CLEVE HILL SOLAR PARK

THE APPLICANT'S RESPONSES TO SUBMISSIONS RECEIVED AT DEADLINE 4

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Revision A

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CLEVE HILL
SOLAR PARK

TABLE OF CONTENTS

List of Abbreviations

BBPP	Breeding Bird Protection Plan
CCC	Canterbury City Council
CEMP	Construction Environment Management Plan
CHSP	Cleve Hill Solar Park
CHSPL	Cleve Hill Solar Park Limited
CNMP	Construction Noise Management Plan
CTMP	Construction Traffic Management Plan
DCO	Development Consent Order
EA	Environment Agency
EIA	Environmental Impact Assessment
EPSM	European Protected Species Monitoring Licence
ES	Environmental Statement
ESO	Electricity System Operator
FES	Future Energy Scenarios
GB	Great Britain
GREAT	Graveney Rural Environment Action Team
Ha	Hectares
HGV	Heavy Goods Vehicle
ISH	Issue Specific Hearing
KCC	Kent County Council
kV	Kilovolt
LBMP	Landscape and Biodiversity Management Plan
MW	Megawatt
NETS	National Electricity Transmission System
NPS	National Policy Statement
NSIP	Nationally Significant Infrastructure Project
NTS	Non-Technical Summary
PEIR	Preliminary Environmental Information Report
PINS	Planning Inspectorate
PRoW	Public Rights of Way
PV	Photovoltaic
RR	Relevant Representations
SBC	Swale Borough Council
SPA	Special Protection Area
SPA CNMP	Special Protection Area Construction Noise Management Plan
SoCG	Statement of Common Ground
SSSI	Site of Special Scientific Interest
TEC	Transmission Entry Capacity
TCO	Transport Coordination Officer
TMG	Traffic Management Group
TWh	Terawatt hours
WR	Written Representation
WWII	World War Two

1 INTRODUCTION

1. This document provides Cleve Hill Solar Park Ltd's (the Applicant's) response to the Written Representations (WRs) submitted to the Planning Inspectorate (PINS) by Deadline 4 on 30 August 2019, relating to the Development Consent Order Application (the DCO Application) for Cleve Hill Solar Park (the Development).

2. Table 1.1 lists the organisations and individuals who made submissions at Deadline 4. The Applicant has responded to the points raised by these stakeholders in Section 2 of this document.

3. References to the Application documentation are provided where necessary according to the reference system set out in the Cleve Hill Solar Park Examination Library.

Table 1.1: List of organisations and individuals who submitted Written Representations

PINS Reference	Written Representation Received from
REP4-054	Kent County Council (KCC)
REP4-058 REP4-059	Chris Lowe
REP4-063 REP4-064 REP4-065 REP4-066 REP4-067	Graveney Rural Environment Action Team (GREAT)
REP4-071	Tom King

4. The following Deadline 4 submissions were received which do not require a response:

   - REP4-056 - Blue Transmission London Array Limited (BT LAL) and London Array Limited (LAL) update email; and
   - REP4-070 - Stephen Ledger, information to support presentation at Open Floor Hearing 3.

5. All other Deadline 4 submissions were responses to the Examining Authority's further written Questions (ExQ2) which are addressed in the Applicant's Comments on Responses to ExQ2 (Deadline 5 submission document reference 13.3.1).

1.1 Appendices

6. This response is supported by the following appendices.

Table 1.2: List of Appendices

Appendix	Title
1	Transmission Entry Capacity Register 05/09/19, National Grid Electricity System Operator
2	Email correspondence from Network Rail regarding abnormal load movements over Graveney railway bridge
3	Topographical survey results

2 STAKEHOLDER WRITTEN REPRESENTATIONS AND THE APPLICANT'S RESPONSES

2.1 REP4-054 Kent County Council

Table 2.2: The Applicant's Comments on KCC's comments on the Draft DCO

Ref.	Issue Raised	Applicant's Comment
Part 1 - Preliminary	*Interpretation* The draft DCO defines "permissive paths"; however, it does not provide any detail on the alignment of these paths or the process of establishing these new routes. Additional wording should be inserted into the DCO to clarify the permissive path alignment as the route shown on the Rights of Way Plan. The DCO should also define the process for establishing the permissive paths. KCC recommends the following text is included within the DCO - "following consultation with the KCC PROW and Access Service, the applicant will enter into a licensed permissive path agreement, with the terms and conditions to be agreed with the local highway authority."	This point has been addressed through addition to the permissive path section in the Outline Design Principles document submitted at Deadline 5 (document reference 7.1, Revision D). Additionally, the Applicant has added wording to the definition of "Permissive Path" in the DCO, as requested, in the dDCO submitted for Deadline 5 (document reference 3.1, Revision E). The Applicant also provided a relevant response to ExQ2.8.6 in the Applicant's Responses to the ExA's Second Written Questions [REP4-020].
Schedule 1 Part 2 – Requirements	*Requirement 8: Surface and Foul Water Drainage* KCC welcomes the inclusion of KCC as Lead Local Flood Authority as a consultee for this Requirement.	The Applicant notes this confirmation.
	Requirement 9: Archaeology The County Council recognises that Requirement 9 secures the agreement and implementation of a Written Scheme of Investigation (WSI) for archaeological works. This will be in accordance with the Outline WSI and covers the phases of site investigation and post investigation works through assessment, analysis, reporting and archiving. KCC can confirm that it is satisfied with the wording of Requirement 9.	The Applicant welcomes this confirmation.

Ref.	Issue Raised	Applicant's Comment

	Requirement 10: Construction Environmental Management Plan / Requirement 13: European protected species
	
	The County Council recognises that these requirements refer to breeding birds and protected species. However, the DCO does not currently refer to the other species recorded on site, including foraging bats, water voles and reptiles. The development is proposing to retain the majority of the habitat in which these species were recorded, but there is a need to ensure that they will be protected during the works. KCC recommends that there is a need for a requirement that requests the submission of an Ecological Mitigation Strategy, which includes all species including those associated with the designated sites.
	
	KCC notes that Requirement 13 states: *(3) Where a European protected species is shown to be present, the phase of authorised development must not begin until, after consultation with Natural England and the relevant planning authority, a scheme of protection and mitigation measures has been submitted to and approved by the relevant planning authority.*
	
	It would be useful for the scheme to have an overarching Detailed Mitigation Strategy. If the surveys carried out on the site identify something different than anticipated, the applicant should engage with the Local Planning Authority and Natural England to agree mitigation. The wording for this requirement as currently drafted suggests that if any European protected species are recorded, development will not commence until mitigation has been agreed. The site is adjacent to the Swale SPA/Ramsar/SSSI and is known to
		In respect of Requirements 10 and 13 (following amendments to the draft DCO at Deadline 5, now 11 and 14), the Applicant does not agree that an additional ecological mitigation strategy is necessary. The required mitigation is already captured in other documents secured under the draft DCO, for example in Table 1 of the outline LBMP which is replicated in Appendix E of the CEMP. Examples of this are set out below:
		
		• Great crested newt
		  ○ Addressed within EPSM Licence and provided NE LONI
		  ○ Captured in the LBMP/CEMP
		• Water Vole
		  ○ All addressed within UK Protected Species Licence and provided NE LONI
		  ○ Captured in the LBMP/CEMP
		• Reptiles (common lizard and grass snake)
		  ○ Two staged habitat manipulation in any areas of suitable habitat to encourage species to disperse into adjacent retained/untouched habitat. Only applicable along the ditch network (where impacted) and areas of grassland and needs to be done between April to September/October. Will ensure adherence with the Wildlife and Countryside Act 1981 (as amended).
		  ○ Captured in the LBMP/CEMP
		• European Eel/Elver
		  ○ Need to ensure continual movement can continue post development and across the onsite and offsite waterbodies. Ensuring ongoing ability to navigate across the site will ensure adherence with the Eel Regulations (2009)
		  ○ Captured in the LBMP/CEMP
		
		Avian mitigation during construction is also captured in the BBPP (Appendix B of the Outline CEMP [REP4-009]) and in the SPA CNMP [REP3-008].

Ref.	Issue Raised	Applicant's Comment
	provide functionally linked habitat – therefore it is likely that species associated with these sites will be within the site during the pre-commencement surveys.	

2.2 REP4-058 / REP4-059 Chris Lowe

7. The representations received from Chris Lowe at Deadline 4 cover issues addressed in previous submissions. Table 2.1 sets out in summary the topics raised, and where they have been addressed in documentation, with examination library references.

Table 2.2: The Applicant's Comments on Chris Lowe's Written Representations

Ref.	Issue Raised	Applicant's Comment
REP4-058 - 1	Background noise adversely effects birds (during operation)	Operational noise impacts on non-human receptors are assessed in the ES at Chapter 12 - Noise and Vibration [APP-042], section 12.5.3.7 and 12.6.2.2.
REP4-058 - 2	Land Use and effects on Carbon	The Applicant submitted a WR on CO_2 Offset and Sequestration at Deadline 3 [REP3-025].
REP4-058 - 3	Benefits of Nature	The Applicant submitted updated biodiversity metric calculations at Deadline 4 [REP4-052] which demonstrates a net gain in biodiversity as a result of the Development.
REP4-059 - 1A	A Demand Side Response (DSR): Uninterruptible Power Supplies as a Reserve	The submission and references below provide a significant body of material related to the deployment of flexibility services, demand side response and decentralised energy schemes. The Applicant agrees that more flexibility is required in order to operate the UK's power network while meeting the countries net-zero legal targets. This is discussed fully in the Applicant's previous submissions as part of this DCO application process, as listed below. Within these documents the Applicant also makes the following points, relevant in the context of assessing the contribution of this interested parties' submission: • Flexibility is an enabler of a low-carbon network. But it does not in itself deliver low-carbon power. Flexibility is currently delivered through storage, gas peaking plant, hydro and DSR; • DSR has a role to play in decarbonisation through flexibility provision, however in this regard, DSR acts to change when demand is needed, rather than act as an overall reducer of demand therefore low carbon power generation is still required to provide power to consumers when it is needed; • Low carbon power is best generated through a portfolio of different renewable technologies which are connected at different geographies, and at different levels within the UK's power networks. The Applicant has addressed these issues in the following submissions: • Statement of Need [APP-253] • Statement of Need Addendum March 2019 [AS-008] • Response to GREAT and Faversham Society Deadline 3 Submissions on Need [AS-037] • Written Summary of the Applicant's Oral Submissions presented at Issue Specific Hearing 1 on Need [REP3-014] • The Applicant's Response to GREAT Expert Report on the Statement of Need [REP3-030] • The Applicant's Response to GREAT Deadline 4 Submission on Need (section 2.4 of this document).
REP4-059 - 1B	Demand Side Response: Incentivising Domestic Demand Response	
REP4-059 - 1C	Demand Side Response: Incentivising Commercial Demand Response	
REP4-059 - 1D	Reducing energy costs or increasing earnings for local generators and consumers	
REP4-059 - 1E	New partnership for flexibility	
REP4-059 - 1F	Improving the Networks for flexibility	
REP4-059 - 1G	UK Power Networks Flexibility Contracts	
REP4-059 - 1H	Vehicle to grid, V2G, use of Electric vehicles	
REP4-059 - 2	Identifying what is on the grid and local distribution network.	
REP4-059 - 3	Community Energy	
REP4-059 - 2A	Riding Sunbeams	
REP4-059 - 3	Wind Alternatives	
REP4-059 - 4	Local smart energy systems key to net zero, says Association for Decentralised Energy	

Ref.	Issue Raised	Applicant's Comment
		Section 3 ("Wind alternatives") of the Interested parties' submission refers to the repowering of onshore wind turbines as a reason for not consenting the Development. The Applicant refers to the following submissions: Chapter 4 (Site Selection, Development Design and Consideration of Alternatives) of the Environmental Statement [APP-034], Chapter 5 (Development Description) of the Environmental Statement [APP-035] and Written Summary of the Applicant's Oral Submissions presented at Issue Specific Hearing 1 on Need [REP3-014] which together describe: (a) the existing offshore wind development at London Array I; (b) the reasons London Array II was abandoned; and (c) the generation outturn advantages of the Proposed Development at Cleve Hill, compared to an onshore wind generation facility. The Applicant therefore considers that the point raised by the Interested party is not relevant to the examination of the Development.

2.3 REP4-063 - 066 GREAT (Heritage)

Table 2.3: The Applicant's Comments on GREAT's Written Representations in relation to Heritage

Ref.	Applicant's Summary of Representation	Applicant's Response
REP4-063 REP4-064	These consist of Heritage Statements commissioned by GREAT and undertaken by Asset Heritage Consulting Ltd. The first dates to 2018 (post-publication of the PEIR), and the second is a fuller updated statement dated August 2019. They are considered together here. The Heritage Statement provides substantial detail on the assets principally of concern, and a justification supporting the contention that the Applicant has undervalued the heritage resource, and not accorded sufficient weight to the setting of the assets. The Heritage Statement concludes by asserting that any harm is "less than substantial", but considers such harm to be at the higher end of the scale.	The Applicant accepts that heritage assets are a material concern and does not dispute the value or importance of the assets that may be affected. The Applicant disagrees with the submission in the degree to which the contribution made by "setting" (both visual and non-visual) would be so affected by the Development as to reduce that contribution so that the heritage significance of the assets themselves is diminished or unable to be appreciated or understood. The Applicant does not consider that simple intervisibility between an asset and the Development equates to "harm" (there has to be an effect on "significance") and has followed the guidance issued by Historic England in making its assessment (The Setting of Heritage Assets: Historic Environment Good Practice Advice In Planning Note 3 (Second Edition) 2018). In particular, consideration was given to paragraph 9 of the relevant guidance, to the effect that "Setting itself is not a heritage asset, nor a heritage designation [….]. Its importance lies in what is contributes to the significance of the heritage asset or the ability to appreciate that significance". The Applicant stands by the methodology used in its assessment as well as the appropriateness of the scope of study as presented in the PEIR and ES Chapter 11 - Cultural Heritage and Archaeology [APP-041]. The Applicant notes that this methodology (as well as the scope) has been agreed as appropriate by KCC (see sections under heritage conservation on page 10 of the Local Impact Report [REP1-004] as well as by Historic England in its Statement of Common Ground [REP4-038]. The Applicant concedes that the Development will cause "Harm" to the significance of a number of designated heritage assets, but considers this to be "less than substantial". The Applicant further notes that its assessment, as well as that provided by Historic England in their response are in agreement with GREAT's heritage statement; namely, that where there is "harm", this harm is "less than substantial".
REP4-065	This consists of an Advice Note on Heritage Policy and Legislation prepared by Asset Heritage on behalf of GREAT. It asserts that even where harm is found to be "less than substantial", this should not be seen as a less than substantial planning objection.	The Applicant is cognisant of the relevant policy and legislation pertaining to heritage, and has taken full account of this as required, and as presented in both the ES chapter [APP-041] and Heritage Statement [APP-257] submitted as part of the Application. The Applicant agrees that any harm to heritage interests is "less than substantial", as set out in its own assessments. The Applicant notes that the relevant tests for this Application are under Regulation 3, Infrastructure Planning (Decisions) Regulations 2010, and in accordance with the NPS EN1, and not the NPPF or Planning (Listed Buildings and Conservation Areas) Act 1990. The Applicant has provided detail on heritage policy both in the Heritage Statement submitted with the application [APP-257], as well in a specific heritage policy Written Representation [AS-027] and in subsequent responses to submissions received at Deadline 3 [REP4-041] such as the response to the planning heritage submission made by Faversham and Swale East Branch Labour Party in section 2.2 of [REP4-041].
REP4-066	This document states that the	The ES assessment scoped in all assets within 5 km, but considered that only those within 1 km of the

	assessment provided in the PEIR and EIA is not complete (and thus deficient), as assets to 5km were to be considered as required by KCC and HE. Four Listed named assets were listed as an example of designated assets not so considered, which GREAT consider would be harmed: St Peter's Church, Oare (Grade I) Church House Oare (Grade II) Pheasant Farmhouse, Oare (Grade II) Oyster Bay House, Standard Quay (Grade II)	Development boundary were close enough that a significant effect was likely. This was based on consideration of the height of the panels and the landform within and around the Development site. Consequently, only assets within 1 km were taken forward for detailed assessment and those more distant were consequently scoped out for further assessment. A number of heritage assets at a greater range than 1 km were included for assessment, either where their setting or location was such that an effect might be anticipated requiring assessment, or where these had specifically been requested by name (or general location) during consultation prior to completion of the PEIR and subsequently prior to the completion of the EIA, and in order to inform post-submission responses. The named assets were not previously raised by Consultees and taken forward for detailed assessment as initial consideration determined that their settings were unlikely to be so changed by the presence of the Development (even where intervisible) that this would affect the contribution made by that setting to the heritage significance of the assets, and certainly not to the degree that the assets would lose overall significance. The Applicant has reconsidered these assets in the light of this GREAT submission (and following a site visit on 11th September 2019, confined to public roads), and applied the same methodology as presented in the PEIR and EIA. Consideration was given as to whether these assets would suffer any "harm" or loss of heritage significance as a result of a reduction in the contribution made to that significance by their settings, through development within those settings (bearing in mind that simple intervisibility is not automatically "harm" – there has to be an effect on heritage "significance"). Given the nature of the relationships of the assets to each other, their location with respect to the Oare, screening from and intervisibility with the Development, as well as their functions, historic and architectural interests, the Applicant does not consider that the Development would cause such a reduction in the contribution made by setting to the significance of any of these assets (even where they might be considered to have a setting that include the Development site), that any would suffer any reduction in that significance and no harm is likely to occur. No further detailed assessment is considered necessary. Taking the above into account, as well as the results presented in the ES chapter [APP-041] in respect of those assets included for assessment at beyond 1 km (such as the Church of St. Thomas the Apostle on the Isle of Harty at some 1.9 km from the Development), it is considered unlikely that any further assets within the 1 km to 5 km zone would receive any significant effect upon their heritage significance. The position set out in the original ES is considered to be maintained, and the methodology used and scope of study are considered to remain appropriate.

2.4 REP4-067 GREAT (Need)

Table 2.4: The Applicant's Comments on GREAT's Written Representation in relation to Need

Ref.	Representation	Applicant's Response
1	This document constitutes a Reply to the comments submitted by the Applicant in response to the GREAT expert report on the Statement of Need and comments which were made during the hearing on the 17th July 2019. This document intends to summarise key points which should be considered in the context of need for the Cleve Hill project, and to clarify some of the points made by the Applicant throughout the process. Rather than add to the burden of additional resources and documents this Reply aims to bring clarity to some of the more complex but relevant points about the Application.	The Applicant has carefully read this submission from GREAT, and has provided its comments in response in this document. The Applicant has not identified any significant points raised by GREAT in this submission which have not already been raised, discussed and responded to earlier in the examination. As a consequence, in the main the Applicant does not provide any new information in this response, but provides references to submissions where points raised have been answered previously.
	Debunking "100,000 homes each year"	
2	While the claim that the Cleve Hill project can power nearly 100,000 homes each year, from 2023 or earlier, has been made more than several times in the Reply report submitted on behalf of the Applicant, in fact such claim is difficult, if not unrealistic to make. I note that this claim has also increased from over 90,000 homes mentioned in the Statement of Need (para 7.2, p.51).	The Applicant makes the case that the electricity generated each year from the proposed development will be approximately 100,000 times greater than the average UK household annual consumption. This is derived from a conservative estimate of the generation expected from the site (0.31 TWh per year – Statement of Need [APP-253], Table 6.2) and the average UK household consumption of 3,100 kWh/Year, as reported for 2017 by Ofgem for unrestricted domestic users (Profile Class 1: https://www.ofgem.gov.uk/gas/retail-market/monitoring-data-and-statistics/typical-domestic-consumption-values) and in January 2018 at https://smarterbusiness.co.uk/average-gas-electricity-usage-uk/. Different achieved solar capacity factors, and different views of average annual household consumption, will derive slightly different ratios.
3	Such calculation would have to take several things in consideration, such as the size of the panels and the material that they are made of, as determinants of efficiency, along with average sunshine, electricity consumption, temperature and wind. As discussed in the GREAT expert report, there are significant difference in the efficiency of solar PV depending on the materials. However, these material parameters are unknown at this point in the application.	See response above.
4	Even if Cleve Hill produces the same amount of power across a year to power between 90,000 and 100,000 homes, its generation output will not be at the same time as household demand (i.e. when it matters). Since the UK is currently not struggling to meet its energy demand nor is projected to struggle in the mid and long term (as evidenced in the GREAT expert report on Need), when household	Statement of Need [APP-253] Chapter 5 Section iv discusses the contribution solar generation makes to a diversified supply of power to the UK's National Electricity Transmission System, and its contribution to system adequacy and security of supply. i.e. in ensuring that there is sufficient generation to ensure that the demands of all consumers – be

Ref.	Representation	Applicant's Response
	demand can be met is as important as how (i.e. using low carbon resources).	they domestic, industrial or commercial – can be met at all times.
5	In the words of the Aurora Energy Research report (2016), "not all MWhs are created equal". A MWh delivered at times of the year when demand is high and supply is low is inherently more valuable than a MWh delivered when demand is low and supply is high (Aurora Energy Research, 2016). Solar PV is characterised by season and daily variability which limits the occasions when peak supply overlaps with peak demand (National Grid, 2018). Although the Applicant's response dismisses the importance of load factor, as not the only or most important factor when considering the feasibility of large-scale solar PV. A claim of output of 100,000 homes is further undermined by the low load factor of solar PV. Despite representing one third of the total share of capacity (second highest share at 31.5 per cent) in 2017, its share of generation was just 12 per cent (BEIS, 2018).	See response above. The Applicant's response to the first paragraph of this section makes clear that the equivalent output claim made by the Applicant takes into account an estimate of load factor at the proposed location.
6	Furthermore, how many households in the UK could be powered by a large scale solar PV farm such as Cleve Hill also depends on the demand profile of homes. The average household electricity use in the UK has fallen to 3760kWh in 2017. But big differences exist across regions and between different types of homes. For example, while the average annual electricity consumption for a mid-terrace home is 2779 kWh/year, for a detached house it is 4153 kWh/year. In 2017, the average household domestic electricity consumption in the UK was highest in the Southwest of England, at 4,279 kilowatt hours, in comparison with 3,347 kilowatt hours in the North East of England.	See responses above.
	Need for a diverse range of technologies and scale of generators	
7	The Applicant has responded to a significant number of points raised against the proposed Cleve Hill project in relations to need with reference to the National Grid FES statement that the UK needs a "diverse" range of technologies and scale of generators going forward. Although this is generally true, technologies and scales of generation are not equal in efficiency in terms of energy generation and in the way in which they can contribute to balancing the supply and demand of energy in the UK. The usefulness of the National Grid FES (2019) analysis here is in showing how different technologies and scales of generation could fit together (represented in different scenarios); and how these are changing in the longer term, identifying trends of importance across scenarios. These are: decentralised energy generation; growth in meeting own demand through solar panels (household and rooftops); slower growth for solar beyond 2040; and electricity storage projects needing multiple income streams to be commercially viable, among others. In all scenarios, the decentralisation of generation increases, and new microgeneration develops, including small solar panels.	The Applicant makes points with respect to diversification of generation technology in Statement of Need [APP-253], Chapter 5 Section (iv). The Applicant also agrees that in all National Grid Future Energy Scenarios (2019), decentralisation of generation increases, including domestic solar. However, the Applicant refers to its submission in response to GREAT Statement of Need [REP3-030], point 3.23, which clearly states that although distributed generation will grow, the replacement and growth of transmission connected assets is also foreseen. Further, the Applicant demonstrates through the Environmental Statement [APP-034] Chapter 4 that no other more efficient nor suitable renewable technologies will be blocked from the grid at this location, if consent for CHSP were to be granted.

Ref.	Representation	Applicant's Response
8	The FES 2019 acknowledge that following very rapid growth, the installation of solar capacity in the UK has slowed in the past 3 years, and that more rapid growth of solar until the late 2020s is not anticipated. The greatest growth in solar capacity is reached in the Community Renewables Scenario due to high consumer interest in technologies like residential solar plus storage systems. The FES 2019 have reduced maximum levels of solar in this scenario compared to FES 2018 to reflect stakeholder feedback on the problems with solar PV in the UK. It projects slowing down of solar growth beyond 2040 across all scenarios, with prices for solar output falling to the extent that it no longer becomes commercially viable to build new solar plants.	The Applicant accepts that the FES 2019 maximum levels of solar generation have reduced when compared to the 2018 edition, largely as a consequence of the withdrawal of subsidies for all scales of solar generation. However, investment in the GB electricity market is participant-led, and the Applicant submitted in ISH1 [REP3-014] that the project is economically viable as either stand-alone solar, or combined solar-plus-storage.
9	Across all scenarios, the FES 2019 assume electricity storage projects will need multiple income streams to be commercially viable, with potential revenues from price arbitrage, balancing and ancillary services, and providing services to network operators. The analysis highlights the increasing number of new customer tariffs and business models in the electricity storage market for domestic solar PV. The two decentralised scenarios also reflect the growth in battery storage, mostly connected at the distribution level.	The Applicant refers again to reference [23] to the Statement of Need [APP-253] as an example of the number of markets available to storage assets in the UK. These markets are listed in Table 5.5 of the Applicant's Statement of Need. The Applicant agrees that more than one market is likely to be important to the long-term viability of the storage facility.
10	The FES analysis considers transmission connected generation (such as Cleve Hill) as being centralised, and distribution system generation or at lower voltages (including microgeneration) as being decentralised. The scenarios that meet the 2050 carbon target have a higher requirement for flexibility which is met through rapid growth in smaller-scale generation co-located with storage, highlighting once again the system-level shift toward smaller scale, more decentralised capacities. A key take-away message is that large number of distributed smaller scale systems (such as rooftop solar PV) offer greater flexibility than larger energy capacities, like the large-scale solar PV project at Cleve Hill. This trend resonates with BEIS's DUKES analysis (2018) and other research (Hinson, 2019), showing greater increase in distribution connected renewables capacities than transmission installed renewable capacities (BEIS, 2018, p.124).	The Applicant makes points with respect to diversification of generation technology in Statement of Need [APP-253], Chapter 5 Section (iv). The Applicant also agrees that in all National Grid Future Energy Scenarios (2019), decentralisation of generation increases, including domestic solar. However, the Applicant refers to its submission in response to GREAT Statement of Need [REP3-030], point 3.23, which clearly states that although distributed generation will grow, the replacement and growth of transmission connected assets is also foreseen in each scenario. The Statement of Need, Table 5.1 lists those characteristics of Transmission connected assets which allow them to contribute in a meaningful way to the efficient and secure operation of the National Electricity Transmission System, and Table 5.5 of the same document lists the services which a Solar-plus-storage system will be able to provide to the GB electricity market, including ancillary service and flexibility provision
11	The trend for increasing quantities of embedded solar and wind generation (connected into the distribution network) started in 2011 and is projected to continue past 2030 (BEIS, 2018, p.124). The FES 2019 analysis is clear that in a decentralised world, far more small-scale solar PV connects to the distribution	See response to previous point.

Ref.	Representation	Applicant's Response
	networks, alongside an increase in smaller-scale, consumers access technology (such as rooftop solar PV with EV battering storage) to manage own electricity needs in a more localised manner.	
12	The exact proportions of embedded electricity supplied vary through the year. Embedded solar PV is affected by the seasonal and daily variability of solar PV, leading to variability in the demand from the transmission network. The changing electricity mix, and the increase in embedded generation (and through it, its impact on demand for the transmission network) is impacting grid balancing requirements. It means that balancing the grid is much more complex, and requires National Grid to draw on a wider variety of technologies, including gas, storage, and exports, including better interoperability and balancing across them (for example, across electricity and gas) Adjusting to the interaction of embedded generation with the balancing of the transmission network is complex from National Grid's view point and links to longer term and deeper transition of the institution which is already underway (Hinson, 2019).	The Statement of Need [APP-253], Table 5.1 lists those characteristics of Transmission connected assets which allow them to contribute in a meaningful way to the efficient and secure operation of the National Electricity Transmission System, and Table 5.5 of the same document lists the services which a Solar-plus-storage system will be able to provide to the GB electricity market, including ancillary service and flexibility provision. The Applicant agrees with GREAT that "the interaction of embedded generation with the balancing of the transmission network is complex", which is one reason why it is important to maintain diversity of generation assets across technology choice, scale and connection voltage. The proposed development contributes to that diversity.
13	In para 7.2 the Applicant contrasts embedded and transmission connected generation, arguing that the former causes complex flows at the sub-system level, which are avoided in transmission connected generation. Typically, transmission connected generation includes smaller stations on industrial sites, combined heat and power plant, renewable energy plant such as wind farms, as well as some domestic solar PV generators.	The National Grid TEC register, (latest edition is available at https://www.nationalgrideso.com/document/149106/download, a copy of the file dated 23Jul2019 was submitted as reference 13 to the Applicant's response to the GREAT Statement of Need [REP3-043]) forms a complete list of assets (a) connected and (b) planned to be connected to the National Electricity Transmission System. The latest edition of this document, dated 5 September 2019 and appended to this document (Deadline 5 submission document reference 13.4.1), lists a small number of lower-power projects (including connections in Scotland which are at lower voltage than in England and Wales), connecting to the NETS. The TEC Register records 510 connections, totalling c. 125 GW (an average of 400 MW / connection). Only 39 connections outside of the Scottish (lower voltage) circuits, totalling c. 900 MW, have connection capacities lower than 49 MW. These are predominantly (a) industrial CHP, co-located with heavy industry consumers and (b) a recent development of gas-fired peaking plant connecting to 132 kV substations rather than 400 kV circuits. Other than one on-shore wind development of 32 MW, all domestic solar PV generators, and all on-shore wind generators smaller than 150 MW are connected to Distribution Networks.

Ref.	Representation	Applicant's Response
14	As mentioned earlier, embedded generation has grown rapidly in recent years, a trend which covers, but also goes beyond solar PV. The FES 2019 analysis show that in the medium and long-term transmission connected capacities will likely take place with low-carbon sources other than solar PV, including pumped hydro with storage, putting a stop to the dominance of large transmission connected electricity. Instead there is a transition to more distributed supply patterns, varying in terms of scale and location, and more complex flows of energy. Since many of the distribution connected electricity supplies are renewable, the generation patterns become more weather dependent, with significant swings in both scale and location of supply dependent upon weather conditions.	The Applicant refers to its submission in response to GREAT Statement of Need [APP-253], point 3.23, which states that although in each of the FES scenarios distributed generation will grow, the replacement of and growth in transmission connected capacity is also foreseen in each scenario. Further, the transmission system remains the only way to complete the bulk transport of power between regions – therefore transmission connected generation plays an increasingly important role as distributed renewable generation assets further grow in scale and complexity at the Distribution Network level.
15	Large scale solar PV farms do play a role in the UK energy system but they are not least regret options for the UK energy system as they do not fit the long terms trends of the FES 2019 analysis. In contrast, smaller scale solar PV is a least regret option for the UK energy system. The BEIS DUKES (2018) analysis acknowledges that the increase in generating solar capacity in 2017 was driven by Major power producers (MPPs), those generating 50 MW or more. In fact, total transmission entry capacity for solar PV MPPS has doubled between 2015 and 2017 (588MW), suggesting that there is already significant large scale (albeit smaller than the proposed Cleve Hill project) solar PV capacity connected to the transmission network. In comparison, this is just 1/3 of the connected smaller solar PV (BEIS, 2018).	The Applicant agrees that smaller scale solar PV has an important role to play in the future GB power system, but does not agree that there is an either/or choice between large-scale solar and smaller scale solar: both are valuable and it is the Applicant's opinion that the growth of both in the future will deliver security of supply and decarbonisation at an efficient cost to consumers. The Statement of Need [APP-253], Figure 6.3, shows the historical reduction in cost of solar generation. As costs have fallen, larger projects have become more investable (i.e. within economic grasp of developers), it is the Applicant's opinion that it is for this reason only that large scale solar is only coming to the UK market now.
	Connection offer	
16	To clarify, under BETTA, National Grid has a statutory duty to offer grid connections to generators where there is capacity in the system, through the development of a connection offer which details the conditions of connection: its design; the infrastructure of the transmission system; initial outage requirements; asset details; and cost and programme information. The process includes a Connection and Use of System Code Construction Agreement (CONSAG) detailing the scope of transmission works, costs, programme and Bilateral Connection Agreement (BCA) setting out requirements for compliance with Grid Code, Connection Use of System (CUSC) and Balancing and Settlement Code (BSC).	No comment.
17	National Grid is not, as part of the offer process, obliged to consider wider questions of the value or contribution of the proposed capacity to meet demand. Its primary focus of consideration is on technical issues and costs relating to connection (i.e.	National Grid has made many public statements on their position in relation to the connection of generation utilising diverse technologies and

Ref.	Representation	Applicant's Response
	what works are required in order to facilitate the connection). National Grid has a duty to provide advice before connection application and following the offer, in order to answer any questions. As stated previously, a connection offer is not an endorsement of the proposed project or evidence that the National Grid actually feels that there is a "need" for the particular project. Its duty is to put forward the conditions within which a project could be connected to the grid, even if these render the project not-viable in practical terms because of a delay in connection due to the need for reinforcement. So far, the Applicant has not presented any substantial evidence of cooperation with the National Grid on the connection offer beyond performing its statutory duties.	of sufficient capacities to the electricity network. National Grid also provided a submission in response to ExQ2.0.6 at [REP4-057]. These have been referenced in previous submissions, including references 3 and 6 to the Applicant's response to the GREAT Statement of Need [REP3-030].
18	Such endorsements will also not be found in the annual FES analysis, as these are both generic and focus on the system level and can change every year, based on stakeholder feedback, unexpected events and market conditions. The National Grid has a duty to find technical solutions to balancing problems rather than pass judgement on the types of projects that could add value or not to balancing the grid and meeting energy demand. Furthermore, since the National Grid's focus on transmission generation and balancing, (for example it considers embedded renewable generation as demand management rather than contributing to generation) it often lacks not only mandate but also the ability to "see" related issues at the distribution level. Forecasting difficulties about assessing the impact of solar PV exist for the National Grid not only at the distribution level but also within the transmission level (National Grid, 2018). The recent blackout in August 2019 illustrates the multiple socio-technical challenges faced by National Grid in managing grid stability.	The Applicant's Statement of Need [APP-253] Paragraph 5.31 and Figure 5.4 discuss – with external references – the relative forecastability of solar generation as a stand-alone generation technology and the impact this has when working alongside wind generation, on generation dependability in the UK.
19	The limited technical details about the battery storage component of Cleve Hill, lack evidence in the design of the plant that the battery system would be configured in such a way that it would be able to respond in sufficient time to meet frequency response requirements of the National Grid. In fact, the Applicant considers the battery storage system as non-essential to the project.	The Applicant's Statement of Need [APP-253] Chapter 5 section iii discusses the differences between transmission connected and distribution connected generation assets. In particular, Table 5.1 explains that Transmission connected assets are "Required to conform to regulations and standards for critical service provision and response characteristics". This includes a minimum requirement on mandatory frequency response. Table 5.5 of the same document lists the markets which the asset may look to for revenues, one of these is the Frequency Response Market, where it will be in the interests of the Applicant to ensure that its asset is best placed to respond in an efficient and effective way to the needs of that market in order to participate. The Applicant submitted in ISH1 [REP3-014] that the project is economically viable as either stand-alone solar, or combined solar-plus-

Ref.	Representation	Applicant's Response
		storage
	Integration/intermittency costs	
20	Comment 6.1 from the Applicant's Reply references a view from the National Infrastructure Commission and Aurora Energy Research (para 6.14) "that reduction in capital cost of generation are more than likely to offset completely, integration costs associated with renewable technologies". The Aurora report (2016) analyses the integration (or intermittency) costs of solar PV. However, the report is explicit that it does not include the impact of renewables on transmission and distribution costs or benefits, excluding costs renewables can impose on transmission and distribution by exacerbating congestion and increasing the amount of capacity required to cope with low utilisation and volatile demand (Aurora Energy Research, 2016). This supports the initial argument that calculations about the feasibility of the Cleve Hill project exclude important costs "passed on" to other system actors, a widely recognised weakness of LCOE. This puts into question any subsequent claims made based on these calculations.	The Development is not expected to cause any additional congestion costs on account of its location and generation profile, and is borne out by the fact that there are no wider works required to strengthen the NETS as a result of its connection. The Development will pay its transmission costs in accordance with prevailing network charging methodologies, set by National Grid. These are not passed through to consumers. On account of making use of available connection capacity, the Development is not the cause of any additional capacity-related costs, indeed it actually works the other way, by spreading the already sunk cost of connection capacity at the Cleve Hill substation over a larger electricity output.
21	The Aurora report (2016) estimates solar's cost of intermittency in 2016 to be around £1.3/MWh, which increases with increased solar penetration. For example, the intermittency cost associated with the timeliness of delivery would increase from £-1.2/MWh to £3/MWh by 2030. The cost of backup capacity for solar would increase from £2.5/MWh to £4.5/ MWh by 2030. A doubling of solar capacity from the current 11GW by 2030 would bring the cost of intermittency from £1.3/ MWh to £3.4/MWh.	The Applicant's Statement of Need [APP-253] Paragraph 5.31 and Figure 5.4 discuss – with external references – the relative forecastability of solar generation as a stand-alone generation technology and the impact this has when working alongside wind generation, on generation dependability in the UK. The installation of battery storage facilities seeks to minimise costs of intermittency through minimising "spilt" power and bridging between natural generation profiles and consumer demand patterns.
22	This "disconnection" between the National Grid and lower-levels effects of transmission connected generation are attempted to be rectified through the transitioning of Distribution Network Operators into are Distribution System Operators. This will see them take on a more managerial role including some of the balancing actions National Grid operates on the transmission network, being replicated on the distribution network (Hinson, 2019). This will likely help make more visible and re-connect the costs and benefits of large scale renewable capacities across the transmission and distribution networks. However, this process is far from complete and for many DNOs it has just started.	Noted. This is part of the important action required across the electricity sector to integrate renewables and variable consumption / generation at all levels of connection. The Applicant's opinion is that this is essential action and development which is wholly independent of the Development.
	Downplaying socio, economic and technical risks and uncertainties	
23	The Applicant plays up the "need" for a large scale solar project to bridge the delay in nuclear capacity (para 3.28). However, there is a stable renewable energy	Statement of Need [APP-253] Chapter 5 Section iv discusses the contribution solar generation makes to a *diversified* supply of power to

Ref.	Representation	Applicant's Response
	pipeline which is strengthened by the Government Offshore Wind Deal and continuous reduction of annual energy demand since 2010, largely as a result of improved energy efficiency (EFS, 2019). However, the narrative offered by the Applicant continues to downplay a number of key sociotechnical risks and uncertainties, discussed at length in the previous expert submissions on behalf of GREAT. Other than integration/intermittency costs discussed above, these include high levels of regulatory and market uncertainties, for both large scale solar PV and co-located battery and storage.	the UK's NETS, and its contribution to system adequacy and security of supply. i.e. in ensuring that there is sufficient generation to ensure that the demands of all consumers – be they domestic, industrial or commercial – can be met at all times. A secure and diverse supply of electricity cannot be achieved by placing reliance on one form of renewables generation, e.g. offshore wind, nor is it Government policy to do so.
24	Furthermore, the discussion of the FES 2019 analysis highlights the mismatch between large scale (300-400MW) solar PV and the long term, deeper trends of the energy system, which favour decentralised, smaller scale solar PV capacity, either embedded within the distribution grid or for self-consumption. These also illustrate how such options can provide greater diversity and flexibility in the UK energy system, as least regret options. All of these, put together challenge the Applicants' claim of Cleve Hill being the right technology, at the right place and at the right time, and cast doubt over promises of powering 100,000 homes.	The Applicant refers to its submission in response to GREAT Statement of Need [APP-253], point 3.23, which states that although in each of the FES scenarios distributed generation will grow, the replacement of and growth in transmission connected capacity is also foreseen in each scenario.
	References	
	Aurora Energy Research, 2016, Intermittency and the cost of integrating solar in the GB power market. BEIS, 2018, Digest of United Kingdom Energy Statistics 2018, July 2018. BEIS, 2019, Digest of United Kingdom Energy Statistics 2019. Hinson, S. 2019, Electricity Grids, Briefing Paper, Number 8472, 8 January 2019, House of Commons Library. National Grid, 2018, Summer Outlook Report.	

2.5 REP4-068 Tom King

Table 2.5: The Applicant's Comments on Tom King's Written Representation in relation to the Outline Construction Traffic Management Plan

Representation	Applicant's Response
Following my submission at the Open Floor Hearing on 22 July, I wish to challenge a number of statements made in the Outline Construction Traffic Management Plan, Document reference: 6.4.14.1, Revision B, submitted by the Applicant for Deadline 3:	The Outline Construction Traffic Management Plan (CTMP) was updated for Deadline 4 and is now at Revision C [REP4-014].
Paragraph 1.1.6 states "Construction is anticipated to commence in spring 2021 and last up to 24 months". Paragraph 2.2.3 states "Subject to the final development design and potential environmental constraints, phase 1 of the development construction is anticipated to last 24 months." Paragraph 2.2.5 states "Phase 2 of the development construction will run for approximately 3 to 6 months, which is expected to be contained within the overarching construction programme." o The duration was queried with the Applicant and, on 19 Jun 2019 @ 08:55, James Senior (via email from info@clevehillsolar.com) advised: "The candidate design for Cleve Hill Solar Park assumes that both phases of construction would happen within an indicative 24 month period. However, the construction of the energy storage facility has been separated into a six month 'Phase Two' construction phase, to allow for the flexibility to deliver this six month construction phase at a later date. If this was to happen, the construction phases would then be undertaken within an indicative 24 months for phase one and a further indicative six months for phase two at a later date." When will this decision be made? It is essential that all stakeholders are aware of the duration of the proposed development and be in a position to comment / assess accordingly.	A decision on whether Phase Two will come forward within the initial 24 month construction window will be made ahead of any construction starting on-site. The phasing of the Development will be secured via Requirement 4 of the DCO (Deadline 5 submission document reference 3.1, Revision E) which requires approval from the relevant planning authority on phasing prior to any development being commenced.
Paragraph 1.2.3 states "This Outline CTMP will inform Officers at Highway England (HE), Kent County Council (KCC), Swale Borough Council (SBC), Canterbury City Council (CCC) and other relevant transport stakeholders with regards to the suitability of the proposed construction traffic route and the highway access matters associated with the Proposed Development." o I cannot see how this document, and the accompanying Environmental Statement Chapter 14, Access and Traffic, can adequately inform these authorities when there are so many inaccuracies and untruths included. o These authorities should be provided with a final, validated version of these documents to comment on and disregard the spurious information provided to date.	The Outline CTMP [REP4-014] is intended to be a 'live document' to be updated further ahead of construction of the Proposed Development. Furthermore, it is proposed that a management structure is put in place to ensure the CTMP objectives are met, and the continued monitoring and reviewing of the final CTMP is maintained. To do this it is proposed that a Traffic Management Group (TMG) and a Transport Coordination Officer (TCO) is appointed to do this. The responsibilities of these posts are set out within Section 7 of the CTMP. CHSP is committed to continued dialogue with the relevant stakeholders, KCC and Highways England to agree and finalise this CTMP up to and

Representation	Applicant's Response
	during construction of the Development. The CTMP is to be secured via DCO Requirement 11 (Document Reference 3.1) which states: "*No phase of the authorised development may commence until written details of a construction traffic management plan (which must accord with the outline construction traffic management plan) for that phase has been submitted to and approved by the relevant local planning authority in consultation with the relevant highway authority. (2) The construction traffic management plan must be implemented as approved.*"
Paragraph 1.3.2 states: "As part of the preparation of the final CTMP, the following transport stakeholders will be consulted regarding the traffic and transport elements of the Proposed Development: Highways England; Kent County Council; Swale Borough Council; Graveney Primary School; Graveney Parish Council; and Graveney Residents Environmental Action Team." ○ As at the time of writing, Graveney Parish Council and the Graveney Residents Environment Action Team have met once on the subject of traffic and transport elements of the proposed development. This meeting cannot be considered as 'consultation' in any sense. ○ As these groups are most familiar with the road network it would seem sensible that these were consulted at an early stage to advise on the true situation. Could the Applicant please explain why this has not happened?	The Applicant has consulted on the traffic and transport elements of the Development iteratively throughout the project, beginning with the Phase One consultation where the Applicant provided topic specific space for comments relating to traffic and transport in the feedback form which was made available in person at events and online. A meeting with elected members, including representatives from GREAT and Graveney with Goodnestone Parish Council was held on 22 February 2018 where the Applicant presented a project update including discussing how the feedback received so far would be used to inform the CTMP. As part of the Applicant's formal consultation held between 31 May - 13 July 2018, the Applicant consulted on a Preliminary Environmental Information Report (PEIR) which included information on the traffic and transport assessment in Chapter 14 Access and Traffic as well as a draft Construction Traffic Management Plan (CTMP) in Appendix 14.1. The PEIR and a non-technical summary (NTS) were made publicly available on the Applicant's project website, at community access points and at the community consultation events held between 13-16 June 2018. Following design changes to the development and in response to feedback received to the PEIR, the Applicant was able to reduce construction traffic movements which were then presented in the Environmental Statement Chapter 14, Access and Traffic [APP-044]. The Applicant invited elected members, GREAT and Graveney with Goodnestone Parish Council to an issue specific meeting on traffic and transport on 21 September 2018 to present this updated information and to receive feedback on the updated CTMP. Representatives of GREAT and Graveney with Goodnestone Parish Council attended. GREAT and Graveney with Goodnestone Parish Council together with all

Representation	Applicant's Response
	stakeholders have had the opportunity to make representations have been able to provide comments on the application documents (which have included the CTMP) pre-submission, pre-examination and throughout the examination. Furthermore, the CTMP is intended to be a 'live document' to be updated further ahead of construction of the Development, and a commitment to pre-application consultation on the discharge of requirements was included as requirement 19 in the draft DCO submitted at deadline 4 [REP4-003].
Paragraph 2.4.2 states: "A large proportion of the construction staff will stay in accommodation local to the site and travel to the site together by mini-bus." o Requirement 15 of the dDCO states that "local skills supply chain and employment which requires that a skills, supply chain and employment plan is submitted ahead of construction." If the supply chain was being fulfilled by locals then I fail to understand why 'a large proportion' of the construction staff would require local accommodation. Could the Applicant please explain?	The objectives of the Outline Skills, Supply Chain and Employment Plan are to ensure that there is the opportunity for local employment. From a transport and access perspective, whether workers are in their own accommodation or temporary accommodation, the expectation is that they would be collected and taken to the site by mini-bus.
Paragraph 2.6.4 states: "The size of the abnormal loads to be transported to the site will be similar in size and weight to the abnormal loads that have previously been transported to the London Array substation. These loads were up to 143te nett." o Could the Applicant confirm the number of abnormal loads that were transported during the London Array substation construction and the anticipated number of abnormal loads for the proposed Cleve Hill development? o I do not believe there will be any comparison on numbers, as there were very few for the London Array site yet this paragraph suggests it will be comparable. I have been unable to find any evidence of what volumes and load sizes were used during the London Array substation construction and would like to see this.	Four abnormal loads (weighing up to 143 te nett) were transported to the London Array project. Similarly, four abnormal loads (weighing up to 95 te nett) are required for the Development. The same specialist company that that advised on the movement of the abnormal loads associated with London Array substation have been commissioned to assess and oversee the movement of abnormal loads to the CHSP site.
Paragraph 2.6.6 states: "A key constraint is the road bridge over the railway at Graveney. Discussions have been undertaken with Network Rail who own the structure and permission has been given to move the loads over the railway bridge subject to a number of conditions." o I have been unable to trace any documentation from Network Rail on the portal. Could the Applicant please provide this together with the list of conditions stated by Network Rail?	Some of the information relating to the delivery of the abnormal loads is commercially sensitive, however, an email from Network Rail in relation to transporting the abnormal loads over the Graveney Railway Bridge is included with this submission as Appendix 2 (Deadline 5 submission document reference 13.4.3).
Paragraph 2.6.7 states: "Abnormal loads will be transported to the site during off-peak periods (typically at night). As well as the statutory obligations, agreement with relevant	There will only be minimal abnormal load movements associated with the CHSP (four movements to the site in total) and these will be undertaken in

Representation	Applicant's Response
stakeholders will be sought prior to any abnormal load movement being undertaken." o The unacceptable traffic movements taking place from 6am to 8pm during the week and from 6am to 2pm on Saturdays will severely impact residents without their nights being disrupted too. o It is essential that this additional disruption is considered during the examination process, it is unacceptable for this detail only to be available once the application is approved when the Applicant states the final CTMP will be delivered.	line with statutory obligations for the movement of abnormal loads and at times to keep the potential for any disruption to a minimum. Prior consultation and advanced notice of abnormal load movements will be undertaken before any deliveries are made.
Paragraph 2.7.6 states: "To ensure a robust prediction of the number of construction vehicles, it has been assumed that all vehicles arrive loaded and depart empty. In reality, exiting vehicles would remove waste/materials from the site." Paragraph 2.7.7 states: "Of the 80 two-way HGV vehicle movements, 20 account for waste removal per day." o This seems to contradict paragraph 2.5.2 which states: "It is proposed that all of the excavated material generated by construction will be used within the site for roads, landscaping, drainage, reinstatement and otherwise as required to deliver the Proposed Development". o Could the Applicant clarify what 'waste material' is being referred to here please?	The waste being referred to in paragraph 2.7.6 is general waste, generated by construction activities on-site. This may include general rubbish and packaging of plant/equipment. Paragraph 2.5.2 relates specifically to excavated material which will be kept within the site.
Paragraph 2.7.8 states: "Peak daily total construction traffic is expected to occur in week 100 of the construction programme. This comprises of 222 two-way vehicle movements (111 vehicles). This breaks down as 162 two-way LGV movements (81 vehicles) and 60 two-way HGV movements (30 vehicles). o I am confused about this statement. Figure 2.2 shows a Construction Vehicle Profile which covers 24 months. This shows there will be daily construction traffic in excess of 200 movements from August 2022, meaning this will continue for around 8 months. This will be extremely disruptive for local residents and businesses and the additional noise, pollution and other impacts are unacceptable. o Could the Applicant advise how they propose to manage this to ensure that local residents and businesses are not delayed in their journeys through the village?	222 two-way vehicle movements is the highest predicted daily peak in total vehicle flows. The management and mitigation measures proposed along the delivery route are set out within the CTMP.
Paragraph 2.7.10 states: "An average of 62 two-way HGV movements (31 vehicles) and 90 two-way LGV movements (45 vehicles) will generated per day throughout the 24 month construction period." o Based on the highest level of HGV's recorded in the traffic data analysis presented by the Applicant at Deadline 3, this represents a 100% increase in HGV's (the number identified in the Applicant's traffic raw data was 32 which they have not provided any further	The percentage increases in HGV traffic as a result of the Development were identified and discussed within Chapter 14 Access and Traffic of the Environmental Statement [APP-044] at section 14.4.2. Within this section increases of over 100% in HGVs using Seasalter Road were identified. This represents the relatively low number of HGVs that

Representation	Applicant's Response
comments on). ○ This is considered to be an unacceptable increase in HGV movements through a small village approached by narrow country lanes which pass in close proximity to a primary school and other sensitive receptors. ○ Could the Applicant advise how this impact will be mitigated?	currently use this section of road. The mitigation measures proposed are set out and discussed within the CTMP [REP4-014].
Paragraph 3.2.8 states: "Head Hill Road/ Seasalter Road is formed of a single carriageway ranging in width between 4.5m and 7.5m." ○ I have undertaken my own measurements of this stretch of road from the junction between Whitstable Road and Head Hill Road to the entrance of the London Array Substation on 7 August 2019. A total of 25 random measurements were taken and are included in Table 1 below. Photographs of each measurement point are included in Appendix 1. ○ As can be seen, the minimum width measured was 4.2m and the maximum 6.1m, both of which are outside the parameters provided by the Applicant. ○ Additionally, the Applicant stated in their Written Summaries of Oral Submissions, Document Reference 11.1.1, Revision A, that "a bus is expected to be able to pass an HGV, as can occur in the existing baseline scenario when HGVs utilise the same route." Anyone who uses these roads knows that this statement is completely untrue and misrepresents the reality of the situation which will occur should this proposed development go ahead. Based on my measurements of the local bus (2.8m including wing mirrors) and the Hilderbrands Removal lorries (2.6m including wing mirrors) this makes a total of 5.4m WITH NO GAP BETWEEN. ○ Out of the 25 measurements I took, these vehicles would only be able to pass in a maximum of 3 places (12%) with a gap ranging between 0.1m and 0.6m. ○ Figure 1 below demonstrates a situation experienced on 23 August 2019 where it was not possible for a Mini car to pass an HGV at the top part of Head Hill Road.	An initial route assessment was undertaken based on the work documented for the London Array substation assessment set out within their Environmental Statement. This was supplemented with on-site observations and detailed OS mapping of the delivery route from the strategic road network to the site. This identified a number of locations along the delivery route where a HGV would have to give way to an oncoming vehicle. The assessment was undertaken using a large 16.5 m articulated vehicle. To ensure the accuracy of this assessment KCC Highways requested topographical surveys be undertaken at specific locations along the delivery route. The results of the updated assessment using the topographical surveys has been included and discussed within CTMP [REP4-014] at section 4.2. At the locations where vehicles are not able to pass each other there is available carriageway ahead to allow a vehicle to wait for another to pass. Furthermore, at these locations good forward visibility was identified.
Paragraph 4.2.1 Section 4.2.1 states: "An initial assessment of Head Hill Road and Seasalter Road was undertaken using OS mapping to identify the locations where the carriageway width is restricted, or where a corner or obstacle is present, that means a large vehicles may have difficulty passing an oncoming vehicle." ○ This method of assessment was clearly invalid and the Applicant should be required to re-assess using physical measurements that accurately reflect the road network.	The route assessment has been updated using topographical survey information and the results contained within the latest version of the CTMP [REP4-014].
Paragraph 4.2.2 states: "In total four locations were identified whereby a large HGV and a large car may experience difficulty in passing each other." ○ This does not include the location shown in Figure 1 above which again calls into	Part of the northern section of Head Hill Road which is believed to be shown in Figure 1 of the submission by Tom King was included within the topographical survey and the results discussed within CTMP. It is

Representation	Applicant's Response
question the accuracy of the Applicant's assessments. ○ When asked, the local removal company also stated that, when going over rough ground and having to pull up to the edge, high vehicles will lean which effectively makes them wider.	acknowledged that vehicles may find it difficult to pass each other at this point, however, there is adequate forward visibility and space for a vehicle to give way to another before this point. While the condition of the road along Head Hill Road and Seasalter Road has been identified as being poor in places, it remedial works would be undertaken prior to construction of the Development, to ensure an appropriately smooth carriageway surface is provided.
Paragraph 4.2.3 states: "In all instances, there is available carriageway width for a vehicle to wait to allow another to pass. Furthermore, in all situations a good level of forward visibility is maintained meaning that vehicles have early sight of approaching vehicles." ○ This is completely untrue. Currently, the only places where it is possible to wait for large vehicles to pass are on private property, e.g. wide driveways and the privately owned layby along Seasalter Road. Additionally, the road is narrow with many bends which cannot be seen around due to high verges. ○ Could the Applicant please accurately represent this situation to ensure the necessary authorities can accurately assess the impact?	The comments made in paragraph 4.2.3 of the CTMP relate specifically to those areas identified ahead of a section of road where vehicles have been identified as not being able to pass each other. At these locations vehicles can wait within the public highway while they give way to oncoming traffic. The updated route assessment using topographical surveys is described within section 4.2 of the CTMP [REP4-014].
Paragraph 4.2.5 states: "In order to ensure the assessment was accurate, KCC Highways requested that topographical surveys were undertaken at these locations. In addition, two further locations were requested to be surveyed, these include: North of St Bartholomew's Church access road; and 350m north of Whitstable Road junction. ○ Could the Applicant advise if these have been completed and, if so, where the surveys can be located?	The topographical surveys have been undertaken and the route assessment updated and included within the Revision C of the CTMP (Section 4.2). A copy of the surveys has been included with this submission as Appendix 3 (Deadline 5 submission document reference 13.4.4).
Paragraph 6.7.7 states: "There are laybys and services (suitable for HGVs) along the A2, A299 and M2. A vehicle could wait in one of these areas until the LRN timing restriction has ended." ○ This is factually incorrect. There are no layby's on the M2 (or on any motorway in the UK!) and stopping on a motorway unless it is an emergency is a criminal offence. ○ Additionally, there are minimal layby's on the A2 approaching from Dover direction, but no layby's on the A2 approaching from Sittingbourne. ○ There is just one layby on the A299 close to the junction which is often utilised by resting long distance HGV drivers. ○ In view of this, could the Applicant advise where, in reality, the construction traffic will wait?	The laybys referred to in Paragraph 6.7.7 relate to the A2 and the A299 with services being located on the M2. Vehicles will only be expected to utilise laybys and services as a backup if they are expected to miss the scheduled delivery window and conflict with the proposed timing restrictions. The release of deliveries from their point of origin will be carefully timed as to not conflict with the proposed timing restrictions. The A2 from Sittingbourne is not proposed to be used by construction traffic access/egressing the site. There are a number of laybys located along the A299 and A2 from that could be used by vehicles to wait if necessary. Not just those laybys within proximity to the site could be used, but those along the entire delivery route could be utilised to regulate timings.

Representation	Applicant's Response
Paragraph 6.9.1 states: "It is proposed that the speed of construction traffic along Head Hill Road and Seasalter Road is restricted to 20mph in places." Paragraph 6.9.2 states: "The locations of the proposed construction traffic speed restrictions are shown in Drawing 007 in Appendix E at the rear of this report." o Could the Applicant please provide an explanation of this drawing as I have been unable to ascertain where the 20mph limits will apply?	A speed restriction would be placed on construction traffic at locations along the construction traffic route including through residential areas, past Graveney School and at the identified sections of the route whereby construction traffic may have to give way to oncoming vehicles. In reality, due to the nature of the delivery route, it is unlikely that construction traffic (specifically HGVs) will travel over 20 mph along any section from Whitstable Road to the site entrance. The signage shown in Drawing 007 (CTMP Appendix E) is indicative and is subject to further agreement with KCC Highways as well as the exact locations of the 20 mph restrictions. This will be secured as part of the CTMP which in turn is secured as part of Requirement 12 of the dDCO (Deadline 5 submission document reference 3.1, Revision E).
Paragraph 6.12.3 states: "In the event that mud or debris is found on the public highway, a road cleaning contractor will be on call throughout the construction programme." o Could the Applicant advise how the road cleaning contractor will be contacted when mud or debris is found on the road by residents or road users?	To ensure a clear line of communication, it is proposed that a Transport Coordination Officer (TCO) is appointed throughout construction of the Development. Their role is defined in Section 7 of the CTMP [REP4-014]. The TCO can be contacted by residents and other road users if an issue relating to construction traffic needs to be reported. If mud or debris on the highway, attributable to the Development, was reported to the TCO, the cleaning contractor would then be notified.
In addition, and following up on my open floor hearing comment about Headhill Road and Seasalter Road being used as diversions when there are problems on the A299 and M2, please see below two photographs which support this (figures 2 and 3).	An Outline CTMP forms part of the suite of documents appended to the CTMP [REP4-014]. This sets out the protocol to be followed if there is a traffic incident along the proposed delivery routes to the site.