



LIME DOWN SOLAR PROJECT

DEADLINE 7 ADDITIONAL TRANSPORT SUBMISSION – STOP LIME DOWN

Oct 2026





1. Cover Submission

1.1.1. The papers attached to this submission comprise Stop Lime Down's (**SLD('s)**) further transport submission for Deadline 7. It is in addition to the transport submission provided as part of SLD's principal Deadline 7 submission [**REP7-145**]. It includes a response to Action Point 7 of the Action Points from ISH6 [**EV12-010**].

1.1.2. This submission is provided late as SLD's transport expert was still awaiting documents and information from the Applicant as at 2 October 2026. This was noted at para 2.2.21-2.2.23 of SLD's principal Deadline 7 submission [**REP7-145**]. Indeed, as will be apparent from the attached papers, SLD's transport expert is still awaiting some such documents and information. However, given the limited period remaining to Deadline 8, it was considered necessary to provide the ExA what was available as soon as possible (so that it could be considered by the ExA and parties prior to Deadline 8).

1.1.3. SLD apologise for the delay in providing this document to the ExA. SLD would respectfully request and welcome the ExA accepting this additional transport submission so that it is available to the parties prior to Deadline 8.

1.1.4. Attached to this document are first a revised Table 5 as requested for Action Point 7, followed by Mr. Bamber's updated trip generation figures.

1.1.5. This submission has not been produced with the use of AI.

Table 5 (Revised): Increases in HGV Movements on Links (includes both solar array areas and cable route)

Stop Lime Down

Link	Daily					Hourly				
	2028 Base	Peak		Average		Peak Hour	Peak		Average	
		No.	%	No.	%		No.	%	No.	%
B4039	66	82	+124%	59	+90%	Not calculated by SLD				
Road W of Grittleton	49	82	+167%	59	+120%					
Fosse Way	21	68	+326%	45	+217%					
Sherston Road	42	23	+55%	15	+37%					
Road E of Hullavington	135	64	+48%	43	+32%					
Bradfield Cottages	48	58	+121%	39	+81%					

Applicant

Link	Daily					Hourly				
	2028 Base	Peak		Average		Peak Hour*	Peak		Average	
		No.	%	No.	%		No.	%	No.	%
B4039	66	69	+105%	46	+70%	7	10	+143%	7	+100%
Road W of Grittleton	49	69	+143%	46	+95%	3	10	+333%	7	+233%
Fosse Way	21	56	+271%	37	+181%	3	8	+267%	5	+167%
Sherston Road	42	19	+45%	13	+30%	6	3	+50%	2	+33%
Road E of Hullavington	135	56	+42%	38	+28%	12	8	+67%	5	+42%
Bradfield Cottages	48	56	+118%	38	+79%	6	8	+133%	5	+83%

Derived from Table 13-30 of REP7-061 * derived from Annex F of REP7-061

	Slight change (30-60%)		Moderate change (60-90%)		Substantial change (>90%)
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SLD: Construction HGV Trip Generation (Deadline 7)

Summary of table showing the Applicant's and SLD's estimates of HGV numbers

Item	Applicant's Original Estimate*	Applicant's Current Estimate**	SLD's Current Estimate
Solar panels	588,988	842,500 panels	917,381 panels, but 842,500 is used to align with Applicant's commitment to limit HGVs to 1,200 in the OCTMP. The number of HGVs could not be limited to 1,200 if the number of panels exceeds 842,500.
Panels per HGV	500 panels	720 panels	720 panels (Applicant's figure is used -see above)
Mounting structures	540 HGVs	599 HGVs (51.2% of panel deliveries)	891 HGVs (73.0% of panel deliveries, derived from Applicant's figures)
Concrete footings	0 HGVs	104 HGVs	275 HGVs
Waste packaging	230 HGVs	529 HGVs	529 HGVs
General access tracks	4,940 HGVs	3,718 HGVs	3,718 HGVs
BESS/400kV substation access tracks		442 HGVs	553 HGVs
132 kV substation access tracks		700 HGVs	700 HGVs
Compound surfacing	2,196 HGVs (includes spoil removal and 'general')	1,080 HGVs	1,620 HGVs
Compounds (other)		1,252 HGVs	1,252 HGVs
Spoil	2,196 HGVs (includes compounds and 'general')	721 HGVs	2,025 HGVs
33kV conversion units	0	166 HGVs	166 HGVs
Conversion units (foundations)	0	701 HGVs	701 HGVs
132kV substations	496 HGVs	1,022 HGVs	1,022 HGVs
400kV substation	1,369 HGVs	2,646 HGVs	2,646 HGVs
BESS units	975 HGVs	270 AIL vehicles	270 AIL vehicles
BESS Power Conversion Units		45 HGVs	45 HGVs
BESS foundations		2,051 HGVs	2,051 HGVs
Other BESS components		100 HGVs	100 HGVs
Cable	50 HGVs	55 HGVs	55 HGVs
Landscaping	495	495	495
General	0	0	0
Drainage	0	0	0
Total (solar areas)	13,043 HGVs	17,867 HGVs	21,529 HGVs
Cable route corridor	20,160 HGVs	20,160 HGVs	20,160 HGVs

* Applicant's original estimate from Annex E of APP-233 (Transport Assessment)

** Applicant's current estimate from Annex E of REP7-061 (Transport Assessment Rev. 7 Part 2)

Item	Applicant's estimate and Applicant's notes		SLD estimate and 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). 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] based on the delivery of 720 panels per HGV as specified below.	917,381 panels 842,500 used to reflect OCTMP	SLD's estimate is based on a total panel area of 385.3ha assuming that panel rows have a width of 4.5m, are spaced 2.5m apart and each panel has an area of 2.7m². It is possible that the number of panels would be higher because the 3P configuration may involve a lesser angle of inclination and therefore allow rows to be spaced more closely. The Applicant has been asked to provide an indicative diagram showing the 3P configuration but no response has been received as of the date of submission (12 October 2026). The Applicant's estimate is not accepted since the total of 842,500 panels appears to be based simply on assuming 720 panels rather than the originally assumed 500 panels per HGV with exactly the same number of HGVs (1,170) as originally assumed. Thus, it appears to be derived from the number of HGV movements and not from the areas provided for within the works plans. Notwithstanding SLD's position, the 842,500 figure is used given the OCTMP commitment. However, see text in row below.
Number of panels per	720 panels	The delivery of 720 panels per High Cube 40ft container has been calculated. This has been confirmed by the manufacturer/supplier.	720 panels used to reflect	The Applicant has provided evidence to show that 720 x 2.7m ² panels can be transported in a single high cube container. However, for this value to be applied directly, it would be necessary to guarantee that the 2.7m ² panels would be used

HGV		To provide certainty, the requirement to deliver panels by 40ft High Cube container has been included in the latest Outline CTMP submitted at Deadline 5.	OCTMP	and that all containers would be high cube. This is a very best case and not considered a reasonable assumption. However, the Applicant is committing to ensuring that the total number of HGVs associated with panel transport does not exceed 1,200. It should be noted that is the total number of panels exceeds 842,500, it will be impossible for the Applicant to limit the number of HGVs to 1,200, even if all of these carried high cube containers. As such, significant concerns remain about whether what is secured in the OCTMP is achievable at all.
Mounting Structures	599 HGVs (51.2% of panel HGVs)	in Table 2 of Appendix A of Stop Lime Downs Deadline 4 Comments [REP4-132] it is suggest 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 flat bed. Assuming a worst-case of 0.9MW, this results in a total of 599 HGV deliveries.	891 HGVs (73.0% of panel HGVs as derived from OCTMP)	Information provided by the Applicant suggests that the mounting structure estimate does not allow for piles/foundations. Confirmation of this has been sought from the Applicant but no response has been received as at the date of submission (12 October 2026). The absence of an allowance for piles would explain why the Applicant is suggesting that a single HGV can transport around 1,400 mounting structures. Given that piles are several metres long (up to 4m depth plus section above ground), it is implausible to suggest that sufficient piles plus frames plus supporting structures for 1,400 panels could be transported in a single load. The 73.0% of panel deliveries is adopted as the average from other similar developments although this may be an under-estimate given that no allowance has been made for piles. As above, this figure is now included as derived from the Applicant's OCTMP figure.
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:	275 HGVs	The latest Illustrative Drawings (REP5-065) show substantial concrete footings. If there are 16.03 ha of sensitive areas, this constitutes 4.2% of the total panel areas (using Appellant's figure of 385.3ha of panels). This would result in 275 HGV deliveries based on the concrete footings shown in Appendix 3.3 of the ES (REP5-065)

		• 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.		
Waste (Packaging)	529 HGVs	This sets out the HGVs associated with the total volumes of waste (packaging) set out in Table 3 of the Outline Waste Management Chapter 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 panels based on a 3P layout. A compactor will be provided on site to increase weight per vehicle of waste transported from site. This would allow tipper lorries to remove 11.1 tonnes loads or 20m3 of compacted waste.	529 HGVs	Agreed
General Access Tracks	3,718 HGVs	This is based on the need for 28.1km of general access track 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].	3,718 HGVs	Agreed
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,	553 HGVs	The illustrative design in Appendix 3-3 shows drainage ditches that, on a reasonable worst case basis are likely to need to be rock-filled or cemented to avoid collapse. A 25% allowance has been made for drainage infrastructure.

		widening at bends with a compacted construction depth of 0.65 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.		
132kV Access Tracks	700 HGVs	The access track required to serve the 132kV substations total 2.9km 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.	700 HGVs	Agreed
Compound Surfacing	108 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 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	162 HGVs per compound	Includes an allowance for the removal of 50% of compounds since it is not plausible that compound material can be re-used on site for access tracks since both compounds and access tracks will need to be operational simultaneously in each area. If a compound within an area is to be used for access tracks in another area, the material will still need to be transported on the external highway network..

		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) • One potential further compound in the vicinity of the BESS.		
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 (Rev 4) [REP4-037].	1,252 HGVs	Two HGVs per week for regular servicing (water, fuel, removal of waste from welfare facilities) is reasonable. This does not include the import and export of all structures associated with compounds and movements associated with machinery and equipment – see below.
Spoil	721 HGVs (10%)	The volume of material is derived directly from the volumes of material used for access roads, compounds, foundations of substations and the	2,025 HGVs (25%)	Assumes 25% of spoil removed from site. This is still considered a conservative estimate as it represents significantly less spoil than that displaced by substation and BESS

	spoil removed)	BESS. This amounts to 94,589m ³ . 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.	spoil removed)	foundations alone (38% of total). It is estimated that the BESS bund would, if comprised entirely of spoil displaced elsewhere use around 12% of the total spoil volume. The Applicant has presented no information to show where spoil is proposed to be stored and there has been no assessment of the consequences of storing large quantities of spoil on site.
33kV Conversion Units	166 HGVs	The Applicant now allows for 166 conversion units. As confirmed by the supplier, 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) (4.4MVA). Each unit will require one HGV delivery.	166 HGVs	Agreed
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. 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.	701 HGVs	Agreed
132kV Substations	255 HGVs per substation	The indicative size of the 132 kV substations is 3,455m ² (see 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 a maximum 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 250m ²	255 HGVs per substation	Agreed

		(7.2%) of the area comprising concrete foundations. 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 50 deliveries associated with these items for each 132kV substation.		
400kV Substation Foundations	2,396 HGVs	The indicative size of the 400 kV 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 this area would be 0.8m. It has been assumed that a maximum 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 1,924m² (5.1%) of the area would comprise concrete foundations.	2,396 HGVs	Agreed
400kV Substation Other	250 HGVs	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 150 deliveries associated with these items.	250 HGVs	Agreed
BESS Units	270 AIL vehicles	As confirmed by the supplier, each BESS unit (5MWh) will comprise of a 20ft, 43 tonne 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	270 AIL vehicles	Agreed

		5-axle SL2 Semi low loader trailer capable of delivering the BESS units is provided at Appendix C .		
BESS Power Conversion System (PCS)/transformer Units	45 HGVs	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.	45 HGVs	Agreed
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 assume an average depth of concrete for BESS and PCS foundations of 0.8m. 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.	2,051 HGVs	Agreed
Other BESS Components	100 HGVs	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	100 HGVs	Agreed

		deliveries associated with these items.		
Cable	55 HGVs	The Applicant has now allowed for 50 deliveries associated with cable associated with the solar array areas. The length of DC cables has been uplifted to account for an uplift to 842,508 panels based on a 3P layout. Not uplift is required for AC cables as none of the electrical equipment upstream of these inverters needs to be uplifted.	55 HGVs	Agreed
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 (Rev 4) [REP4-037] .	495 HGVs	Agreed
General	0	The Applicant identifies 2,685 HGVs associated with compounds, spoil removal and landscaping. These items are dealt with individually above so no additional allowance is made.	800 HGVs	It is noted that for West Botley, a solar farm of similar size to Lime Down (Works No. 1 area 839ha), a total of 1,600 HGVs is allowed for ' <i>excavators, construction machinery and cranes</i> '. The Applicant's allowance for spoil removal and landscaping does not include these elements of the scheme. It also does not allow for the delivery and later removal of all physical structures and equipment accommodated within compounds or for the establishment watering of new trees and hedgerows (the latter could continue for a significant period of time). The Applicant's allowance for compounds only covers weekly servicing (fuel, water, removal of waste from welfare facilities). The Applicant has therefore overlooked this significant category of HGV movement. The figure of 800 HGV constitutes half of that proposed at West Botley and represents only 80 HGVs at each compound over the lifetime of the project.
Highway Improvements and Site	0	The Applicant has confirmed that these would be constructed before the main scheme construction period.	0	Agreed

Accesses				
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, the 400kV substation and the 132kV substations.	0	Agreed (see comments regarding 'other' trips above)
Cable Route Corridor	4 HGV Deliveries (8 movements), 4 LGV Deliveries (8 movements) and 10 Cars/Vans (20 movements) per access	The Transport Assessment [REP3-065] 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 the 22km cable length. All movements are accounted for within the daily HGV movements.	4 HGV Deliveries (8 movements), 4 LGV Deliveries (8 movements) and 10 Cars/Vans (20 movements) per access	Agreed
Construction Days	5.5 day per week	The Applicant has updated the proposed construction days for each site based on the construction programme, 5.5 days per week and bank holidays. A 20-month construction period has now also been assumed for the 400kV substation.	5.5 day per week	Agreed
Overall (solar areas)	17,867 HGVs	(37% increase over original 13,043 HGVs)	21,378 HGVs	(64% increase over original 13,043 HGVs)