

PROPOSED SOLAR PARK, LAND WEST OF DELPH ROAD, PENYCAE (Application Ref: P/2015/0092)

CONSTRUCTION TRAFFIC MANAGEMENT PLAN

LIGHTSOURCE RENEWABLE ENERGY LTD

APRIL 2015



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DOCUMENT CONTROL

Job No	L335		
File Reference	G:\workfiles\L335\REPORTS\L335-DOC03 CTMP Issue 2.docx		
	Name	Date	Initials
Prepared By	Olaolu Adeboye	14.04.15	OA
Checked By	Amy Waites	16.04.15	Amw

Issue	Date	Comments	Approved
1	16.04.15	Draft for client comment	Amw
2	17.04.15	Final Issue	Amy Waites

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1. INTRODUCTION

- 1.1. This Construction Traffic Management Plan (CTMP) has been prepared by PFA Consulting on behalf of Lightsource Renewable Energy Ltd in support of a planning application (Application Ref: P/2015/0092) for the development of a solar photovoltaic park which could produce up to 5 MW of electricity at Land West of Delph Road, Penycæ, Wrexham.
- 1.2. The site is located off Delph Road and lies to the north of the village of Acrefair, approximately 8km southwest of Wrexham, North Wales. The location of the site in relation to the surrounding area is shown on the Site Location Plan, reproduced at **Figure 1**. The proposed layout for the site is reproduced at **Appendix A**.
- 1.3. The site is formed of three agricultural fields separated by hedgerows with a small copse in the centre. It is bounded to the north and east by Delph Road while the west and southern edges are bounded by hedgerows. The proposed site is approximately 10.7 hectares in area. An existing gated field access is located on the western side of Delph Road as shown in **Figure 2**.
- 1.4. As part of the planning consultation, Wrexham Council have stated that:
- “A condition requiring the submission of a Construction Traffic Management Plan will ensure that this route is strictly controlled and adequately signed. It is also important the HGVs are not using the route during peak hours outside the school on Copperas Hill.**
- The CTMP will also ensure adequate signage is erected to inform of the access and to inform drivers that there will be an occasional HGV utilising the highway.**
- The CTMP will need to include proposals to ensure that the highway is kept free of mud and detritus. “**
- 1.5. It was recommended that any permission included the following conditions:
- No part of the development shall commence until a Construction Traffic Management Plan has been submitted to and approved in writing by the Local Planning Authority and the Plan as is approved has been fully implemented.**
- The plan shall include details of:**
- **On-site parking and turning for construction vehicles;**
 - **On-site parking for all staff;**
 - **Signing and guarding proposals along the proposed route for construction traffic;**
 - **Method to ensure highway is kept clear of mud; and**
 - **Timing of deliveries.**
- 1.6. Construction shall be undertaken in accordance with the approved CTMP and all traffic movements to and from the site will be carried out in accordance with this plan unless otherwise agreed in writing with the LPA.

2. ACCESS ARRANGEMENTS

- 2.1. Access to the site for construction, operation and decommissioning is proposed via the existing agricultural access on Delph Road. The access will be widened to enable HGV access and egress as shown on PFA Consulting Drawing No. L335/03 attached in **Appendix B**.
- 2.2. Temporary warning signage, as shown on **Figure 3**, will be provided on the approaches to the site access. These signs will ensure that other highway users are made aware of the potential for HGV movements at the access during the construction period.
- 2.3. The construction traffic routing to and from the site will be managed through a one-way system. Traffic will arrive to the site from the north and depart to the south as set out below.
- 2.4. Construction traffic will travel to the site access from the A483, east of the site following the A539 to the junction with Plas Bennion Road. From here, construction traffic will turn north on to Plas Bennion Road following the road to the junction with B5097. Construction vehicles will then turn west through the village of Penycae before turning south on to Delph Road and arriving at the site access.
- 2.5. Construction traffic departing the site will head south on Delph Road from the site access to the Bethanai Road in the Acrefair. Heading east from here, vehicles will reach the A359 heading back towards the A483.

3. TRIP GENERATION

Construction Period

- 3.1. The construction period of the solar park is anticipated to take approximately 12 weeks. During this period there will be trips associated with the arrival and departure of construction staff, and with the delivery of parts and construction materials.
- 3.2. Staff trips will mainly be made by cars, vans or minibuses, whilst deliveries of construction materials and equipment will mainly be made by HGVs. The majority of the deliveries will be during the first half of the construction period.
- 3.3. A Transport Statement has been prepared to support the planning application, setting out the trip generation for the proposed solar park on the basis of a 12 week construction period. The anticipated number of deliveries associated with each of stage of construction is set out in **Table 3.1** below.

Table 3.1: Construction Schedule

Construction Stage	Description of Activity	Week	Total Deliveries
Site Preparation			
Site security, construction compounds & site welfare	Erection of security fencing around the site perimeter and establishment of site construction compound	1 – 2	25
Landscaping materials & other materials	Deliveries of hedgerows, trees and other materials.	1 – 2	20
Machinery	Deliveries of machinery	1 – 2	15
Deliver of Hardware			
Structure	Delivery of supporting frames for PV arrays	3 – 10	12
PV array construction	Delivery and installation of PV panels and cables	3 – 10	32
Large components	Delivery and installation of inverter, control room and transformers (including cranes and delivery vehicles)	3 – 10	4
Other materials	Deliveries of additional hardware materials	3 – 10	12
Testing & Completion of Works			
Testing and commissioning	Ensuring the systems work effectively	10 – 12	1
Site closure	Removal of site offices/welfare, construction compound and machinery	10 – 12	40
Total			176

Notes: Summation errors due to rounding.

- 3.4. The construction of the solar park will result in 176 deliveries to the site, spread over the 12 week construction period. It is unlikely that even at the most intense period of construction there will be more than 6 deliveries (12 HGV movements) per day.
- 3.5. The number of construction staff on site will vary over the construction period depending on the activity that is taking place. The majority of staff will travel in crew minibuses/vans, which will park on site during the day. At the peak of activity, there could be 10 minibuses/vans on the site. In addition, there are expected to be a small number of managerial cars/vans.

4. CONSTRUCTION TRAFFIC MANAGEMENT

Site Management

- 4.1. It is expected that construction hours of operation will be between 08:00 and 18:00 Monday to Friday, and between 08:00 and 13:00 Saturday.
- 4.2. Deliveries will be closely coordinated to identify a timetable of deliveries to enable them to be managed and to ensure that construction vehicles will not arrive in convoy. Additionally, deliveries will be coordinated to ensure that they do not pass Penrycae Infant School during the times of 8:45-9:15 and 2:45-3:15, in line with the schools operating hours of 9am – 3pm. At the end of the life of the site, it is anticipated that decommissioning will take place during the same hours.
- 4.3. A construction compound area will be provided for deliveries to be unloaded and loaded, and for delivery vehicles and staff vehicles to park and turn around. These areas will be formed using an unbound granular material which will not require any formal drainage arrangements.
- 4.4. A wheel washing facility (drive-through bath) will also be provided. A plan showing these designated areas and facilities is reproduced at **Appendix C**. Vehicle tracking has been undertaken to show that vehicles are able to exit the site in forward gear. This is shown on PFA Consulting Drawing No. L335/08 reproduced as **Appendix D**.

Transport Management

Vehicle Types

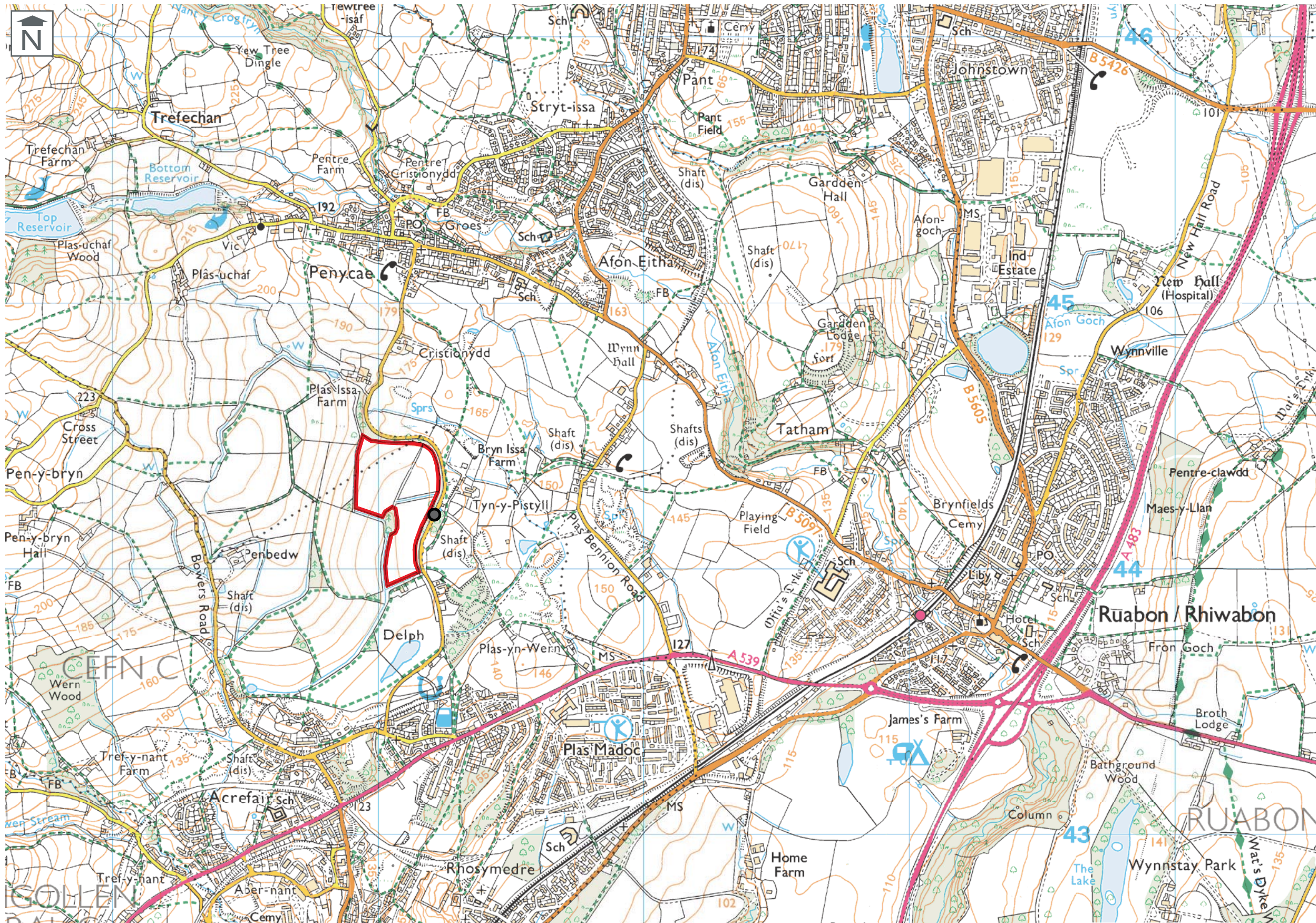
- 4.5. The majority of deliveries to and from the site will be made by standard HGVs up to and including 16.5m articulated vehicles. There will be no abnormal loads.

Vehicle Routing

- 4.6. The route for construction traffic is shown on **Figure 2**. The construction traffic will be managed through a one-way system. It is anticipated that all construction traffic will arrive at the site from the north and depart from the site to the south.
- 4.7. Construction traffic will travel to the site from the A483, east of the site following the A539 to the junction with Plas Bennion Road. From here, construction traffic will turn north on to Plas Bennion Road following the road to the junction with B5097. Construction vehicles will then turn west through the village of Penrycae before turning south on to Delph Road.
- 4.8. Construction traffic departing the site will head south on Delph Road from the site access to Bethanai Road in Acrefair. Heading east from here, vehicles will reach the A359 continuing on to the A483.

Warning Signage

- 4.9. Temporary warning and routing signage will be provided in the locations indicated on the Proposed Construction Warning Signage Plan at **Figure 3**. The signage will remain in place for the duration of the construction period and will also be used during the decommissioning period.
- 4.10. The signage will alert exiting drivers of the presence of cyclists on Llangollen Road.
- 4.11. All temporary signage will be dual-language, in both Welsh and English.



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- Site Boundary (indicative only)
- Site Access

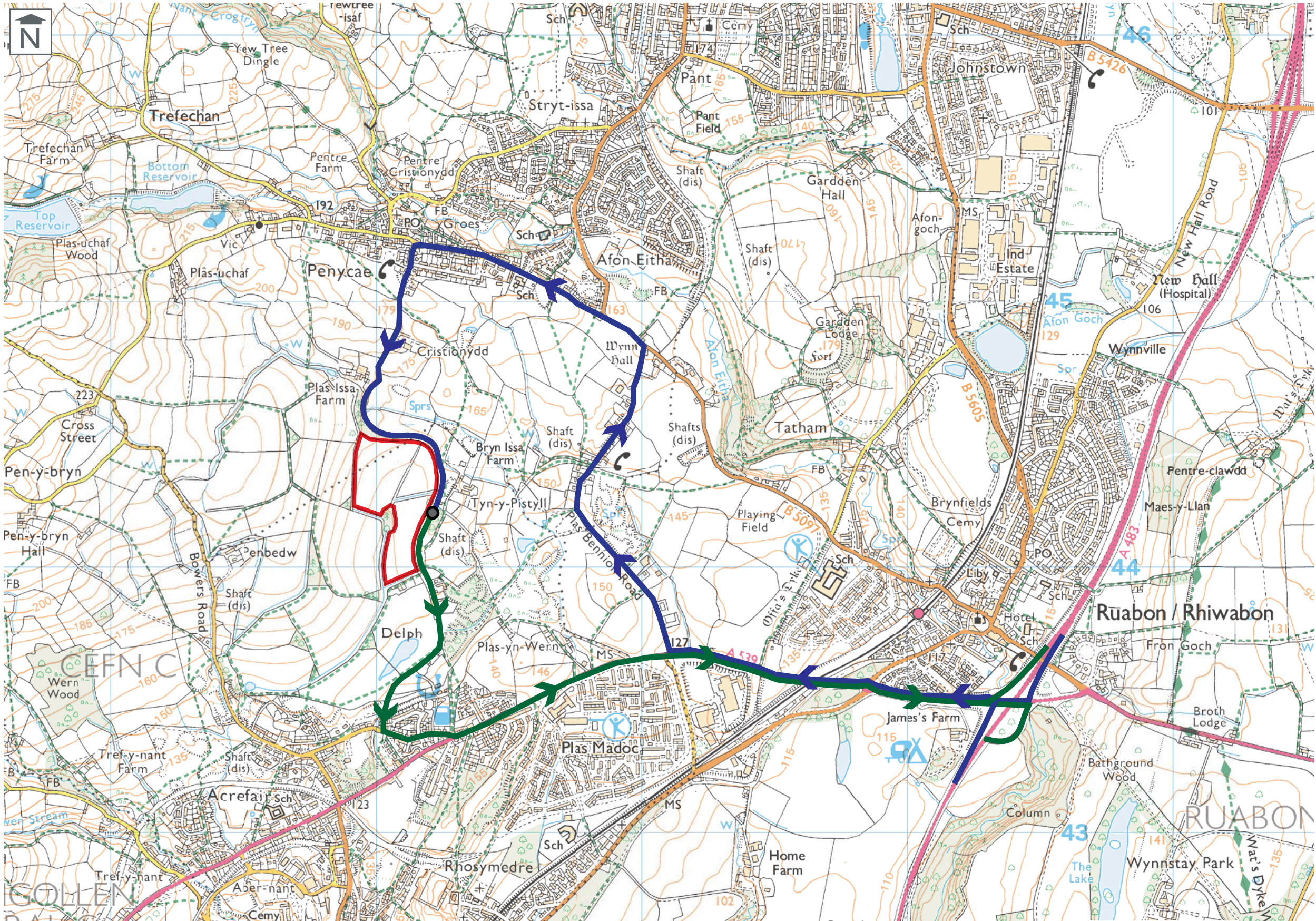
Client
Lightsource Renewable Energy Ltd

Project
**Land to the West of Delph Road:
Proposed Solar Park**

Figure Title
Site Location Plan

Figure No
Figure 1

Date	December 2014
Drawn By	EN
Checked By	AW
Scale	See Scale Bar
File Ref	L335/Figures/Fig1.ai
Doc Ref	L335



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- Site Boundary (indicative only)
- Site Access
- Inbound Construction Traffic
- Outbound Construction Traffic

Client
Lightsource Renewable Energy Ltd

Project
**Land to the West of Delph Road:
Proposed Solar Park**

Figure Title
Construction Traffic Route

Figure No
Figure 2

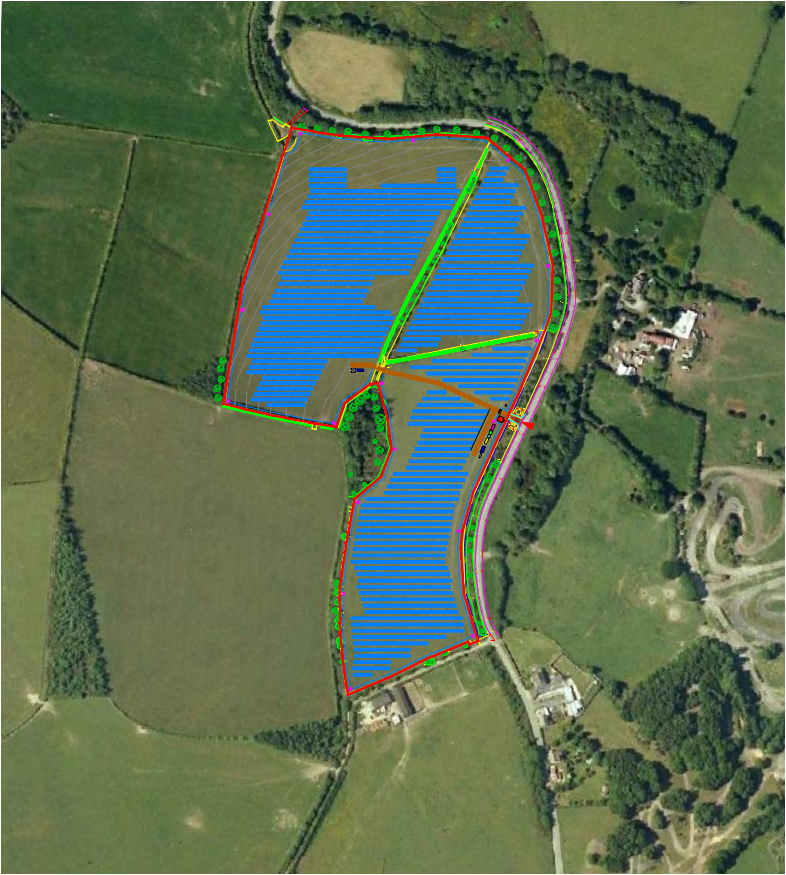
Date	December 2014
Drawn By	EN
Checked By	AW
Scale	See Scale Bar
File Ref	L335/Figures/Fig2.ai
Doc Ref	L335

Appendix A

Area 106,753 m2 (26.38 acres)



Scale 1:7500



	Site Boundary
	Site Access
	Security Fence
	Field Boundary
	Module Table 11 x 3
	Module Table 22 x 3
	Field Transformer
	Inverter Station
	DNO Substation
	Client Side Substation
	Communications Building
	Site Transformer (Aux)
	DNO Meter
	Storage Shed
	Access Road
	Compound Area
	Overhead Line
	Tree
	Access Gates
	CCTV
	Temporary Access Road
	WC

Revisions:			
5	04.02.15	Panels removed from Mine Shafts	DA
4	13.01.15	Changed to 3 landscape 25 degrees tilt	DA
3	11.12.14	Topo inserted	DA
2	26.09.14	modules relocated from S & W areas	ZA
1	25.09.14	Proposed fields changed	ZA
Rev	Date	Comments	Dwn Chkd

JK	XX	XX	27.08.14
DRAWN	CHECKED	APPROVED	DATE

PROJECT NAME & ADDRESS:
Location: Land to the West of Delph
Postcode: LL14 1TU
3° 4'32.70"W
52°59'22.92"N

NOTES:
-
-
-
-

Paper Size:	Scale:	Sheet:
A3	1:2500	1

CAPACITY:
5.0 MWp

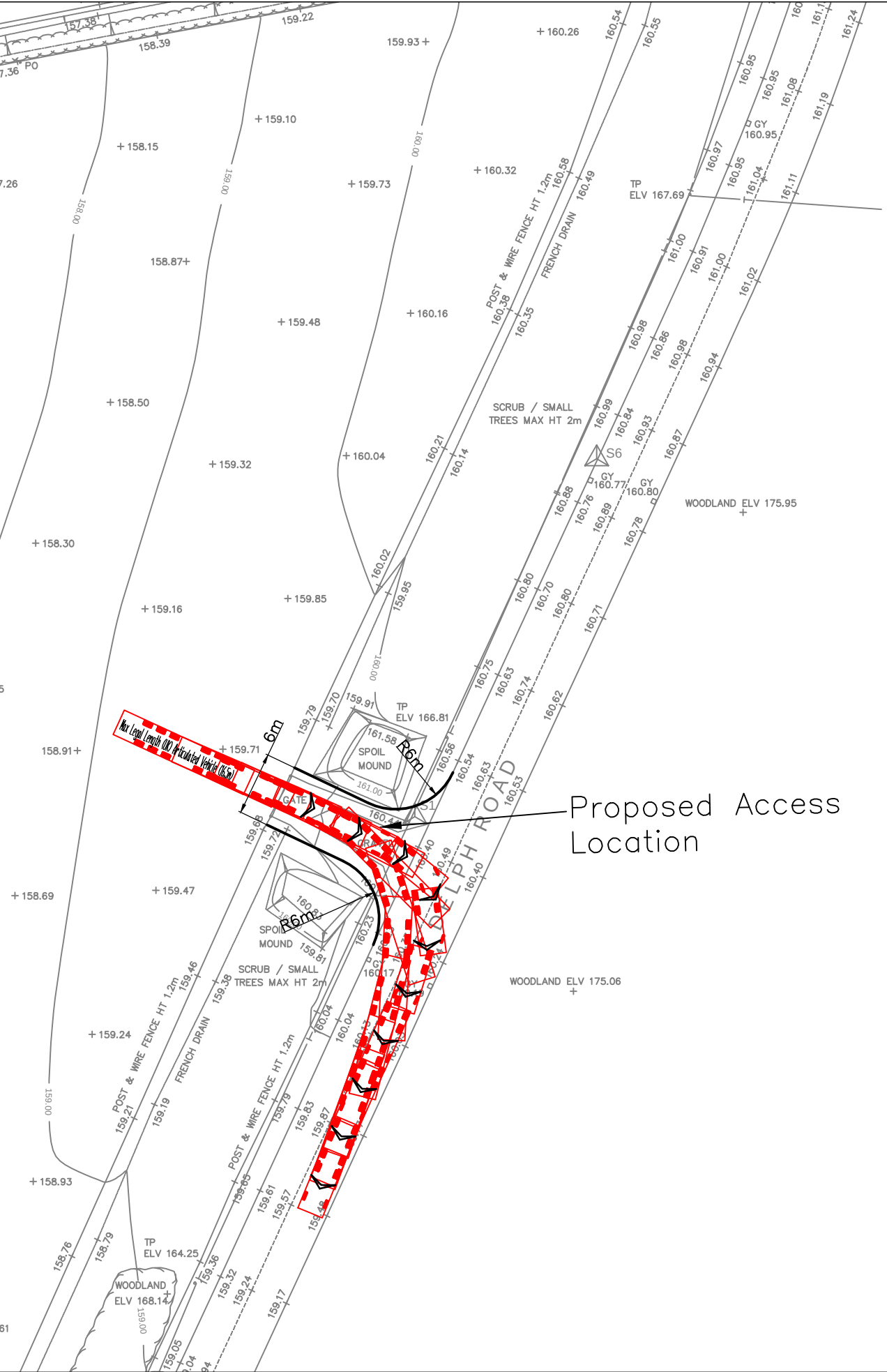
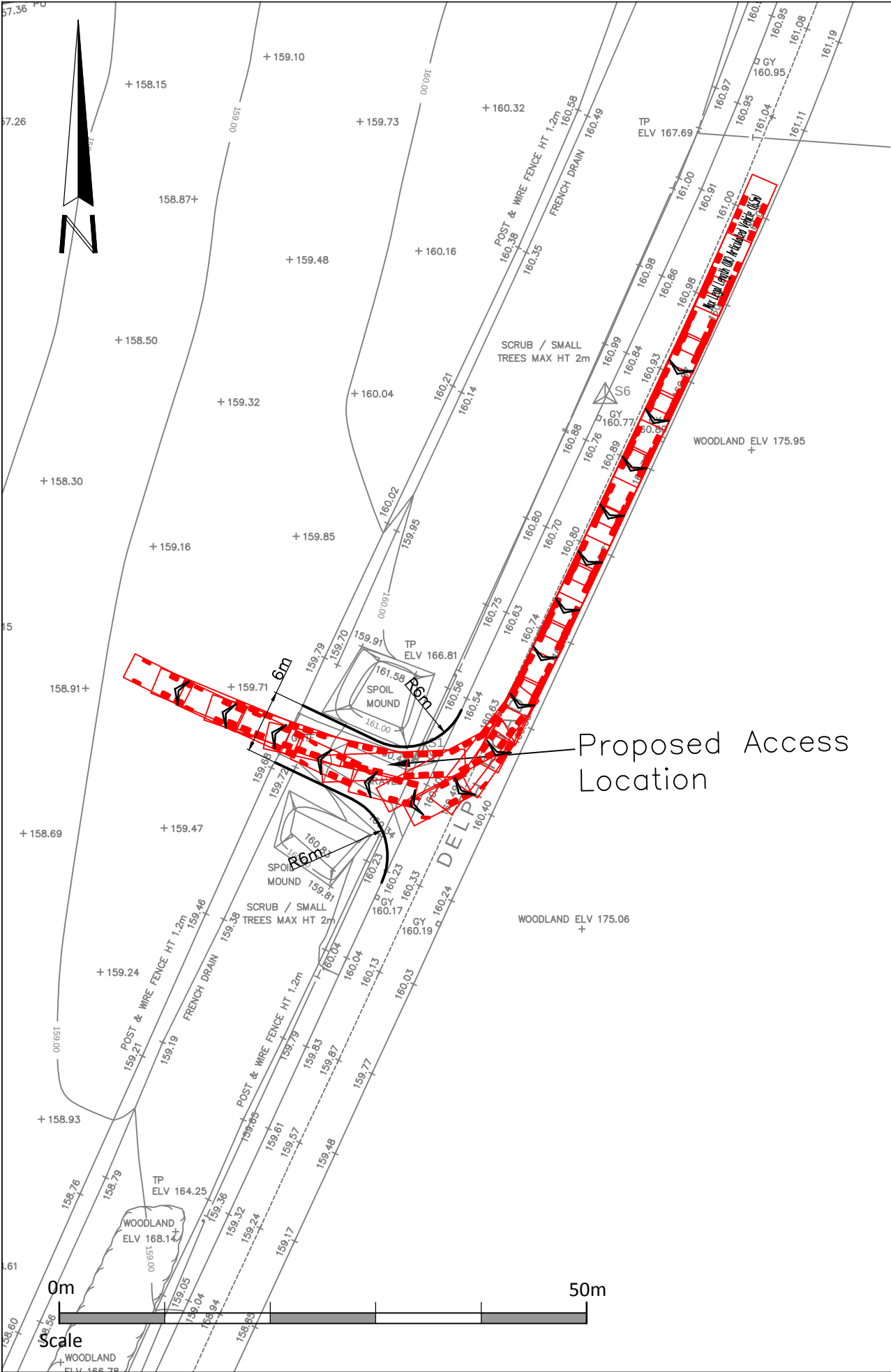
DRAWING TITLE:
Land to the West of Delph_Proposed_Layout_Rev5

DRAWING NUMBER: ACR_01_Rev5	STATUS: Preliminary
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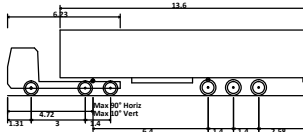
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KEY



Max Legal Length (UK) Articulated Vehicle (16.5m)
Overall Length 16.500m
Overall Width 2.550m
Overall Body Height 3.632m
Min Body Ground Clearance 0.396m
Max Track Width 2.500m
Lock to Lock Time 6.00s
Kerb to Kerb Turning Radius 6.870m

Rev	Date	Description	Initials
-----	------	-------------	----------

Client

**Lightsource Renewable
Energy**

Project

**Proposed Solar Park,
Land to the West of Delph
Road**

Drawing Title

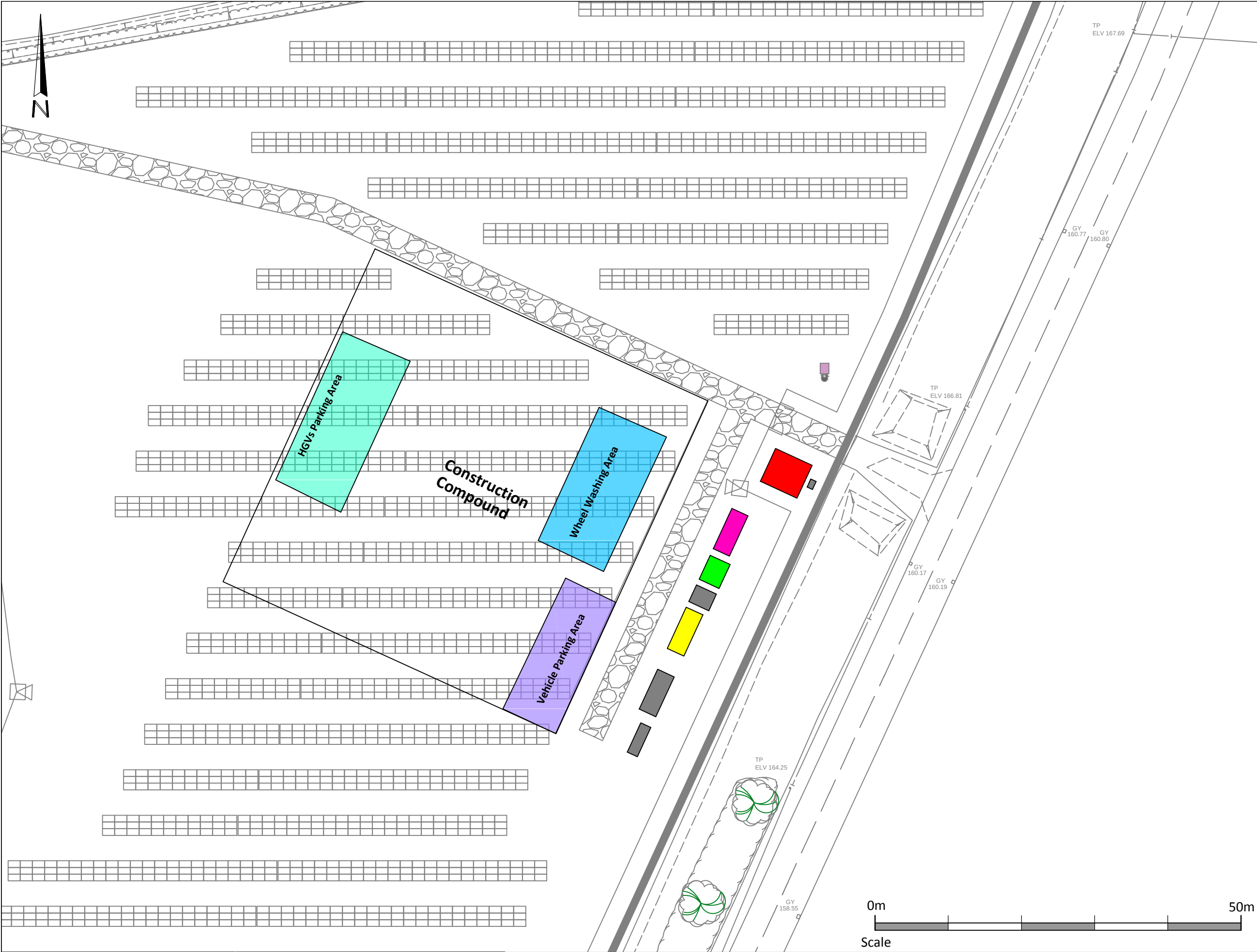
Swept Path Analysis

Drawing No.

L335/3

Date	December 2014
Scale	1:500 @ A3
Drawn By	PJ
Checked By	AW
E-Mail	awaites@pfapl.com
File Ref.	F:\Workfile\L335_Drawings\L335_3

Appendix C



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supplied by client.

Rev	Date	Description	Initials
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Client

**Lightsource Renewable
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Project

**Proposed Solar Park,
Land to the West of Delph
Road**

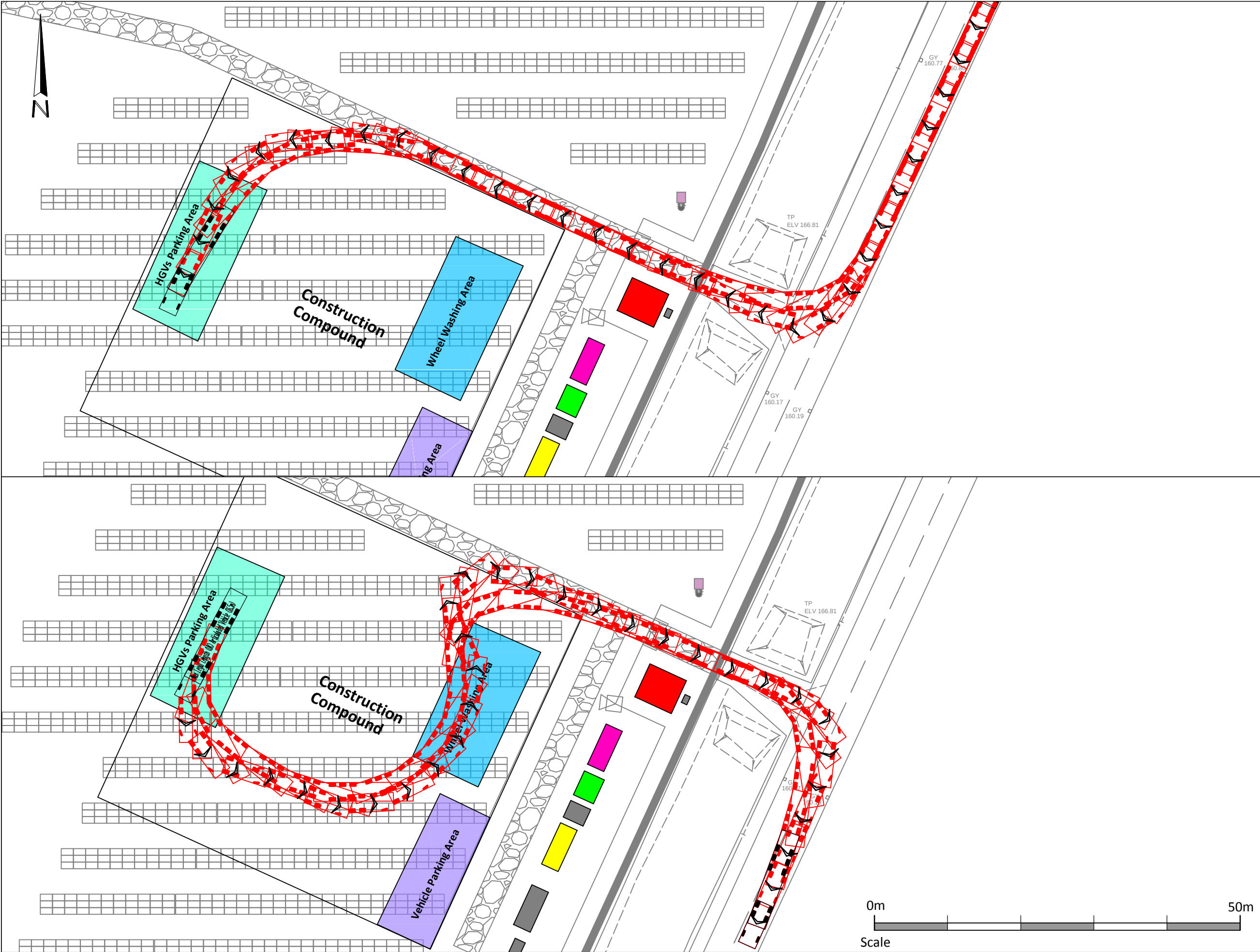
Drawing Title

**Construction Compound
Proposed Layout**

Drawing No.

L335/7

Date	April 2015
Scale	1:500 @ A3
Drawn By	PJ
Checked By	AW
E-Mail	awaites@pfapl.com
File Ref.	F:\Workfile\L335_Drawings\L335_7



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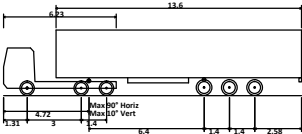
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KEY



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Plan based on Dwg no. ACR_1_Rev5 Layout
supplied by client.

Rev	Date	Description	Initials
Client			
Lightsource Renewable Energy			
Project			
Proposed Solar Park, Land to the West of Delph Road			
Drawing Title			
Construction Compound Swept Path Analysis			
Drawing No. L335/8			
Date	April 2015		
Scale	1:500 @ A3		
Drawn By	PJ		
Checked By	AW		
E-Mail	awaites@pfapl.com		
File Ref.	F:\Workfile\L335_Drawings\L335_8		