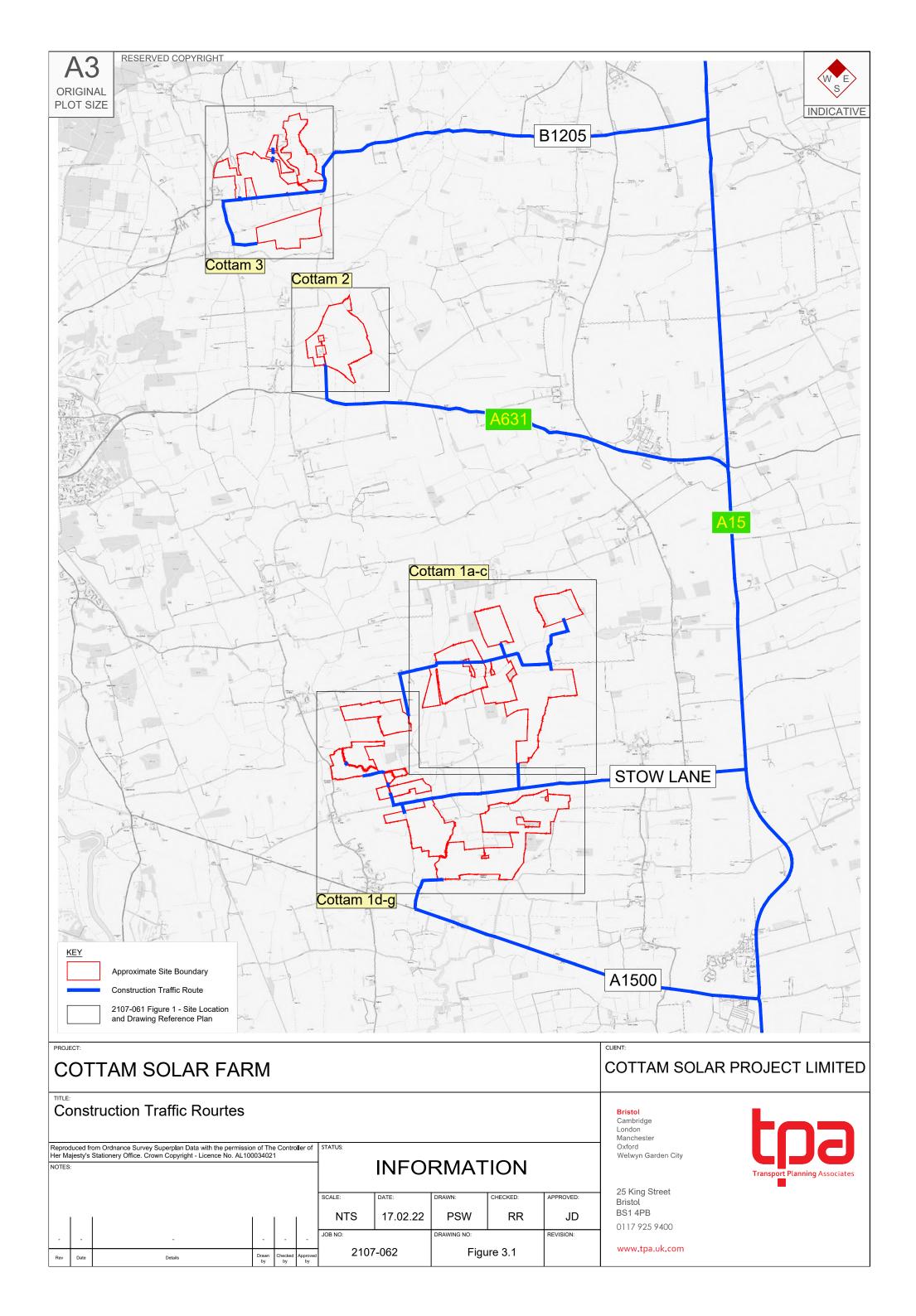
Community Engagement

- (xvi) The details of the Construction Site Manager will be provided to the local highway authority in advance of any work being carried out.
- (xvii) The Construction Site Managers details will also be provided on a Site-board at the Site accesses. If anyone in the local community has any issues during the construction phase, the Site Manager will be available to discuss.

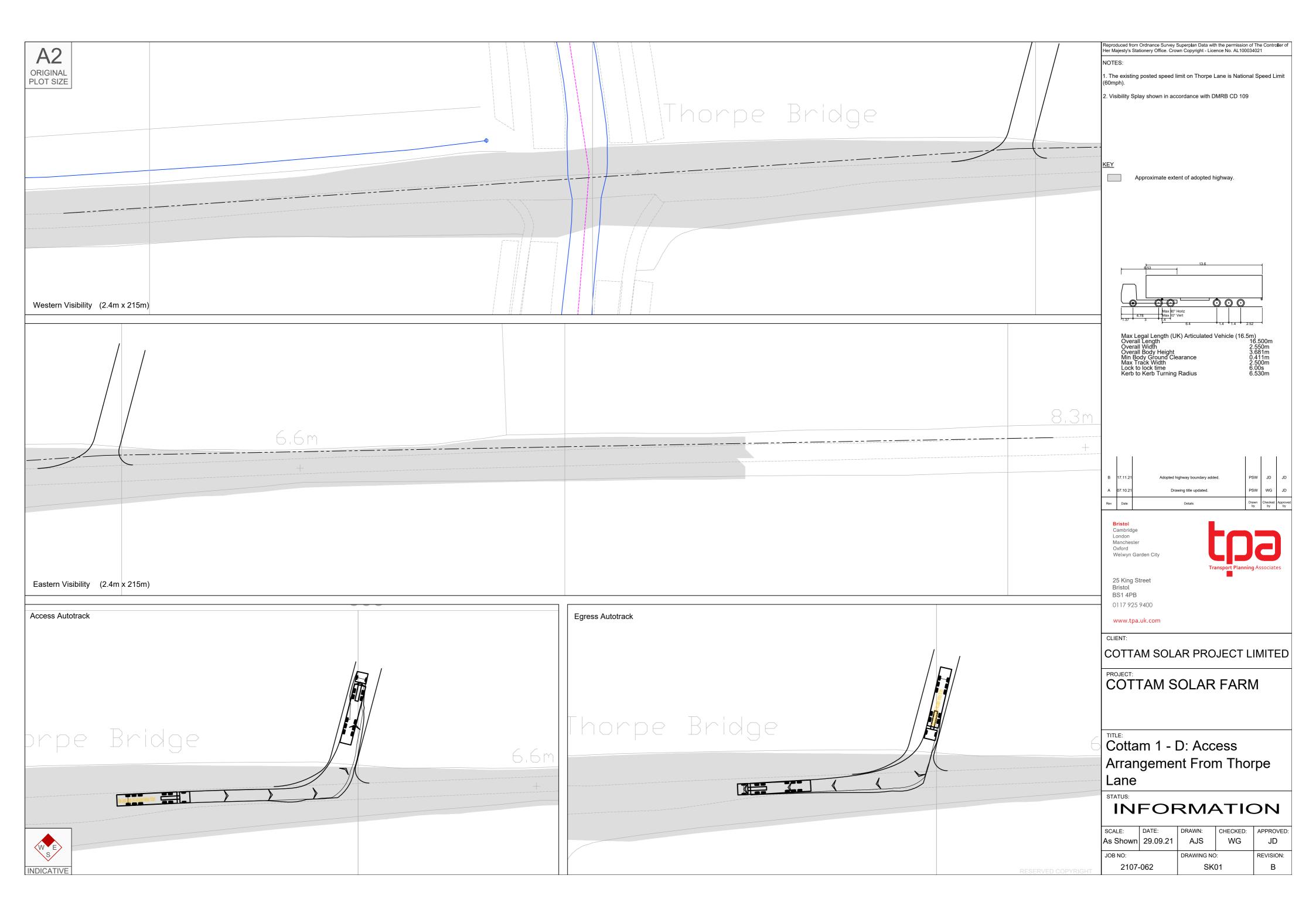
Figures

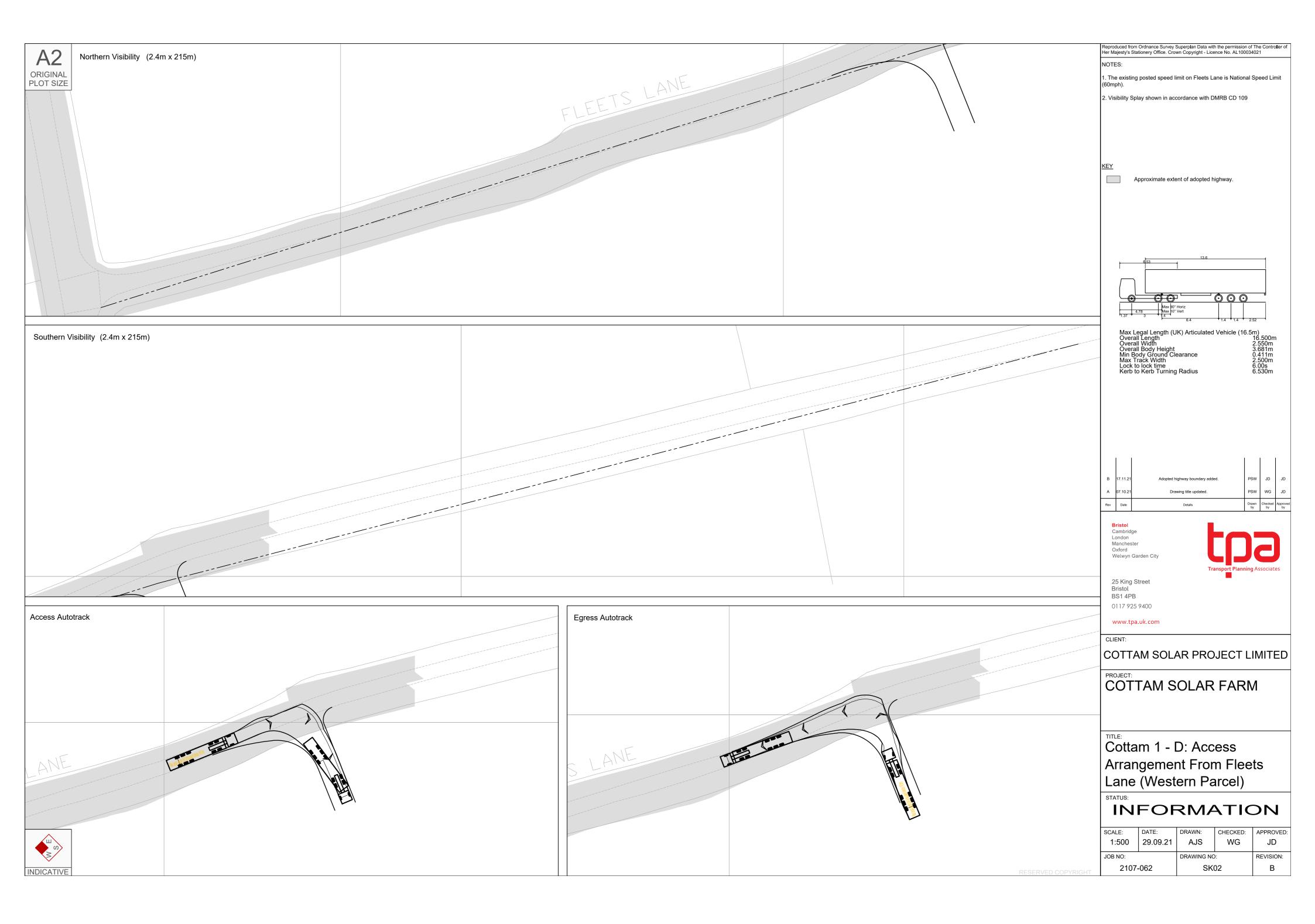


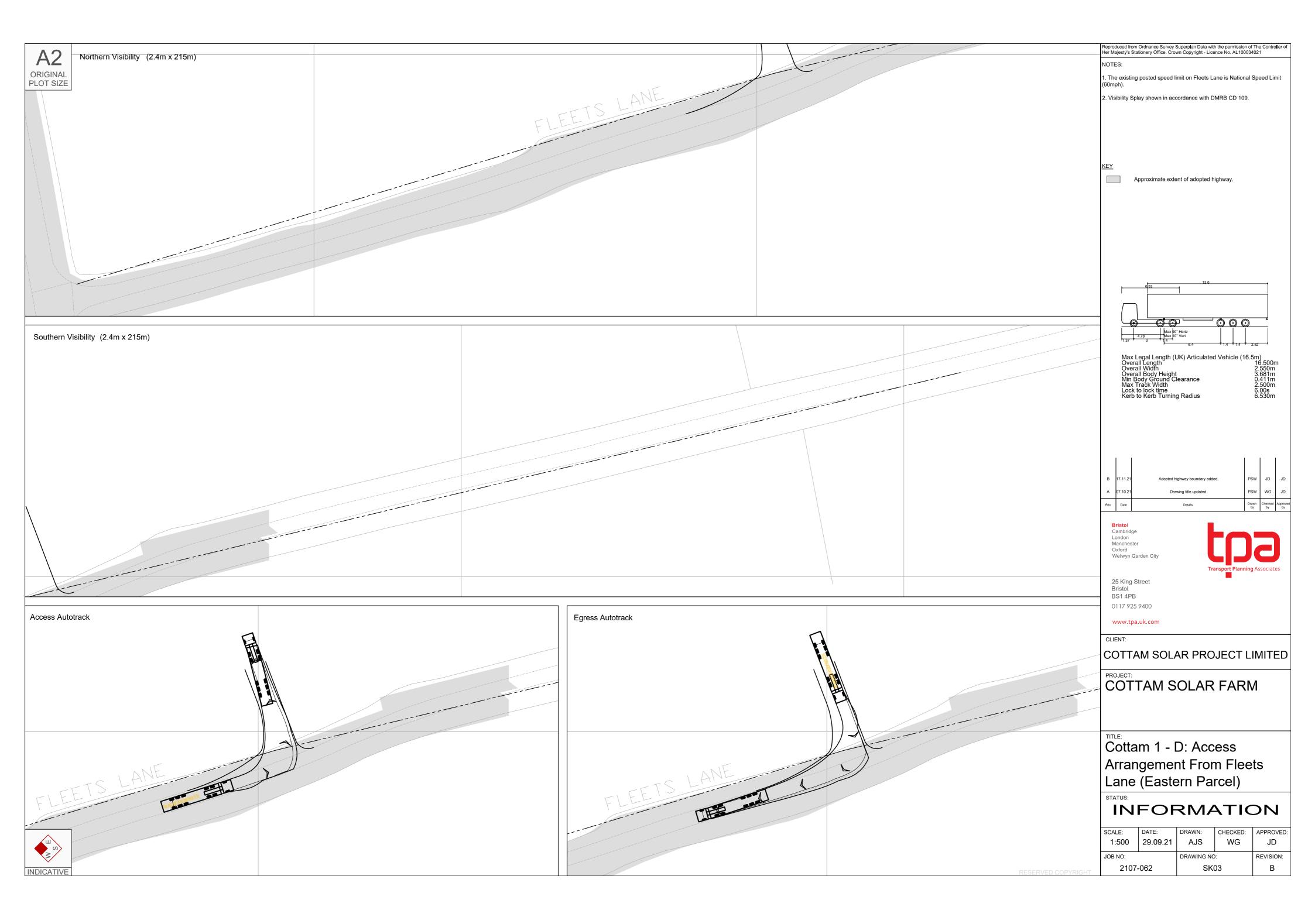


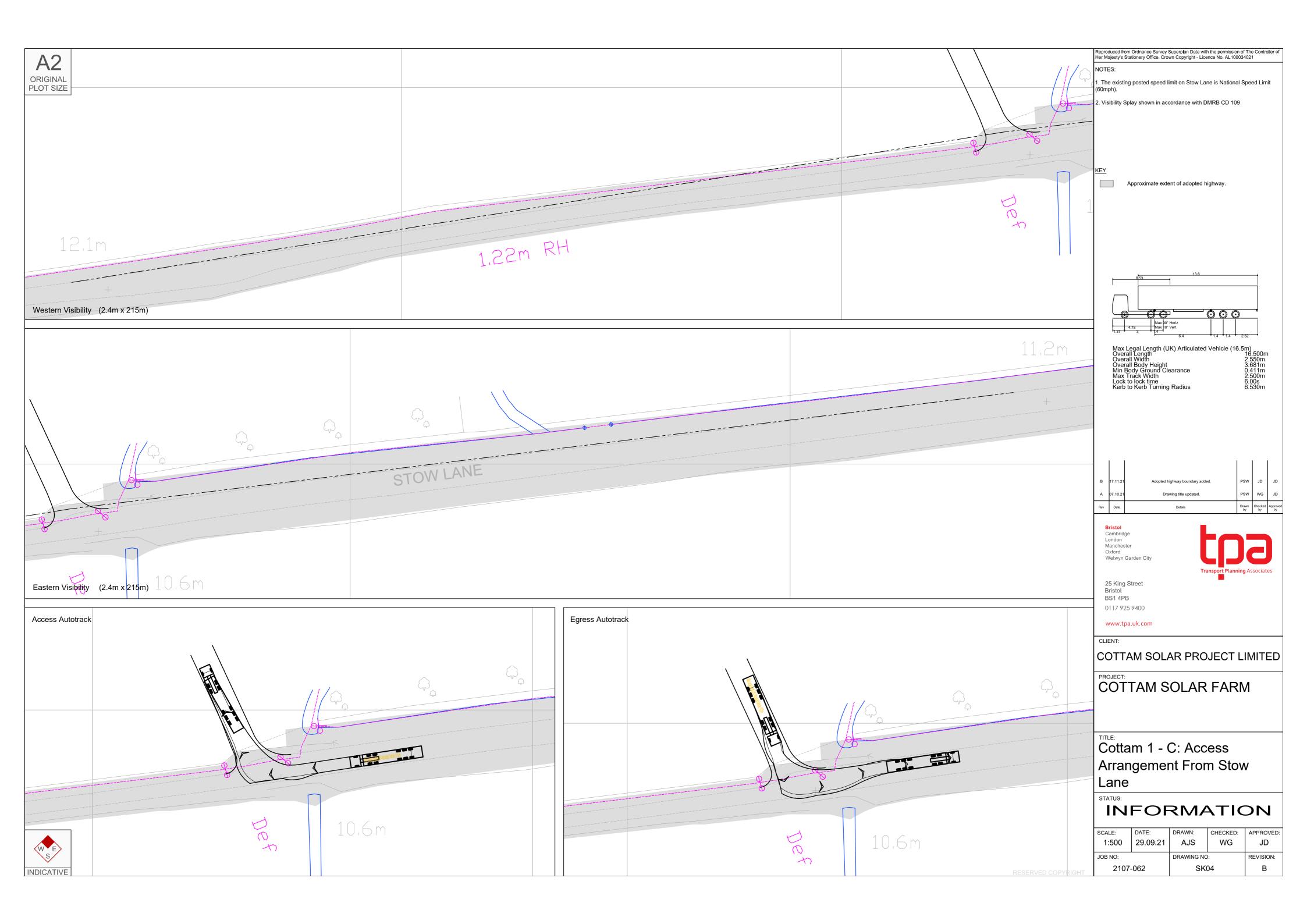


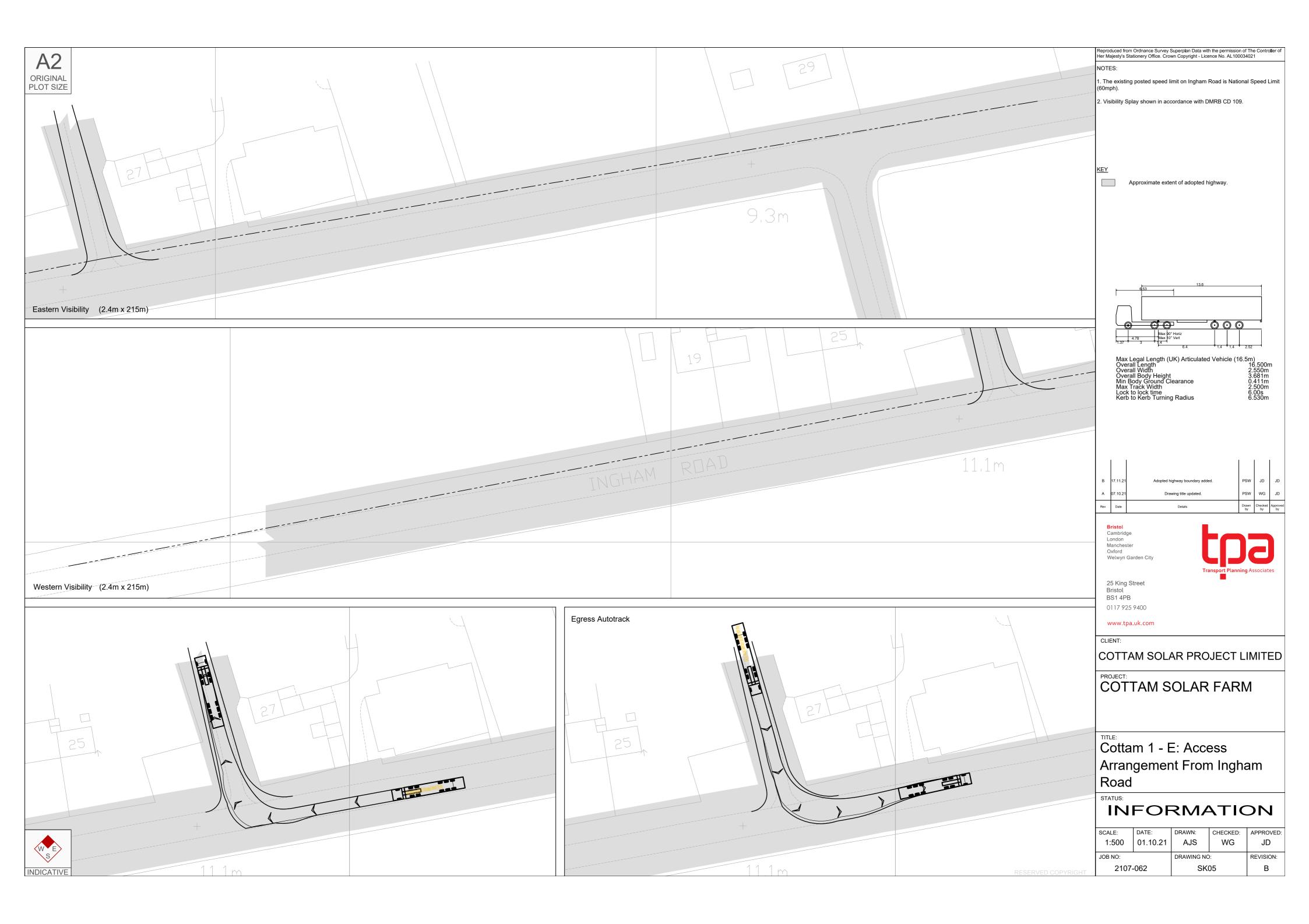
APPENDIX A

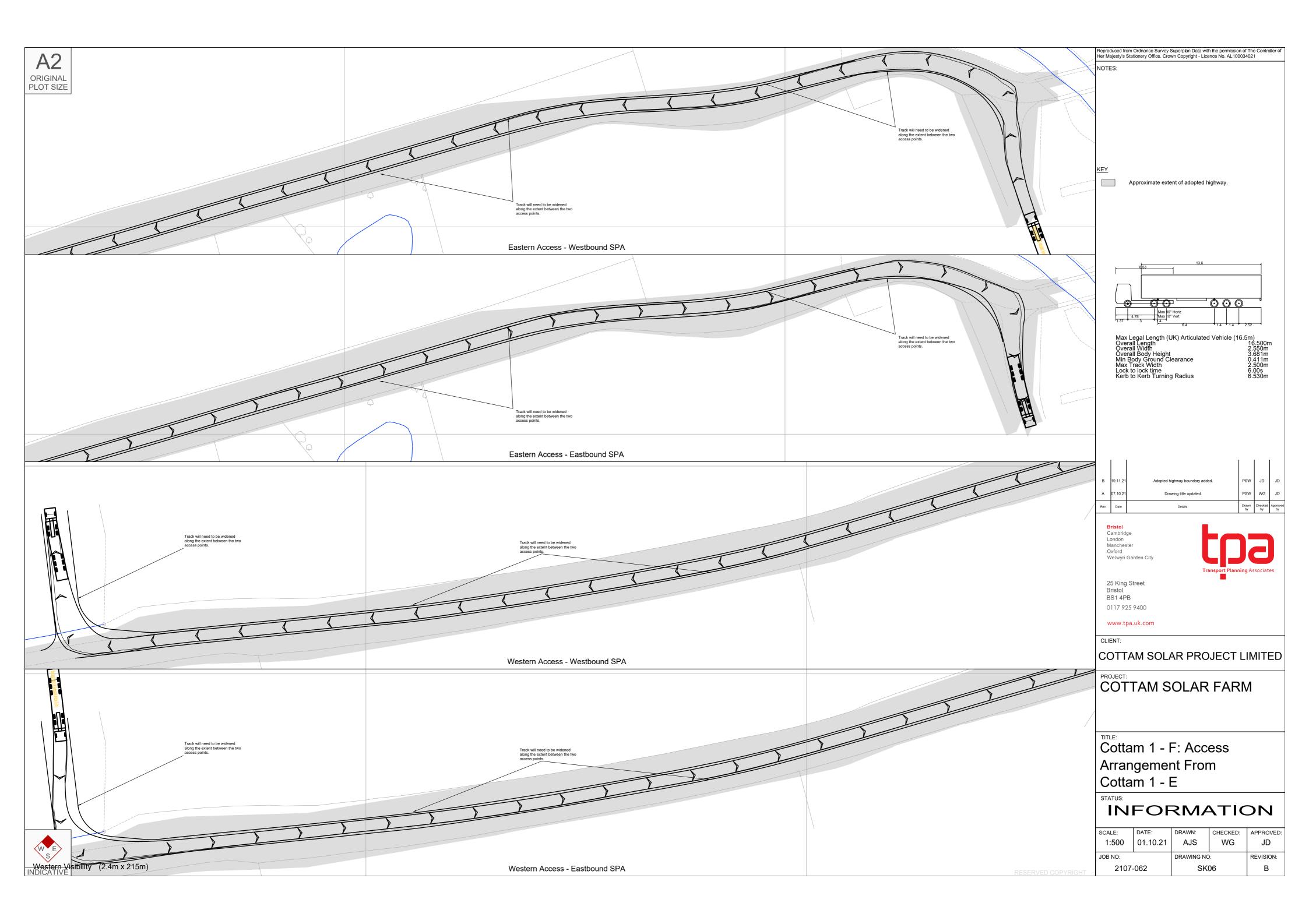


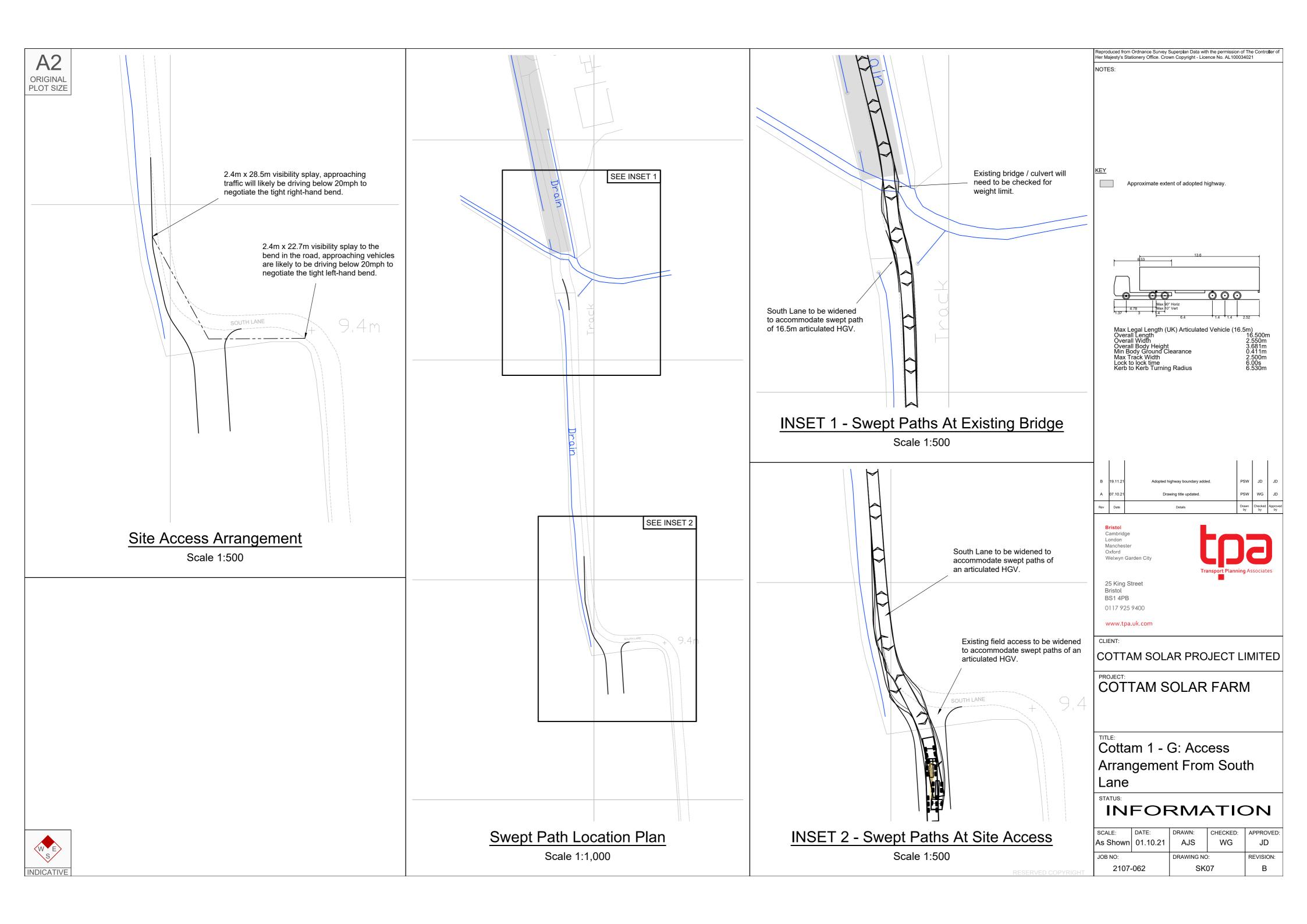


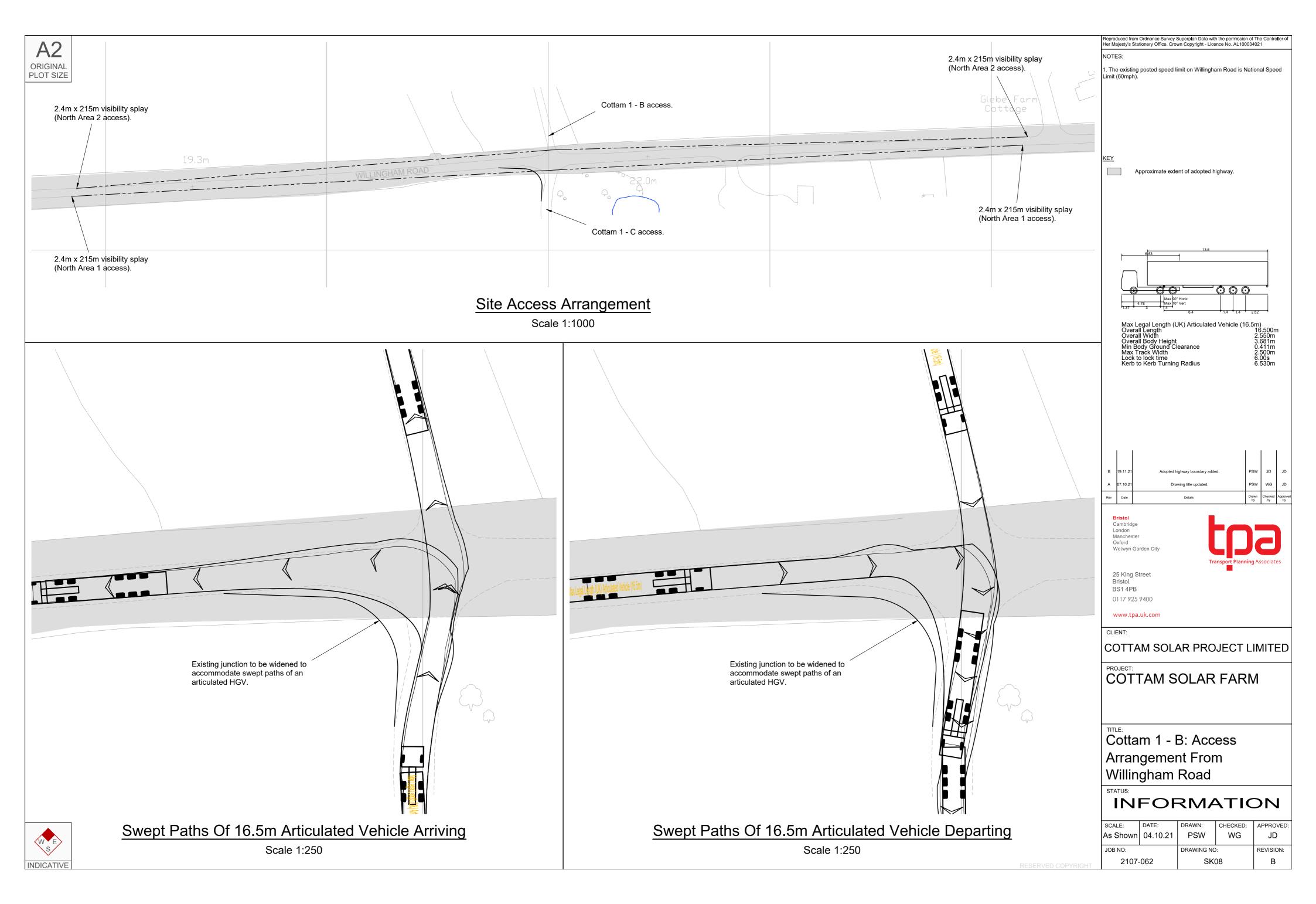


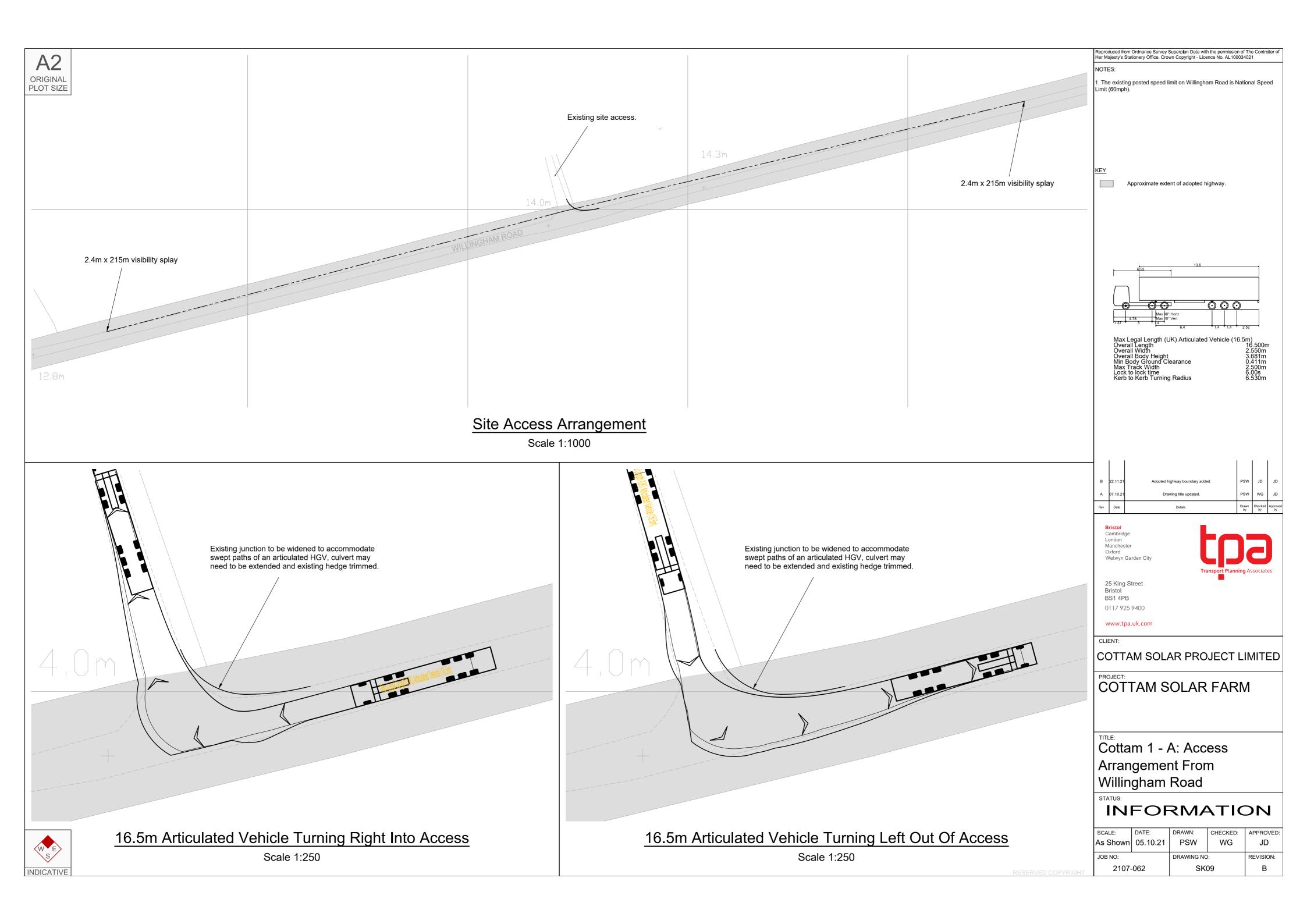


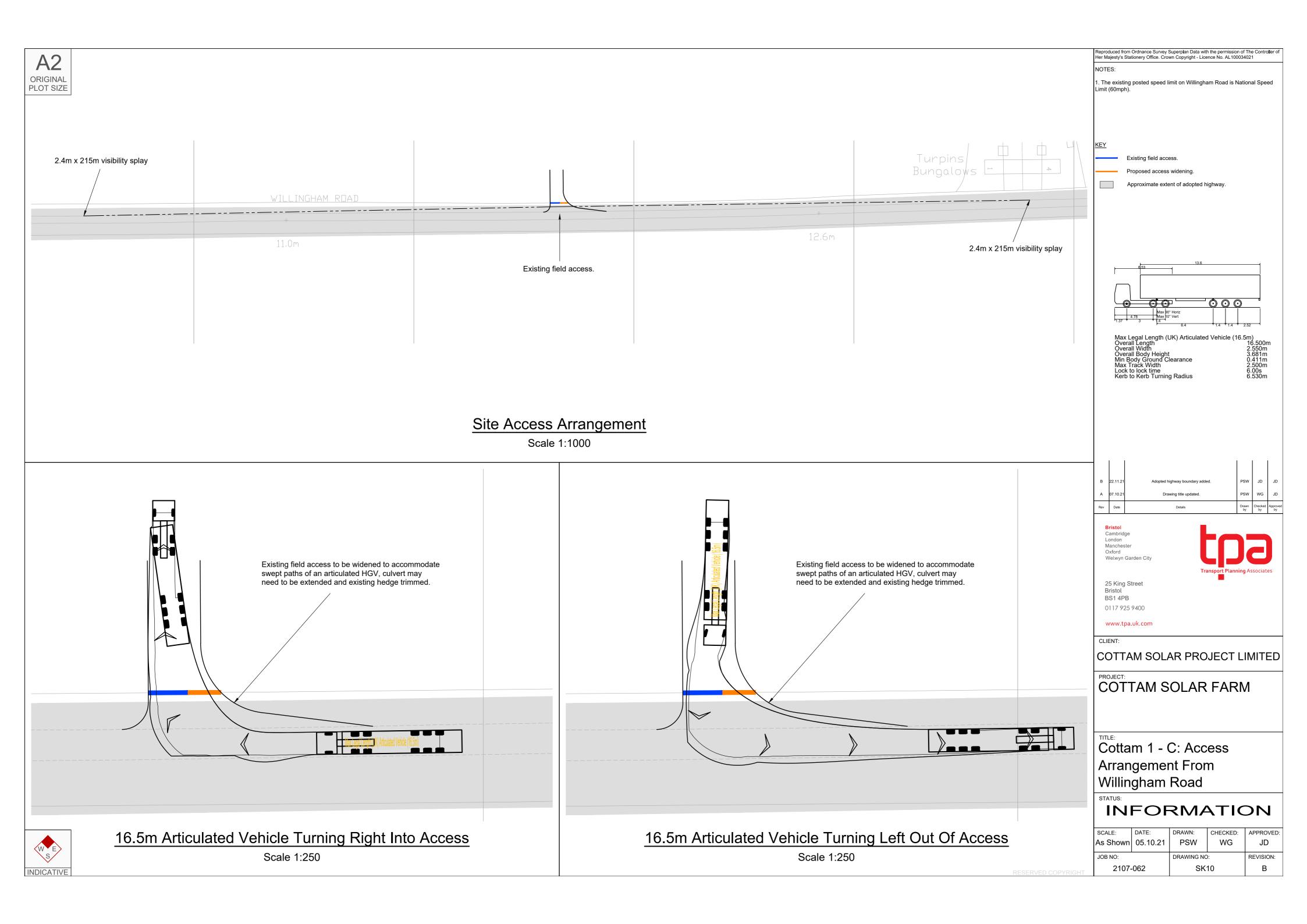


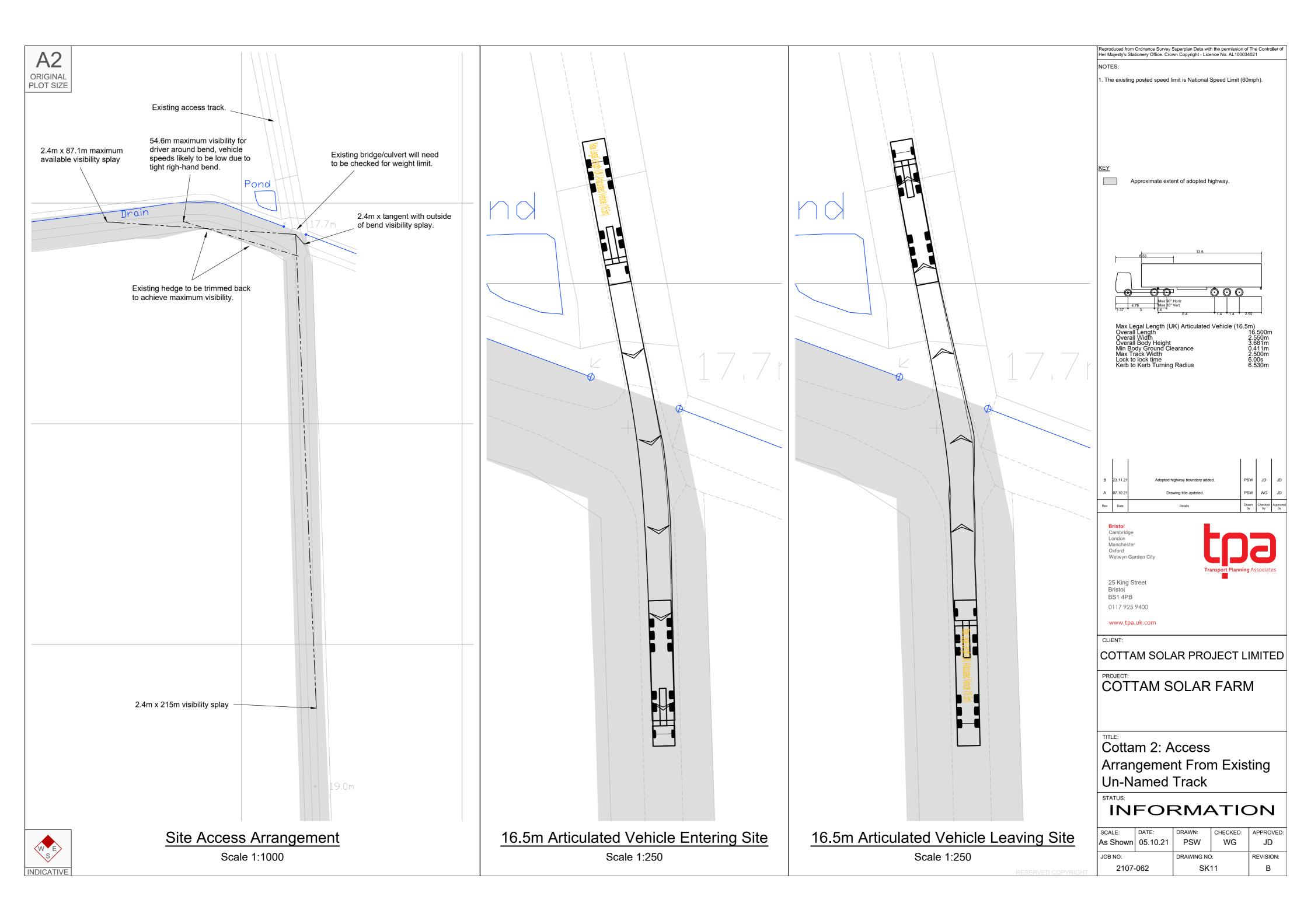


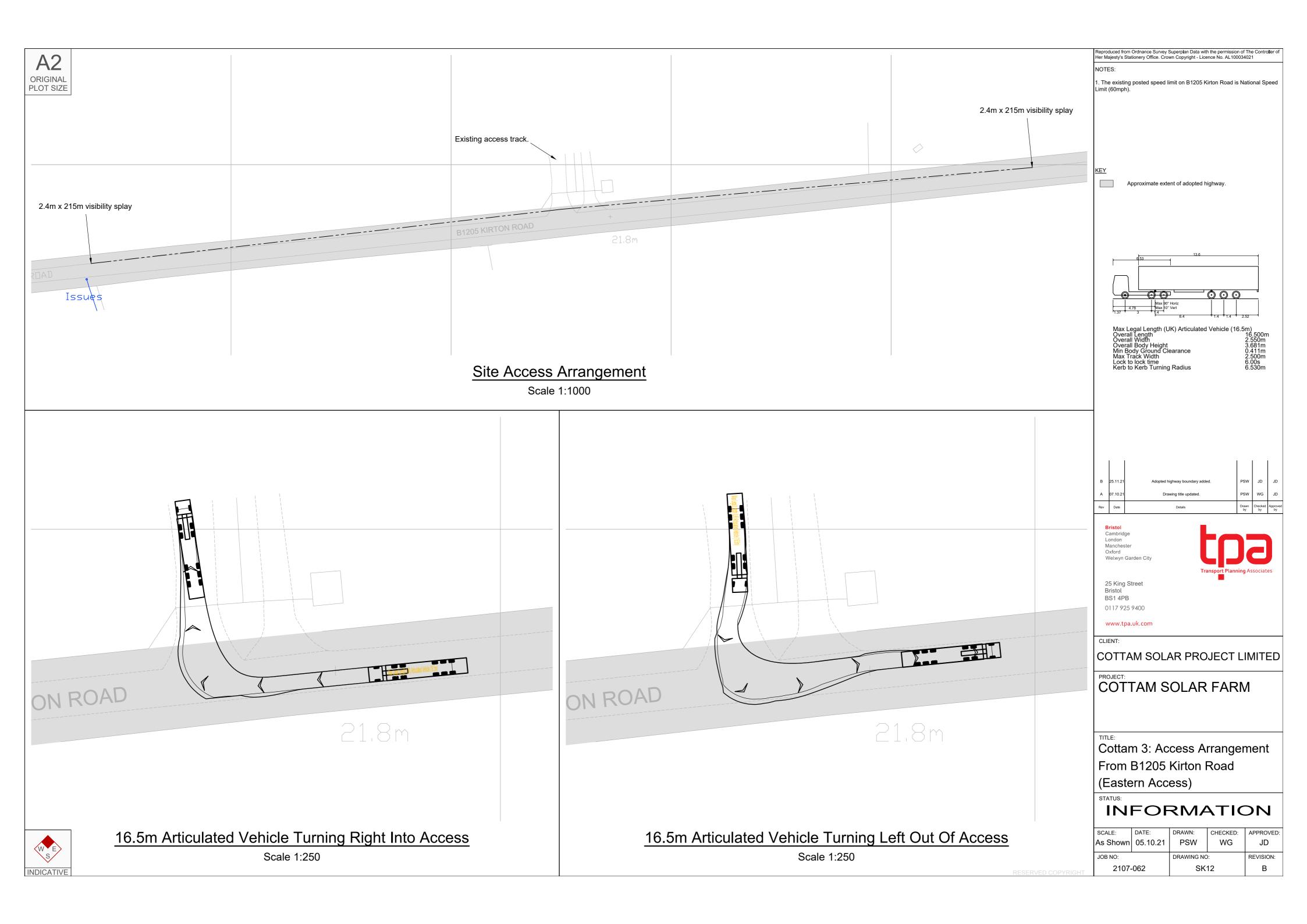


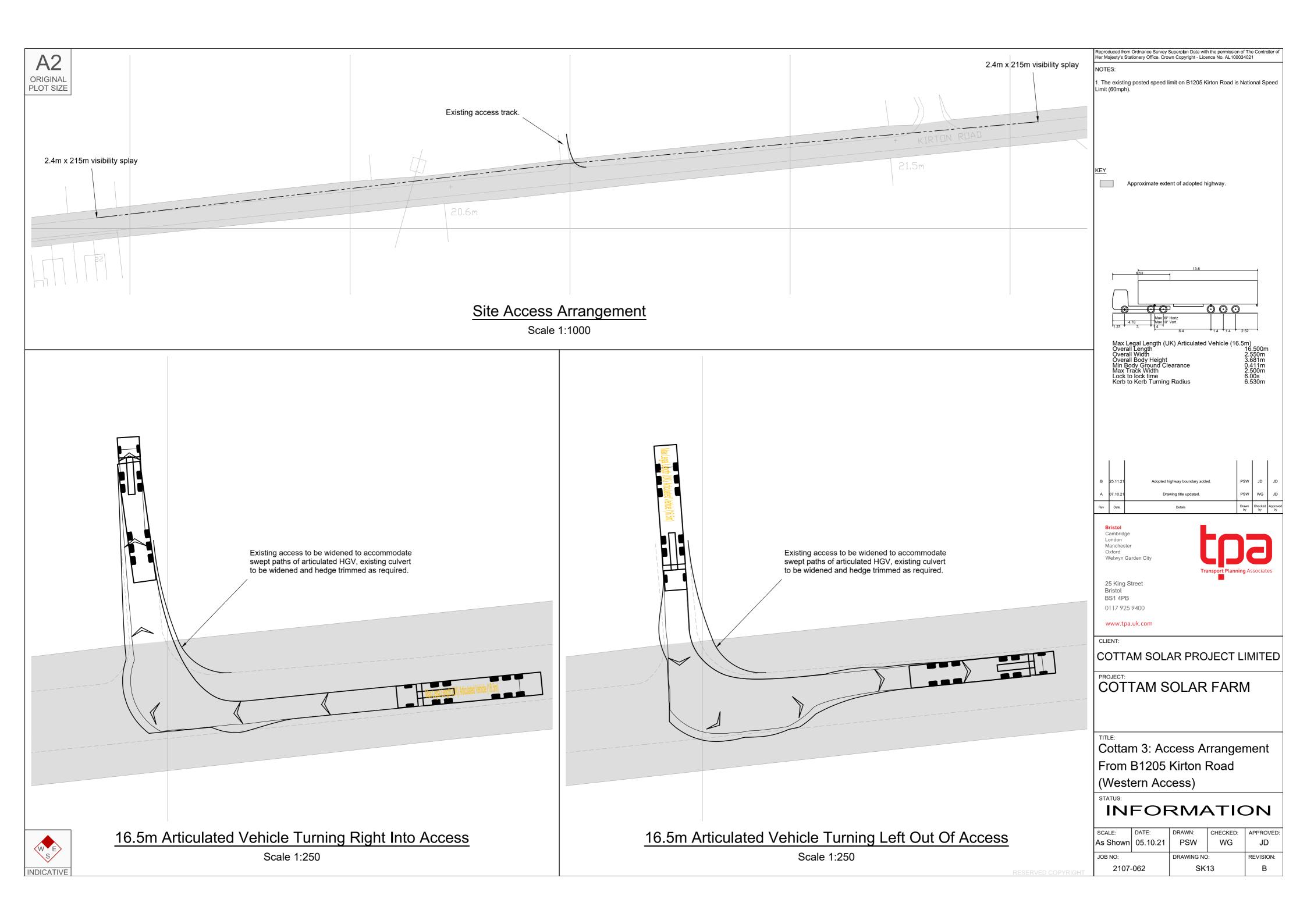


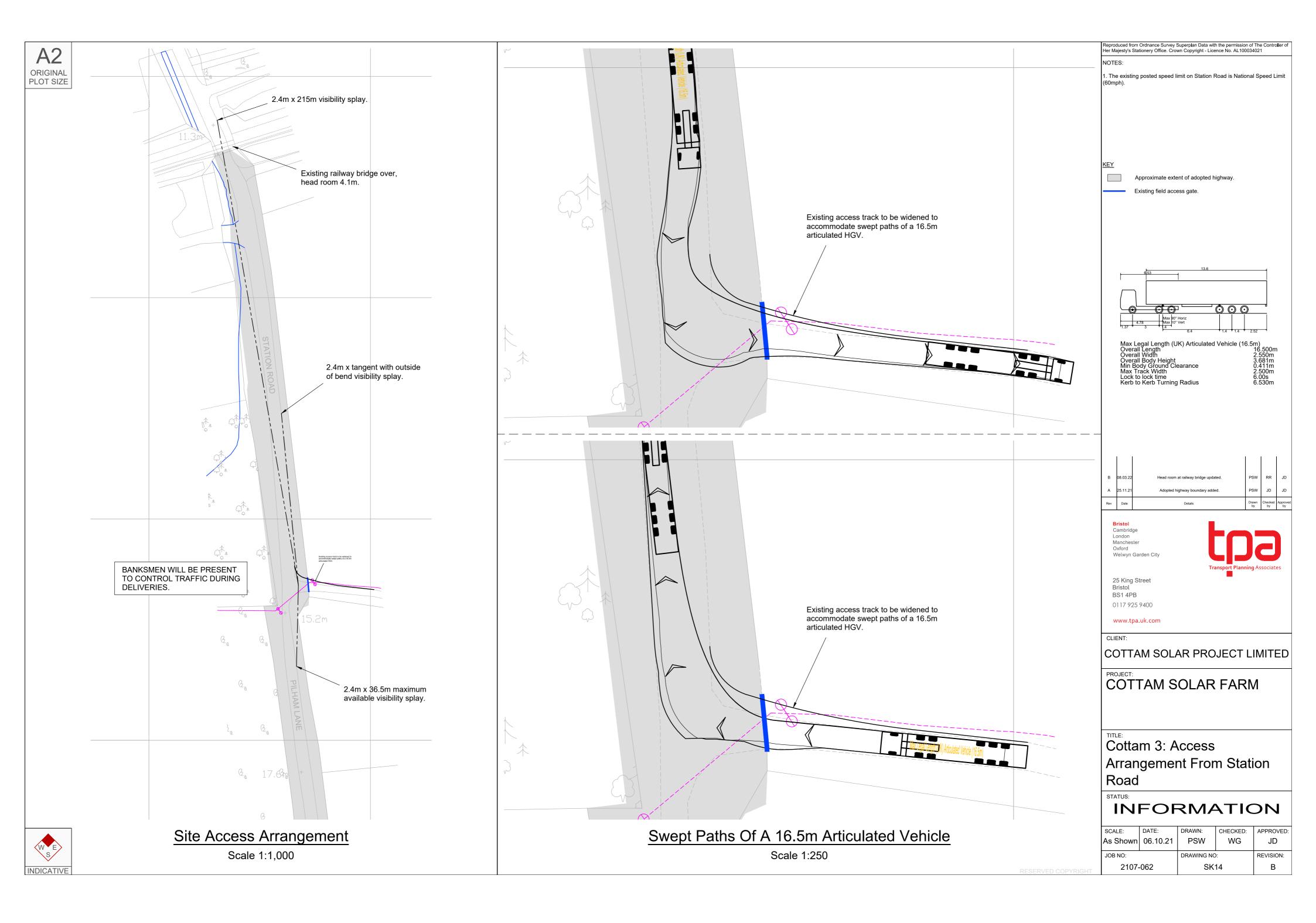














14.2 Abnormal Indivisible Loads Access Summary



Abnormal Indivisible Load Access to Cottam Solar Project Substations - High Level Summary Document & Desktop review

Prepared for Island Green Power (IGP)





NAME		SIGNATURE	DATE	
Prepared by:	Andy Pearce	Indeleure	13.04.22	
Checked by:	Peter Wynn	WAR	14.04.22	
Approved by:	Andy Pearce	Indefeere	14.04.22	

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DOCUMENT REVISIONS

Issue	Date	Details
0	14.04.22	Summary Report
1	16.05.22	Revised after comments from client
2		



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1. Introduction

- 1.1. This document includes high level summary reports in respect to Abnormal Indivisible Loads (AIL) access to the proposed substations that are expected to be required for the Cottam Solar Project. This will involve construction of new substations for connection to the National Grid at the 3 sites detailed in this report in terms of AIL transportation of the main transformer tank only.
- 1.2. The sites where AIL access are required are:
 - Cottam 1 (Coates)
 - Cottam 2 (Corringham)
 - Cottam 3 (Blyton)
- 1.3. The report considers access to the proposed onshore substation in terms of AIL transportation of the main transformer tank only. Wider traffic and transport for Construction and Use vehicles is not within the scope of this document which details the issues on access for heavy transformers only.
- 1.4. At this stage the agreed site access points for transformer AILs remain to be confirmed. The report highlights preferred AIL access routes via the public road network as far as is possible to date and highlights where additional remedial works will be necessary.
- 1.5. The report includes reference to the responses of highway and structural authorities where applicable including Lincolnshire County Council, Network Rail, National Highways Yorkshire and North East and the National Highways Abnormal Loads Team. The high level summary is intended to inform initial planning documentation. A more detailed report discussing the various issues raised will be issued to Island Green Power (IGP) under separate cover. This will include more information on legislative requirements, route negotiability and the structural status of the routes.

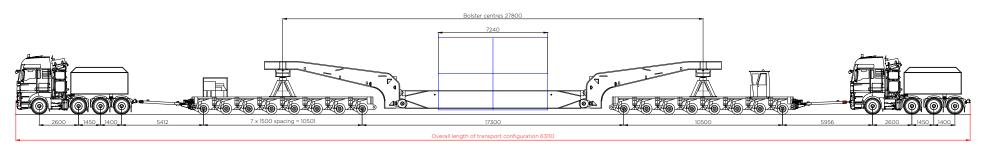


2. Transport Drawings

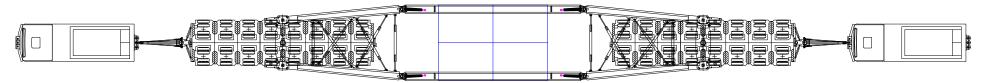
2.1. The anticipated transport dimensions of the transformers for each of the substation location are shown below in Table 1 as is the indicative AIL transport arrangement that has been used for initial consultation with highway authorities that are reproduced on the following pages. These are based on standard AIL transport configuration that are generally used for transformers of the dimensions stated.

Table 1 Transformer Transport Dimensions and Trailer Arrangements

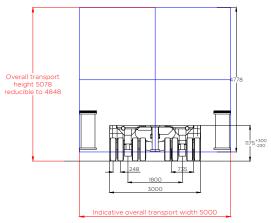
Site	Length	Width	Height	Weight	Transport Arrangements
	(mm)	(mm)	(mm)	(kgs)	
Cottam 1	7240	5000	4778	157,000kgs	16 axle girder frame trailers as shown in Drawing Number 22- 1062.TC01/02 and 12 axle flattop
					trailer as shown in Drawing Number 22-1062.TC03.
Cottam 2	7900	4860	4500	100,000kgs	5 bed 5 trailer as shown in Drawing Number 22-1062.TC04
Cottam 3	7900	4860	4500	100,000kgs	5 bed 5 trailer as shown in Drawing Number 22-1062.TC04



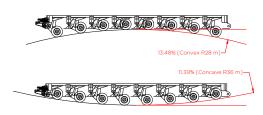
Elevation view - 16-axle girder frame trailer - concept model only Indicative 157 te transformer Scale 1:250



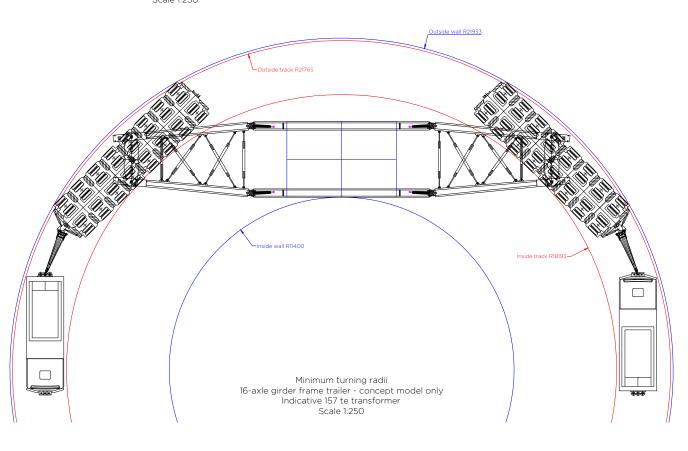
Plan view - 16-axle girder frame trailer - concept model only Indicative 157 te transformer Scale 1:250



Profile view Scale 1:125



Vertical curve negotiability information based on manufacturers literature (Scale 1250)



Load table				
16-axle girder frame trailer				
Self weight of transformer	157.0 te			
Self weight of trailer	92.0 te			
Self weight of aux. steelwork (for L&S)	0.0 te			
Total combined weight	249.0 te			
Load per trailer	124.5 te			
Load per axle line	15.56 te			
Load per axle	7.78 te			
Load per wheel (4 per axle)	1.95 te			
Overall ground bearing pressure	3.95 te/m²			
Tractor(c) (42 to)				

Tractor(s) (42 te)

Front axle	8.0 te
Second steer	10.0 te
Rear axle	12.0 te
Rear axle	12.0 te

Notes:

- [1] The figures shown above are representative of the transport configuration portrayed. However, as tractor and trailer arrangements vary then the loads and dimensions indicated should be treated as probable values.
- [2] Actual dimensions, including axle spacing and mean running height, may vary slightly depending on manufacturer of trailer deployed.
- [3] All linear measures in millimetres unless stated otherwise.
- [4] Indicative transformer shown only.

	1		
	0	24.02.22	Issued for comment
Rev. Date		Date	Amendments

Revisions

Prepared by:



Shaftesbury House, 2 High Street, Eccleshall, Stafford, ST21 6BZ Tel: (01785) 850411

Independent Transportation Engineers

Client:



Project:

Cottam & West Burton Solar

Title

Indicative transport configuration

Conceptual 157 te 400/33 kV transformer carried within 16-axle girder frame trailer with 3 m track width showing minimum turning radii

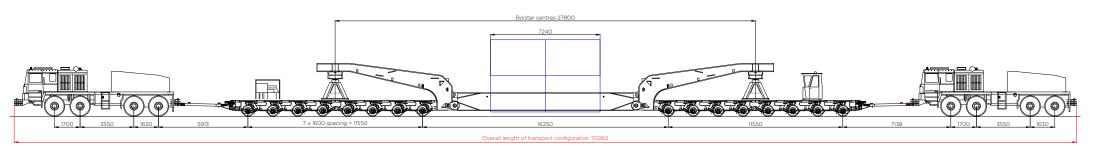
Drawing status:

Final report

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P:\Clients\Existing Clients\Island Green Power\22-1062 Cottam and West Burton Solar\Transport configuration\22-1062.TC01 Cottam & West Burton Solar 157 te transformer 16 axle frame 3 m track width R0.dwg

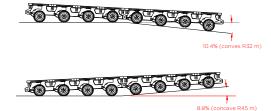


Elevation view - 16-axle girder frame trailer - concept model only Indicative 157 te transformer Scale 1:250

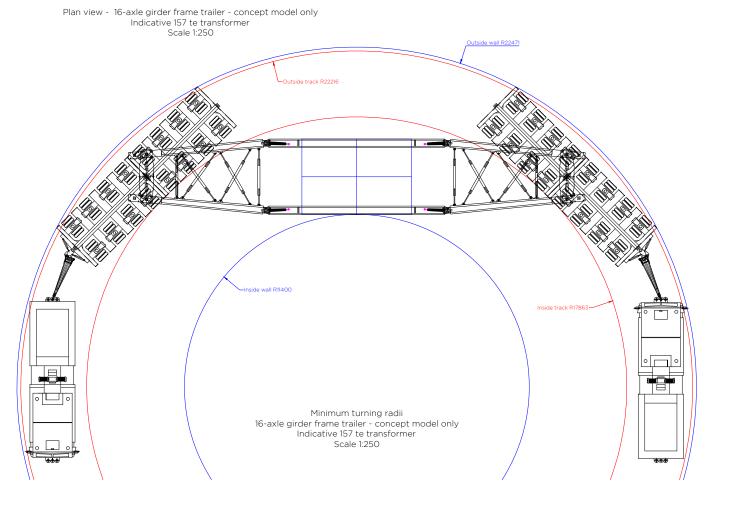


Overall transport height 5078 reducible to 4848 4778 reducible to 4848 1075 -/- 300 1075 -/- 300 Indicative overall transport width 5000

Profile view Scale 1:125



Vertical curve negotiabilty information based on manufacturers literature



Load table				
16-axle girder frame trailer				
Self weight of transformer	157.0 te			
Self weight of trailer	92.0 te			
Self weight of aux. steelwork (for L&S)	0.0 te			
Total combined weight	249.0 te			
Load per trailer	124.5 te			
Load per axle line	15.56 te			
Load per axle	7.78 te			
Load per wheel (4 per axle)	1.95 te			
Overall ground bearing pressure 3.05 te/				
Tractor(s) (19 to)				

Tractor(s) (48 te)

Front axle	9.0 te
Second steer	9.0 te
Rear axle	15.0 te
Rear axle	15.0 te

Notes:

- [1] The figures shown above are representative of the transport configuration portrayed. However, as tractor and trailer arrangements vary then the loads and dimensions indicated should be treated as probable values.
- [2] Actual dimensions, including axle spacing and mean running height, may vary slightly depending on manufacturer of trailer deployed.
- [3] All linear measures in millimetres unless stated otherwise.
- [4] Indicative transformer shown only.

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0	24.02.22	Issued for comment
Rev.	Date	Amendments

Revisions

...



Shaftesbury House, 2 High Street, Eccleshall, Stafford, ST21 6BZ Tel: (01785) 850411

Independent Transportation Engineers

Client:



Project:

Cottam & West Burton Solar

Title

Indicative transport configuration

Conceptual 157 te 400/33 kV transformer carried within 16-axle girder frame trailer with 3.65 m track width showing minimum turning radii

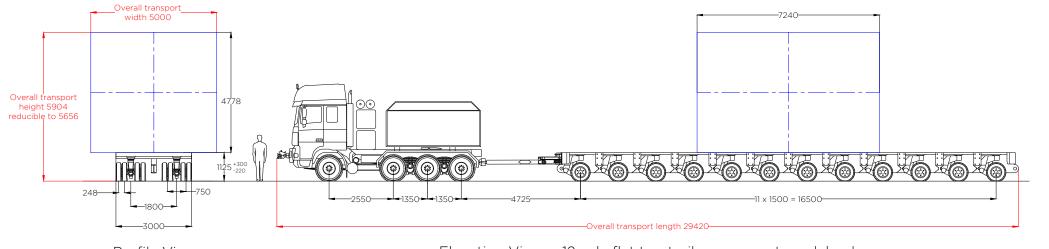
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Final report

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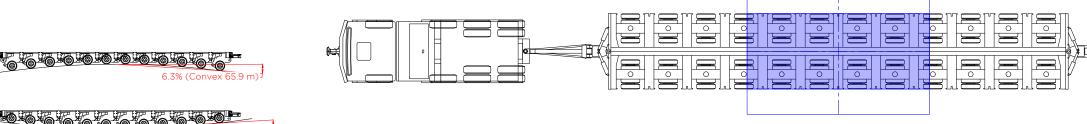
P:\Clients\Existing Clients\Island Green Power\22-1062 Cottam and West Burton Solar\Transport configuration\22-1062.TC02 Cottam & West Burton Solar 157 te transformer 16 axle frame 3.65 m track width R0.dwg



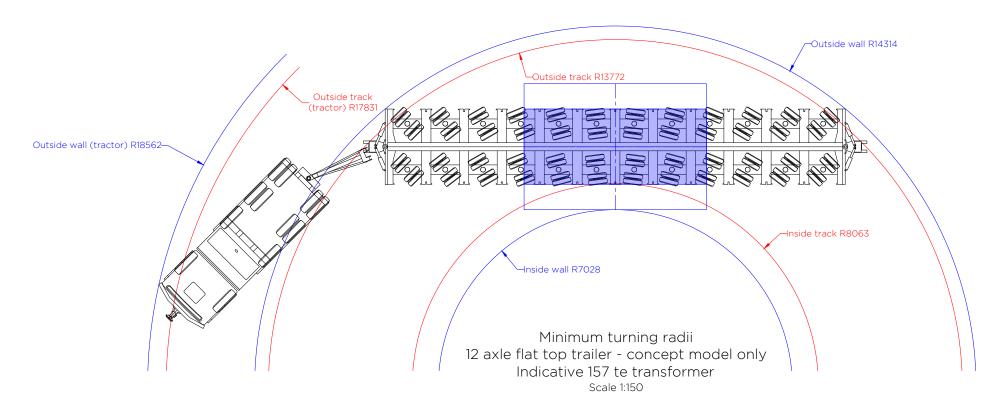
Profile View Scale 1:150

5.9% (Concave 70.5 m)

Elevation View - 12 axle flat top trailer - concept model only Indicative 157 te transformer Scale 1:150



Vertical Curve Negotiabilty Information based on manufacturers literature Scale: 1:300 Plan View - 12 axle flat top trailer - concept model only Indicative 157 te transformer Scale 1:150



Load Table	
12 axle flat top trailer	
Self weight of load	157.0 te
Self weight of trailer	38.9 te
Total combined weight	195.9 te
Load per axle line	16.33 te
Load per axle	8.16 te
Load per wheel (4 per axle)	2.04 te
Overall ground bearing pressure	3.96 te/m²

Tractor (42 te`)
-----------------	---

Front axle	8.0 t
Second steer	10.0 t
Rear axle	12.0 t
Rear axle	12.0 t

Notes:-

- [1] The figures shown above are representative of the transport configuration portrayed however, as tractor and trailer arrangements vary then the loads and dimensions indicated should be treated as probable values.
- [2] Actual dimensions including axle spacing and mean running height, may vary slightly depending on manufacturer of trailer deployed.
- [3] All linear measures in millimetres unless stated otherwise.
- [4] Indicative transformer shown only.

Rev.	Date	Amendments
0	24.02.22	Issued for comment
1	23.03.22	Amended load table

Revisions

Prepared By



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Independent Transportation Engineers

Client:



Project:

Cottam & West Burton Solar

Title:

Indicative Transport Configuration

157 te transformer carried on 12 axle flat top trailer showing minimum turning radii

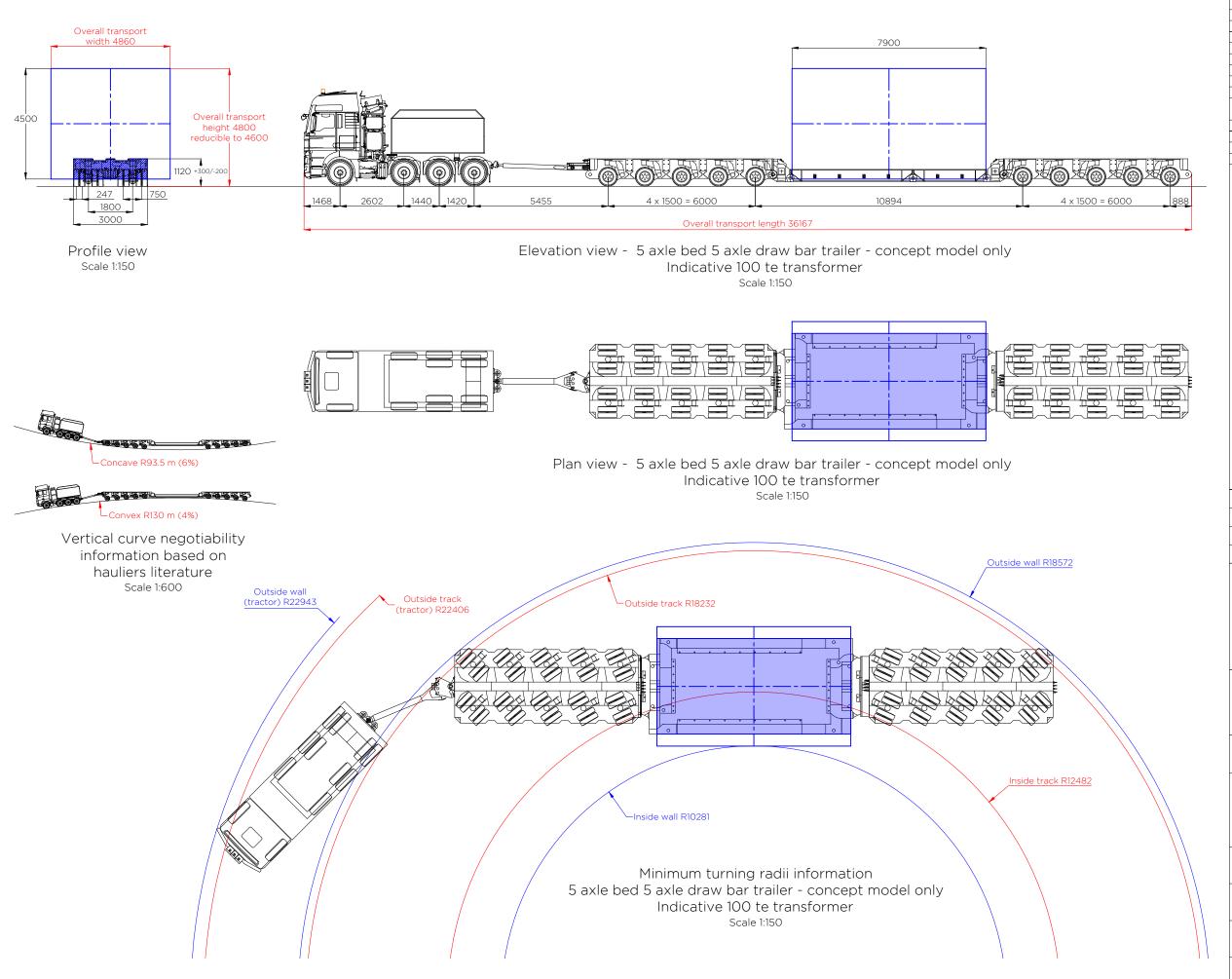
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22-1062.TC03	1 of 1	1

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P:\Clients\Existing Clients\Island Green Power\22-1062 Cottam and West Burton Solar\Transport configuration\22-1062.TC03 Cottam & West Burton Solar 157 te transformer 12 axle flat top R1.dwg



Load table	
5 axle bed 5 axle draw bar trailer	
Self weight of transformer	100.0 te
Self weight of trailer	Say 46.0 te
Self weight of aux. steelwork (for L&S)	0.0 te
Total combined weight	146.0 te
Load per axle line	14.6 te
Load per axle	7.3 te
Load per wheel (4 per axle)	1.83 te
Overall ground bearing pressure	4.06 te/m²
- · · · · · · ·	

Tractor (40 te)

Front axle	7.0 te
Second steer	7.0 te
Rear axle	13.0 te
Rear axle	13.0 te

Notes:

- [1] The figures shown above are representative of the transport configuration portrayed. However as tractor and trailer arrangements vary then the loads and dimensions indicated should be treated as probable values.
- [2] Actual dimensions, including axle spacing and mean running height, may vary slightly depending on manufacturer of trailer deployed.
- [3] All linear measures in millimetres unless stated otherwise.
- [4] Indicative transformer shown only.
- [5] Running height dependent upon tank base and transport lug arrangement.

1		
0	24.02.22	Issued for comment
Rev.	Date	Amendments

Revisions



Shaftesbury House, 2 High Street, Eccleshall, Stafford, ST21 6BZ Tel: (01785) 850411

Independent Transportation Engineers

Client:



Project:

Cottam & West Burton Solar

Title:

Indicative transport configuration

Indicative 100.0 te transformer carried on 5 axle bed 5 axle draw bar trailer showing minimum turning radii

Drawing status

Final report

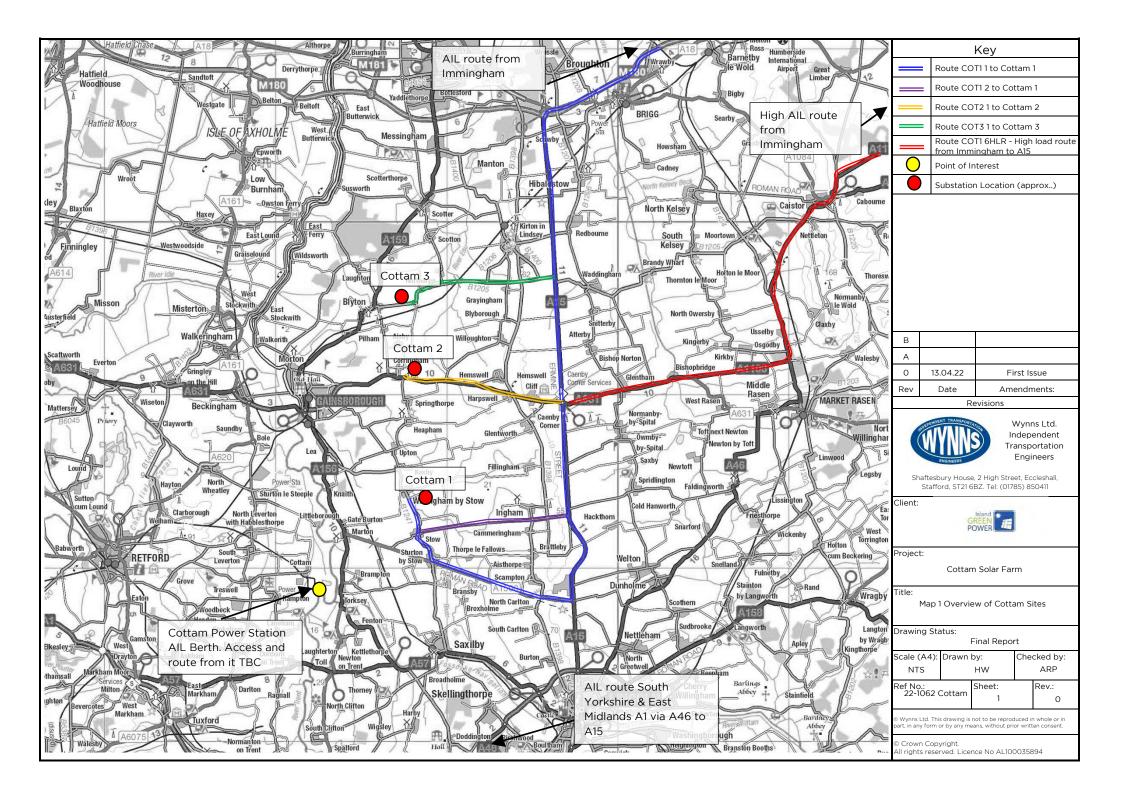
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22-1062.TC04	1 of 1	0

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P:\Clients\Existing Clients\Island Green Power\22-1062 Cottam and West Burton Solar\Transport configuration\22-1062.TC04 Cottam & West Burton Solar 100 te transformer 5 bed 5 R0.dwg



3. Cottam Solar Project Substations Overview Map





- 4. Cottam Solar Project Substations Individual Summary Reports
- 4.1. Cottam 1 (Coates)
- **4.2.** Cottam 2 (Corringham)
- 4.3. Cottam 3 (Blyton)



Site	Cottam Solar Park - Cottam 1 (Coates)
Route Inspection and AIL Access Report Recently undertaken by Wynns?	Yes.
Has Agreement in Principle (AIP) been provided by National Highways/Transport Scotland in line with the Department for Transports (DfT) Water Preferred Policy	National Highways requested further information on whether AIL routes to Cottam 1 could be undertaken from the EDF Energy heavy load berth at Cottam Power Station on the River Trent. This is in consideration of the Department for Transports Water Preferred Policy which requires that Special Order loads in excess of 150te gross weight are transported via the nearest practicable marine access delivery point to minimise the road miles travelled by large AILs. Further information on this will be included in more detailed reporting. Wynns have advised that this is considered unlikely to be suitable for the following reasons. • Lincolnshire County Council are responsible for Gainsborough Bridge over the River Trent and have advised that the structure is listed and will need to be assessed before any large loads travel over it. It has 45 units of HB capacity so has some AIL strength but assessment is needed. • Even if Gainsborough Bridge was suitable, the A156 Lea Road, the most direct route, is restricted by a 4.2m low bridge. The lanes near Willingham by Stow are narrow and inaccessible from the north. • This would mean routes would have to be east on A631 to A15 to then come back west to site which would not save road miles in comparison to Immingham. • Cottam to West Burton and then onto Gainsborough Bridge would need to be considered. • Route via Gainsborough would pass through the town centre. • Cottam via A57, A1 and A46 to Lincoln and Immingham route is



National History AID Defense Albumba	approx. 50miles Cottam via Dunham Toll Bridge is approx. 20miles but not suitable as Dunham Bridge Company have confirmed the maximum weight they can accept is 44te. National Highways AIL Team have issued AIP from Immingham as the port of access for Cottam 1 Special Order loads.
National Highways AIP Reference Number	AIP Ref 808 dated 20.04.22
Proposed port of Delivery	Immingham The port of Immingham is well established for heavy project cargo and no issues are expected in respect to marine access. The Cottam 1 transformers will be Special Order in terms of weight.
Maximum Transport Weight considered during the most recent report in line with future project requirements	157te nett 400/33kv transformer
Typical trailer used in Route Clearance works	16 axle girder frame trailer at 249te gross weight as shown in Drawing Number 22- 1062.TC02
Expected delivery date of next planned delivery if known	To be confirmed.
Last Recorded Special Order Movement (according to available records)	No movements to this site which is a new development. However, heavy loads do use the A15 from the A46 at Lincoln to the M180 Junction 4 as part of the historical heavy load export route from South Yorkshire and the East Midlands to Immingham docks.
Suggested route based on investigations undertaken during 2022	A selection of routes have been considered to date as shown below: Route Ref COT1 1 Exit M180 Jct 4 Turn left A15 southbound Continue A15 to Scampton Turn right A1500 Till Bridge Lane Continue A1500 to Sturton by Stow Turn right B1241 Continue B1241 via Stow At Willingham by Stow turn right Cot Garth Lane crossing over River Till Turn right Stone Pit Lane Turn left to potential site access at approx. OS Ref SK 8845 8426



	Route Ref COT1 2
	Exit M180 Jct 4
	Turn left A15 southbound
	Continue A15 to north of Scampton
	Turn right Ingham Lane at OS Ref SK 9706
	8297
	Continue B1398 Continue Stow Lane to Stow and join route
	COT11.
	Route Ref COT1 3
	As Route COT11 to Stow
	Turn right from B1241 at Normanby by Stow
	at Flattops onto U/C road at OS Ref SK
	8827 8275
	Continue U/C crossing River Till Turn left potential site access at OS Ref SK
	8952 8298
	Route Ref COT1 4
	As Route COT11 to Stow
	Turn right at East Farm (OS Ref SK 8825
	8306) Continue via internal roads to site including
	via Environment Agency bridge over River
	Till.
Is a map available of the proposed route?	Yes – See attached Map 1 and Map 2.
	Yes.
	Formal response remains outstanding from
	Lincolnshire County Council in respect to
	the bridges on all of the routes detailed.
	Although no major concerns have been
	raised to date there are structures on the
	routes which would need to be checked
	and are unlikely to be acceptable for
	Special Order loads without further
	assessment or analysis by Lincolnshire
	County Council as highlighted below.
Any Known Problems for AIL Access in terms	country counten as migning need selow.
of structures?	Route Ref COT1 1
	Route Ref COT11 involves crossing over the
	River Till at Willingham by Stow on Cot
	Garth Lane (ID 88/84/02) at OS Ref SK
	8810 8430. The status of this structure
	which is 11m span on a minor road will be specifically important to whether this route
	can be used or if remedial works may be necessary.
	can be used or if remedial works may be necessary.
	can be used or if remedial works may be necessary. There is a 3.3m span culvert on Stow Road
	can be used or if remedial works may be necessary.



<u> </u>	
	that confirmation of suitability for proposed loadings is required on.
	Route Ref COT1 2 There are two small culverts on Ungham Road known as Blackthorne Old Till Culvert 2 (ID 98/22/25 B) and Squires Bridge (Centre) (ID 98/02/33 -1).
	Route Ref COT1 3 The River Till is crossed by Coates Bridge (ID 88/92/39) at OS Ref SK 8935 8294 which is a Lincolnshire County Council structure of 12.43m span.
	Route Ref COT1 4 Within the site owners land is the Environment Agency bridge over the River Till OS Ref SK 8858 8312. This is approx. 14m span and on a skew with 6.9m between abutments. It is understood to have been upgraded to 44te in recent years but is unlikely to be suitable for heavy AILs and remedial works would be necessary.
	National Highways Yorkshire and North East have confirmed that the motorway and trunk road section of the route from Immingham to M180 Jct 4 is able to accommodate the proposed Special Order loads.
Authorities consulted in respect to AIL Access	 Lincolnshire County Council National Highways Yorkshire and North East Lincolnshire Police North East Lincolnshire County Council (High load route only) North Lincolnshire County Council (High load route only)
Any Known Problems for AIL Access in terms of Negotiability and other Route Comments?	Yes. The A15 and A1500 are considered negotiable for the proposed load to the potential site access location. Caution is needed at the locations detailed below on each route and where further works would be needed if the route was to be utilised. There will be areas of the routes once off the A15 where the entire road width will be required and careful consideration of traffic management and police escort of the AIL will need to be agreed prior to delivery.



Route Ref COT11

- "S" bends in Stow. Further topographical surveys needed to confirm access via Swept Path Assessment.
- Trailer selection will be important to access.
- Protection of the verge by timbers or plates needed to enable trailer overrun within the highway.
- Right turn at Willingham by Stow to Cot Garth Lane is not negotiable and would require remedial works to enable access.

Route Ref COT1 2

- Ingham Road narrows in sections between Ingham and Stow and the carriageway width was measured as 3.6m in some locations. Detailed survey works would be required to enable AIL access on this route with full occupation of the road under road closure.
- Lincolnshire County Council also required to confirm status of overall road construction to avoid any issues with use of the entire carriageway and immediate verges either side.
- Ingham Road has a 7.5te
 Environmental Weight restriction.
 Discussions would be required with
 Lincolnshire County Council to seek
 to overcome this with one of heavy
 AlLs if this route was considered
 further.

Route Ref COT1 3

- Access from B1241 at Normanby by Stow at Flattops onto U/C road at OS Ref SK 8827 8275 would require the corner to be widened to enable All
- The U/C road east from Flattops would require tree pruning and hedge removal to enable the AIL sufficient width to use the road.
- There are signs indicating that the access on this lane is limited and the road is gated but there were no restrictions at the time of survey. Confirmation as to the extent of the public highway would be advised if this option is progressed.
- Coates Bridge (ID 88/92/39) also



presents difficulties with physical negotiability due to the skew. It is thought that land take would be required on approach to the bridge to enable a suitable alignment to be used Swept Path Assessments required. A site walkover has been undertaken and this was used to inform the potential routes detailed above to access the site in the most appropriate locations. In consideration of the preferred substation location where the heavy transformer is required to be installed, route COT11 would minimise the amount of road building, either of a permanent or temporary nature on site. However, it is recognised that this also requires additional consideration of access on the approaches to site from the A15 via the A1500 and B1241 and also the final entrance to the site from B1241. It is expected that new access from the public road network to the new substation location will be feasible subject to the site access bell mouth being constructed able to accommodate the AILs and onward internal road infrastructure being able to Any Known Problems for AIL Access in terms accommodate trailer loadings in terms of of Onsite issues? physical turning radii and also structural capacity. Site access roads can be permanent or temporary in construction but should be designed to be able to accommodate the AILs required. Further information on the specific negotiability issues raised can be provided under separate cover but the main items to be address are: **Route Ref COT11** Assuming the issues highlighted above in terms of structures and negotiability on the public road can be resolved on Cot Garth Lane access could be envisaged into the area where the new substation is to be located by running over Stone Pit Lane. Further works required to design suitable access.



	Route Ref COT1 3 Access would be immediately east after Coates Bridge discussed above.
	Route Ref COT1 4 Access from B1241 at East Farm (OS Ref SK 8825 8306) would require the corner to be widened to enable AIL access. Surveys needed to confirm remedial works. Hedgerow will need to be removed. There is also a culvert and ditch that would need to be considered in any remedial works. It is understood the land on the inside of this right turn is within the developers land holding and this would aid in remedial works permissions.
Do routing issues currently present a serious risk that access to the site may be restricted?	Yes. There are various options available. All require further detailed works to enable AIL access, but it is expected that a technically suitable access solution could be determined subject to more detailed technical appraisal and, where necessary, third party access agreements.

Any other Relevant Information and Notes:

Other routes discounted:

- The unclassified road that approaches the site from the northeast via Fillingham is not expected to be suitable in terms of negotiability as remedial works would be needed to achieve access on Willingham Road, especially at the left bend where there is a bridge at OS Ref SK 92228545. However, further surveys could be undertaken if all other alternatives are found to be unsuitable, but this is not recommended at this time.
- Access from the northwest is not feasible due to the village of Willingham by Stow being restrictive to the proposed loads.

Green Lane Alternative Access from the south:

- There is a Green Lane between Ingham and Stow on Ingham Road at Stow Pasture (OS Ref SK 8960 8225) which could potentially be developed into an access route to link to the site access at Coates (OS Ref SK 8937 8293) on Route COT1 3.
- This would however not avoid the River Till Coates Bridge. To do so, an access route could be created from immediately west of Coates Bridge in a northerly direction towards the site.
- The Green Lane is not suitable in its current layout and this is highlighted as an option in the event that other solutions cannot be secured as there may well be other environmental limitations to opening up the lane.



• To minimise disruption or remedial works for the Green Lane a further option would be to undertake a transhipment from a large girder frame trailer to a smaller Self Propelled Modular Trailer (SMPT) (See below).

Transhipment to use Green Lane with SPMT:

- A suitable location would need to be found to carry out such an operation and it is understood that the land to the south of the Green Lane is within the ownership of the Cottam 1 site owner. This could potentially be developed into an area of hard standing on a temporary or permanent basis to carry out a transhipment.
- This would need to be carefully considered in terms of ground conditions and preparatory works but this would see an area off road created to the south of Ingham Road able to accommodate trailer jacking ground loadings and would see off-loading from frame trailer, jacking, loading to SPMT. Small cranes are needed for mobilisation but no major heavy lifting is undertaken with the self loading arrangements of the trailer jacking abilities being used to perform the operation.
- The SPMT is a smaller more manoeuvrable trailer ideally suited to site works. The
 trailer would increase the loaded configuration to in excess of 5m and as such
 would also be a high load, thus requiring detailed analysis of the impact on any
 overhead wires and trees.
- Associated traffic management would also need to be agreed prior to and during delivery and transhipment operations.
- The SMPT is delivered to transhipment area on standard 40ft trucks and once loaded continues to the site.

High Load Route from Immingham:

 A further option that has been initially explored would be to exit Immingham Docks and use the historical high load route. The high load is shown below for information.

Route Ref COT1 6HLR

Exit Immingham Docks via Humber Road

Turn right Rosper Road

Turn left Chase Hill Road

Turn left Eastfield Road

Turn left A160 Humber Road

Turn right A1173 Manby Road

Turn right Pelham Road

Turn left B1210 Stallingborough Road

Continue A1173

Turn right A1173 Riby Road

Turn left then right at A18 crossroads staying on A1173 Riby Road to Caister

Turn right A46

Turn right A1103 Top Road

Turn right A631

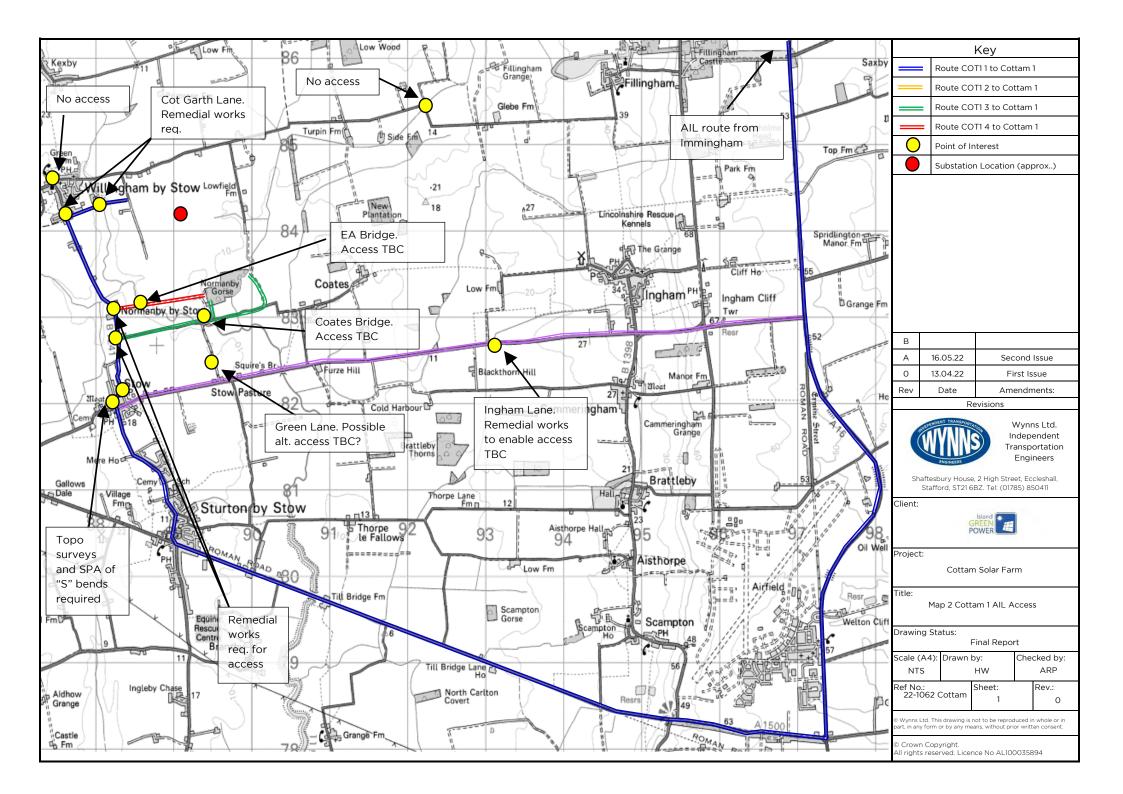
At Cainby Corner turn left A15 south and join other routes COT1 1.



- Transport of the transformer on a Flattop trailer, as shown in Drawing Number 22-1062.TC03 would improve physical negotiability closer to the size in terms of horizontal requirements, as it would be less onerous than the 16 axle girder frame trailers. However, girder frame trailers are used to enable loads to be transported under the standard motorway and trunk road running height of 4.95m by carrying the load low to the ground between two twin bogies.
- A conventional flattop trailer would see the load height increased to circa 5-.7 5.9m which is significant and generally not suitable for long distances, especially where loads are also heavy.
- More work would be required as the initial indications from North East Lincolnshire County Council are that they would be concerned with the loads travelling via Immingham village which has a 7.5te environmental weight restriction. They are not aware of this route being used for many years. The structure known as Little London Bridge, supporting the B1210 just west of Stallingborough is advised as significantly over the assessed capacity for this AIL. There may be a route if vehicle loading can be reduced and further discussions remain ongoing on this basis. Alternatively, it may be possible to install a temporary overbridge to not load the road bridge.
- There would be a need to confirm overhead line clearances with BT Openreach and with the local Distribution Network Operators Western Power and Northern Power Grid.
- The high load route is highlighted as an option in the event that other solutions cannot be secured in terms of local access and would require further investigation if it was to be explored. The issues with overhead wires would need to be compared to local access issues for girder frame trailers as reported.



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Agreement in Principle from National Highways



Our ref: HE Ref AIP 808

Your ref: Cottam Solar Farm, Willingham by Stow

Andy Pearce Wynns Limited Shaftesbury House High Street Eccleshall Staffordshire ST21 6BZ Sarah Hollender Abnormal Loads Team 9th Floor, The Cube 199 Wharfside Street Birmingham B1 1RN Tel: +44 (0) 7523 931811

20th April 2022

Dear Andy,

AGREEMENT IN PRINCIPLE: - Cottam Solar Farm, Willingham by Stow

Thank you for your email dated 4th March 2022, requesting provision of an AIP for future abnormal load moves to Cottam Solar Farm, near Willingham by Stow.

I can confirm that an AIP can be provided for the movement of a Transformer from Immingham to Cottam Solar Farm near Willingham by Stow (east of the River Trent). This is on the condition that the route via Cottam Berth remains structurally unsuitable.

This agreement in principle is valid for a period of at least seven years but with the proviso that should a nearer, suitable access become apparent, or feasible in that time (such as Cottam Berth), Island Green Power (IGP) will undertake to investigate and assess its potential for future use, with a view to that new facility becoming the agreed access.

Vehicle and load dimensions are tbc.

This will of course be subject to formal application nearer the time at which National Highways will consult with all relevant parties and take into consideration their views and requirements. Consequently, any Special Order issued is likely to include specific requirements relating to the day(s) on which movements will be authorised. The Special Order may also prescribe specific times during the day or night when movement will be permitted (which may take into account seasonal variations in traffic) in order to minimise traffic congestion, and disruption to other road users.

It would be helpful if you could ask the designated haulage contractor to quote the above AIP reference when applying for the VR1 and Special Order permits.

I trust this information is sufficient for your purposes, but please do not hesitate to get in touch if you require anything further.

Yours sincerely

Sarah Hollender

Sarah Hollender Abnormal Indivisible Loads Team

Email: sarah.hollender@highwaysengland.co.uk





Site	Cottam Solar Park - Cottam 2 (Corringham)
Route Inspection and AIL Access Report Recently undertaken by Wynns?	Yes.
Has Agreement in Principle (AIP) been provided by National Highways/Transport Scotland in line with the Department for Transports (DfT) Water Preferred Policy	Not applicable as 100te nett transformer will be moved within STGO Category 3 and as such will not require Special Order permissions from National Highways.
National Highways AIP Reference Number	NA
Proposed port of Delivery	Immingham The port of Immingham is well established for heavy project cargo and no issues are expected in respect to marine access. It should be noted that as the load is STGO it will not be specifically limited to Immingham as the closest port but Immingham does provide suitable facilities.
Maximum Transport Weight considered during the most recent report in line with future project requirements	100te nett 132/33kv transformer with a transport height of 4.5m
Typical trailer used in Route Clearance works	5 bed 5 trailer at 146te gross weight as shown in Drawing Number 22-1062.TC04
Expected delivery date of next planned delivery if known	To be confirmed.
Last Recorded Special Order Movement (according to available records)	No movements to this site which is a new development. However, heavy loads do use the A15 from the A46 at Lincoln to the M180 Junction 4 as part of the historical heavy load export route from South Yorkshire and the East Midlands to Immingham docks.
Suggested route based on investigations undertaken during 2022	Exit M180 Jct 4 Turn left A15 southbound to Caenby Corner Turn right A631 Turn right U/C at OS Ref SK 8816 9086 Turn right to new site access road OS Ref SK 8813 9159 at Corringham
Is a map available of the proposed route?	Yes - See attached Map 1 and Map 3.
Any Known Problems for AIL Access in terms of structures?	Yes. It is noted that there are 2 culverts under the junction at the approach to Corringham Grange Farm. These culverts do not show on the ESDAL AIL notification system. Confirmation of ownership and suitability has been sought from Lincolnshire County Council and advise is there are 2 bridges,



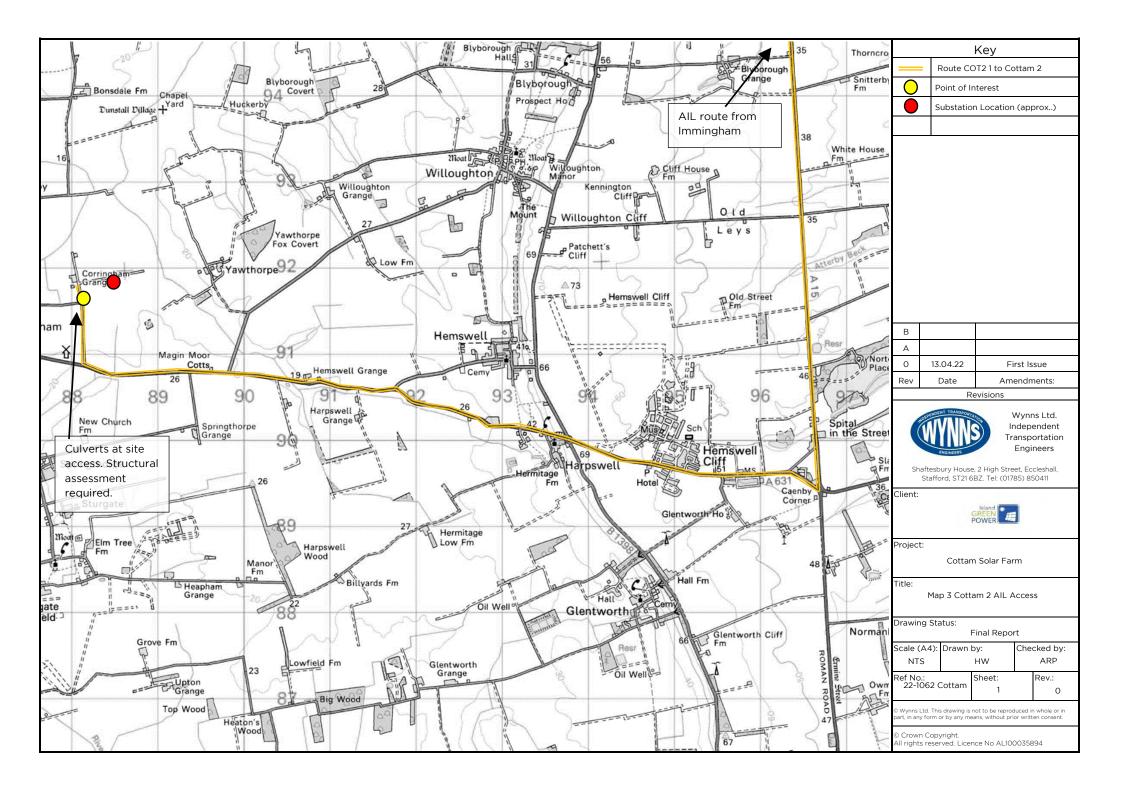
	one is a brick arch (1.3m span width) and another is a corrugated steel pipe (800mm span width), both owned by Lincolnshire County Council who do not have any assessment data on either detailing the weight limits of the bridges. An assessment would be required to determine the weight capacities and suitability for proposed loads. National Highways Yorkshire and North East have confirmed that the motorway and
	trunk road section of the route from Immingham to M180 Jct 4 is able to accommodate the proposed STGO loads.
Authorities consulted in respect to AIL Access	 Lincolnshire County Council National Highways Yorkshire and North East Lincolnshire Police
Any Known Problems for AIL Access in terms of Negotiability and other Route Comments?	The route from A15 to site as described above is considered negotiable for the proposed load to the potential site access location. There will be areas of the A631 where the entire road width will be required and careful consideration of traffic management and police escort of the AIL will need to be agreed prior to delivery.
Any Known Problems for AIL Access in terms of Onsite issues?	No detailed review of site access has been undertaken within this report and it is expected that new access from the point at which the public road and farm access merge to the new substation location will be feasible subject to bell mouth being constructed able to accommodate the AILs and onward internal road infrastructure being able to accommodate trailer loadings. The point above reference the culverts on the junction at the farm entrance should be noted and clarified with Lincolnshire County Council.
Do routing issues currently present a serious risk that access to the site may be restricted?	No. Although assessments of culverts at site access is needed and may require remedial works.



Any other Relevant Information and Notes:	
NA	



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Site	Cottam Solar Park - Cottam 3 (Blyton)
Route Inspection and AIL Access Report Recently undertaken by Wynns?	Yes.
Has Agreement in Principle (AIP) been provided by National Highways/Transport Scotland in line with the Department for Transports (DfT) Water Preferred Policy	Not applicable as 100te nett transformer will be moved within STGO Category 3 and as such will not require Special Order permissions from National Highways.
National Highways AIP Reference Number	NA
Proposed port of Delivery	Immingham The port of Immingham is well established for heavy project cargo and no issues are expected in respect to marine access. It should be noted that as the load is STGO it will not be specifically limited to Immingham as the closest port but Immingham does provide suitable facilities.
Maximum Transport Weight considered during the most recent report in line with future project requirements	100te nett 132/33kv transformer with a transport height of 4.5m
Typical trailer used in Route Clearance works	5 bed 5 trailer at 146te gross weight as shown in Drawing Number 22-1062.TC04
Expected delivery date of next planned delivery if known	To be confirmed.
Last Recorded Special Order Movement (according to available records)	No movements to this site which is a new development. However, heavy loads do use the A15 from the A46 at Lincoln to the M180 Junction 4 as part of the historical heavy load export route from South Yorkshire and the East Midlands to Immingham docks.
Suggested route based on investigations undertaken during 2022	Exit M180 Jct 4 Turn left A15 southbound Turn right B1205 Continue B1205 to Blyton Park Driving Centre Turn right to new site access road from some point to be confirmed on Kirton Road
Is a map available of the proposed route?	Yes - See attached Map 1 and Map 4.
Any Known Problems for AIL Access in terms of structures?	Lincolnshire County Council Caution advises that they do not have enough information to confirm if the bridge on the B1205 over the River Eau (OS Ref SK 9061 9658) is able to accommodate the AILs and it only has a capacity rating of 18HB. An assessment will be required to confirm



	access. but no major concerns raised to date.
	National Highways Yorkshire and North East have confirmed that the motorway and trunk road section of the route from Immingham to M180 Jct 4 is able to accommodate the proposed STGO loads.
Authorities consulted in respect to AIL Access	 Lincolnshire County Council National Highways Yorkshire and North East Network Rail Lincolnshire Police
Any Known Problems for AIL Access in terms of Negotiability and other Route Comments?	No. The route from A15 to site as described above is considered negotiable for the proposed load to the potential site access location. Caution is needed at the B1205 bridge over the River Eau (OS Ref SK 9061 9658) and the level crossing at Parkside (OS Ref SK 9051 9656) where standard procedures for AIL accessing level crossings will need to be followed. There will be areas of the B1205 where the entire road width will be required and careful consideration of traffic management and police escort of the AIL will need to be
Any Known Problems for AIL Access in terms of Onsite issues?	agreed prior to delivery. No detailed review of site access has been undertaken within this report and it is expected that new access from the B1205 to the new substation location will be feasible subject to bell mouth being constructed able to accommodate the AILs and onward internal road infrastructure being able to accommodate trailer loadings.
Do routing issues currently present a serious risk that access to the site may be restricted?	Yes. Assessment of B1205 River Eau Bridge access is needed and may require remedial works.



Any other Relevant Information and Notes:	
NA	



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