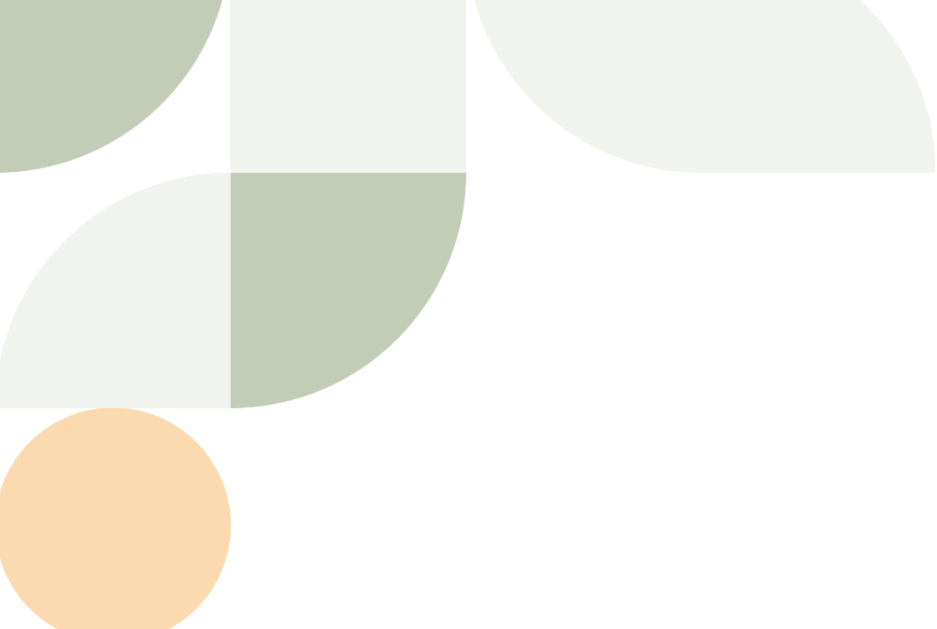




Lime Down

Solar Park

Highways Technical Note in Response to Appendix A of the SLD Deadline 4 Submission (Tracked

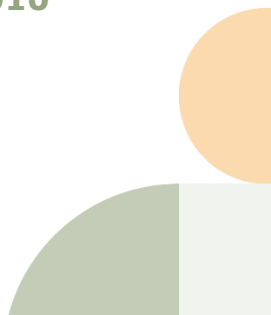
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The Infrastructure Planning (Examination Procedure) Rules 2010



Schedule of Changes

<u>Revision</u>	<u>Section Reference</u>	<u>Description of Changes</u>	<u>Reason for Revision</u>
<u>2</u>	<u>Table 2-1 and accompanying text.</u>	<u>Updated with the Lime Down waste HGV numbers removed from the calculations.</u>	<u>In response to Action 2 of ISH6.</u>
	<u>Appendix A and Table 3-2 and accompanying text.</u>	<u>BESS Units and BESS PCU units HGV numbers added to the total HGV numbers</u>	<u>In response to Action 5 of ISH6.</u>
	<u>Table 3-4</u>	<u>Table 3-5 updated to include the originally assessed 'average day movement' numbers.</u> <u>Table 3-4 removed, no longer relevant following request for comparison of average day movements</u>	<u>In response to Action 6 of ISH6.</u>
	<u>Table 3-3</u>	<u>Updated to account for minor update to HGV trip generation calculations.</u>	<u>In response to Action 5 of ISH6.</u>

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1 Introduction

- 1.1.1 This Technical Note (TN) has been prepared by Transport Planning Associates (TPA) to address matters raised in Appendix A of the '**Stop Lime Down Deadline 4 [Comments](#)**' [REP4-132].
- 1.1.2 Appendix A of the '**Stop Lime Down Deadline 4 Comments**' [REP4-132]. provides Stop Lime Down's revised assessment of HGV trip generation associated with the proposed Solar Farm and BESS, following the discussion at ISH3 on 2 July 2026, and Action Point 6 in [EV9-010].
- 1.1.3 As requested in TT2.1 of the Examining Authority's Second Written Questions [PD-014] this TN provides the Applicant's version of the numbers included in Stop Lime Down's 'Assessment of Construction Traffic Movements' and 'Flow Diagrams' in pages 140 to 143 of [REP4-132], using, as far as possible, the exact same format and presentation as Stop Lime Down in those pages so that direct comparison can be made.
- 1.1.4 This TN also addresses outstanding ISH3 Action Point 12 [EV9-010], which required a full response to the points raised by Wiltshire Council and Stop Lime and Table 2 of Stop Lime Down's **Written Representation, Appendix D** [REP1-172], which compares the ratios of HGV deliveries to the solar array areas for five other solar projects with the applicant's stated HGV delivery numbers for solar panels and mounting structures for Lime Down.

2 Response to Table 2 of Stop Lime Down's Written Representation, Appendix D [REP1-172]

2.1.1 As requested in TT2.1 of the Examining Authority's Second Written Questions [PD-014], this section addresses outstanding ISH3 Action Point 12 [EV9-010], which requires a response to Table 2 of Stop Lime Down's **Written Representation, Appendix D [REP1-172]**, which compares the ratios of HGV deliveries to the solar array areas for five other solar projects with the applicant's stated HGV delivery numbers for solar panels and mounting structures for Lime Down.

2.1.2 For clarity, Table 2 of Stop Lime Down's **Written Representation, Appendix D [REP1-172]** is shown as follows:

Table 2: Ratios of HGV Deliveries to Solar Array Areas

Site	Works No.1 Area/ha	HGV Deliveries*	Ratio (HGVs/ha)
West Burton**	734	3,280	4.47
Botley West	839	7,423	8.85
Cottam**	897	4,320	4.81
Green Hill**	1,157	2,817	2.43**
Heckington Fen	292	2,400	8.22
Average			5.76
Lime Down	748	1,740	2.33

* includes both solar panels and mounting structures

** Green Hill, West Burton and Cottam are Island Green Power schemes as is Lime Down

2.1.3 When providing a comparison with other schemes, it is important that variables being compared are consistent. Many of the How Works 1 areas No.1 areas are expressed within DCOs can vary across schemes and those provided in Table 2 of Stop Lime Down's **Written Representation, Appendix D [REP1-172]** may or may not include large areas not covered by solar panels, including areas between parcels, including access tracks, habitat areas, drainage, landscaping and infrastructure, which can vary considerably from scheme to scheme.

2.1.4 To provide a genuine like-for-like comparison, the Applicant has obtained the area for the 'Works No. 1 - Solar PV generating station areas' (excluding areas of only Works No. 1(d) electrical and communications cabling) for the Lime Down scheme and compared it against the other schemes put forward by IGP, which have been identified in a consistent manner. Unfortunately, the Applicant does not have access to the relevant data for this exercise to be undertaken for Botley West and Heckington Fen. The 'Works No.1 – Solar PV generating

station areas' are shown by the solid blue areas on the **Works Plan [REP3-004]**.

~~2.1.5 It should also be noted that trip calculations were not broken down into such detail on other IGP schemes, and the trip numbers of solar panels and mounting structures would have included trips associated with waste packaging etc. The HGV movements related to waste packaging presented in Annex E of ES Volume 3, Appendix 13-1: Transport Assessment [REP4-037] have therefore been added to the HGV movements for Lime Down to provide a fair comparison.~~

~~2.1.6~~ 2.1.5 In accordance with the known 'Works No.1 – Solar PV generating areas' the ratio of Solar PV deliveries to solar array areas are presented in ~~Table 2-1~~ Table 2-1.

Table 2-1 Table 2-1 Ratios of HGVs to Solar Array Areas – Applicants Calculations

Scheme	Work No.1 Area - Solar PV generating station areas (hectares)	HGVs*	HGVs per hectare
Lime Down	385.3	1,970,740	4.54
Green Hill	607.1	2,997	4.9
Cottam	897.4	4,320	4.8
West Burton	734.0	3,280	4.5

~~*includes for solar panels, mounting structures and waste packaging~~

~~2.1.7~~ 2.1.6 The data presented in ~~Table 2-1~~ Table 2-1 represents a consistency in the number of HGVs per hectare for the 'Works No.1 – Solar PV generating areas' between the schemes, with Lime Down generating approximately 4.54 HGVs per hectare. In comparison with the figures provided by Stop Lime Down, which have used the areas of the Solar PV Sites from ES Chapter 3: The Scheme with no adjustment for areas of non-solar development such as access tracks and habitat mitigation areas, it is concluded that ~~Table 3-1~~ Table 2-1 presents the most reliable like-for-like comparison.

3 Response to Stop Lime Down Deadline 4 Comments – Appendix A

3.1 Review of Trip Generation Calculations

- 3.1.1 As requested in TT2.1 of the Examining Authority's Second Written Questions [PD-014], ~~Table 2-1~~, Table 3-1 summarises the Applicant's version of the numbers included in Stop Lime Down's 'Assessment of Construction Traffic Movements' in [REP4-132], using, as far as possible, the exact same format and presentation as Stop Lime Down for comparison purposes.
- 3.1.2 Where possible, reasonable worst-case assumptions have been applied and, where required, the Applicant has provided evidence to support the calculations.
- 3.1.3 ~~Table 3-1~~ Table 3-1 accompanies the summary spreadsheet calculation presented in **Appendix A** of this TN and ~~a two-link flow diagram~~ is provided in **Appendix B**. The ~~first link flow diagram shows changes in peak daily light and HGV vehicle flows on key links and the second~~ shows the percentage changes in daily HGV flows when the average + 50% approach is applied to account for peak day trips. The flow diagrams include cable route HGVs allowing for the fact that only 4 cable route access points are expected to be operational at any one time.
- 3.1.4 It should be noted that unlike the Stop Lime Down calculations, trips for **Lime Down D** have been split between the access points to the western and eastern sections of the site, as proposed.

Table ~~3-13-1~~ Construction HGV Trip Generation: Revised Assumptions (Solar PV Sites)

Item	Allowance in Revised Trip Generation Calculation	Notes
Number of Solar Panels	842,500 panels	In accordance with the Works Plan [REP3-004], the Works No. 1 - Solar PV generating station areas total 385.3ha. In accordance with this area, a maximum total of 842,500 panels, has been derived from an indicative high density layouts based on a 3P fixed panel layout. This would result in a density of 2,186 panels per hectare (885 per acre).

Item	Allowance in Revised Trip Generation Calculation	Notes
		When assuming outputs of 640W per panel currently being used on other IGP schemes (including West Burton), this would result in 1.76 acres per MW, which is more intensive than the suggested range of 2-4 MW per acre set out in EN-3. It is also noted that paragraph 2.10.17 of EN-3 states that densities will <i>'vary significantly depending on the site, with some being larger and some being smaller. This is also expected to change over time as the technology continues to evolve to become more efficient'</i>. The trip generation calculations for solar panels remain broadly unchanged from calculations set out in Annex E of ES Volume 3, Appendix 13-1: Transport Assessment [REP4-037]EN01068/APP6.31 (Rev 7) based on the delivery of 720 panels per HGV as specified below.
Number of panels per HGV	720 panels	The delivery of 720 panels per High Cube 40ft container has been calculated. This has been confirmed by the manufacturer/supplier. To provide certainty, the requirement to deliver panels by 40ft High Cube container, where required, has been included in the latest Outline CTMP submitted at Deadline 5. Case Basis: REASONABLE WORST CASE (given commitment to high cube containers in Outline CTMP to secure a maximum of 1,200 deliveries for the panels)
Mounting Structures	51.2% of panel HGVs	In Table 2 of Appendix A of Stop Lime Down's Deadline 4 Comments [REP4-

Item	Allowance in Revised Trip Generation Calculation	Notes
		132] it is suggested that the number of HGVs required to transport mounting structures would constitute 73% of the number required to transport solar panels. This is based on ratios for Botley West, Green Hill and Heckington Fen. Further to the Applicants knowledge of Green Hill, the number provided for mounting structures were not broken down in as much detail and included other elements such as waste and packaging, which have been accounted elsewhere in calculations for Lime Down Solar Park. The Applicant has obtained further detail on mounting structures from the manufacturer/supplier which confirms that mounting structures for 0.9-1.1MW of 640W solar panels can be transported per standard articulated flatbed. Assuming a worst-case of 0.9MW, this results in a total of 599 HGV deliveries. The resulting uplift in HGV trips associated with mounting structures have been updated in the trip generation calculations. Case Basis: REASONABLE WORST CASE
Note on solar panel and mounting structure HGV trip generation		The approach to calculating the number of HGVs associated with panels and mounting structures set out in Appendix A, leads to an average of 4.6 HGVs/ha of Works 1- Solar PV generating station areas, which is still in accordance with the averages for Green Hill, Cottam and West Burton set out in Table 2-1. Table 2-1.

Item	Allowance in Revised Trip Generation Calculation	Notes
Concrete Footings	104 HGVs	It has been identified that within the Works 1 areas, approximately 16.03 hectares is potentially archaeologically sensitive. Based on initial layouts it has been calculated that a total of 2,776 concrete footings could be required within these areas. The Applicant has confirmed with suppliers  that a worst-case assumption would be: • 1000kg concrete on each rear upright • 500 kg on each front upright This would result in a total of 2,082 tonnes for concrete footings. There is a likelihood that solar panels will not be placed on the archaeologically sensitive areas. This therefore presents a worst case. The resulting HGV trips associated with concrete footings have been added to the trip generation calculations. Case Basis: REASONABLE WORST CASE
Waste (Packaging)	529 HGVs	This sets out the HGVs associated with the total volumes of waste (packaging) set out in Table 320-7 of the Outline Waste Management ES Volume 1, Chapter 20: Other Environmental Matters [REP5-029] submitted at Deadline 5. This includes waste associated with solar panel and mounting structure packaging, which has been updated to account for an uplift to 842, 500,000 panels based on a 3P layout. A compactor will be provided on site to increase weight per vehicle of

Item	Allowance in Revised Trip Generation Calculation	Notes
		waste transported from site. This would allow tipper lorries to remove 11.1 tonnes loads or 20m³ of compacted waste. The resulting uplift in HGV trips associated with waste have been updated in the trip generation calculations. Case Basis: REASONABLE WORST CASE (given commitment to compactors in Outline CTMP)
General Access Tracks	3,718 HGVs	This is based on a worst case for the need for 28.1km of general access tracks with a width of 3.5 metres, widening to 6.0 metres at passing places. The track would also need to be widened on bends. The Applicant assumes that tracks would be constructed with 0.3m of compacted aggregate. The Applicant now includes a 5% widening allowance as per Table 2 of Appendix A of Stop Lime Downs Deadline 4 Comments [REP4-132]. This has been added to the trip generation calculations. Case Basis: REASONABLE WORST CASE
BESS/400kV Access Track	442 HGVs	The access track required to serve the 400kV Substation and BESS would be 0.9km in length. This will be designed to accommodate AIL vehicles delivering transformers to a 400kV substation. The access road will therefore be 6.0 metres wide, widening at bends with a compacted construction depth of 0.65

Item	Allowance in Revised Trip Generation Calculation	Notes
		metres. There would be no requirement for passing places given the infrequency of movements. The Applicant now includes a 5% widening allowance as per Table 2 of Appendix A of Stop Lime Downs Deadline 4 Comments [REP4-132], which has been added to the trip generation calculations. Case Basis: REASONABLE WORST CASE
132kV Access Tracks	676 HGVs	The access track required to serve the 132kV substations total 2.9km<u>3.0km</u> in length. This will be designed to accommodate AIL vehicles delivering transformers to a 132kV substation. Further information on the design parameters for 132kV Access tracks is now provided in the updated ES Volume 3, Appendix 3-3: Illustrative Drawings submitted at Deadline 5. This is in accordance with guidance from UKPN for access requirements to 132kV substations. The access road will therefore be 4.5 metres wide, widening at bends, with a compacted construction depth of 0.41 metres. The Applicant also includes a 5% widening allowance which has been added to the trip generation calculations. Case Basis: REASONABLE WORST CASE
Compound Surfacing	1,080 HGVs per compound	Further to Table 2 of Appendix A of Stop Lime Downs Deadline 4 Comments [REP4-132], it has been agreed that the aggregate required for

Item	Allowance in Revised Trip Generation Calculation	Notes
		compounds will be 50m x 60m metres with a depth of 0.3 metres. The Applicant maintains that aggregate used for the compounds will remain on site as per Applicant's Response to SLD's Written Representation [REP3-133]). This will either be used to repair access tracks following construction, stored on site or in the case of Lime Down A and D, used within the proposed 132kV substations. The resulting uplift in HGV trips associated with waste have been updated in the trip generation calculations. These calculations assume the use of ten compounds, as shown on the Works Plans and as follows: • Lime Down A – One compound (south of road towards Sherston); • Lime Down B – One compound (north of Fosse Way); • Lime Down C – Two compounds (one either side of the Fosse Way); • Lime Down D – Three compounds (one either side of Bradfield Cottages and one north of A429); • Lime Down E – Two compounds (one north of railway line and one south of railway line); and • One potential further compound in the vicinity of the BESS.

Item	Allowance in Revised Trip Generation Calculation	Notes
		Case Basis: REASONABLE WORST CASE
Compounds (Other)	1,252 HGVs (two per week per compound).	The Applicant accepts that other structures that will be associated with compounds include office, welfare, water tank, fuel tank, fencing, security, compactor, generator and skips. Regular HGV movements would be associated with water and fuel delivery, waste removal (foul water, chemicals solvents and oils) and the transport and movement of equipment and machinery. An allowance of two HGVs per compound per week over the construction phase for each Solar PV site is assumed. The trip generation calculations for other compound trips have been increased in comparison with those assumed in general trips set out in Annex E of ES Volume 3, Appendix 13-1: Transport Assessment [REP4-037]-EN01068/APP6.31 (Rev 7). Case Basis: REASONABLE WORST CASE
Spoil	10% of excavated spoil taken off site. 721 HGVs	The volume of material is derived directly from the volumes of material used as a worst case for access roads, compounds, foundations of substations and the BESS. This amounts to 94,589m³. In accordance with the Applicant's Response to SLD's Written Representation [REP3-133], the Applicant has included an allowance for 10% of spoil to be taken off site. The remaining spoil would be stored on site or used for bunds within the Scheme.

Item	Allowance in Revised Trip Generation Calculation	Notes
		The trip generation calculations have been updated to reflect the anticipated volume of spoil. Case Basis: REASONABLE WORST CASE
33kV Conversion Units	166 HGVs	The Applicant now allows for 166 conversion units. These have been added to the trip generation calculations. As confirmed by the supplier (See), each Inverter/Transformer powerbock (4.4MVA) will comprise of a 20ft, 20 tonnes container (6.058m Length x 2.438m Width x *2.896m Height). Each unit will require one HGV delivery. Case Basis: REASONABLE WORST CASE (based on supplier information)
Conversion Unit Foundations	701 HGVs	Each conversion unit would sit on a concrete slab and a levelling layer of aggregate. As set out in ES Volume 1, Chapter 3, The Scheme [APP-055] It has been assumed that each unit would site on a 6.0m x 16.0m slab and the total depth of foundations would be 0.4m split between concrete and a levelling layer of aggregate. Trips associated with Conversion Unit foundations have been added to the trip generation calculations. Given the size of proposed 33kV conversion units set out above, the assumed area of the foundations is an absolute worst-case assumption as they are likely to be smaller.

Item	Allowance in Revised Trip Generation Calculation	Notes
132kV Substations	205 HGVs per 132kV substation (total 822 HGVs (with rounding))	The indicative size of the 132 kV substations is 3,455m² Applicant Response to SLD's WR [REP3-133], para. 3.5.5. There will be 4 132kV substations within the Scheme Given the need to support components and equipment, it is accepted that the average depth of concrete used within this area would be 0.5m. It has been assumed that 50% of the area would be concrete and 50% would be aggregate at a depth of 0.3m. This provides a worst-case assessment, as indicative layouts show only 250m² (7.2%) of the area comprising concrete foundations. The trip generation calculations have been updated to include trip associated with concrete and aggregate. As per Table 2 of Appendix A of Stop Lime Downs Deadline 4 Comments [REP4-132], there would be a need for other components (security fencing, drainage, electrical and structural infrastructure, control room, lighting, security). The Applicant has assumed an additional 100 deliveries associated with these items for each 132kV substation. The trip generation calculations have been updated to include these trips.
400kV Substation Foundations	2,396 HGVs per substation	The indicative size of the 400kV substation is 38,037m² (see Applicant Response to SLD's WR [REP3-133], para. 3.5.5). The foundations are required to support heavy components and the equipment that handles them. it is assumed that the average depth of concrete used within

Item	Allowance in Revised Trip Generation Calculation	Notes
		this area would be 0.8m. It has been assumed that 50% of the area would be concrete and 50% would be aggregate at a depth of 0.3m. This provides a worst-case assessment, as indicative layouts show only 1,924m ² (5.1%) of the area would comprise concrete foundations. The trip generation calculations have been updated to include trip associated with concrete and aggregate.
400kV Substation Compound	0	The Applicant has already assumed an additional construction compound in the vicinity of the BESS and 400kV substation below.
400kV Substation Other	250	As per Table 2 of Appendix A of Stop Lime Downs Deadline 4 Comments [REP4-132] there would be a need for other electrical and structural components, control building, security fencing, lighting, drainage, security and the movements of equipment and machinery. The Applicant has assumed an additional 250 deliveries associated with these items. The trip generation calculations have been updated to include these trips.
BESS Units	270	As confirmed by the supplier, each BESS unit (5MWh) will comprise of a 20ft, 43 tonnes container (6.058m Length x 2.438m Width x 2.896m Height) While an AIL (in terms of weight only), each unit will require one delivery vehicle. The size of AIL vehicle delivering the BESS units will be no larger than a Max legal HGV. An example of a 5-axle SL2 Semi low loader trailer capable of delivering the BESS units is provided at Appendix C.

Item	Allowance in Revised Trip Generation Calculation	Notes
		The trip generation calculations have been updated to include these trips. Case Basis: REASONABLE WORST CASE (based on supplier information)
BESS Power Conversion System (PCS)/transformer Units	45	As confirmed by the supplier (see), each of the 45 integrated PCS/transformer units will comprise of a 40ft, 32 tonne container (12.192 Length x 2.438m Width x *2.896m Height) While an AIL (in terms of weight only), each unit will require one delivery vehicle. The size of AIL vehicle delivering the BESS units will be similar to a Max legal HGV. An example of a 7-axle SL2 Semi low loader trailer capable of delivering the PCS units is provided at Appendix D. The trip generation calculations have been updated to include these trips. Case Basis: REASONABLE WORST CASE (based on supplier information)
BESS Foundations	2,051 HGVs	The indicative size of the BESS area is 27,096m² (see Applicant Response to SLD's WR [REP3-133], para. 3.5.5). Both BESS and PCS units would sit on concrete platforms that would be supported on concrete piles. As per Table 2 of Appendix A of Stop Lime Downs Deadline 4 Comments [REP4-132] the Applicant has assumed an average depth of concrete for BESS and PCS foundations of 0.8m.

Item	Allowance in Revised Trip Generation Calculation	Notes
		As per Table 2 of Appendix A of Stop Lime Downs Deadline 4 Comments [REP4-132] The Applicant has assumed that the entire BESS area will include the provision of a further impermeable concrete structure, likely to be filled with gravel. The Applicant has assumed a 0.3m depth of concrete and 0.3m of gravel over areas not occupied by BESS and PCS platforms. The trip generation calculations have been updated to include trips associated with BESS foundations. Case Basis: REASONABLE WORST CASE
Other BESS Components	100	As per Table 2 of Appendix A of Stop Lime Downs Deadline 4 Comments [REP4-132] there would be a need for other components including the BESS control room, drainage, the minimum of two fire water tanks, security fencing, equipment and machinery. The Applicant has assumed an additional 100 deliveries associated with these items. The trip generation calculations have been updated to include these trips. Case Basis: REASONABLE WORST CASE
BESS Compound	246	The Applicant has already assumed a construction compound in the vicinity of the BESS and 400kV substation. However, the Applicant has allowed for an additional compound in Lime Down D (West) if required. The 246 HGVs trips associated with this compound have been included within the total 1,252

Item	Allowance in Revised Trip Generation Calculation	Notes
		HGV compound movements set out above The trip generation calculations have been updated to include these trips. Case Basis: REASONABLE WORST CASE
Cable	55 HGVs	The Applicant has now allowed for 55 deliveries associated with cable associated with the solar array areas. The length of DC cables has been uplifted to account for an uplift to 842,500 panels. No uplift is required for AC cables as none of the electrical equipment upstream of these inverters needs to be uplifted. The resulting uplift in HGV trips associated with cables has been updated in the trip generation calculations. Case Basis: REASONABLE WORST CASE
Landscaping	495 HGVs	The Applicant identifies 489 deliveries associated with landscaping. The trip generation calculations for landscaping remains unchanged from calculations set out in Annex E of ES Volume 3, Appendix 13-1: Transport Assessment [REP4-037]-EN01068/APP6.31 (Rev 7). Case Basis: REASONABLE WORST CASE
General	0	The Applicant identifies 2,685 HGVs associated with compounds, spoil

Item	Allowance in Revised Trip Generation Calculation	Notes
		removal and landscaping. These items are dealt with individually above, so no additional allowance is made.
Highway Improvements and Site Accesses	0	The Applicant has confirmed that these would be constructed before the main scheme construction period.
Drainage Infrastructure	0	As per Table 2 of Appendix A of Stop Lime Downs Deadline 4 Comments [REP4-132], the Applicant agrees that areas of hardstanding would require drainage. Allowance for this has been made on 'other' trips associated with the BESS and the likely over estimation of concrete for the foundations for the 400kV substation and the 132kV substations. Case Basis: REASONABLE WORST CASE
Cable Route Corridor	4 HGV Deliveries (8 movements), 4 LGV Deliveries (8 movements) and 10 Cars/Vans (20 movements) per day per access (total 90 days per access)	The Transport Assessment [EN01068/APP6.3] (Rev 7) states that each cable route access point would attract 4 HGV deliveries (8 movements), 4 LGV deliveries (8 movements) and 10 staff, all of whom are assumed to drive (20 movements). There are 28 cable route access points each operational for 90 days. This leads to a total of 20,160 HGV movements (28 accesses x 90 days x 8 HGV movements) and 70,560 light vehicle movements (28 accesses x 90 days x 8 LGV movements plus 28 accesses x 90 days x 20 car movements). At any one time, 4 access points are expected to be operating (4/28 of total). This gives an average of 32 HGV movements on a single day (4/28 x 20,160 HGV movements/90 days) over

Item	Allowance in Revised Trip Generation Calculation	Notes
		the 22km cable length. All movements are accounted for within the daily HGV movements. Case Basis: REASONABLE WORST CASE
Construction Days	5.5 day per week	The Applicant has updated the proposed construction days for each site based on the specified construction programme, 5.5 days per week and bank holidays (see Appendix E). A 20-month construction period has now also been assumed for the 400kV substation. Case Basis: REASONABLE WORST CASE
Concrete Density	2.4 tonnes per m ³	The Applicant has assumed that concrete used to construction various elements of the scheme would have a density of 2.4t/m ³ . A concrete density of 3.0t/m ³ used in calculations in Appendix A of Stop Lime Downs Deadline 4 Comments [REP4-132] is normally reserved for nuclear radiation shielding or offshore ballasting. Case Basis: REASONABLE WORST CASE

3.2 Comparison of Total HGV Movements

- 3.2.1 The results of the revised calculations for total construction HGV trip Generation are summarised in [Table 3-2: Table 3-2:](#)

Table 3-2: Summary of Revised Trip Generation Calculations

Quantity	Applicants Submitted Calculation	Applicant Revised Calculation	Percentage Difference
Total HGV Movements (PV Sites)*	26,086	35,054734	34.437.0%
Total HGV movements (cable route corridor)	20,160	20,160	0%

Note: These figures do not include a 50% uplift

3.3 Comparison for Peak Daily HGV Movements Assessed in ES Chapter

3.3.1 For comparison, the resulting peak daily HGV movements for each construction route, which includes for the 50% uplift in average daily trips for each specified Solar PV Site is provided in Table 3-3. Table 3-3.

3.3.2 Table 3-3 The peak flows in **Table 3-3** assume a peak day occurs every day of the construction phase, and all sites are constructed simultaneously. Whilst it is acknowledged that this results in a significant overestimation of AADT flows, it provides a worst-case assessment for the ES Chapter.

3.3.3 However, not all construction activities will be undertaken simultaneously. Therefore, the day-to-day number of HGV movements on the highway network will be much lower as shown in Table 13-12 in **ES Volume 3 Appendix 13-1: Transport Assessment [EN010168/APP/6.3] (Rev 7)** submitted at Deadline 7.

Table 3-3 Comparison of Peak Daily HGV Movements for Construction Routes

Construction Route	Applicants <u>Previously Submitted Calculation (From Table 13-12 of REP6-014)</u>	Applicant Revised Calculation <u>(Sensitivity)</u>	Difference
Lime Down A-C	50	56	+6
Lime Down D (West)	56	5456	-20

Construction Route	Applicants Previously Submitted Calculation (From Table 13-12 of REP6-014)	Applicant Revised Calculation (Sensitivity)	Difference
Lime Down D (East) and Lime Down E	42	61	+19

~~3.3.23.3.4~~ As shown in ~~Table 3-3~~, [Table 3-3](#), the differences in calculated peak daily HGV movements for the construction routes to Lime Down A-C (via Alderton Road and Fosse Way) and Lime Down D (west) (via Bradfield Cottages) are negligible (less than one additional movement per hour within specified delivery times), with the movements associated with Lime Down D (west) reducing due to the increased programme for building out the 400kV substation.

~~3.3.33.3.5~~ [Table 3-3](#) [Table 3-3](#) shows peak daily HGV movements to Lime Down D (east) and Lime Down E increasing by ~~17~~[19](#) movements. However, the sites are accessed via the A429 which is readily able to accommodate the additional movements.

~~3.3.43.3.6~~ It should ~~be~~ noted that these peak daily ~~movement~~[movements](#) are only likely to last for the first few months, at the beginning of construction of each site, with the majority construction phase experiencing much lower movements.

3.4 Comparison of ~~AADT~~[Average](#) HGV Movements

~~3.4.1~~ For further comparison, the resulting AADTs for each Solar PV site has been compared against the AADTs assessed within ~~ES Volume 1, Chapter 13: Transport and Access [REP4-014]~~ in ~~Table 3-4~~.

~~Table 3-4 Comparison of AADT HGV movements for each Solar PV Site~~

Construction Route	Applicants Assessed AADT	Applicant Revised AADT (Sensitivity)	Difference
Lime Down A	16	4	-12
Lime Down B	12	2	-10
Lime Down C	22	9	-13
Lime Down D (West)	56	23	-23

Lime Down D (East)	24	3	-21
Lime Down E	18	7	-11

3.4.2 As shown in **Table 3-4**, the differences between the AADTs calculated from the revised trip generation calculations presented in **Appendix A**, are lower than the AADTs taken forward and assessed in **ES Volume 1, Chapter 13: Transport and Access [REP4-014]**.

3.4.3 The reason for this difference is that the submitted assessment in **ES Volume 1, Chapter 13: Transport and Access [REP4-014]** assumed peak day movements for every day of the two year construction phase, which provided a considerable buffer for potential trips generated by the Scheme. However, given the level of detail which is provided in the revised calculations presented in **Appendix A**, the conventional approach to calculating AADTs has been applied, by calculating the total traffic volume within the construction phase and dividing it by the number of days (730) over the two year construction period.

3.4.43.4.1 To provide further comfort **Table 3-5** **Table 3-4** provides a comparison of AADTs assessed within **ES Volume 1, Chapter 13: Transport and Access [REP4-014]** and the average daily trips generated by each Solar PV site during its respective length of construction, as presented in for the updated calculations presented in **Appendix A** (e.g. 213 days to construct Lime Down A). This demonstrates that, and the average daily trips for each Solar PV Sites are still within the AADT flows assessed within **ES Volume 1, Chapter 13: Transport and Access [REP4-12 of REP6-014]**.

Table 3-53-4 Comparison of AADT HGV movements assessed in ES Chapter with Average Daily HGV Construction Movements for Each Solar PV Site presented in Appendix A Sites

Solar PV Site	Applicants Assessed AADT Previously Submitted Calculation (from Table 13-12 of REP6-014)	Average Daily Movements During Build-Out Time of Solar PV Site Applicants Revised Calculation	Difference
Lime Down A	4610	13	-+3
Lime Down B	128	8	-30
Lime Down C	2214	16	-6+2

Lime Down D (West)	<u>5636</u>	<u>3638</u>	<u>-20+2</u>
Lime Down D (East)	<u>2416</u>	<u>2523</u>	<u>+17</u>
Lime Down E	<u>1812</u>	<u>1516</u>	<u>-3+4</u>

3.4.53.4.2 In conclusion, while the updated trip calculations presented in **Appendix A** show an uplift in calculated trip generation for the Scheme, these trips fall within or accord with movements assessed within **ES Volume 1, Chapter 13: Transport and Access** [~~REP4-014~~;EN01068/APP6.1] (Rev 5). It is also apparent that the daily peak movements shown in Appendix A are also comparable or show negligible increases to those presented in **ES Volume 3, Appendix 13-1: Transport Assessment** [~~REP4-037~~;EN01068/APP6.3] (Rev 7), and no further assessment is required.

4 Conclusion

- 4.1.1 This Technical Note has reviewed and responded to the assumptions and calculations presented in **Appendix A of Stop Lime Down's Deadline 4 submission [REP4-132]**, together with the matters raised in **Table 2 of Appendix D of Stop Lime Down's Written Representation [REP1-172]**. The review has applied, wherever possible, the same methodology and presentation format used by Stop Lime Down, while incorporating updated supplier information, scheme-specific design parameters and reasonable worst-case assumptions supported by available evidence.
- 4.1.2 The comparison of solar panel and mounting structure deliveries with other nationally significant solar projects demonstrates that, when assessed on a like-for-like basis using the actual Works No. 1 Solar PV generating station areas, Lime Down Solar Park generates a comparable level of HGV activity per hectare to other consented and proposed large-scale solar developments. The analysis therefore indicates that the Applicant's forecast construction delivery assumptions are consistent with industry experience and similar projects.
- 4.1.3 The revised sensitivity calculations presented in **Appendix A** identify an increase in total construction HGV movements associated with the Solar PV sites compared with the figures originally submitted within the Transport Assessment. However, this increase reflects the application of additional conservative assumptions and the inclusion of further detail relating to construction materials, foundations, compounds, waste, substations, BESS infrastructure and ancillary components. Consequently, the revised calculations represent a robust and reasonable worst-case assessment of construction traffic generation.
- 4.1.4 Importantly, despite the increase in total calculated HGV movements, the resulting peak daily HGV flows on the principal construction routes remain broadly comparable to those previously assessed. Differences on the routes serving Lime Down A-C and Lime Down D (West) are negligible, while the increase associated with Lime Down D (East) and Lime Down E occurs on routes accessed from the A429, which has sufficient capacity to accommodate the additional movements.
- 4.1.5 ~~The assessment of Annual Average Daily Traffic (AADT) confirms that the traffic levels derived from the revised calculations remain within, or below, the levels assessed in ES Volume 1, Chapter 13: Transport and Access [REP4-014] and ES Volume 3, Appendix 13-1: Transport Assessment [REP4-037]. Furthermore, when average daily movements during the active construction periods are considered, the resulting flows remain consistent with those previously assessed as part of the Environmental Statement.~~

4.1.64.1.5 Overall, the analysis demonstrates that the revised construction traffic assumptions do not alter the conclusions of the Transport Assessment. The updated calculations provide additional confidence that the assessment has been undertaken on a robust and conservative basis and confirm that the construction traffic impacts of the Scheme have been appropriately assessed. Accordingly, the conclusions presented within **ES Volume 1, Chapter 13: Transport and Access** [~~REP4-014~~EN01068/APP/6.1] (Rev 5) remain valid, and no further highways assessment is considered necessary.

Appendix A Updated Trip Generation Calculations

Assessment of Construction Traffic Movements (Solar PV Areas only)

1. Wetlands	A	B	C	D (Wet)	D (Ext)	Total
Total Area of Lake and Wet (A)	50	70	265	20	10	415
Wetlands - Water (B)	10	10	10	10	10	50
Wetlands - Non-Water (C)	262	234	100.0	10.0	2.0	76.0
Preserving Area (D)	10.0	10.0	20.0	20.0	4.0	20.0
Number of Wetlands	10	10	10	10	10	10
Number of Wetlands (Total)	10	10	10	10	10	10
Number of Wetlands (Total)	10	10	10	10	10	10

2. Wetland Structures	A	B	C	D (Wet)	D (Ext)	Total
Area of Wetland Structure (A)	20	10	10	10	10	10
Area of Wetland Structure (B)	10	10	10	10	10	10
Area of Wetland Structure (C)	10	10	10	10	10	10
Area of Wetland Structure (D)	10	10	10	10	10	10
Area of Wetland Structure (E)	10	10	10	10	10	10
Area of Wetland Structure (F)	10	10	10	10	10	10
Area of Wetland Structure (G)	10	10	10	10	10	10
Area of Wetland Structure (H)	10	10	10	10	10	10
Area of Wetland Structure (I)	10	10	10	10	10	10
Area of Wetland Structure (J)	10	10	10	10	10	10
Area of Wetland Structure (K)	10	10	10	10	10	10
Area of Wetland Structure (L)	10	10	10	10	10	10
Area of Wetland Structure (M)	10	10	10	10	10	10
Area of Wetland Structure (N)	10	10	10	10	10	10
Area of Wetland Structure (O)	10	10	10	10	10	10
Area of Wetland Structure (P)	10	10	10	10	10	10
Area of Wetland Structure (Q)	10	10	10	10	10	10
Area of Wetland Structure (R)	10	10	10	10	10	10
Area of Wetland Structure (S)	10	10	10	10	10	10
Area of Wetland Structure (T)	10	10	10	10	10	10
Area of Wetland Structure (U)	10	10	10	10	10	10
Area of Wetland Structure (V)	10	10	10	10	10	10
Area of Wetland Structure (W)	10	10	10	10	10	10
Area of Wetland Structure (X)	10	10	10	10	10	10
Area of Wetland Structure (Y)	10	10	10	10	10	10
Area of Wetland Structure (Z)	10	10	10	10	10	10

HDI Values of Warming Strands (for 20000 records)									
	A	B	C	D (Warm)	E (Cool)	F (Total)			
Total warm (Warm: Plastic, Cardboard) (n=100)	5842	2868	9294	4752	2408	4770	3384		
Warm (Plastic)	1262	1015	2708	3466	820	2712	12322		
Warm (Cardboard)	4578	2277	10586	1786	4168	4770	15266		
Plastic (Warm)	284	284	284	284	284	284	284		
Plastic (Cool)	765	401	2140	2254	434	1060	7896		
Cardboard (Warm)	589	170	549	121	451	451	451		
Cardboard (Cool)	89	85	274	239	61	200	277		
Cardboard (Total)	1221	1046	2346	3173	744	2441	12312		
Cardboard (Warm)	284	174	547	124	451	451	451		
Cardboard (Cool)	122	87	260	239	62	205	101		
Total Cool (Warm (Cool), Plastic (Cool))	1075	611	2863	2760	455	2467	10374		
Total Cool (Warm (Cool), Cardboard (Cool))	1075	611	2863	2760	455	2467	10374		
HDI	86	46	186	146	23	268	89		

[illegible]

S. Components		width [m]	length [m]	Depth	Compaction	Volume [m ³]	HQ/ha
surfacing per compound		80	30	0.3	1.2	1080	108
removal of surfacing per compound		0	0	0	0	0	0
		A	B	C	D (H&L)	E (S&L)	F Total
Number of compounds		1	2	3	1	1	8
HQ/ha for compound surfacing		108	108	216	324	108	216
Weeks in Operation		30	30	74	87	17	61
Total HQ/ha servicing trips for compounds (including plant and machinery)		76	76	260	522	34	244
		108	108	216	324	142	460
HQ/ha visitors		108	108	216	324	142	460
		108	108	216	324	142	460

[illegible][illegible]

8. 122 kV Substations		width (m)	length (m)	area (m ²) 3.625	depth (m)	Volume (m ³)	Tonnage	kg/m ³
	surface area per substation							
	area of concrete			1,728	0.5	864	2073	198
	area of aggregate				0.3	518	1036.5	88
	other materials per substation							
		A	B	C	D (Walls)	E	F	tot
	number of 122kV sub use Area	1	0	0	0	0	0	1
	kg/m ³	200	0	200	0	200	200	1,675

width (m)	length (m)	area (m ²)	depth (m)	volume (m ³)	kg/m ³
concrete	10/10	0.8	15,215	1,208	
aggregate	10/10	0.3	5,706	871	
included 1 overall on assessment/machinery also called infrastructure control building fencing security etc.					280
				Total for substation	2,360

16.8555	270.0000 units 40.0000 Percent utilization system units (PCCs)					270.0000 40.0000		
	width (m)	length (m)	area (m ²)	depth (m)	volume (m ³)	tonnes	kg/ha	
	total constant							
	0.5500 offshore contour	3.5	7.0	0.015	0.0	0.000	12701	630
	PCC pattern contour	3.5	7.5	2.500	0.0	1.750	4002	200
	approximate terraced constant area			10.000	0.3	3.000	1913	900
	for water containment contour			10.000	0.3	3.000	13015	600
	Remove agroecotechnology, tree, cutting, infrastructure, contribute to long lasting security, etc.							
	Total for 0.5500						3.000	1400

[illegible]

15. Landscaping						
Land Parcel	Land Parcel					
	A	B	C	D (Habitat)	E (Habitat)	Total
Flower length (meters)	2715	2280	16200	13202	2654	11229
10000	1	1				3
Land Parcel						
	A	B	C	D (Habitat)	E (Habitat)	Total
Flower	2080	2080	8100	7601	1737	5702
10000	2	2		3		5

	Land Parcel						
	A	B	C	D (West)	D (East)	E	Total
Groundwater Seeding (hectares)	70	55	55	55	44	145	440
Groundwater Seeding (kg)	2884	2614	7914	7460	1745	5385	28115
H ₂ O ₂	1	1	1	1	1	1	6

	Land Parcel						Total
	A	B	C	D (West)	E (East)	F	
None Indegress Length (meters)	1819	3100	4000	3000	3000	3000	16519
Number of Species (kips)	9713	8654	27616	25771	8645	10681	77081
None Indegress	1	1	1	1	1	1	6
Number of Species	4507	4507	12088	12088	3003	3003	40000
None Indegress	18	18	30	30	0	0	76
Total Area	36	36	36	36	36	36	216

	Land Parcel					
	A	B	C	D (Habitat)	E (Habitat)	Total
New Hedgerow Length (meters)	1078	1018	1002	1414	1030	5542
Number of Hedgerow Wings	164	127	488	430	122	1231
Habitat - Hedgerow	1	1	1	1	1	5
Number of Roadbanks	227	760	2213	2165	1114	6369
Habitat - Roadbank	12	42	127	127	64	372
Total Hedgerow	38	23	67	63	15	205

	Land Parcel						
	A	B	C	D (Hwy)	E (Hwy)	F	Total
Area in hectares	2	2	5	1	4		15
Number of licensed shops	4706	4670	13,125	12,723	2664	9360	48158
100% Licensed	1	1	1	1			5
Number of footcops	2308	2235	6357	6362	1463	4764	24158
100% Licensed	7	7	13	13			30
Total (Hwy)	6	6	20	6	5	15	74

	A	B	C	D (West)	D (East)	E	Total
	81	49	136	129	33	97	486

Total HGV (PV Sites)	0.000 - 0.00
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	A	B	C	D (Total)	E	Total
Number of Working Days	213	210	204	427	56	225
Total HW Deliveries	1,532	985	1,762	4,281	1,588	2,652
Average Daily HW Deliveries	7	4	8	17	30	12
Total HW Movements	2,063	1,505	2,224	17,322	2,715	6,244
Average Daily HW Movements	10	8	10	38	23	18
Average Daily HW Deliveries (100 Loads)	15	0	15	28	17	12
Average Daily HW Movements (100 Loads)	15	0	15	38	23	18

Notes		General assumptions and inputs
		2.0 aggregate density (t/m ³)
		2.4 concrete density (t/m ³)
4/2500	panels	20.0 tonnes of aggregate per HGV
2/186	panels/ha	20.0 tonnes of concrete per HGV
720	panels/HGV	11.1 tonnes of compacted waste per HGV
		20.0 tonnes of concrete footings per HGV
		1.6 topsoil density (t/m ³)
		20.0 tonnes of topsoil per HGV

		Solar PV Site						
Vehicle Size (Max)		A	B	C	D (West)	E (East)	F	Total
No. of Vehicles	207	176	664	664	222	222	1,746	
Clear Height	2.100	2.100	7.800	7.800	2.176	6.522		
Total	1,333	1,333	5,140	6,711	1,888	2,822	17,807	

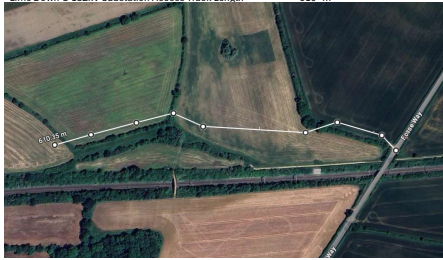
Vehicle Size (Max)	Solar PV Size						Total
	A	B	C	D (West)	D (East)	E	
16.5m Articulated	22%	20%	21%	10%	22%	19%	8%
15m Rigid	77%	80%	79%	90%	82%	81%	88%
Total	80%	100%	100%	100%	100%	100%	88%

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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Lime Down A 132kV Substation Access Track Length 250 m



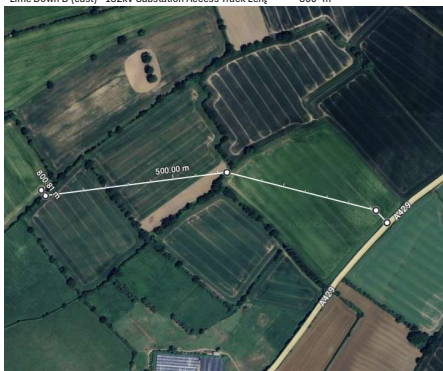
Lime Down C 132kV Substation Access Track Length 610 m



Lime Down D - 400kV Substation and BESS 900 m



Lime Down D (east) - 132kV Substation Access Track Length 800 m



Lime Down E - 132kV Substation and BESS 1350 m



Cable Route Corridor

	Peak Flows			Average Flows		
	HGV AADT Movements	LV AADT Movements	Total AADT Movements	HGV AADT Movements	LV AADT Movements	Total AADT Movements
Cable Route Corridor	12	42	54	8	28	36

Number of Accesses in Use at Any One Time	Total Access Points
4	28

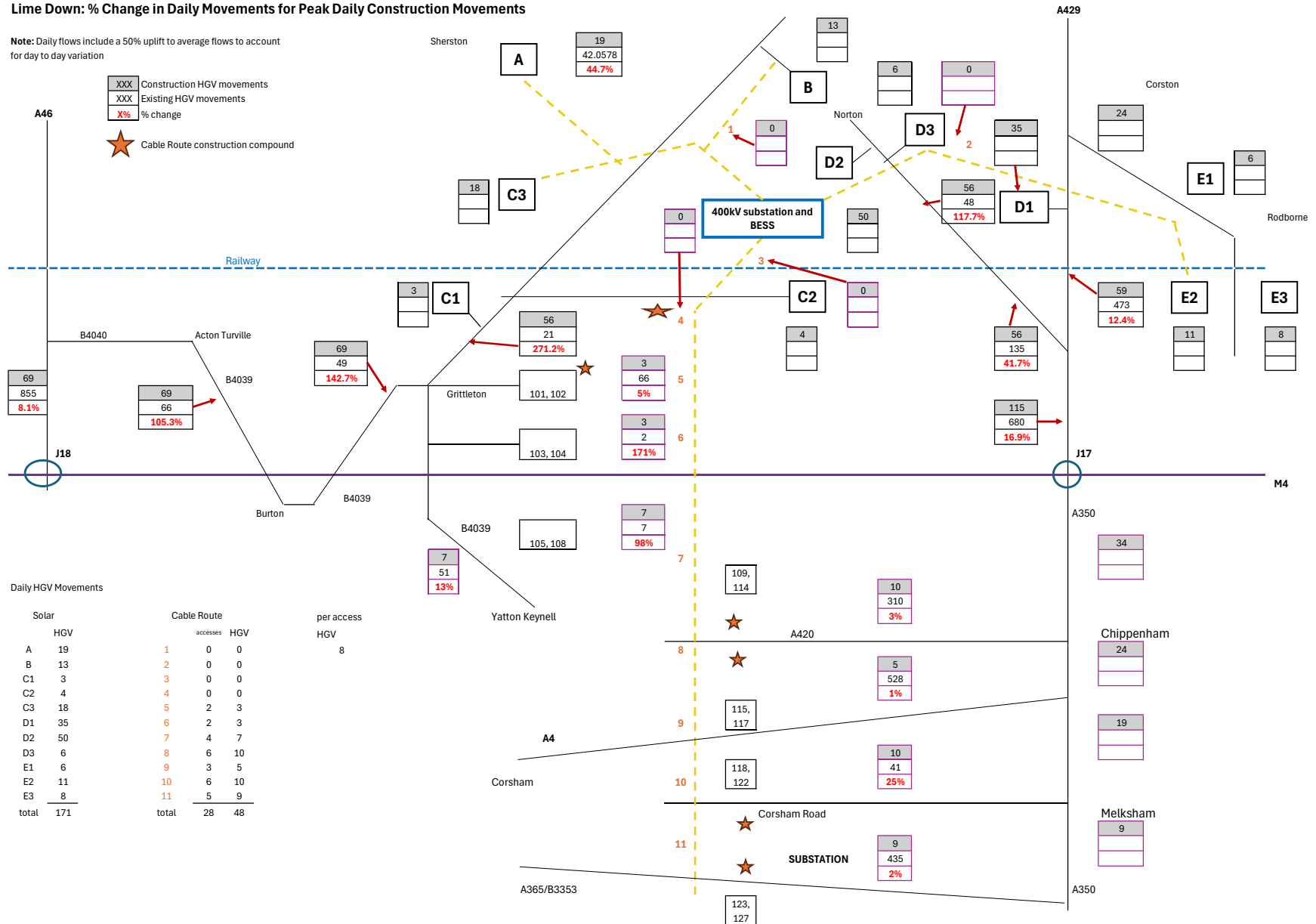
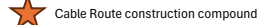
	Peak Flows			Average Flows		
	HGV AADT Movements	LV AADT Movements	Total AADT Movements	HGV AADT Movements	LV AADT Movements	Total AADT Movements
Total Per Day	48	168	216	32	112	144
Average Per Access	1.7	6.0	7.7	1.1	4.0	5.1

Links	Number of Cable Route Corridor Access Points Served	Peak Flows			Average Flows		
		HGV AADT Movements	LV AADT Movements	Total AADT Movements	HGV AADT Movements	LV AADT Movements	Total AADT Movements
M4 J18	8	14	48	62	9	32	41
A46	8	14	48	62	9	32	41
B4040	8	14	48	62	9	32	41
B4039	8	14	48	62	9	32	41
Unnamed Road West of Grittleton	8	14	48	62	9	32	41
The Street, Grittleton	2	3	12	15	2	8	10
Neeld Court, South of Grittleton	2	3	12	15	2	8	10
Road North of Yatton Keynell	4	7	24	31	5	16	21
Road to Sevington	2	3	12	15	2	8	10
Cromhall Lane	2	3	12	15	2	8	10
Fowlswick Lane	1	2	6	8	1	4	5
B4039	1	2	6	8	1	4	5
A420	2	3	12	15	2	8	10
Sheldon Corner	3	5	18	23	3	12	15
Chippenham Lane	2	3	12	15	2	8	10
Stowell Lane	1	2	6	8	1	4	5
A4 Bath Road	6	10	36	46	7	24	31
Road East of Easton	2	3	12	15	2	8	10
Road South of Easton	2	3	12	15	2	8	10
Corsham Road	1	2	6	8	1	4	5
Coppershell	3	5	18	23	3	12	15
Silver Street, Gastard	2	3	12	15	2	8	10
B3353	3	5	18	23	3	12	15
Westlands Lane (East)	1	2	6	8	1	4	5
Westlands Lane (West)	2	3	12	15	2	8	10
A365 Bath Road, Shaw	5	9	30	39	6	20	26

Appendix B Peak Daily Movements

Note: Daily flows include a 50% uplift to average flows to account for day to day variation

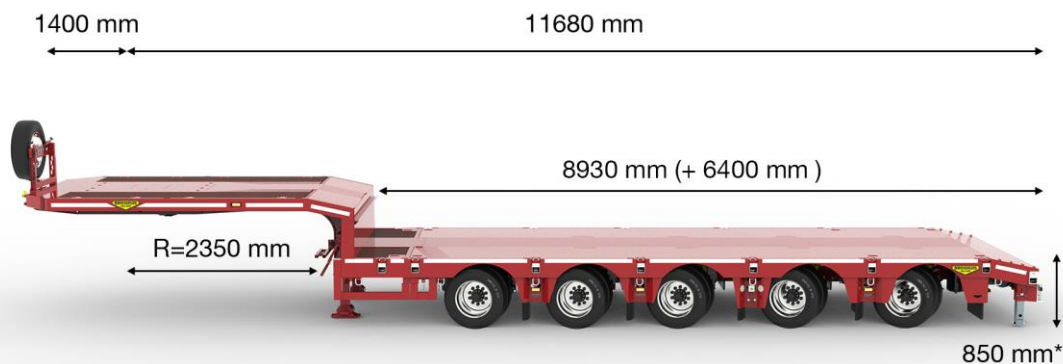
XXX	Construction HGV movements
XXX	Existing HGV movements
X%	% change



Appendix C Example 5-Axle SL2 Low Loader

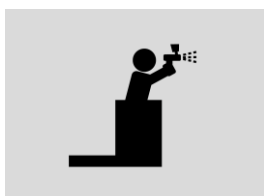
Trailer specifications

Dimensions and weights



Weights in kg	Netherlands		Germany		England	
	C & U	Special types	C & U	Special types	C & U	Special types
Maximum fifth wheel load	23000	23000	23000	23000	23000	23000
Maximum bogie load	45000	50000	40000	60000	40000	70000
Gross load capacity	68000	73000	63000	83000	63000	93000
Tare weight, app.	15000	15000	15000	15000	15000	15000
Net load capacity, app.	53000	58000	48000	68000	48000	78000

Your benefits



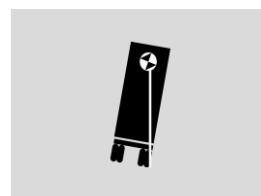
Optional complete
metalized



The lowest trailer
with the most
ground clearance



Great steering angle
of 57°



Greater stability

Neck

- The (single beam) neck height is 230 mm and suitable for 23T fifth wheel pressure. Under rear side of the neck accordance ISO chamfer
- Front extension 1400 mm
Chamfered corners at front 400x400 mm
- Fifth wheel height 1170 mm
- Neck width 2530 mm
- Rear swing clearance 2350 mm
- Hard wood floor of 28 mm thick
- 3,5" Kingpin, fitted under a ball bearing turntable. The turntable is connected to two double action hydraulic steering rams. Holder is suitable for mounting a 2" kingpin
- 10T certified lashing rings (max. Load 5T) . According NEN12640 TÜV Certificate
- 32 mm holes in the side raves, to use as lashing point
- Divided at the side raves of the neck, dim. 96x66x6mm, suitable for stakes of 81x51mm
- Spare wheel carrier at front of the gooseneck. Suitable for one spare wheel.
- Slope for easy access of the neck 600x12°.
U profile for the attachment of aluminium ramps
- Landing gear two speed vertical lift, with S foot. Static capacity of 50.000 kgs

Floor

- The torsion rigid chassis is in the lower deck extendible in increments of approx. 500 mm. Air assisted locking pins are fitted to either side of the main beam and operated by a single two way valve.
- Height of axle bogie 850 mm (loaded)
- With a central main beam of high tensile steel
- Fixed part 850 mm
- Width of loading area 2530 mm
- 'Pull out' galvanised outriggers to increase the overall lower deck width by 500mm (250mm per side of the trailer)
- 37 mm nominal hardwood in the lower deck.
8/10 mm steel chequer plate fitted over the suspension area
- Heavy duty side raves 240 mm deep, welded by strong steel cross members to chassis
- All air and service lines are located in an energy chain within the central main beam. Resulting in improved ground clearance and reduced maintenance
- 10T certified lashing rings divided in the side rave of the loading floor, placed every approx. 1.2 meter, according EN12650 with TÜV Certificate
- 32 mm holes in the side rave, to use as lashing point
- Rope hooks. On each side of the trailer
- Stake pockets divided at the side raves of the trailer, dim. 96x66x6mm, suitable for stakes of 81x51mm

- Container position for 1x 20 Ft (Container mountings are optional)
- Container position for 1x 30 Ft (Container mountings are optional)
- Container position for 1x 40 Ft (Container mountings are optional)
- Container position for 1x 45 Ft (Container mountings are optional)
- Beavertail of 300 mm x 12° for easy access of the lower deck, incl. U profile for the optional aluminium ramps
- Beavertail with 8/10 mm checkerplate floor
- At the rear of the chassis a pair of drop down steady legs to support the chassis beaver tail when using the ramps

Axle bogie

- Broshuis 12T axles
- Axle quantity: 5
- The patented SL2 suspension can be independently steered left and right. It combines a low ride height with a maximum steer angle of 57 degrees. The patented SL2 suspension can be driven at any ride height without any influence on the toe-in and toe-out. It has a travel of 360 mm (+290/-70 mm). The brake cylinders are relocated to give maximum possible protection with this latest design.
- Broshuis hydraulic steering system, consists of two fully independent circuits.
 - Butterfly section, with adjustable conical bearing, resulting in extremely low maintenance,
 - Adjustable steering rods, to correct axle alignment tracking to compensate for wear during the life of the trailer.
 - Air, electrical and hydraulic service lines are housed inside the central spine(s) in an energy chain
- All axles of the bogie are hydraulic steered
- Tyre Pressure Monitoring System according ECE R141
- Distance between the axles is 1510 mm
- The left and right floor height can be operated separately. 2 LED indicators are installed to set the correct floor height. Operation from the neck.
- Manual override steering with 3kW electrical pump
- Electrical hydraulic override steering system, to allow the axles to steer independently of the tractor unit, by means of buttons. Butterfly section, with adjustable conical bearing, extremely low maintenance - adjustable steering rods, to correct axle alignment tracking to compensate for wear during the life of the trailer. Air, electrical and hydraulic service lines are housed inside the central spine(s) in an energy chain
- Two air line Wabco brake system, EC-approved design with an automatic load sensing device. Spring type chambers fitted to two axles for the hand brake. Incl. EBS

- An hydraulic pressure gauge is connected to the suspension for determining the axle loads
- Tyre brand to choice of Broshuis (Continental, Goodyear or comparable). 245/70 R17.5
- Steel rims, light grey

Lights

- Lights are complete in LED
- 2 pairs of 3-chambers rear lights and Led side-marker-lights. Conform EU-specifications
- One LED fog light
- 1 pair of reversing lights LED
- One rear flashing beacon connection at the rear side
- On each side at the neck and axle bogie a connector fitted with holder for extendible marker board lights
- Connector for over width marker board lights: 3 pin plug

Accessories

- Spare wheel 1x
- Central Greasing level II with a pump. Brand of pump Bekamax
- EBS connector
- Connectors at the front: Dual 7 pin SAE plugs
- Air couplings palm type
- A 35mm² cable between truck and trailer for the use of any electrical power supply
- 24V power connector NATO
- The chassis is equipped with white reflective tape on sides and red reflective tape on the back

Paintwork

- Metallized and finished in one colour. (non-metallic)
- After chassis assembly, the support brackets for valves, air tanks and pipe and wiring runs are fitted. The completed chassis is then shot blasted and immediately painted according to the Broshuis 2K paint system. The final fitting of all the components is carried out after the chassis has been through the preservation process

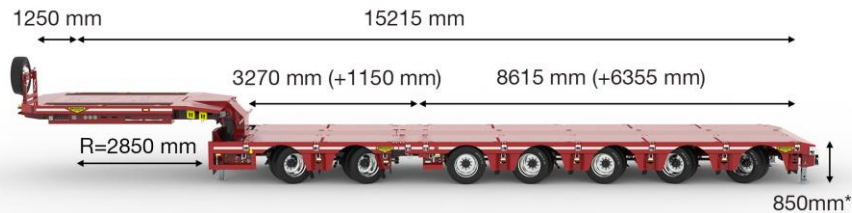
Permits

- SERT-Document. Heavy transport permit for the Netherlands to increase axle loads

Appendix D Example 7-Axle SL2 Low Loader

Trailer specifications

Dimensions and weights

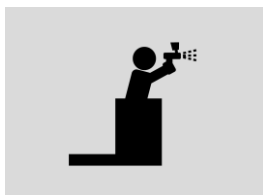


Weights (in kg)	Netherlands		Germany		England	
	C & U	Special types	C & U	Special types	C & U	Special type
Maximum fifth wheel load	30000	30000	30000	30000	30000	30000
Maximum bogie load	63000	70000	63000	84000	63000	101500
Gross load capacity	93000	100000	93000	114000	93000	131500
Tare weight, app.	25000	25000	25000	25000	25000	25000
Net load capacity, app.	68000	75000	68000	89000	68000	106500



Weights (in kg)	Netherlands		Germany		England	
	C & U	Special types	C & U	Special types	C & U	Special type
Maximum fifth wheel load	30000	30000	30000	30000	30000	30000
Maximum bogie load	45000	50000	45000	60000	45000	72500
Gross load capacity	75000	80000	75000	90000	75000	102500
Tare weight, app.	18500	18500	18500	18500	18500	18500
Net load capacity, app.	56500	61500	56500	71500	56500	84000

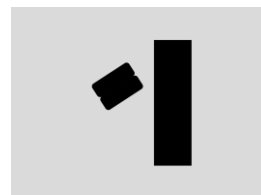
Your benefits



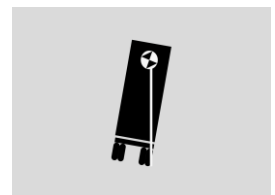
Optional complete
metalized



The lowest trailer
with the most
ground clearance



Great steering angle
of 57°



Greater stability

Neck

- The (single beam) hydraulic neck height is 350 mm and suitable for 30T fifth wheel pressure
- The hydraulics of the gooseneck are connected and linked with the hydraulic suspension of the dolly. The max fifth wheel pressure is switchable to 19T or 30T
- Front extension 1250 mm. Chamfered corners at front 400x400 mm
- Fifth wheel height 1250 mm
- Neck width 2530 mm
- Rear swing clearance 2850 mm
- Hard wood floor of 28 mm thick
- 3,5" Kingpin, fitted under a ball bearing turntable. The turntable is connected to two double action hydraulic steering rams. Holder is suitable for mounting a 2" kingpin
- A hydraulic stinger is provided with 2 separate operable cylinders to support the neck whilst removing the gooseneck. Cylinders approx. 1300 mm from Kingpin.
- 10T certified lashing rings (max. Load 5T) . According NEN12640 TÜV Certificate
- 32 mm holes in the side rave, to use as lashing point
- Divided at the side raves of the neck, dim. 96x66x6mm, suitable for stakes of 81x51mm
- Spare wheel carrier at front of the gooseneck. Suitable for one spare wheel.
- At the front a pair of drop down legs (lightweight construction)

Floor

- Step frame construction with a central main beam of high tensile steel. The torsion rigid chassis is in the lower deck extendible in increments of approx. 500 mm. Air assisted locking pins are fitted to either side of the main beam and operated by a single two way valve. All air and service lines extend automatically when extending the lower deck
- The dolly is 1x extendible for better weight distribution or for better supporting the load.
- Height of axle bogie 850 mm (loaded)
- With a central main beam of high tensile steel
- Main beam has compression joints between neck and dolly and between dolly and rear axle bogie. The trailer can therefore also be used without dolly
- Width of loading area 2730 mm
- 'Pull out' galvanised outriggers to increase the overall lower deck width by 500mm (250mm per side of the trailer)
- 8/10 mm steel chequer plate fitted over the suspension area
- Heavy duty side raves 240 mm deep, welded by strong steel cross members to chassis

- All air and service lines are located in an energy chain within the central main beam. Resulting in improved ground clearance and reduced maintenance
- 10T certified lashing rings divided in the side rave of the loading floor, placed every approx. 1.2 meter, according EN12650 with TÜV Certificate
- 32 mm holes in the side rave, to use as lashing point
- Rope hooks. On each side of the trailer
- 10T lashing rings floor against the main beam
- Stake pockets divided at the side raves of the trailer, dim. 96x66x6mm, suitable for stakes of 81x51mm
- 2 pair of stake pockets against main beam dolly
- Stake pocket row between axle 1 and 2
- Stake pocket row between axle 3 and 4
- Stake pocket row between axle 5 and 6
- Stake pocket row between axle 6 and 7
- Beavertail of 300 mm x 12° for easy access of the lower deck, incl. U profile for the optional aluminium ramps
- At the rear of the chassis a pair of drop down steady legs to support the chassis beaver tail when using the ramps

Axle bogie

- Broshuis 12T axles
- Axle quantity: 7
- The patented SL2 suspension can be independently steered left and right. It combines a low ride height with a maximum steer angle of 57 degrees. The patented SL2 suspension can be driven at any ride height without any influence on the toe-in and toe-out. It has a travel of 360 mm (+290/-70 mm). The brake cylinders are relocated to give maximum possible protection with this latest design.
- Broshuis hydraulic steering system, consists of two fully independent circuits.
 - Butterfly section, with adjustable conical bearing, resulting in extremely low maintenance,
 - Adjustable steering rods, to correct axle alignment tracking to compensate for wear during the life of the trailer.
 - Air, electrical and hydraulic service lines are housed inside the central spine(s) in an energy chain
- All axles of dolly are hydraulic steered
- Tyre Pressure Monitoring System according ECE R141
- Distance between axles is 1510 mm
- The left and right floor height can be operated separately. 2 LED indicators are installed to set the correct floor height. Operation from the neck.
- Manual override steering with 3kW electrical pump

- Electrical hydraulic override steering system, to allow the axles to steer independently of the tractor unit, by means of buttons. Butterfly section, with adjustable conical bearing, extremely low maintenance - adjustable steering rods, to correct axle alignment tracking to compensate for wear during the life of the trailer. Air, electrical and hydraulic service lines are housed inside the central spine(s) in an energy chain
- Two air line Wabco brake system, EC-approved design with an automatic load sensing device. Spring type chambers fitted to two axles for the hand brake. Incl. EBS
- A raisable axle is fitted on axle 1 and 2 to adjust the weight on the fifth wheel or to reduce the tyre wear.
- An hydraulic pressure gauge is connected to the suspension for determining the axle loads
- Tyre brand to choice of Broshuis (Continental, Goodyear or comparable). 245/70 R17.5
- Steel rims, light grey
- Heavy transport permit for the Netherlands to increase axle loads

Lights

- Lights are complete in LED
- 2 pairs of 3-chambers rear lights and Led side-marker-lights. Conform EU-specifications
- One LED fog light
- 1 pair of reversing lights LED
- One rear flashing beacon connection at the rear side
- Preparation for over width marker board lights. On each side at the neck, dolly, front and rear axle bogie a connector.
- Connector for over width marker board lights: 3 pin plug

Accessories

- Spare wheel 1x
- Central Greasing level II with a pump. Brand of pump Bekamax
- EBS connector
- Connectors at the front: Dual 7 pin SAE plugs
- Air couplings palm type
- A 35mm² cable between truck and trailer for the use of any electrical power supply
- 24V power connector NATO
- The chassis is equipped with white reflective tape on sides and red reflective tape on the back

Paintwork

- Metallized and finished in one colour. (non-metallic)
- After chassis assembly, the support brackets for valves, air tanks and pipe and wiring runs are fitted. The completed chassis is then shot blasted and immediately painted according to the Broshuis 2K paint system. The final fitting of all the components is carried out after the chassis has been through the preservation process

Permits

Appendix E Construction Days and Week Calculations

Tracker	2027					2028												2029						Working Days	Weeks	
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May			Jun
Solar PV Site A	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	212.5	39
Solar PV Site B																									212.5	39
Solar PV Site C																									394	74
Solar PV Site D (West)																									395.5	75
Solar PV Site D (East)																									94.5	17
Solar PV Site E																									324.5	61
BESS (Solar PV Site D (West))																									440	82
440KV (Solar PV Site (West))																									466.5	87

Overall Summary (England & Wales Bank Holidays Excluded, Saturdays Counted Separately)

Period	Working Weekdays (Excl. Bank Holidays)	Saturdays	Full-Day Equivalent*
Jul 2027 – Aug 2027	43	9	47.5
Sep 2027 – Dec 2027	86	17	94.5
Jul 2027 – Mar 2028	193	39	212.5
Feb 2028 – Jun 2029	357	74	394.0
Jan 2028 – Mar 2029	315	66	348.0
Mar 2028 – Apr 2029	294	61	324.5
Nov 2027 – May 2029	399	82	440.0
Jul 2027 – Feb 2029	423	87	466.5

Solar PV Site A
Solar PV Site B

- Summary
- 193 working weekdays (after bank holidays)
 - 39 Saturdays
 - 212.5 full-day equivalent working days (if Saturdays are half-days)

Solar PV Site C

- Summary
- 357 working weekdays (excluding bank holidays)
 - 74 Saturdays
 - 394 full-day equivalent working days (if Saturdays are half-days)

Solar PV Site D (West)

Period	Working Weekdays	Saturdays
Jul-Aug 2027	43	9
Jan 2028-Mar 2029	315	66
Total	358	75

If Saturdays are half-days:
 $358 + (75 \times 0.5) = 395.5$ full-day equivalent working days.

Solar PV Site D (East)

Summary

Period	Working Weekdays	Saturdays	Full-Day Equivalent*
Sep-Dec 2027	86	17	94.5

*Assuming Saturdays are counted as half-days.

Solar PV Site E

Summary

Period	Working Weekdays	Saturdays	Full-Day Equivalent*
Mar 2028 – Apr 2029	294	61	324.5

*Assuming Saturdays are counted as half-days.

BESS (Solar PV Site D (West))

- Summary
- 399 working weekdays (excluding bank holidays)
 - 82 Saturdays
 - 440 full-day equivalent working days (if Saturdays are half-days) [open](#)

440KV (Solar PV Site (West))

- Summary
- 423 working weekdays (excluding bank holidays)
 - 87 Saturdays
 - 466.5 full-day equivalent working days (if Saturdays are counted as half-days) [open](#)