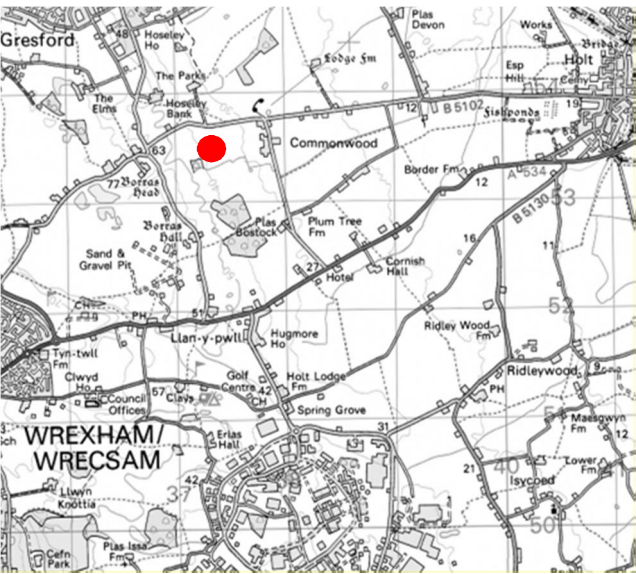


Project:	Site at Commonwood, Holt in Wrexham	Job No:	6031111
Subject:	Addressing comments made by local highway authority		
Prepared for:	Euan Brown, GP Energy Ltd	Date:	06 December 2013
Prepared by:	Adam Hogg		
Chk / Apr by:	Shaun Edwards		

Introduction

This technical note has been produced by AECOM on behalf of GP Energy Ltd (a subsidiary of Dart Energy (Europe) Ltd) to provide sufficient information to allow Wrexham Council, as the Local Highway Authority, to determine the application for a proposed site for the drilling of an exploratory borehole, at land at Commonwood, Holt in Wrexham.



Site Location Plan

The additional information requested by the local highway authority included the requirement for further details regarding the maximum size of vehicles accessing the site and the suitability of the existing junctions on the local road network to accommodate turning movements. Details of the site access junction and internal arrangements were also sought.

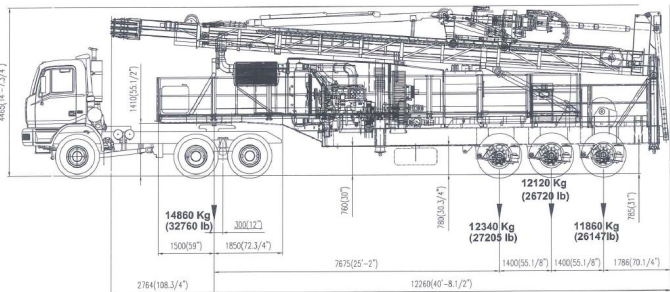
AECOM has held discussions with Wrexham Council's Network and Infrastructure team to agree in principle the details contained within this submission.

Vehicle Details

In addition to the typical construction type vehicles, the largest vehicle envisaged to access the site will be associated with the transportation of the drilling rig. The drilling rig currently envisaged to be used on site is the HH102 Rig.

The vehicle transporting the HH102 is typically a conventional low-loader articulated vehicle. The rig in transit is 15.024 metres in length with a width of 2.920 metres and height of 4.465 metres. The weight in transport condition is 51 metric ton. The specifications for the rig in transport are given below. This vehicle has been used in all of the swept path analysis drawings accompanying this Note.

Diagram 1 – HH102 Vehicle Dimensions



During the setting up of the site, the majority of vehicles accessing the site will be HGVs, with only a small number of staff movements. During the operation of the site only 4 – 6 vehicle trips per day will be required.

Vehicle Movements

A summary of the typical vehicle movements envisaged during the duration of an exploration drilling site is given in Table 1.

Table 1 – Typical transport loads and trips for an exploration drilling site.

Site Set-up Phase		
Load	Weight	Movements
JCB on low loader Delivery of fencing, matting etc.	HGV of max 44 tonnes (6 axles)	50 trips over around 1 week
Self-propelled drilling rig to set conductor	32 tonnes (3 axles)	2 movements (1 in 1 out)
Drilling Phase		
Load	Weight	Movements
Delivery of site cabins and other equipment	HGVs with various loads between 5 and 26 tonnes	Up to 100 movements over two days
Mobilisation of drilling "Rig Carrier"	51 tonnes (6 axles)	1 in
Fuel, Water and other deliveries	HGV of max 44 tonnes (6 axles)	Average 4 movements per day over 6 weeks
Crew change	Minibus	Average 4 movements per day over 6 weeks
Restoration Phase		
Load	Weight	Movements
Demobilisation of drilling "Rig Carrier"	51 tonnes (6 axles)	1 out
Removal of site cabins and other equipment	HGVs with various loads between 5 and 26 tonnes	Up to 100 movements over two days
JCB on low loader Removal of fencing, matting etc.	HGV of max 44 tonnes (6 axles)	50 movements over around 1 week

Site Access

Access to the site will be taken from Borrass Road at the location of the existing gated field access opposite the access which serves The Parks Farm. The existing access is approximately 4.3 metres and is gated approximately 2.9 metres behind the carriageway. The existing gated access will be modified to safely accommodate the turning movements of expected vehicles.

The proposed measures to the access have been mindful of the temporary nature of the site operations and the rural environment of its surroundings; these were specifically discussed with Wrexham Council's Network and Infrastructure team. As agreed, the site access junction will not be kerbed and will not have a bitumen surface, but will instead be a compacted Type 1 aggregate to provide a permeable surface for the first 20 metres back from the edge of the carriageway. The eastern side of the junction will have a 10 metre radius to accommodate the turning movements of HGVs whilst the western side will have a nominal 6 metre radii.

The presence of a below surface gas pipeline in the vicinity of the site access has been confirmed by Wales and West Utilities Ltd (WWU Ltd), who has advised that the crossing should comprise of Type 1 aggregate to a depth of 300 mm and road plates extending 2 metres either side of the pipeline. Liaison with WWU Ltd will continue throughout the construction process, including a representative of WWU Ltd attending the site to confirm the precise location of the pipeline.

A new gate and fence line will be installed to maintain the existing level of security and avoid accidental access.

Visibility from the site access is satisfactory and splays of 75 metres to the west and 120 metres to the east will be ensured by the localised removal of a short length of vegetation.

The proposed site access junction is shown on Drawing No SK001 which includes visibility splays and the swept path analysis of the largest vehicle transporting the HH102 Rig.

Vehicle Routing to Site

As outlined in the Outline Traffic Management Plan which has been produced, all HGVs will route to the site from the east, travelling westbound on the A534 and turning north on Buck Road before travelling west to the site access.

Swept path analysis has been undertaken at the key junctions to confirm their suitability to accept the turning movements of the largest vehicle envisaged to attend site; the vehicle transporting the HH102 Rig. Drawings SK002 and SK003 show the swept paths at the junctions of:

- A534 / Buck Road
- Buck Road / Borrass Road

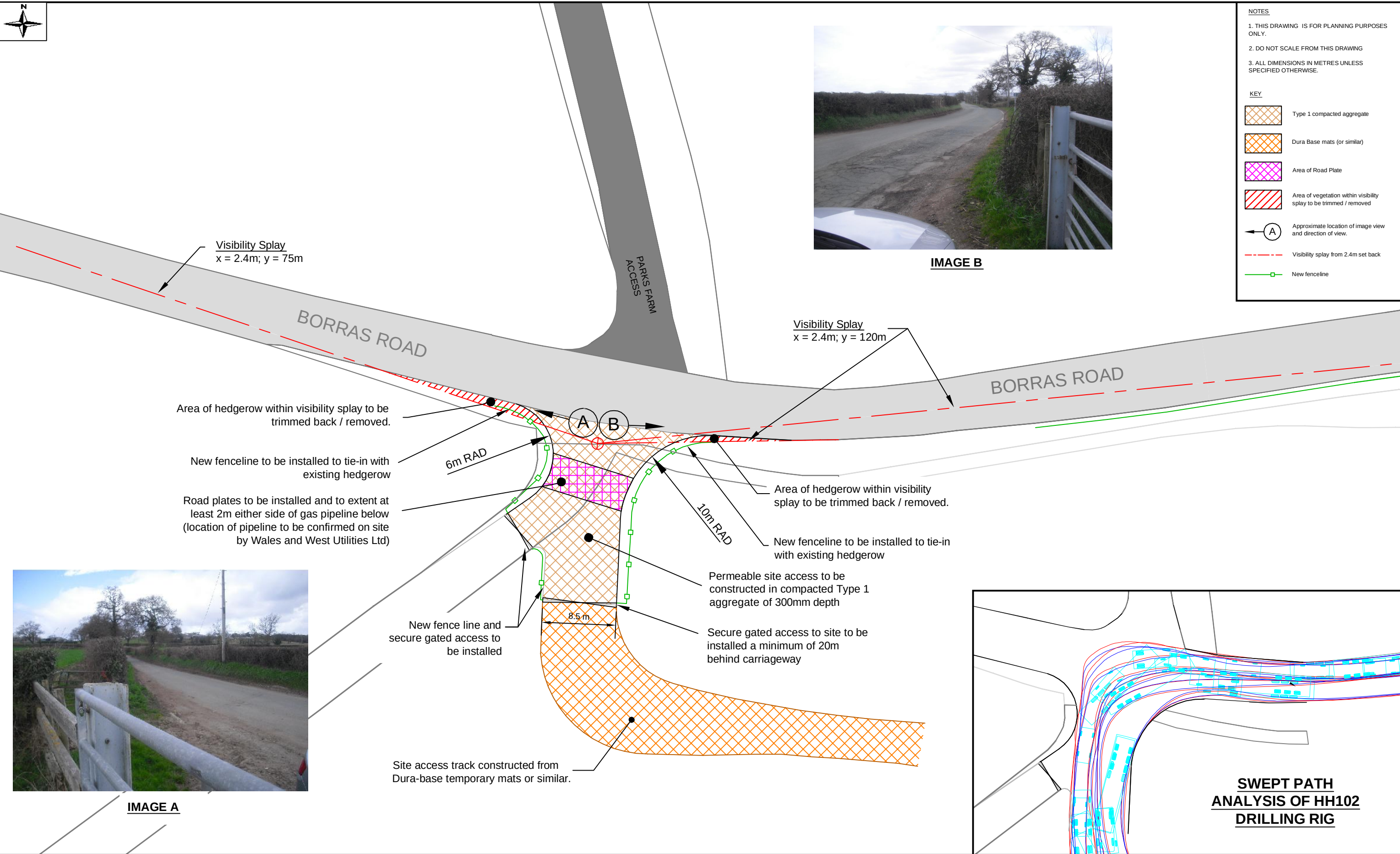
Internal Site Arrangement

Drawing SK004 provides a site layout, including the location of car parking spaces and demonstration that sufficient space is available to accommodate the turning movements of HGVs.

Summary

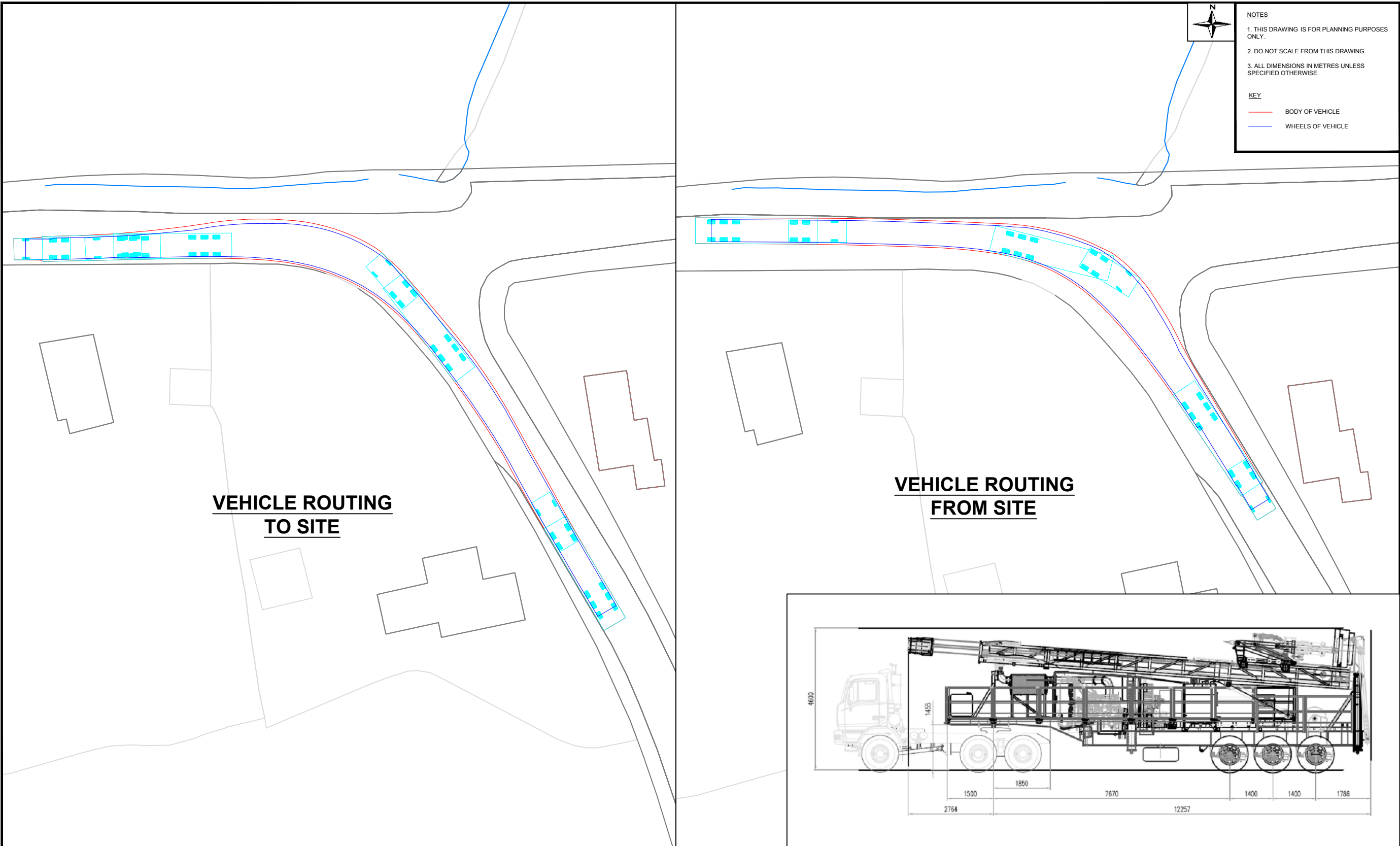
This scope and content of this technical note and supporting information has been discussed with Wrexham Council's Network and Infrastructure team to ensure sufficient information is provided and satisfactory.

The information included within this submission demonstrates that vehicles are able to access and egress the site in a safe manner.

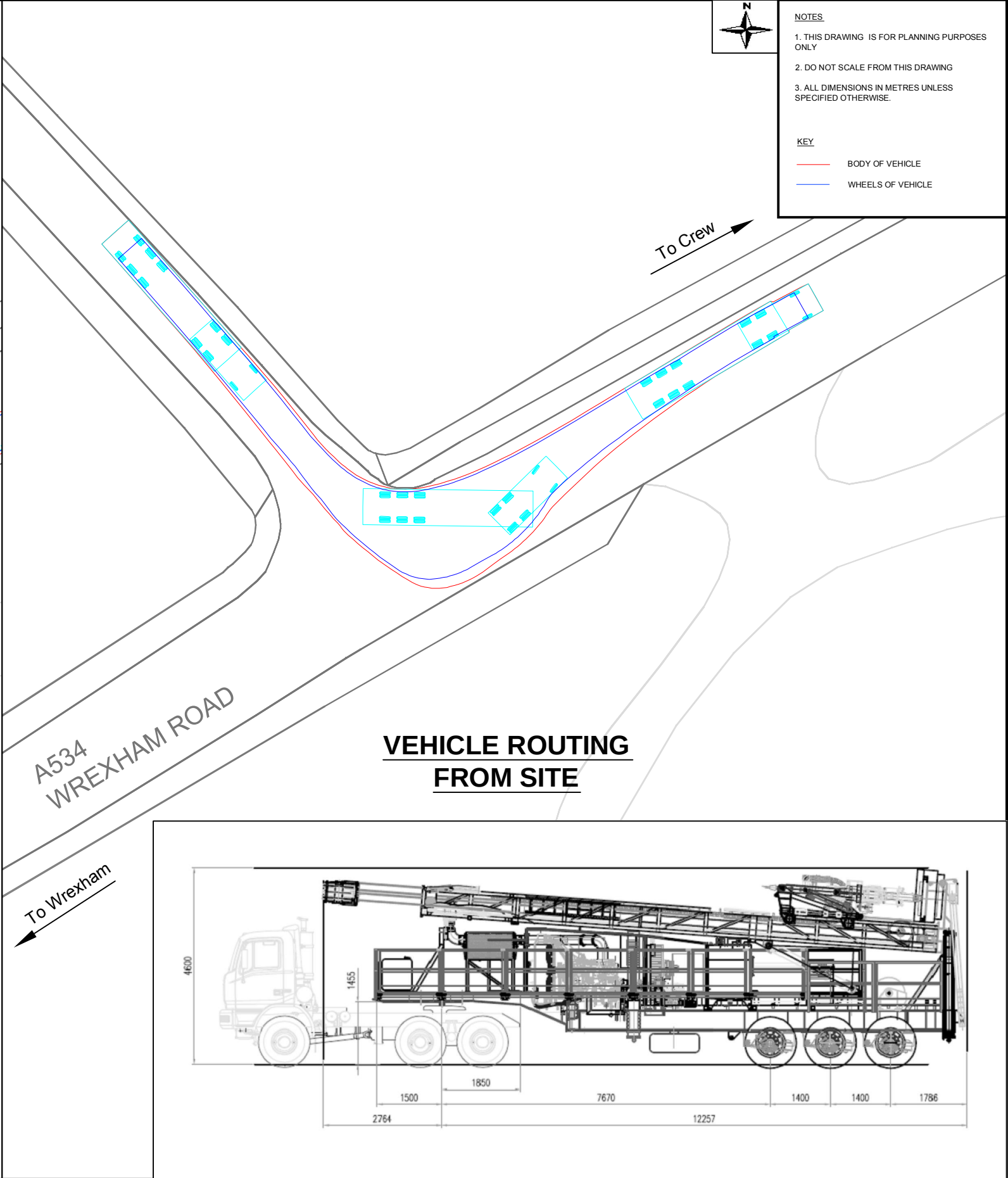


Client: GP Energy Ltd a subsidiary of Dart Energy (Europe) Ltd	Title: GENERAL ARRANGEMENT SITE ACCESS ON BORRAS ROAD	 1st Floor, 1 Trinity Gardens Broad Chare, Quayside Newcastle upon Tyne, NE1 2HF Tel: +44 (0) 191 2246500 Fax: +44 (0) 191 2246599 www.aecom.com	Design: AH	CAD: AH
			Chk'd: SE	App'd: JR
Project: SITE AT COMMONWOOD, HOLT IN WREXHAM			Date: 06 DEC 2013	Scale: 1:200 @ A1
Drawing Number: 6031111_SK001			-	

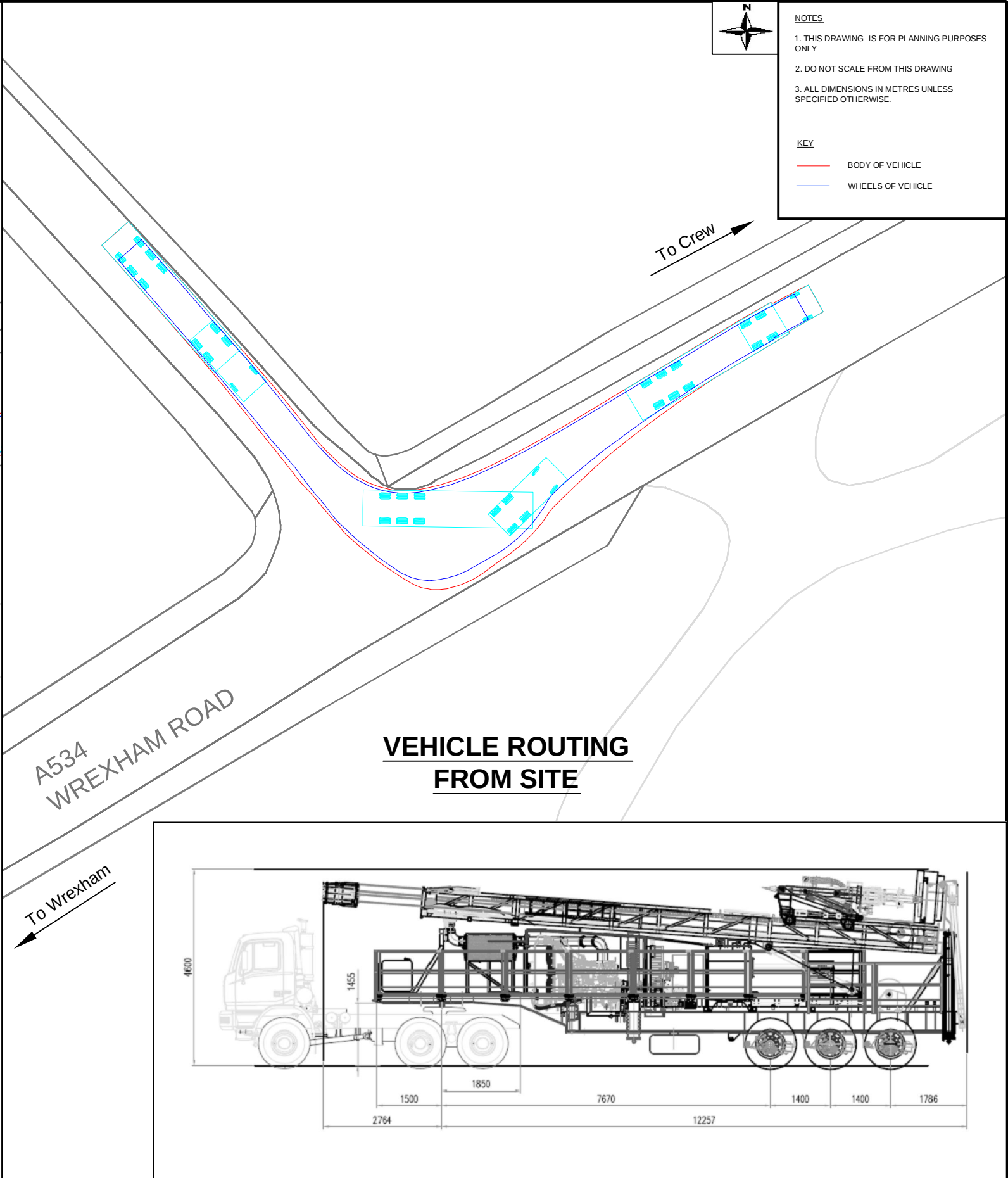
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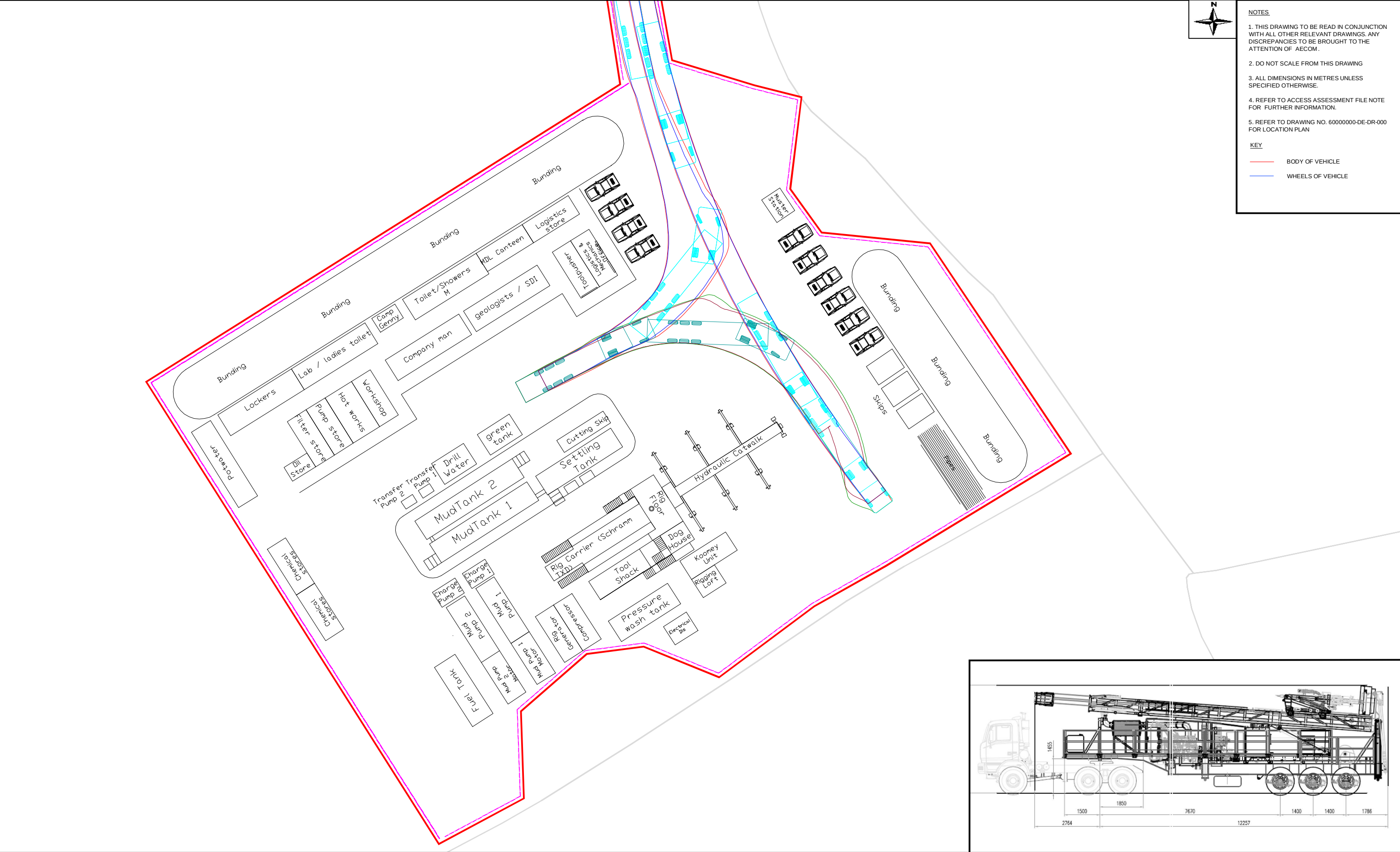
Client:	GP Energy Ltd a subsidiary of Dart Energy (Europe) Ltd	Title:	SWEPT PATH ANALYSIS OF HH102 DRILLING RIG BORRAS ROAD / BUCK ROAD JUNCTION			Design:	AH	CAD:	AH
Project:	SITE AT COMMONWOOD, HOLT IN WREXHAM			1st Floor, 1 Trinity Gardens Broad Chare, Quayside Newcastle upon Tyne, NE1 2HF Tel: +44 (0) 191 2246500 Fax: +44 (0) 191 2246599 www.aecom.com		Chk'd:	SE	App'd:	JR
						Date:	06 DEC 2013	Scale:	
						Drawing Number:	6031111_SK002		-



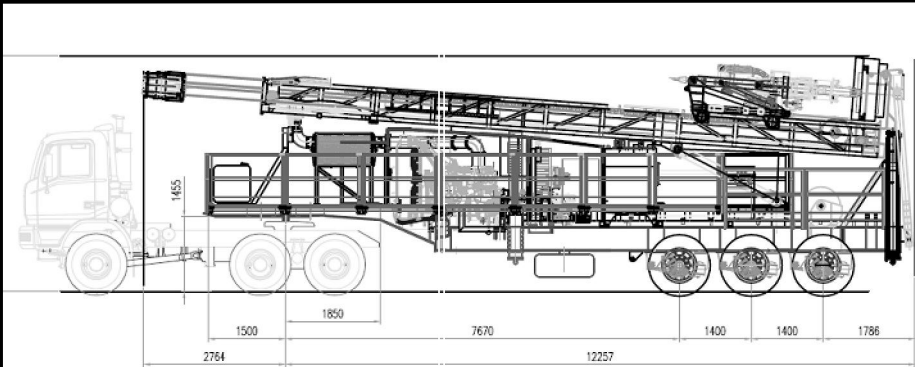
Client:	GP Energy Ltd a subsidiary of Dart Energy (Europe) Ltd	Title:	SWEPT PATH ANALYSIS OF HH102 DRILLING RIG A534 WREXHAM ROAD / SHEPHERDS ROAD JUNCTION		Design:	AH	CAD:	AH
Project:	SITE AT COMMONWOOD, HOLT IN WREXHAM				Chk'd:	SE	App'd:	JR
					Date:	06 DEC 2013	Scale:	
					Drawing Number:		SK003	-
		1st Floor, 1 Trinity Gardens Broad Chare, Quayside Newcastle upon Tyne, NE1 2HF		Tel: +44 (0) 191 2246500 Fax: +44 (0) 191 2246599 www.aecom.com				



Client: GP Energy Ltd a subsidiary of Dart Energy (Europe) Ltd	Title: SWEPT PATH ANALYSIS OF HH102 DRILLING RIG A534 WREXHAM ROAD / SHEPHERDS ROAD JUNCTION	 1st Floor, 1 Trinity Gardens Broad Chare, Quayside Newcastle upon Tyne, NE1 2HF Tel: +44 (0) 191 2246500 Fax: +44 (0) 191 2246599 www.aecom.com	Design: AH	CAD: AH	
			Chk'd: SE	App'd: JR	
			Date: 06 DEC 2013	Scale:	
Project: SITE AT COMMONWOOD, HOLT IN WREXHAM					Drawing Number: SK004



- NOTES**
1. THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS. ANY DISCREPANCIES TO BE BROUGHT TO THE ATTENTION OF AECOM.
 2. DO NOT SCALE FROM THIS DRAWING
 3. ALL DIMENSIONS IN METRES UNLESS SPECIFIED OTHERWISE.
 4. REFER TO ACCESS ASSESSMENT FILE NOTE FOR FURTHER INFORMATION.
 5. REFER TO DRAWING NO. 60000000-DE-DR-000 FOR LOCATION PLAN
- KEY**
- BODY OF VEHICLE
 - WHEELS OF VEHICLE



Client:	GP Energy Ltd (A subsidiary of Dart Energy (Europe) Ltd)
Project:	SITE AT COMMONWOOD, HOLT IN WREXHAM

Title:	PROPOSED SITE LAYOUT SWEEP PATH ANALYSIS
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Chk'd:	SE	App'd:	JR
Date:	06 DEC 2013	Scale:	
Drawing Number:	6031111_SK004		-