

# CRAIG Y PERTHI SOLAR FARM

## Transport Statement

JNY11484-02c  
Land at Craig y Perthi  
Transport Statement  
Version 02c  
13 June 2023

## Document Status

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## Contents

1	INTRODUCTION.....	1
2	BASELINE CONDITIONS .....	3
3	DEVELOPMENT PROPOSALS AND ACCESS ARRANGEMENTS .....	6
4	TRAVEL DEMAND .....	7
5	SUMMARY AND CONCLUSIONS .....	8

## Appendices

**APPENDIX 1 – MASTERPLANS**

**APPENDIX 2 – RPS TECHNICAL DRAWINGS PACKAGE**

# 1 INTRODUCTION

- 1.1 RPS have been commissioned by JBM Solar to produce a Transport Statement (TS) to accompany a planning application for a large-scale Solar Farm on land around Bishton between the M4 and the Newport to London Paddington main railway line.
- 1.2 The proposed Solar Farm extends to approximately 239 hectares (590 acres) in size and is located in a predominantly rural area approximately 8km east of Newport City Centre. The proposed development site is intersected by the hamlet of Bishton and consists of several large parcels of agricultural land. A copy of the masterplan is included within **Appendix 1**.
- 1.3 The Solar Farm will include an array of ground-mounted solar panels and ancillary infrastructure including inverters (likely to be mounted behind the panels), transformer units, electrical infrastructure, switch gear and substation, and temporary construction compounds. It is anticipated that the useful life of the proposed development would be approximately 40 years.
- 1.4 Once built, the proposed Solar Farm will generate approximately 99.9 MW of electricity. The electricity generated would be enough to provide electricity for approximately 45,374 typical Welsh homes<sup>1</sup> and result in an approximate saving of over 3,180,368 tonnes of CO<sub>2</sub> over the life of the development, compared with generation from fossil fuels.
- 1.5 Primary access to the Solar Farm will be promoted from two locations on Bishton Road, these are existing accesses currently serving the egg factory and Castle Farm. Given the scale of the development there will be several secondary accesses, providing access to the various different land parcels.

## Report Purpose

- 1.6 This Transport Statement considers the transport issues surrounding the proposed development. It sets out the methodology for assessing the baseline and proposed development and provides a summary of the transport implications of the proposed Solar Farm with regards to transport.

## Report Structure

- 1.7 This Transport Statement is structured as follows:
  - **Section 2: Baseline Conditions** - Describes the existing site and the surrounding areas transport and highway characteristics;
  - **Section 3: Development Proposals and Access Arrangements** - Analysis of the development proposals in respect of the development itself as well as the access and parking arrangements being promoted;

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<sup>1</sup> Subnational Electricity and Gas Consumption Statistics Regional and Local Authority, Great Britain, 2021

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1126284/subnational\\_electricity\\_and\\_gas\\_consumption\\_summary\\_report\\_2021.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1126284/subnational_electricity_and_gas_consumption_summary_report_2021.pdf)

- **Section 4: Travel Demand** - Assessment of the number of trips that are likely to be generated by the developments; and
- **Section 5: Summary and Conclusion** - Summary of the findings of the Transport Statement.

## 2 BASELINE CONDITIONS

### Context

- 2.1 This section provides information on the existing site and the surrounding area, with a particular focus on the local highway network and highway safety, given that the development will attract minimal (if any) pedestrians or cyclist movements once operational.

### Site Location

- 2.2 The proposed Solar Farm extends to approximately 239 hectares in size and is located in a predominantly rural area approximately 8km east of Newport City Centre. The site consists of several parcels of agricultural land and is bound and intersected by several minor local roads along its northern, southern, eastern, and western boundaries.

### Local Road Network Infrastructure

#### Bishton Road

- 2.3 The proposed Solar Farm development site is intersected by Bishton Road, which runs on a north to south alignment through the small hamlet of Bishton. Bishton Road has a carriage width of approximately 4m and is subject to a 60mph speed limit (national speed limit).

#### Waltwood Road

- 2.4 To its north, Bishton Road leads onto Waltwood Road via a simple priority junction. Waltwood Road has a carriage width of approximately 6m and benefits from footways on the western side of the carriageway. It is subject to a 30mph speed limit within the vicinity of the Bishton Road / Waltwood Road junction, increasing to 40mph just before it crosses the M4.

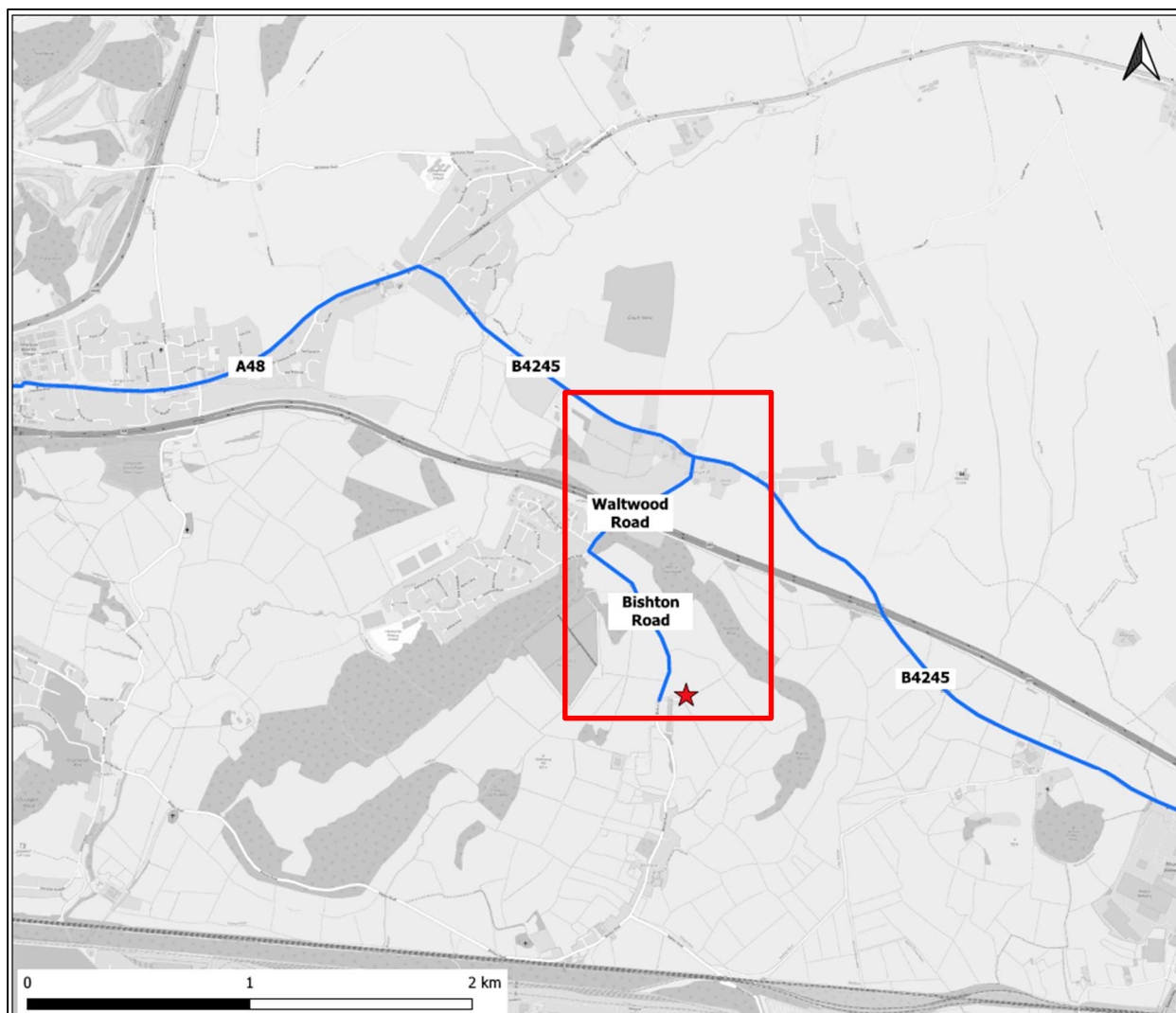
#### B4245

- 2.5 Waltwood Road leads onto the B425, Magor Road, via a simple priority junction. The B4245 is a single lane carriageway with an average carriageway width of 7.5m subject to a 30mph speed limit.

#### A48

- 2.6 The B425 Magor Road leads onto the A48 which routes broadly northeast to southwest between Gloucester, England, and Carmarthen, Wales. Within the vicinity of its junction with the B4245, the A48 is a single carriageway road with footway provision on both sides of the carriageway. The A48 is subject to a 40mph speed limit and has a wide carriageway width of approximately 9m.
- 2.7 **Figure 1** below shows the location of the primary road network in the vicinity of the proposed Solar Farm site.

**Figure 1: Local Road Network**



### Personal Injury Accident History

- 2.8 Collision data in the vicinity of the proposed development site has been obtained by RPS from CrashMap and analysed for the latest complete five-year period (2017 - 2021).
- 2.9 The collision history has been reviewed at key junctions and links identified by the red box on **Figure 1** above.
- 2.10 The data shows that there were five accidents recorded during this period, of which three were slight and two were serious. This equates to one accident per year. **Table 2.1** below summarises the collision history resulting in personal injury on the local road network.

**Table 2.1: Personal Injury Accident History**

Ref	Location	Date	Severity	Number of Vehicles Involved	Number of Casualties Involved
1	Bishton Road	02/06/2019	Slight	1	2
2	Waltwood Road	24/12/2020	Slight	2	1
3	B4245 at junction with Waltwood Road	10/01/2019	Serious	1	1
4	B4245 at junction with Pencoed Lane	12/04/2018	Slight	3	1
5	B4245	22/06/2019	Serious	1	1

2.11 The data shows that there is no inherent trend on accident locations in the vicinity of the site. On this basis, it is considered that the adjoining highway network currently operates with no significant highway safety issues which could be exacerbated by the development.

## Pedestrian and Cycle Accessibility

2.12 The proposed Solar Farm is located in a very rural area and as such has pedestrian and cycle infrastructure commensurate with its location. The local highway network comprises very minor narrow roads with no formal walking or cycling facilities. Traffic volumes are however very low in the area.

## Public Transport

2.13 The closest bus stop to the site is approximately 900m north of the site access, located on Waltwood Road in the Underwood Estate. Bus routes 74, 74A and 74C operate from this stop facilitating travel to Newport City Centre and Chepstow. These buses offer a combined peak frequency of two buses per hour between 07:00 and 20:00 to Newport, and one bus daily to Chepstow.



## 3 DEVELOPMENT PROPOSALS AND ACCESS ARRANGEMENTS

- 3.1 The Solar Farm will include an array of ground-mounted solar panels and ancillary infrastructure including inverters (likely to be mounted behind the panels), transformer units, electrical infrastructure, switch gear and substation, and temporary construction compounds. It is anticipated that the useful life of the proposed development would be approximately 40 years.
- 3.2 It is predicted that the Solar Farm will generate approximately 99.9MW of electricity which is enough to power approximately 45,374 typical family homes.

### Access Arrangements

- 3.3 Access to the Solar Farm will be promoted via two existing accesses, one to the east of Bishton Road, the other to the west. Both accesses are in the form of simple priority junctions, and serve existing businesses in the area, the first being the existing egg factory, along the western side of Bishton Road, the second being Castle Farm, a dairy farm and shop.
- 3.4 These two existing accesses are both frequently used by HGV's, and will be primarily only used during the construction phase. Notwithstanding, RPS Drawing numbers JNY11484-RPS-0100-001C,003C and 020A included as **Appendix 2**, shows a 16.5m Artic and 12m rigid HGV accessing and egressing via these existing accesses without issue.
- 3.5 It should however be noted that once operational, the Solar Farm will not require significant maintenance, except for occasional visits made by 4x4 vehicles or panel van vehicles. On that basis, while it is noted that there will be an intensification of use on these accesses during construction, once operational, the number off vehicles generated by the development will be negligible.

### Car Parking

- 3.6 Occasional maintenance vehicles will be on site, this however is expected to be an infrequent occurrence, with maintenance vehicles driving to individual solar panels to address issues, rather than parking their vehicle. On that basis, no formal parking is included at the proposed Solar Farm.

## 4 TRAVEL DEMAND

- 4.1 This section of the Transport Statement outlines the forecasted trip generation of the proposed development (when operational) in respect of vehicular trips.
- 4.2 The development site is a low trip generator, with typically more vehicular trips generated during the construction phase as opposed to when the site is actually operational. On that basis, a Construction Traffic Management Plan (CTMP) has been produced for the site which provides details on how traffic will be managed during the construction period and how its impacts are mitigated.

### Trip Generation

- 4.3 Once operational, the proposed development will not require significant maintenance, except for occasional visits made by 4x4 vehicles or panel van vehicles.
- 4.4 The impact of maintenance vehicles is negligible given the infrequent nature of maintenance visits.
- 4.5 On that basis, no further analysis has been undertaken to determine the impact the proposals have on the local network.

## 5 SUMMARY AND CONCLUSIONS

### Summary

- 5.1 RPS have been commissioned by JBM Solar to produce a Transport Statement (TS) to accompany planning application for a large-scale Solar Farm on land around Bishton, between the M4 and the Newport to London Paddington main railway line.
- 5.2 The proposed Solar Farm will extend approximately 239 hectares (590 acres) and is located in a predominantly rural area approximately 8km east of Newport City Centre. The existing site consists of several parcels of agricultural land.
- 5.3 Once built, the proposed Solar Farm will generate approximately 99.9 MW of electricity. The electricity generated would be enough to provide electricity for approximately 45,374 typical Welsh homes<sup>2</sup> and result in an approximate saving of over 3,180,368 tonnes of CO<sub>2</sub> over the life of the development, compared with generation from fossil fuels.
- 5.4 The development is a low trip generator, especially during its operational phase. The Solar Farm is likely to only generate sporadic vehicle trips as and when maintenance is required, as a result the impact on the local highway network once operational is negligible.
- 5.5 The development site is located in a predominately rural area, and is currently used as farm land. The various parcels of land currently benefit from minor accesses, usually in the form of gated filed access, as would be expected in this location.
- 5.6 Access to the Solar Farm will be promoted via two existing accesses, one to the east of Bishton Road, the other to the west. Both accesses are in the form of simple priority junctions, and serve existing businesses in the area, the first being the existing egg factory, along the western side of Bishton Road, the second being Castle Farm, a dairy farm and shop.
- 5.7 These two existing accesses are both frequently used by HGV's, and will be primarily only used during the construction phase
- 5.8 Minor accesses will continue to be used to facilitate the site when necessary. The site (when operational) will not generate a significant amount of traffic, and therefore these existing accesses will not be used regularly.
- 5.9 The application is accompanied by a CTMP which fully details the access arrangements for the site during the construction stages.

### Conclusion

- 5.10 Based on the above it is therefore considered that, in transportation terms, there are no overriding or sustainable reasons why the development proposals should not be approved.

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<sup>2</sup> Subnational Electricity and Gas Consumption Statistics Regional and Local Authority, Great Britain, 2021

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1126284/subnational\\_electricity\\_and\\_gas\\_consumption\\_summary\\_report\\_2021.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1126284/subnational_electricity_and_gas_consumption_summary_report_2021.pdf)

## Appendices

## Appendix 1 – Masterplans

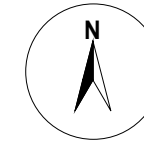


## Appendix 2 – RPS Technical Drawings Package





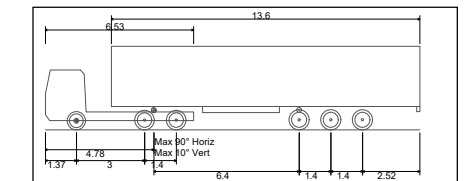




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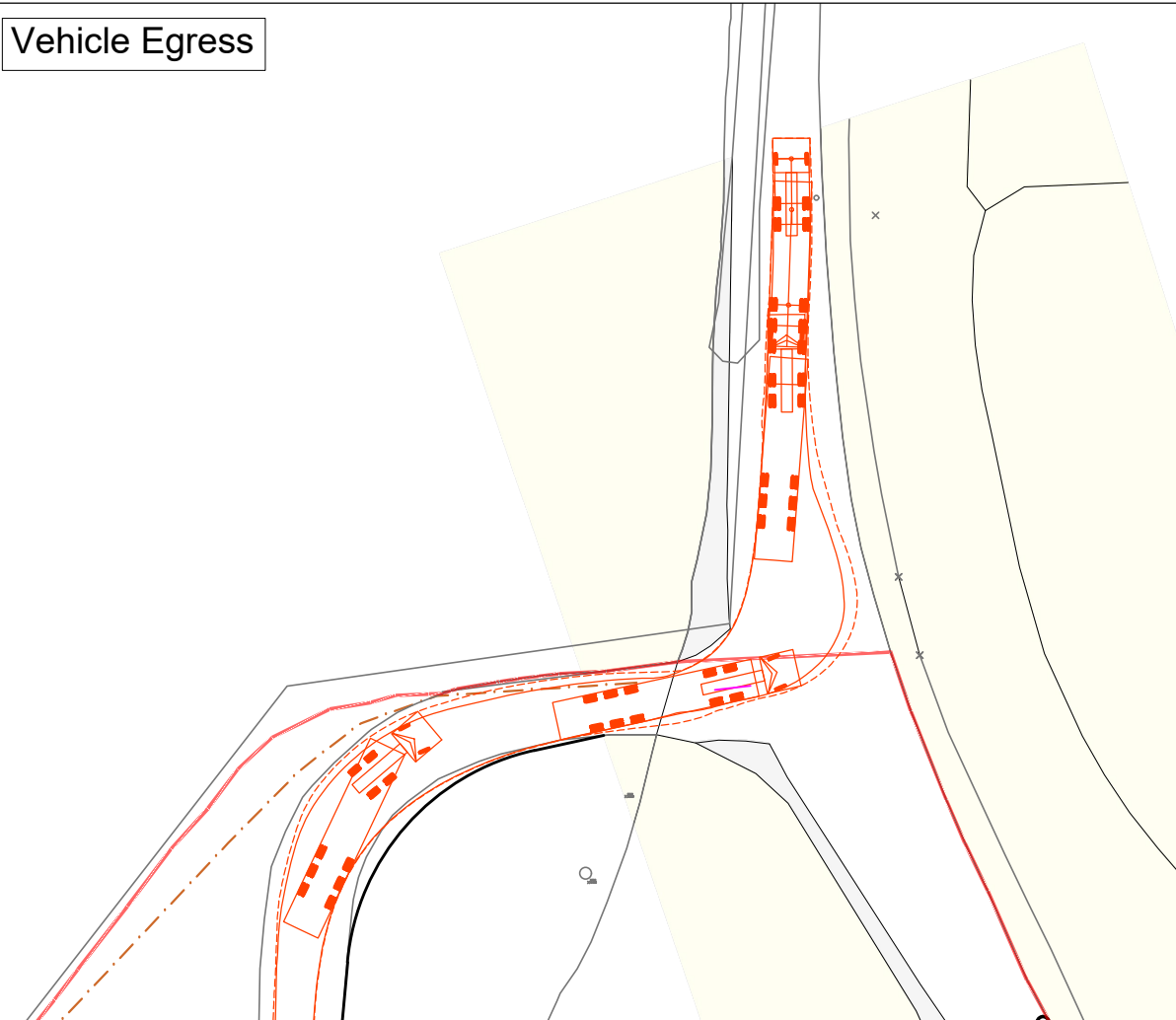
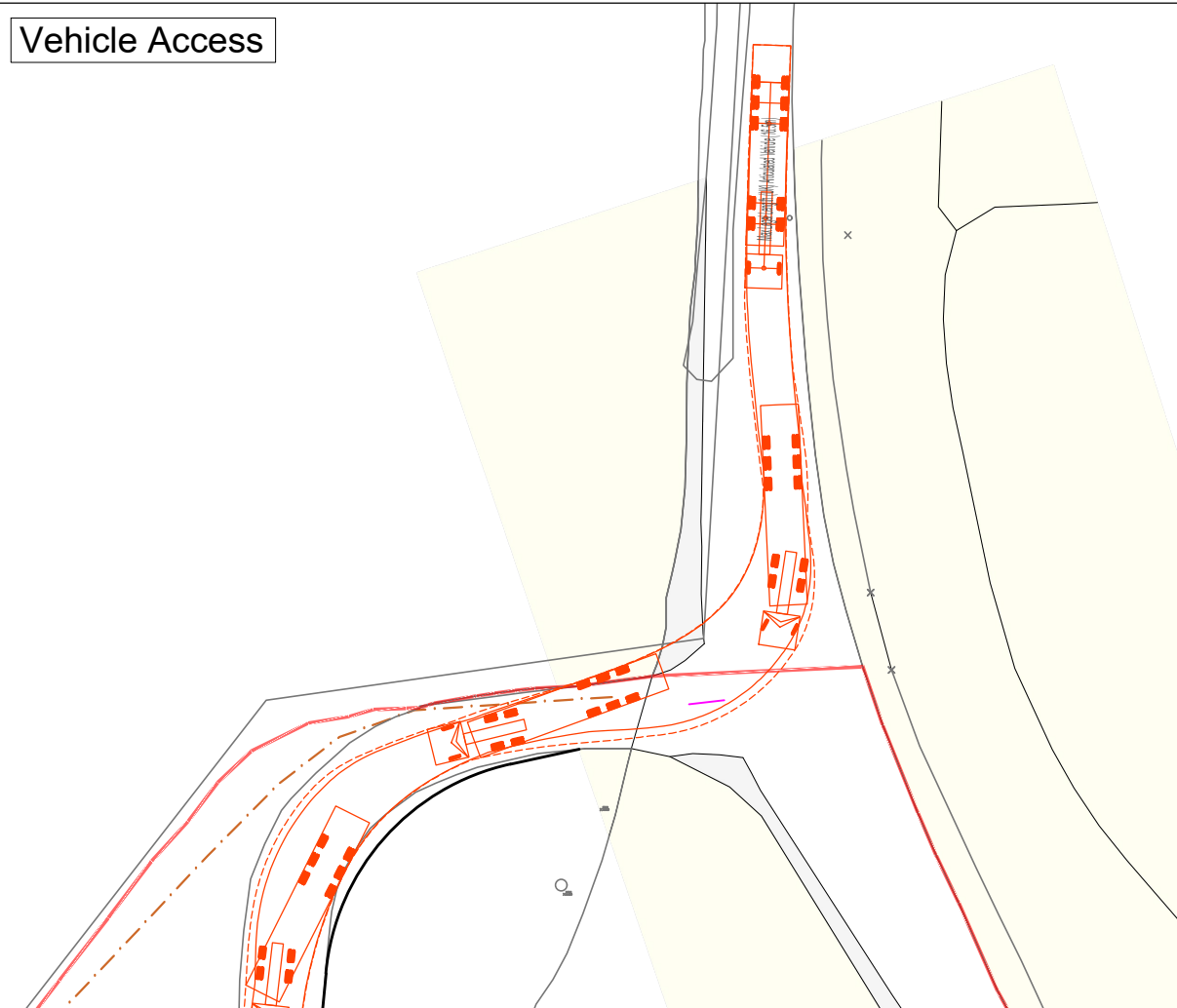
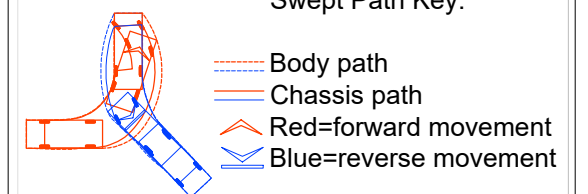
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Vehicle Profiles



Max Legal Length (UK) Articulated Vehicle (16.5m)	16.500m
Overall Length	2.550m
Overall Width	3.681m
Overall Body Height	0.411m
Min Body Ground Clearance	2.500m
Max Track Width	6.00s
Lock to lock time	6.530m
Kerb to Kerb Turning Radius	

Swept Path Key:



A	Latest layout added (J026A_Post Consultation_Rev7)	AJ	EON	12/06/2023
Rev	Description	By	CB	Date



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Client J B M Solar

Project Craig y Perthi

Title Access 2  
12m Rigid Vehicle  
Swept Path Analysis

Status Drawn By PM/Checked by  
PRELIMINARY AJ EON

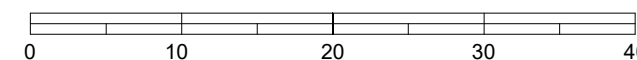
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