



BSR ENERGY

LAND AT HIGHER
WRAXALL

PROPOSED SOLAR FARM

CONSTRUCTION TRAFFIC
MANAGEMENT PLAN

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- B. PROJECTED HGV FLOWS

1. INTRODUCTION

- 1.1 Key Transport Consultants Ltd have been commissioned by BSR Energy to prepare a Construction Traffic Management Plan (CTMP) for the construction vehicles associated with a proposed 13.5MW solar farm at Land at Higher Wraxall, Dorchester.
- 1.2 The site comprises of open fields and is located around 5km to the northwest of the village of Newton Maiden.
- 1.3 The report continues in Section 2 with a brief description of the existing site and local highway network. The proposed development is outlined in Section 3, and the development phases described in Section 4.
- 1.4 The construction access route is set out in Section 5 and traffic analysis of the construction traffic is in Section 6. Finally, conclusions are drawn in Section 7.

2. EXISTING SITE

- 2.1 The existing site is currently open fields and located is located around 5km to the northwest of Maiden Newton, as shown on Figure 1.
- 2.2 Access to the site is from an unnamed road on at the northwestern side of the site. The unnamed road provides access to Higher Wraxall to the east and joins the A356 at a priority junction to west.
- 2.3 The access road is a typical country lane and is some 3.2m in width. At the proposed site access the width is around 4.6m. The photograph below is taken on the access road looking north, with the site access on the right.



- 2.4 The road widens on the approach to the A356 to some 4.5m. The distance from the existing field gate, which will be the proposed field access to the A356 is some 150m. The photograph below is taken from the A356 looking north along the access road.



2.5 At the junction with the A356, visibility is available in both directions for over 215m from a setback of 2.4m, as shown on Figure 2 and the photographs below.



2.6 The A356 links to the A37 in the east to Crewkerne to the west. The most appropriate route for construction traffic is to/from the east and onto the A37.

3. PROPOSED DEVELOPMENT

- 3.1 The proposed development is for a circa 13.5MW solar farm, consisting of photovoltaic panels together with inverters, private switchgear and spares container.
- 3.2 The solar panels will be attached on metal structures to align south towards the sun. These structures are supported by posts pile driven into the ground.
- 3.3 The entire site would be surrounded by stock proof fencing, with CCTV cameras to enable the site to be monitored remotely.
- 3.4 The area below the panels would remain grass and would be available for sheep grazing.
- 3.5 The proposed site layout is included as Appendix A.

4. DEVELOPMENT PHASES

- 4.1 There are three distinct phases to the running of the solar farm. The first being the construction phase when the panels are being installed, the second is when they are operational, and the final stage during decommissioning and the site is fully restored.

Construction Phase

- 4.2 The construction phase is likely to last for approximately 16 weeks. This phase is likely to generate the most vehicle movements, and as such, the traffic is broken down in Section 6.

Operational Phase

- 4.3 The solar park is controlled remotely, and therefore no permanent onsite staff are required. Access will be required by light vehicles for maintenance, and the access track will be used for parking.
- 4.4 The site will be fenced and not open to the general public. The grass will be cut once or twice a year, and the site could be used for sheep farming. Traffic generated as a result of grass cutting/grazing would be the same as the existing field.

Decommissioning Phase

- 4.5 The operational phase of the solar park is at least 25 years, but decommissioning will be planned from the start.
- 4.6 Decommissioning will be completed in the opposite sequence to construction. As all material would be removed from site, the vehicle movements would be similar to construction traffic.
- 4.7 Upon decommissioning, the site is returned as agricultural land.

5. CONSTRUCTION ACCESS

- 5.1 As described previously, access to the site is from lane leading to Higher Wraxall. The existing gate and access are wide enough for HGV traffic.
- 5.2 Visibility at the junction with the A37 is appropriate for the speed of the road.
- 5.3 Vehicle swept path plots for the largest vehicle that would use the site access is included as Figures 2 and 3.
- 5.4 Drivers delivering to the site would be advised of the delivery hours. All deliveries are expected to arrive from the east. Drivers would be instructed to either call on their way (if safe to do so) or stop at the layby on the A356 to the east of the site shown on Figure 3 and in the photograph below, to alert staff on site of their arrival. The bankman would then stop southbound traffic on the access road to minimise the risk of two vehicles passing.



- 5.5 Local signing will be installed to both give delivery drivers advance notice of the access, but also to warn other road users of the possibility of HGVs making the turn in and out of the site. Signs will be installed on the access road informing existing users of potential delays, so they can seek alternative routes.
- 5.6 A banksman would be positioned at the access to assist with HGVs entering and leaving the site and to keep the site secure.

5.7 On site construction roads would be up to 4m wide.

Hours of Construction

5.8 Construction on site will take place from 07:00 to 18:00 Monday to Friday and 08:00 to 12:00 on Saturdays. No construction work is programmed to take place outside of these hours, except in emergency or exceptional cases.

5.9 All HGV deliveries are expected to arrive Monday to Friday.

Site Compound

5.10 All temporary construction facilities will be set up in a temporary construction compound within the site. The facilities will include:

- Site Office
- Storage
- Welfare (Canteen, drying room, personal storage, toilets)
- Generator
- Water Bowser
- Parking Area
- Materials handling and storage area (temporary metal plate surfacing)

5.11 A wheel wash will be located on the site compound, available for all traffic to reduce mud on the highway. If necessary, a road sweeper will also be used should any mud track onto the public highway.

6. TRAFFIC ANALYSIS

Construction Vehicles

- 6.1 Vehicles travelling to the site are broken down into three main groups of construction vehicles, materials/waste, and construction staff.
- 6.2 Construction vehicles and welfare units would be driven/delivered to the site at the start of construction, and removed once the panels have been installed, and therefore would generate just one movement each way at the start and end of the construction period. Construction traffic would consist of:
- 4WD forklift
 - excavator for trenching
 - small piling machine
 - crane
- 6.3 The major component of materials is the solar panels and the associated mounting system. Other items include switchgear, inverters and fencing. Items include:
- solar panels and frames
 - inverters/transformers
 - switchgear
 - cables
 - fencing
 - surfacing materials
 - site compound equipment
- 6.4 The estimated vehicle numbers are shown on the table below, and broken down into more detail in the table in Appendix B. Note that the table provides an estimate, and does not consider holidays or delays due to weather, materials shortages etc.

Item	Vehicle Type	Quantity
Solar Panels, Piles, Framing	HGV	50
Invertors/Transformers etc	HGV	6
Waste Management	HGV	31
40 Tonne Crane		6
Plant/Welfare Units	Low-loader/HGV	14
Concrete and Aggregate	10-20t trucks	21
Fencing	HGVs	15
Access Track Materials	HGVs	10
Small Deliveries	10t truck	16
TOTAL		224

- 6.5 Deliveries would vary in the amount per day during the construction period, with the average around 3 HGVs. Higher flows are estimated in the initial and end weeks of the

construction programme as the site is established and then plant/equipment removed at the end.

- 6.6 Deliveries would be scheduled to arrive at the site between 08:00 to 18:00 from Monday to Friday.

Construction Workforce

- 6.7 The maximum number of personnel on site at any time would be around 50. There will be sufficient space within the site for parking, so no vehicles will be parked on the road.
- 6.8 The contractor will investigate providing a mini-bus shuttle service from Andover to reduce vehicle movements and will promote car sharing.

Operational Traffic

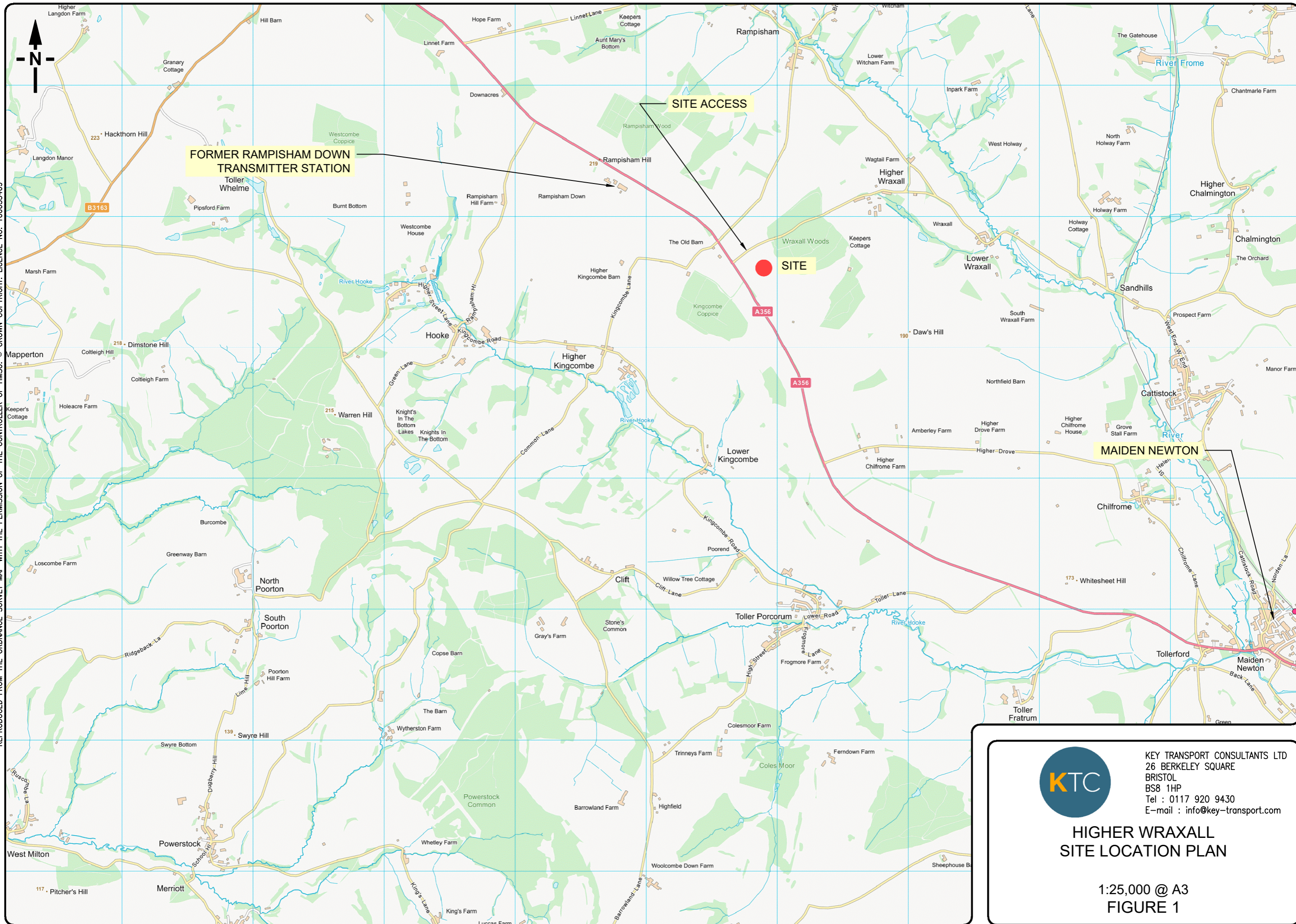
- 6.9 Routine traffic would consist of one small van every week/fortnight. Access would be via the site access, which has suitable visibility.

7. CONCLUSIONS

- 7.1 The construction phase is estimated to last approximately 16 weeks, and at its peak, there would be an average of around three HGV's to the site each day.
- 7.2 The junction with the A356 has adequate visibility in both directions. Traffic management and a banksman would control traffic at the site access and between the access and the A356 junction.
- 7.3 Once operational, the site would generate very little traffic.

FIGURES

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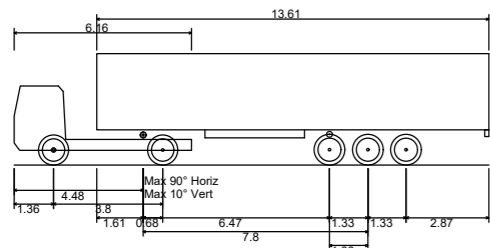
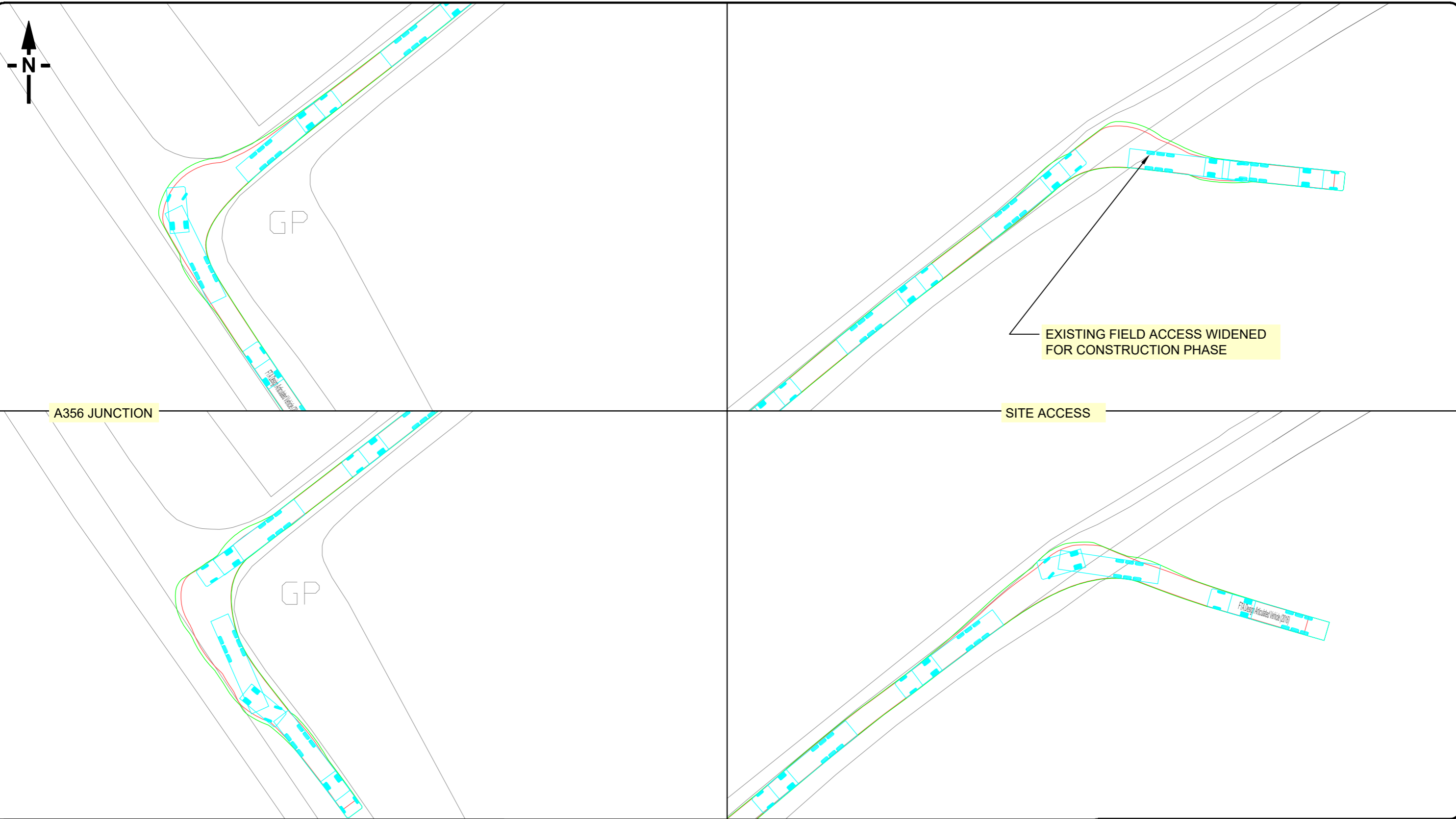


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HIGHER WRAXALL SITE LOCATION PLAN

1:25,000 @ A3
FIGURE 1

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FTA Design Articulated Vehicle (2016)	
Overall Length	16.480m
Overall Width	2.550m
Overall Body Height	3.870m
Min Body Ground Clearance	0.515m
Max Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	6.600m

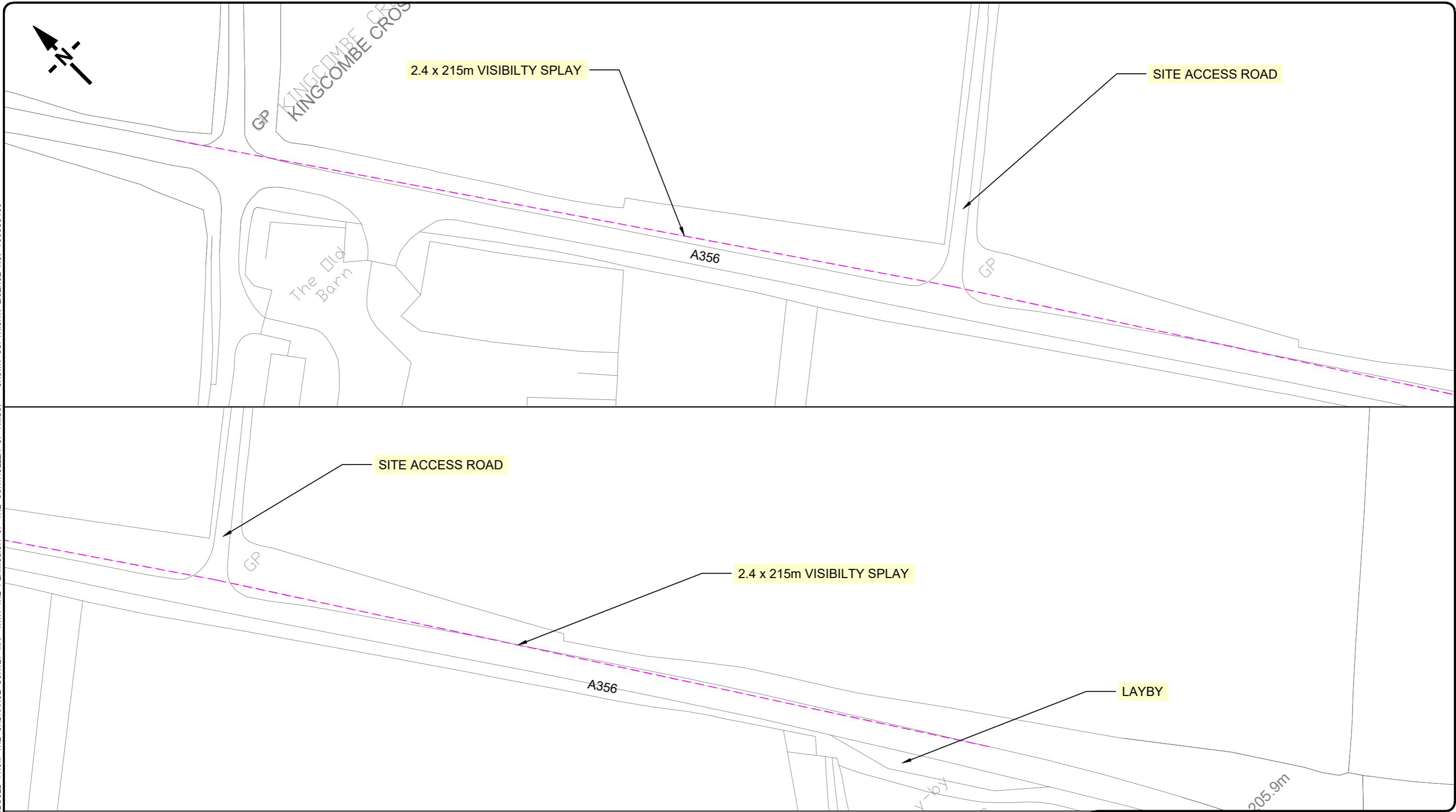


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**HIGHER WRAXALL
 VEHICLE SWEEP PATHS**

1:25,000 @ A3
FIGURE 2

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HIGHER WRAXALL VISIBILITY AT A356 JUNCTION

1:1,000 @ A3
FIGURE 3

APPENDIX A
SITE LAYOUT

APPENDIX B
PROJECTED HGV FLOWS

Higher Wraxall Solar Site

Projected HGV Flows

		Week																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	TOTAL
Delivery	Number																	
Solar Panels	50				5	5	5	5	5	5	5	5	5	5				50
Inverters	3				1		1		1									3
Transformers 0.2/MWp	3			1				1				1						3
Structure 3/MWp	40		5	5	5	5	5	5	5	5								40
Cables 1/MWp	15				3	3	3	3	3									15
Waste Management	31	4				2	2	2	2	2	2	2	2	2	2	2	5	31
Crane	6			1	1		1	1	1			1						6
Plant/Welfare units	14	5				2										2	5	14
Concrete/Aggregate	21		7	7	7													21
Fencing	15		5	5													5	15
Access Track Materials	10	5	5															10
Small Delivieries	16	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	16
Average per day		3	4	4	4	3	3	3	3	2	1	2	1	1	1	1	3	224

