



Appendix H

Construction Update

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Operations Update

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Appendix I

You Said We Did

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Your Property and Compensation

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Utilities Response

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Lower Thames Crossing

Review of Construction Update

On behalf of **Thurrock Council**



Document Control Sheet

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1 Introduction

1.1 Overview

- 1.1.1 As part of its technical engagement relating to the proposed Lower Thames Crossing (LTC) Development Consent Order (DCO) application, Highways England (HE) has issued Thurrock Council (the Council) with the Construction Update document.
- 1.1.2 This document sets out the Council's comments on the proposed Construction Update.
- 1.1.3 The document follows the same structure as the Construction Update and responds only to the sections relating to the north of the river.
- 1.1.4 The key general points of concern are set out below, although the summary of key technical matters are set out in the 'Summary and Recommendations' below.:
 - a. That the document is written to infer that all points of concern and contention between the Council and HE have been resolved. This is far from the case as is evidenced by the myriad of unresolved issues recorded with HE in the response that the Council has made during engagement; during the consultation phases; and to the aborted initial submission in October 2020. This is a major shortcoming as it indicates that HE has not in fact recognised, or had regard to, the Council's previous engagement contrary to the legal obligation to take account of comments made in the context of formal consultation.
 - b. This document must be updated to align with the control documents that are being consulted on and are listed in Table 1.1 on page 15 of the Construction Update. The Council is making representations on those documents which are referenced in this response document but are not repeated here.
 - c. The poor quality of this document, with formatting errors and low resolution images, is evidence of the rushed nature of these proposals which feeds through to HE's absence of recognition and resolution to the concerns being raised by the Council.
 - d. In terms of cultural heritage, particularly buildings, the issue is that historic/listed buildings and conservation areas (including the three Grade II listed buildings being demolished) are not mentioned at all. This element of the documentation needs to be worked up by HE and subject to further consultation.

2 Review of Construction Update

2.1 Comments

Table 2.1: The Council's Comments on the Construction Update

Relevant Section in the Construction Update		The Council's Comments
Chapter 1: Introduction		
1.1	About the Construction Update (pg. 4)	<p>The DCO preparation, submission and Examination is the period through which to assess effects and set the boundaries within which the contractors will work. The suite of control documents which will be examined will need to provide a robust framework which provides a strict set of rules and guidelines within which the contractors will design the detail for the project and undertake the construction period. It is not suitable to leave changes in method to come forward following consent.</p> <p>Figures throughout the document are incorrectly titled, e.g. the many Figure 1-1s. Some figures and diagrams within the document are illegible due to being poorly reproduced e.g. "Figure 1-1 Waste hierarchy diagram" on page 71.</p>
1.4	Outline of the construction programme (pg. 7-10)	<p>a. It should also be clear that building the works would include:</p> <ul style="list-style-type: none"> i. a wide range of temporary (but in some cases long-term) traffic management measures across the network. ii. significant construction logistics and construction work force traffic across the road network throughout the duration of the works. <p>b. The works to the north of the development are split into three sections for construction. From the construction programme it appears works on these will be undergone simultaneously and each section will comprise of various phases, which have been roughly programmed out in the report. The LLFA would need to be consulted on how surface water will be managed during the construction of each phase highlighted. This will require the contractor to submit a detailed 'Construction Surface Water Management Plan' to the LLFA outlining how surface water will be managed for review/ approval before any works commence. Provisions should be made within the REAC or Schedule 2 – Requirements that outline this approval process to ensure it takes place.</p>

Relevant Section in the Construction Update		The Council's Comments
	Leaving a positive legacy (pg. 12)	<p>a. The aspiration to encourage and help local businesses to benefit from works associated with the Project is positive, however, HE must indicate how it will work with and support local businesses to ensure they can be compliant with the requirements of the Project which need to include achieving FORS Gold status and complying with CLOCS standards. These are matters that can hinder smaller companies for being able to contract onto major Projects.</p> <p>b. There is a lack of securing of any provision for skills and employment, such as local targets, social value procurement, apprentices, etc.</p>
1.5	Control documents: securing mitigation for the project (pg. 13)	Reference is made in the report to 'Control Documents'. Reference does not appear to have been made to a 'Construction Surface Water Management Plan' that outlines how surface water flood risk will be managed during construction. This document will need to be produced for each phase of construction work and submitted to the LLFA for review/ approval before any works commence.
	The control plan (pg. 14-18)	<p>a. The ES and the DCO are legally binding documents and need to be indicated within the Control Plan – from which the other plans should be derived and must be consistent.</p> <p>b. It is not clear how the control plan and the multiple processes and activities set out within them will be managed, co-ordinated and governed by HE during the implementation process. How will the local authorities and local communities be engaged and communicated with during this process? Various fora and groups are proposed throughout the consultation documents – Joint Operations Forum (JOF), Traffic Management Forum, Travel Plan Liaison Group, Community Liaison Forums etc – but this currently appears disjointed and uncoordinated.</p> <p>c. Governance and Engagement - The Council would expect, as with other major transport schemes e.g. Silvertown Tunnel, that HE establishes an Implementation Group made up of representatives (at a senior executive level) of all the impacted local planning and highway authorities and the Department for Transport. HE should be required to consult with this Implementation Group on matters related to planning, constructing and operating the LTC scheme.</p> <p>d. oTMPfC – see the Council's separate comments on this document.</p> <p>e. Wider Networks Impacts Monitoring and Management – see the Council's separate comments on this document.</p> <p>f. oMHP – see the Council's separate comments on this document.</p> <p>g. Construction Logistics Plans (CLPs) – the Code of Construction Practice (CoCP) includes a commitment that contractors will produce a CLP which covers their works. HE has also committed to contractors meeting</p>

Relevant Section in the Construction Update		The Council's Comments
		<p>best practice standards for Construction Logistics and Fleet Management as set out in CLOCS and FORS which is welcomed. CLOCS requires the production of a detailed CLP by contractors and notes their importance in planning, managing and monitoring construction logistics. The Council believes CLPs should also be a key control document and should have a framework established as part of the examination of the proposals and not left for the appointed contractors to determine a weak and unenforceable document.</p> <p>h. Draft Archaeological Mitigation Strategy: There is concern that not enough consideration has been given to the destruction of a scheduled monument. It has been recommended that a specific mitigation strategy should be agreed in relation to the complete loss of this nationally important monument.</p>
	Figure 1-3 (pg. 19)	<p>a. The "Construction Phase" box describes 'various schemes/detailed design/management plans' etc., which is vague and should be more defined. The monitoring during construction period will be required to understand, manage and mitigate impacts on local communities</p> <p>b. There is no mention of CLPs. See comments above. CLPs should be referenced as key control document.</p> <p>c. Wider Monitoring and Evaluation – see comments above. Whilst traffic impact monitoring is proposed it is not clear how that fits into a wider Monitoring and Evaluation plan.</p>
1.6	Sustainable construction: (pg. 20)	<p>a. There is no mention or firm commitments to the use of marine transport to reduce road network and environmental impacts. See separate comments on oTMPfc and oMHP.</p> <p>b. It should be clear how HE is committed to ensuring low emission vehicles are used in all construction logistics fleet vehicles. It is surprising that HE makes no reference to its commitment to best practice standards set out in CLOCS and FORS. CLOCS and FORS both aim to reduce construction logistics/fleet impacts on community safety in its widest sense (zero collisions, improved air quality and reduced emissions, fewer vehicles, reduced reputational risk). Ensuring high quality CLPs are produced and delivered by contractors are critical in meeting the CLOCS and FORS standards and therefore a robust framework CLP should be a control document.</p> <p>c. Work force Travel Plans should form a component to maximise the use of sustainable transport by construction workers and should therefore be referenced in this section.</p> <p>d. The 'Sustainable Construction' section does not properly summarise matters in the Carbon and Energy Plan, setting out any targets and commitments. The Construction Update only has a short 2 page section on climate. The REAC is referenced, and it includes high level examples of the mitigation measures included. We expected targets and commitments to be stated much more clearly and more ambitiously within the updated REAC.</p>

Relevant Section in the Construction Update		The Council's Comments
	Hybrid or electric plant (pg. 21)	<ul style="list-style-type: none"> a. Are the figures set in the document to be targets with incentives to exceed or is this just a list of figures which will form no relevance or commitment following consent. b. HE should broaden this section to include other non-polluting fuels to allow the use of other technologies as they come on stream, such as hydrogen. c. Whilst of no direct impact on sustainability the construction methodology should reflect the use of AV as these will be far more commonplace at the time of construction and would be more environmentally sound.
Chapter 2: Project-wide construction		
2.1	Construction overview (pg. 24)	It should be noted that there will be significant construction logistics activity and workforce travel during both the initial and main works and that the commitments to impact mitigation and reducing environmental impacts must be extended to these periods.
	Temporary traffic management (pg. 36-37)	<ul style="list-style-type: none"> a. Thurrock Council has reviewed cordon construction models covering the borough for each phase of construction and has provided feedback. The Council has also raised concerns about certain assumptions for the base case model and particularly relating to the lack of validation on the local road network and with no testing of the local road peak hour. Either the strategic model should be validated on the key local roads, or validated local models should be prepared and provided as evidence regarding the performance of key areas of the local road network. We are aware some micro-simulation models have been created, but they have not been provided as evidence and may not be validated against observed traffic flows. b. Updated construction modelling evidence has not been provided within the consultation, but yet the consultation documents appear to be based upon this. Without this updated evidence, the Council cannot fully comment on the construction impacts. c. The construction modelling provided to date raises the following concerns (Reference: Thurrock Cordon Model Construction Modelling Review, May 2021) regarding the high volumes of construction traffic (either construction vehicles or workforce vehicles) at: <ul style="list-style-type: none"> i. Rectory Road, Orsett Village ii. Stifford Clays Road, Orsett Village iii. B186, North Ockendon iv. B186, South Ockendon v. B188, Baker Street village

Relevant Section in the Construction Update		The Council's Comments
		<ul style="list-style-type: none"> vi. A1014 North Bound vii. A128 Brentwood Road viii. A1089 ix. Buckingham Hill Road North Bound x. A13 West Bound at Stanford Le-Hope Bypass xi. Orsett Cock Roundabout xii. Manorway Roundabout xiii. M25 Junction 30 xiv. Asda Roundabout xv. Daneholes Roundabout <ul style="list-style-type: none"> d. Detailed assessment should be carried out where there is significant impact (e.g. junction capacity assessments, shuttle working/contra flow/temporary signal assessments, swept path testing on unclassified roads to check the feasibility of HGV use and if any widening is needed, etc.). e. It is not clear what mitigation (including road maintenance) is proposed to accommodate this traffic. This should be detailed in the Transport Assessment. f. The Environmental Impact Assessment (EIA) does not include a transport chapter and there does not appear to be an assessment of transport environmental criteria, such as: driver delay fear intimidation, severance, pedestrian and cyclist delay and amenity; safety and accidents; hazardous loads, etc. There are some significant increases in traffic during construction (and operation), which may cause some adverse impacts on pedestrians, including school children and elderly using the adjacent footways or crossing the routes, for example. Mitigation has therefore not been identified, as a result of not completing this assessment. g. The details of any monitoring and enforcement to minimise impact and prevent exceedances have not yet been provided. h. It is understood that construction traffic would not make optimum use of rail and river, because of the impact on A1089. Details on the assessment of these options has not been provided. i. See Council's detailed comments on oTMPfc in separate document.
	Topsoil removal (pg. 38)	<ul style="list-style-type: none"> a. HE must add to its documentation that removal of topsoil will adopt best practice measures and be undertaken in accordance with the measures agreed to address the various commitments in the REAC. b. A similar statement to that above regarding reinstatement should be added.

Relevant Section in the Construction Update		The Council's Comments
		c. Removal of Topsoil is indicated as part of the proposed construction process. This increases the risk of flooding as not only does it remove the permeable top layer that absorbs rainfall, it can also expose clayey impermeable sub-strata that will increase the speed/ volume of overland run-off in a rainfall event. Measures for how this risk will be managed should be outlined in the 'Construction Surface Water Management Plan' for review/ approval by the LLFA before the works commence.
	Temporary soil storage (pg. 38)	After 'best practice measures' add in accordance with the measures agreed to address the various commitments in REAC.
	Management of excavated material and earthworks (pg. 40)	a. Text in bold to be added ' <i>Managing this excavated material, and re-using the chemically and physically suitable materials for earthworks...</i> ' b. Comments have been made on the outline Materials Handling Plan and the outline Site Waste Management Plan.
	Site fencing and hoarding (pg. 41)	a. There will be extensive fencing in place often for extended periods of times. In some locations this will be in close proximity to residential and other properties. There is an acknowledgement that the hoarding and other materials used are appropriate to the location and activities within the compound b. Other major infrastructure construction projects have innovatively used hoarding in some locations to provide greening, wayfinding information, temporary community artwork or other information. This can help reduce its visual impact, support wider social and environmental objectives and help in community engagement etc. This should be considered further by HE.
	Permanent culverts (pg. 41)	It is highlighted that agreement is required from the LLFA to install 'Permanent Culverts', however it should also be noted that any works to an Ordinary Watercourse (Permanent or temporary) that might obstruct or restrict the flow of water, will require approval from the LLFA under the Protective Provisions requirements. Opportunities should be taken to daylight, restore and enhance existing Ordinary Watercourses as part of the scheme to provide betterment.
	Drainage (pg. 42)	The report outlines the provisions that will be made for temporary and permanent 'Drainage' systems. A variety of SuDS measures have been highlighted, however no reference has been made to the design of the SuDS strategy being compliant with the LLFA's requirements outlined in the Essex SuDS Design Guide (i.e. Points of Discharge, Discharge rates, water quality provisions etc.).

Relevant Section in the Construction Update		The Council's Comments
	Road widening works (pg. 46)	For any road widening works, measures should be in place to mitigate against flood risk associated with an increase in impermeable area caused by the road widening. Opportunities should also be sought to provide betterment on existing run-off rates and water quality, as outlined in the Essex SuDS Design Guide where this is practicable.
2.4	Utilities and utilities works (pg. 48-49)	<p>To help understand scope/impacts Table 2-1 should also provide:</p> <ul style="list-style-type: none"> a. Period of works / programme b. If the works are off-line (off highway) or on-line or mixture c. If the works will require traffic management – link to oTMPfc d. Table 2.1 Summary of major utility works proposed in each section, p 49 – how do these utility works impact on supply of water, electricity and gas for local residents? There is a potential risk of perception of or actual fuel insecurity, particularly for low income families, older people living in deprivation and/or alone and other vulnerable groups across Thurrock. What mitigation measures are proposed to reduce any potential impacts, especially given that some of the existing sub-stations require upgrading or are at capacity? e. Residents require utilities to stay well for example, water for cooking and cleaning and electricity and gas for cooking and as a means of heating their homes. f. For some of the networks and substations that are being embedded as part of the project and are outlined in Table 2.1 it is not clear where in Thurrock these are proposed. This needs to be clearer and should be added to the map and table within the report. <p>Reference is made to utilities and utility works. Provisions are made within the REAC commitments for this, however just to re-iterate that any such works that might impact an Ordinary Watercourse, as described above would require approval from the LLFA under the Protective Provisions requirements. This also applies to the diversion of any existing Ordinary Watercourses.</p> <ul style="list-style-type: none"> g. Where utility works are taking place, for example, utility diversion and connecting utilities to construction sites, may require switching off some of the utilities at certain times, how will this affect supply to resident's homes? h. What will the health impact be on residents and particularly vulnerable residents whose supply is diverted and/or interrupted? Will they perceive or will there be an actual impact on fuel security which could impact on both their physical and mental health and wellbeing? We would like to understand what mitigation HE are proposing to reduce the potential impacts of these utility works on residents. We note that this is particularly

Relevant Section in the Construction Update		The Council's Comments
		important given that some of the existing sub-stations require upgrading or are almost at capacity. Finally, all networks and substations affected/diverted or created as part of the LTC project need all to be clearly outlined on the map and table within this report.
2.5	Construction of the tunnels and approach structures (pg. 52)	<p>a. It should be made clear that precast concrete segments will be manufactured on site and as such the constituent materials will be imported and that import operation is currently proposed to be by road. It is acknowledged that concrete batching for the segments will take place on-site, but the document does not describe the locations of the segment factory and the batching plant. Where will these activities take place on the site? It is expected that there will be rejected segments and concrete that will not comply with mix standards. These materials will need to be disposed of and so HE should set out how that will be handled. Will on-site crushing be carried out?</p> <p>b. It is possible that the road tunnel may have a secondary lining. Where will that material be prepared and how will it be imported and waste disposed of?</p>
	Tunnel boring machines (pg. 53-54)	<p>a. It should be stated how these will be transported to the construction site if the PoT2 is not used.</p> <p>b. The documents are silent on the removal of the TBMs and the associated machinery and equipment.</p> <p>c. The document is also silent on the movement of rails, ducting and pipes associated with the TBMs.</p>
	Tunnel construction risk mitigation (pg. 55)	<p>a. Why are changing ground conditions only identified for south of the river? There are known sink holes in the Gosham landfill and erosion is reported along the northern bank.</p> <p>b. The reader would benefit from knowing what 'changing ground conditions' are expected to be.</p>
2.6	Construction compounds and Utility Logistics Hubs (pg. 56)	<p>a. Figure 2-15 Construction Compound Indicative layout p53 and Figure 2:18 ULH indicative layout/alternative layout – There is no sign of secure cycle parking to encourage workers to travel to work by sustainable, active travel modes which is better for the environment (air quality, noise and climate) as well as support the health of workers. We would expect this to be included within all of the compounds. It is noted that the CoCP/REAC state there will be parking for vehicles and bicycles – see the Council's separate comments in response to these documents.</p> <p>b. Various Utility Hubs and Construction Compounds have been highlighted along the development route and indicative details have been provided in the report. REAC Ref. RDWE006 outlines commitment to manage construction Surface Water in an appropriate manner, which is acceptable. However final 'detailed' design of the drainage strategy for these areas should be subject to review and approval by the LLFA. In each instance the proposed drainage strategy should be compliant with the LLFA's requirements outlined in the</p>

Relevant Section in the Construction Update		The Council's Comments
		Essex SuDS Design Guide (Link: https://www.essexdesignguide.co.uk/suds). Any drainage strategy should have a suitable maintenance regime in place to ensure the benefits this delivers can be sustained throughout the construction period. For a scheme of this scale an appropriate allowance for climate change should also be factored into the detailed design of the drainage system.
	Construction compounds (pg. 56)	<ul style="list-style-type: none"> a. Construction compounds – the Construction Update describes a range of issues that have been taken into account in locating compounds. It is unclear whether a range of compound locations were identified and assessed before the current proposed locations were selected. Further information is required on this process and should be shared with the Council. b. HE should state a clear reference/commitment to best practice construction logistics, site and fleet management practices - CLOCS/FORS to minimise impacts on community safety, environment etc. c. Proximity of Brentwood Road to residential homes in Chadwell St. Mary is a concern. There are 3 x high-rise tower blocks to the north of Chadwell St Mary which may not benefit from the noise mitigation measures. d. Proximity of the Stanford Road compound to Whitecroft Care home is concerning from a health and wellbeing perspective. e. Proximity of the Long Lane compound to the (relocated) Gammonfield Traveller site and to residential areas. f. Proximity of the Stifford Clays Road East compound to Baker Street residential is a concern.
	Table 2-2 Construction compound types and descriptions (pg. 57-58)	<ul style="list-style-type: none"> a. It should be made clear whether adequate space to hold vehicles has been made within compounds and whether any on-street holding space will be required. On-street stacking and holding spaces will not be appropriate or safe. b. What will be included in the welfare facilities? Is this just an offer of basic first aid or would it involve more formal health service for supporting workers in terms of reducing the impact on local services in Thurrock. More information is required.
	Table 2-3 Construction compound names and areas (pg. 58-61)	<ul style="list-style-type: none"> a. To help understand scale of construction logistics / site impacts these tables should also indicate: <ul style="list-style-type: none"> i. Programme duration of use / time period ii. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel) iii. Vehicle type/Mix iv. Number and location of access points

Relevant Section in the Construction Update		The Council's Comments
		<p>b. There is no indication/explanation of how compound areas were derived and if they are now minimal or what criteria determined their size. Also, no indication of compound or ULH layouts or major activities descriptions, e.g. Figure 4-4 is too broad. Furthermore, there is no indication of construction impacts from the compounds.</p>
2.7	Utility Logistics Hubs (pg. 61-63)	<p>a. Proximity of Hornsby lane and Brentwood Road Utility hubs to Orsett Heath and Chadwell St Mary residents a concern due to the possibility of noise, traffic movements and air quality issues arising from the operation of the hubs.</p> <p>b. Proximity of Long Land Utility hub to residential and Thurrock Community Hospital a concern due to the possibility of noise, traffic movements and air quality issues arising from the operation of the hubs.</p>
	Table 2-4 Utility Logistics Hubs (pg. 64-66)	<p>a. To help understand scale of construction logistics / site impacts these tables should also indicate:</p> <ul style="list-style-type: none"> i. Programmed time period ii. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel) iii. Vehicle type/Mix iv. Number and location of access points <p>b. It would be helpful to have the dates of when these ULHs would operate to enable a full assessment of any crossover works which may negatively impact on local residents in terms of supply of utilities. As noted above utilities are important for supporting health and wellbeing. The report currently only states how many months ULHs would be required for.</p>
2.8	Construction traffic and haul roads (pg. 67)	See Council's separate comments on oTMPfc.
	Challenges and considerations (pg. 67)	<p>a. It is the Council's opinion that very little attention has been paid to the feedback provided by the Council and this is evidenced through the myriad comments and issues which are unresolved between the Council and HE.</p>

Relevant Section in the Construction Update		The Council's Comments
		<p>b. See the Council's separate comments and concerns on documents and correspondence shared at the various formal consultation stages and the engagement phases that continue to progress in addition to the consultation.</p> <p>c. HE specifically refers to the redesign of the A13 interchange and how that has reduced or removed the need for traffic management measures. This is extremely misleading and disingenuous and so should be evidenced if it is to be stated in the documents. The Council has consistently and repeatedly questioned the proposed permanent state layout of the interchange between A13/A1089/A128 Orsett Cock and LTC. The Council is concerned that the proposed layout is not safe, is convoluted and continues to create impacts on affected sections of the Local Road Network when LTC is operational. These concerns are raised throughout the Council's responses during earlier consultations and engagement and are recorded in the Issues Log which accompanies the Statement of Common Ground. Directly related to the unsatisfactory arrangement of the interchange will be the mechanisms to manage the construction period for the interchange – with which the Construction Update is concerned. HE has not presented a clear phasing approach to the construction of the complex and convoluted interchange and so it cannot maintain that it has <i>"Redesigned Lower Thames Crossing junctions...to reduce and, in some cases, remove the need for traffic management measures."</i> The construction of the A13 interchange would be an extremely complex process and will involve substantive disruption, delays, temporary traffic management and phasing or works. It is therefore the Council's opinion that the statement made seeks to underplay the effects and impacts that would be experienced during construction. The Council does not understand how the design of the interchange has been changed to allow HE to make its claim and requests that HE expands on this assertion.</p>
	Construction logistics (pg. 68)	<p>a. The statement that a combination of "multimodal transport" would be used during the construction of the project does not align with the current oMHP which largely dismisses the use of non-road based transport for materials plant and equipment. The Construction Update is again misleading and not aligned to other documents.</p> <p>b. oMHP – see comments above regarding use of marine transport and the apparent dismissal of rail transport within the currently proposed and weak OMHP, on which the Council is providing a separate response and expressing its concerns about the absence of depth and detail.</p> <p>c. CLPs – The commitment by HE to the preparation of a CLP by the contractors is welcomed. See comments above regarding CLPs which the Council believe should be a control document and must be a critical early deliverable by the contractor. Preparation of a CLP should be first in the list of practices to be deployed. The CLP set sets out the practices, modes of transport and technologies that the contractor will deploy (such</p>

Relevant Section in the Construction Update		The Council's Comments
		<p>as those described in this list) to reduce impact on the road network, reduce environmental impact, reduce road risks, congestion and cost.</p> <p>d. This section implies that CLOCS and FORS are simply about reducing risks to vulnerable road users and perhaps suggests HE does not fully understand the aims of CLOCS and FORS. Committing to contractors meeting these standards is welcomed but HE needs to recognise that the mission and goals of CLOCS /FORS is wider than promoting practices simply reduce vulnerable road user risks. CLOCS and FORS both aim to reduce construction logistics/fleet impacts on community safety in its widest sense (zero collisions, better maintained vehicles; better trained drivers and more aware of the impact of their industry on the environment; improved air quality and reduced emissions, fewer and better managed vehicle movements, reduced reputational risk).</p> <p>e. The FORS and CLOCS initiatives must reach much wider than the contractors and their fleet, the initiatives must apply to the Client's / HE's fleet; to sub-contractors and all hauliers (including those being further sub-contracted). All documents need to align on this point.</p>
	Access routes and haul roads (pg. 69-70)	<p>a. States that some compounds connect directly to the SRN, such as M25 and A2. Specify which compounds please.</p> <p>b. While from a Public Health perspective we support the use of haul routes to reduce disruption and impact on local road users, HE still needs to consider the impact of HGV movements on these local routes in terms of increases in poor air quality and noise as well as cumulative effects.</p>
2.9	Waste management (pg. 70-71)	<p>a. Site Waste Management Plan (oSWMP) – see Council's separate comments for the specific document regarding the lack of specific clarity and detail.</p> <p>b. HE should provide detail on the mechanisms for dealing with rejected materials such as concrete which fails compliance checks and cast segments which do not comply with standards or are damaged. These are typically overlooked but can be significant quanta of material. If Sprayed Concrete Lining is to be used, the 50% overspray would need to be handled, and most likely disposed of off-site.</p> <p>c. oMHP – see Council's separate comments regarding lack of commitment to use of marine and rail transport.</p> <p>d. Comments have been made on the Outline Site Waste Management Plan (OSWMP) including lack of clarity on how suitable for re-use has been defined/decided and no obvious waste classification exercise.</p>
	Lower Thames Crossing and the waste hierarchy	<p>a. HE states at page 73 that contractors will be able to demonstrate that aggregate from secondary uses or recycled is not suitable for the Project. The Contractors should be required to demonstrate why the use of</p>

Relevant Section in the Construction Update		The Council's Comments
	(pg. 71-72)	<p>that material is not appropriate and why it had failed to use that material. It is not sufficient for contractors to be permitted to simply stated that material reuse is not feasible.</p> <p>b. HE states that “around 23 million tonnes would be reused on site”. It does not state what this 23 million tonnes is and whether that is a commitment or a statement.</p>
	Table 2-5 Construction waste eliminated through project design changes (pg. 72-73)	HE states the reuse of excavated material from the tunnels for reuse within the Order Limits as 10,400,000 cubic metres. Is this to be a commitment to which the appointed contractors will have to adhere? It should be stated within the control documents as a commitment and not just an aspiration. The metrics on that should then be reported to the stakeholders and the Secretary of State.
	Northern tunnel entrance and excavated material (pg. 73)	<p>a. Will there be an Environmental Permit for the operations proposed on Shed Marsh?</p> <p>b. Where is the definition of what is suitable for re-use following recovery?</p> <p>c. Given the identified presence of asbestos in the Made Ground/landfill waste is it intended that this material be re-used?</p>
2.10	Working hours (pg. 74)	See the Council's separate response to the CoCP and REAC – particularly in relation to population and human health matters.
2.11	Monitoring (pg. 74)	<p>a. See comments above regarding monitoring</p> <p>b. It is unclear within the oTMPfc and the construction update as to what road network impact monitoring is proposed before and during the construction period. Monitoring will be required to ensure impacts of the construction logistics and traffic management required by the scheme on the road network are understood, being actively managed and impacts on local communities are being mitigated. The oTMPfc proposes a monitoring report but the scope of monitoring proposed is not clear, no monitoring scheme or KPIs are provided in any detail. Monitoring construction logistics activities is a requirement of the CLOCS and this requirement should inform HE's monitoring scheme throughout the construction period. The need for proper and strong governance of the contractors' Traffic Management Plans and Construction Logistics Plans is covered in separate responses by the Council.</p> <p>c. This Council would have expected to see any monitoring during construction and once the road has opened to form part of a much wider monitoring and evaluation plan for the scheme to demonstrate the scheme outcomes and impacts in a much wider sense considering a range of socio, economic and environmental issues. This does not seem to be the case from the documents presented for consultation.</p>

Relevant Section in the Construction Update		The Council's Comments
2.12	Worker accommodation (pg. 75)	<p>a. See the Council's response to the CoCP– particularly in relation to population and human health matters.</p> <p>b. In paragraph 5.6.5 of the original CoCP we raised the question “What will be the impact on demand for health and other services from construction residing in local areas within Thurrock? This has not been adequately addressed in the ES, HEqIA and CoCP.” In the updated CoCP (June 2021) Paragraph 4.3.4 (f) states the following ‘Construction workforce - in its travel to and from work and in its use of temporary accommodation.’ This is in relation to the coordination responsibilities of the Joint Operations Forum (JOF). As noted there is still no reference to the monitoring or impact of the construction workforce on demand and access to health and other services and this issue remains outstanding. We would expect this monitoring to encompass monitoring of the demand and access to local health and social care and other services and would ask that this is included by HE. This fits within the worker accommodation section of the construction update, where there is mention that Highways England’s assessment of local accommodation concludes that there is sufficient capacity through a combination of rented properties, visitor accommodation, such as hotels and owner-occupied homes. As mentioned this assessment and monitoring should examine impact on local services and how this may affect access to health and other services, especially given that Thurrock is one of the most under-doctored areas in the country.</p>
Chapter 4: Section B – Tunnels		
4.1	Overview (pg. 102)	Should identify the potential need for improvement and/ or treatment to address the ground conditions.
4.2	Section B tunnels construction works (pg. 103-105)	<p>a. Tunnelling and Tunnel Fit Out – Add further information about tunnel lining and preparation of tunnel lining segments (on-site).</p> <p>b. Figure 1-1 show tunnel compound access points.</p> <p>c. Figure 1-1 show where concrete batching plant will be sited and tunnel segments will be cast.</p>
	Table 4-1 Section B construction compounds (pg. 107-108)	<p>Table 4-1 To help understand scale of construction logistics / site impacts these tables should also indicate:</p> <p>a. Programmed time period.</p> <p>b. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel).</p> <p>c. Vehicle type/Mix.</p> <p>d. Number and location of access points.</p>

Relevant Section in the Construction Update		The Council's Comments
	Description (pg. 109)	<p>a. Figure 1-3- show main compound access points.</p> <p>b. Figure 1-4 – provides little detail on the proposed internal layout of the site and how all the space will be utilised. Where will concrete batching take place? Where will car parking be and how much space is proposed? Where will tunnel segments be manufacture and stored? Where will office space / sleeping accommodation be provided and how much space will this occupy?</p> <p>c. This further detail is required to help understand why and how the scale of site proposed (270ha) has been established and also to understand site impacts and the mechanisms for workforce and materials movement.</p> <p>d. The indication of a parking area to the northern edge of the compound indicates that workforce access will be focused on the Station Road corridor from Linford and East Tilbury. This is not borne out within the Construction modelling and does not sit well with the aspiration to maximise access by non-car modes, where the main focus should be walking, cycling and public transport use from the west of the compound and that the Station Road approach is not suitable for high numbers of car and van movements. This evidences the shallowness of HE's commitments to sustainable transport and the weakness of the FCTP document.</p> <p>e. The CoCP states that walking and cycling to compounds will only be supported by HE where that occurs along routes which are lit streets. This rules out most of the access corridors to the compounds and shows that HE will not actively support walking and cycling to the work compounds.</p> <p>f. The poor quality of this image and the incorrect use of "Station Road" label as the west approach to the North Portal compound demonstrates the absence of refinement of the information provided by HE.</p>
	Northern Tunnel Entrance Compound (pg. 109-111)	See comments on 'Description' immediately above.
	Access to site (pg. 111-112)	<p>a. States that equipment and materials would arrive via Port of Tilbury and PoT2 and that some would arrive using SRN and a new dedicated access route. The Council is concerned that insufficient work has been undertaken to enable HE to make firm commitments as to the type and amount of equipment and material that can be transported by marine transport and via PoT and PoT2. At present whilst contractors are apparently encouraged to investigate this further as part of their MHPs and TMPs there is no firm commitment to do so and contractors will opt for the easiest and cheapest option. Maximising use of marine transport will help reduce impacts on the road network and local communities during the construction period</p>

Relevant Section in the Construction Update		The Council's Comments
		<p>and help reduce the schemes environmental and carbon impacts. Minimising the increase in HGV movements should minimise the impacts on road safety by reducing potential for road accidents and deaths. The balance between road and marine transportation should not be entirely about cost or convenience, it must reflect safety, environmental effects and community impacts. HE has to commit to incentivising its contractors to adopt the most sustainable methods of transport for materials and equipment.</p> <p>b. The document refers to a “dedicated road” built from Station Road. Is this road to be within the Order Limits and also which route is it to be served by i.e. Station Road from the east or through the Port of Tilbury from the east?</p> <p>c. What restrictions are there to be on the number, sized and time period for using Station Road to access the North Portal compound. This corridor is not suitable for access and it should not be left undefined.</p>
	Materials handling (pg. 113)	<p>a. See Council's separate comments on oMHP and lack of commitment to use of marine transport to reduce road network impacts.</p> <p>b. It is noted that concrete will be batched on site and also tunnel segments cast on site. How will concrete aggregate be delivered to the site for preparation/batching?</p>
	On-site haul routes for the Northern Tunnel Entrance Compound (pg. 113)	Identify the need for EA liaison to ensure the design does not adversely affect the landfill cap.
	Site-specific worker accommodation (pg. 116)	See comments above regarding providing more detail on the proposed internal layout of the northern tunnel compound site.
	Site drainage, construction and drainage outfalls (pg. 116-126)	We assume that EA will comment / secure appropriate design controls including preventing infiltration.
4.7	Launch structure and approach ramp	a. Please provide further information on the volumes of materials to be excavated (as landfill waste and natural ground) for the launch structure.

Relevant Section in the Construction Update		The Council's Comments
	(pg. 127)	b. Please provide clarity as to whether all this material is proposed to be retained on site for re-use.
4.8	Tunnelling and fit out (pg. 128)	a. States that 'the internal road deck would be installed as large precast units within the tunnel' and that 'due to their size and weight, these units are <i>likely</i> to be produced onsite'. At this stage of the project the Council would expect HE would be able to confirm whether this will be the case and commit the contractor to doing so to reduce the need for additional construction logistics/lorry movements. b. Further information should be provided on the proposed tunnel lining process for the main tunnels
4.9	Earthworks and landscaping (pg. 129)	See comments made earlier in regard to operation of a treatment hub and definition of what is considered suitable for re-use.
4.10	Testing and commissioning (pg. 131)	How will this process be managed at locations where the scheme interfaces with third party assets, including those for which the Council is responsible? How will the Council be involved in this testing and commissioning process? Further information is required from HE.
Chapter 5: Section C – North of the River Thames 1		
5.2	Timeline (pg. 134-135)	a. Figure 1-1 – programme duplicates in Figure 1-2. b. It is difficult to understand what the 'lower', 'medium' and 'higher' levels of activity actually translate to in terms of overall HGV movements, workforce travel movements, construction traffic flow on the network, amount of TM on the network. HE should be presenting this information in a more meaningful way so that local stakeholders, including the Council and communities can visualise and understand the scale and scope of local impacts.
	Haul roads (pg. 137-138)	Muckingford Road - What measures are to be put in place to protect vulnerable users, particularly those accessing the recreation and sports ground on this road? What measures are proposed during peak periods of activity at the sports pitches?
	Construction compound set-up (pg. 138-140)	Figure 1-3 – also show compound access points on this plan.

Relevant Section in the Construction Update		The Council's Comments
	Station Road Compound (pg. 141-142)	To help understand scale of construction logistics / site impacts at each compound this section should also indicate: a. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel). b. Vehicle type/Mix..
	Brentwood Road Compound (pg. 143-144)	To help understand scale of construction logistics / site impacts at each compound this section should also indicate: a. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel). b. Vehicle type/Mix..
	Stanford Road Compound (pg. 145-146)	To help understand scale of construction logistics / site impacts at each compound this section should also indicate: a. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel). b. Vehicle type/Mix.
	Long Lane Compound (pg. 147-148)	a. It is not clear from the description as to why this compound needs to be split over two sites. Further information is required to explain why this approach has been taken. b. To help understand scale of construction logistics / site impacts at each compound this section should also indicate: i. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel). ii. Vehicle type/Mix.
	Stifford Clays Road Compound West (pg. 149-150)	To help understand scale of construction logistics / site impacts at each compound this section should also indicate: a. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel). b. Vehicle type/Mix.

Relevant Section in the Construction Update		The Council's Comments
	Stifford Clays Road Compound East (pg. 152-153)	To help understand scale of construction logistics / site impacts at each compound this section should also indicate: a. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel). b. Vehicle type/Mix.
5.4	Utilities (pg. 154)	Little specific information is given in relation to these major utilities works. Further information is required in relation to the scope of work, its likely impacts and any proposed traffic management / other mitigations measures that would be needed to support their delivery.
	Table 5-1 Section C Utility Logistics Hubs (pg. 157)	Table 5-1 To help understand scale of construction logistics / site impacts these tables should also indicate: a. Programmed time period. b. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel). c. Vehicle type/Mix. d. Number and location of access points.
	Diversion of National Grid power line at Tilbury to Linford (pg. 158)	Given the scale of the works described there is little specific information given in relation to these major utilities works within this update. Further drawings and information are required by the Council and other stakeholders in relation to the scope, construction methodology, working areas, programme during construction and its likely impacts including associated construction logistics, proposed traffic management and other mitigations measures that would be needed to support delivery and minimise impacts on the local community. If this information is provided elsewhere in other documents this needs to be clearly stated. These matters must be subject to effective public consultation, which thus far they have not been.
	Diversion of National Grid power lines from Chadwell St Mary to Stifford Clays Road (pg. 158)	Given the scale of the works described there is little specific information given in relation to these major utilities works within this update. Further drawings and information are required by the Council and other stakeholders in relation to the scope, construction methodology, working areas, programme during construction and its likely impacts including associated construction logistics, proposed traffic management and other mitigations measures that would be needed to support delivery and minimise impacts on the local community. If this information is provided elsewhere in other documents this needs to be clearly stated. These matters must be subject to effective public consultation, which thus far they have not been.

Relevant Section in the Construction Update		The Council's Comments
	UKPN proposals (pg. 159)	See comment above re. National Grid.
	Diversion of Cadent high-pressure gas network (pg. 159)	See comment above re. National Grid.
	Diversion of sewers and water mains (pg. 160)	See comment above re. National Grid.
	Diversion of telecommunications networks (pg. 160)	See comment above re. National Grid.
5.5	Tilbury Viaduct (zone 1) (pg. 160)	Given the scale of the works described there is little specific information given in relation to these viaduct works within this update. Further site specific drawings and information are required by the Council and other stakeholders in relation to the final schemes design and also the scope, construction methodology, working areas, programme during construction and its likely impacts including associated construction logistics, proposed traffic management and other mitigations measures that would be needed to support delivery and minimise impacts on the local community. Reference is made to some potential generic construction methodologies described earlier in the document but site specific information is required to enable the Council and others to understand the impacts. If this information is provided elsewhere in other documents this needs to be clearly stated. These matters must be subject to effective public consultation, which thus far they have not been.
	Introduction (pg. 160)	See comment above.
	Timing (pg. 160)	See comment above.

Relevant Section in the Construction Update		The Council's Comments
	Description (pg. 160)	See comment above.
5.6	Chadwell St Mary link (zone 2) (pg. 161)	Given the scale of the works described there is little specific information given in relation to these viaduct works within this update. Further site specific drawings and information are required by the Council and other stakeholders in relation to the final schemes design and also the scope, construction methodology, working areas, programme during construction and its likely impacts including associated construction logistics, proposed traffic management and other mitigations measures that would be needed to support delivery and minimise impacts on the local community. Reference is made to some potential generic construction methodologies described earlier in the document but site specific information is required to enable the Council and others to understand the impacts. If this information is provided elsewhere in other documents this needs to be clearly stated. These matters must be subject to effective public consultation, which thus far they have not been.
	Introduction (pg. 161)	See comment above.
	Timing (pg. 161)	See comment above.
	Description (pg. 161)	See comment above.
	Main route, Tilbury Viaduct to south of the A13 (pg. 161)	See comment above.
	Bridge construction (pg. 161)	See comment above.
	Muckingford Road bridge (pg. 161-162)	See comment above regarding further information/designs required. The Council would like to see further detail on the provision being made for walkers, cyclists and horse riders during the works and once completed.

Relevant Section in the Construction Update		The Council's Comments
	Brentwood Road bridge (pg. 162)	See comment above regarding further information/designs required. The Council would like to see further detail on the provision being made for walkers, cyclists and horse riders during the works and once completed.
	Hoford Road bridge (pg. 162)	See comment above regarding further information/designs required. The Council would like to see further detail on the provision being made for walkers, cyclists and horse riders during the works and once completed.
	Rectory Road (pg. 164)	<ul style="list-style-type: none"> a. See Council's separate comments on oTMPfc. b. The Council is particularly concerned about the impacts of these works and the closure of Rectory Road over an extended period of time (12 months) and its potential impacts, particularly on Orsett Village. What mitigation is proposed for those communities affected by these long term closures? c. Given the scale of the works described there is little specific information given in relation to these works within this update. Further site specific drawings and information are required by the Council and other stakeholders in relation to the final schemes design and also the scope, construction methodology, working areas, programme during construction and its likely impacts including associated construction logistics, proposed traffic management and other mitigations measures that would be needed to support delivery and minimise impacts on the local community. Reference is made to some potential generic bridge construction methodologies described earlier in the document but site specific information is required to enable the Council and others to understand the impacts. If this information is provided elsewhere in other documents this needs to be clearly stated. These matters must be subject to effective public consultation, which thus far they have not been. d. The Council would like to see further detail on the provision being made for walkers and cyclists during the works and once completed. e. What diversions would be put in place for all road users during the duration of works? f. How will property access be provided?
	A1013 (Stanford Road) realignment and tie-in structures (pg. 164)	See Council's separate comments on oTMPfc.
	Orsett Heath Viaduct	Given the scale of the works described there is little specific information given in relation to these viaduct works within this update. Further site specific drawings and information are required by the Council and other

Relevant Section in the Construction Update		The Council's Comments
	(pg. 165)	stakeholders in relation to the final schemes design and also the scope, construction methodology, working areas, programme during construction and its likely impacts including associated construction logistics, proposed traffic management and other mitigations measures that would be needed to support delivery and minimise impacts on the local community. Reference is made to some potential generic construction methodologies described earlier in the document but site specific information is required to enable the Council and others to understand the impacts. If this information is provided elsewhere in other documents this needs to be clearly stated. These matters must be subject to effective public consultation, which thus far they have not been.
	Baker Street (pg. 165)	<p>a. The Council is particularly concerned about the impacts of these works and the closure of Baker Street over an extended period of time and its potential impacts, particularly on Orsett Village. What mitigation is proposed for those communities affected by these long term closures?</p> <p>b. Given the scale of the works described there is little specific information given in relation to these works within this update. Further site specific drawings and information are required by the Council and other stakeholders in relation to the final schemes design and also the scope, construction methodology, working areas, programme during construction and its likely impacts including associated construction logistics, proposed traffic management and other mitigations measures that would be needed to support delivery and minimise impacts on the local community. Reference is made to some potential generic bridge construction methodologies described earlier in the document but site specific information is required to enable the Council and others to understand the impacts. If this information is provided elsewhere in other documents this needs to be clearly stated. These matters must be subject to effective public consultation, which thus far they have not been.</p> <p>c. The Council would like to see further detail on the provision being made for walkers and cyclists during the works and once completed.</p> <p>d. What diversions would be put in place for all road users during the duration of works?</p> <p>e. How will property access be provided?</p>
	Realignment of Stifford Clays Road and bridge construction (pg. 166)	See comment above regarding further information/designs required. The Council would like to see further detail on the provision being made for walkers and cyclists during the works and once completed. These matters must be subject to effective public consultation, which thus far they have not been.

Relevant Section in the Construction Update		The Council's Comments
	Realignment of Green Lane and bridge construction (pg. 166)	See comment above regarding further information/designs required. The Council would like to see further detail on the provision being made for walkers and cyclists during the works and once completed. These matters must be subject to effective public consultation, which thus far they have not been.
5.8	Testing and commissioning (pg. 167)	How will this process be managed at locations where the scheme interfaces with third party assets, including those for which the Council is responsible? How will the Council be involved in this testing and commissioning process? Further information is required from HE.
	Introduction (pg. 167)	See comments above.
	Timing (pg. 167)	See comments above.
	Description (pg. 167)	See comments above.
Chapter 6: Section D – North of the River		
6.2	Timeline (pg. 170)	<ul style="list-style-type: none"> a. Figure 1-2 – cannot read/blurred. b. It is difficult to understand what the 'lower', 'medium' and 'higher' levels of activity actually translate to in terms of overall HGV movements, workforce travel movements, construction traffic flow on the network, amount of TM on the network. HE should be presenting this information in a more meaningful way so that local stakeholders, including the Council and communities can visualise and understand the scale and scope of local impacts.
	Archaeological investigations (pg. 172)	This is very high level containing little information for the public. Considering the amount of work put into the cultural heritage assessment this is disappointing and provides the reader with little information. No information on the assessment of historic buildings. Within this section the road will result in the complete loss of a nationally designated Scheduled Monument and three grade II listed buildings at Orsett. There is no information on the mitigation proposed.

Relevant Section in the Construction Update		The Council's Comments
	Construction compound set-up (pg. 174-175)	Figure 1-3 – show compound access/entrance points on plan.
	Mardyke Compound (pg. 176-177)	To help understand scale of construction logistics / site impacts at each compound this section should also indicate: <ul style="list-style-type: none"> a. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel). b. Vehicle type/Mix.
	Medebridge Compound (pg. 178-179)	To help understand scale of construction logistics / site impacts at each compound this section should also indicate: <ul style="list-style-type: none"> a. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel). b. Vehicle type/Mix.
	M25 Compound (pg. 180-181)	<ul style="list-style-type: none"> a. It is not clear from the description as to why this compound needs to be split over two sites. Further information is required to explain why this approach has been taken. b. To help understand scale of construction logistics / site impacts at each compound this section should also indicate: <ul style="list-style-type: none"> i. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel). ii. Vehicle type/Mix.
	Ockendon Road Compound (pg. 182-183)	To help understand scale of construction logistics / site impacts at each compound this section should also indicate: <ul style="list-style-type: none"> a. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel). b. Vehicle type/Mix.

Relevant Section in the Construction Update		The Council's Comments
	Warley Street Compound (pg. 184-185)	To help understand scale of construction logistics / site impacts at each compound this section should also indicate: <ul style="list-style-type: none"> a. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel). b. Vehicle type/Mix.
	Table 6-1 Section D Utility Logistics Hubs (pg. 188)	Table 6-1 To help understand scale of construction logistics / site impacts these tables should also indicate: <ul style="list-style-type: none"> a. Programmed time period. b. Average daily / Peak vehicle movements associated with each site (Construction Logistics / Workforce Travel). c. Vehicle type/Mix. d. Number and location of access points.
	Diversion of National Grid power lines at the Mardyke (pg. 189)	Given the scale of the works described there is little specific information given in relation to these major utilities works within this update. Further drawings and information are required by the Council and other stakeholders in relation to the scope and area/s of work during construction and its likely impacts including associated construction logistics, proposed traffic management and other mitigations measures that would be needed to support delivery and minimise impacts on the local community. If this information is provided elsewhere in other documents this needs to be clearly stated. These matters must be subject to effective public consultation, which thus far they have not been.
	UK Power Networks (UKPN) proposals (pg. 189)	See comment above re. National Grid.
	Diversion of Cadent gas networks (pg. 189)	See comment above re. National Grid.
	Diversion of foul sewers and water mains (pg. 189)	See comment above re. National Grid.

Relevant Section in the Construction Update		The Council's Comments
	Diversion of telecommunications networks (pg. 190)	See comment above re. National Grid.
6.5	Ockendon link (zone 1) (pg. 190)	Given the scale of the works described there is little specific information given in relation to these viaduct works within this update. Further drawings and information are required by the Council and other stakeholders in relation to the final schemes design and also the scope, construction methodology and area/s of work during construction and its likely impacts including associated construction logistics, proposed traffic management and other mitigations measures that would be needed to support delivery and minimise impacts on the local community. If this information is provided elsewhere in other documents this needs to be clearly stated. These matters must be subject to effective public consultation, which thus far they have not been.
	Introduction (pg. 190)	See comments above.
	Timing (pg. 190)	See comments above.
	Description (pg. 190)	See comments above.
	Construction of the Mardyke Viaducts and embankments (pg. 190-191)	See comments above.
	Construction of North Road bridge (pg. 191)	See comment above regarding further information/designs required. The Council would like to see further detail on the provision being made for walkers, cyclists and horse riders during the works and once completed.

Relevant Section in the Construction Update		The Council's Comments
	Proposed Ockendon Road bridge structure (pg. 193)	Diversion via Dennis Road – further information should be provided on the expected level of traffic forecast to use this diversion.
6.8	Testing and commissioning (pg. 196)	See Council's comments above on Testing and commissioning.
Chapter 7: Project-wide impacts		
	Building the Lower Thames Crossing and the impacts on the local road network (pg. 198-200)	<ul style="list-style-type: none"> a. See Council's separate comments on oTMPfc, oMHP and FCTP provided separately b. Construction Traffic Modelling / Impacts - see Council's report which has been issued to HE: 'Thurrock Cordon Model Construction Modelling Review' which provides a high-level review of the impact of the 11 construction phases (throughout the development of the Lower Thames Crossing as set out within Chapter 8 of the LTC DCO Transport Assessment) on Thurrock's highway network, providing an indication of the forecast impact arising from the traffic arriving and departing at the construction compounds, as well as the temporary diversions and road closures during the construction period. This report raises a series of concerns the Council has regarding high volumes of construction traffic at a wide range of locations on the local Thurrock Road network, including HGVs/lorries and LGVs/vans. It identifies the need for further detailed assessment where there is significant impact and for further details from HE on the mitigation proposed. c. Construction Traffic Modelling - No updated construction traffic modelling has been issued alongside this consultation material. This is vital evidence that helps understand impacts on the road network and local communities and informs the development of appropriate mitigation measures. We consider that HE must provide, and consult upon, this updated traffic modelling. d. Whilst this section highlights a range of good intentions and proposals (which are welcomed) to 'reduce use of the local road network by vehicles accessing compounds' ; 'minimise the volume of earth that has to be moved away from or into construction locations' and 'reduce the number of workforce cars on the road network'. However, the Council has a number of concerns that have been identified above particularly in relation to the control plan documents (1.5) and construction logistics (2.8). Some key points are noted/re-iterated below.

Relevant Section in the Construction Update	The Council's Comments
	<p>e. CLPs - The importance of CLPs is not recognised in this section. CLPs must set out the practices, modes of transport and technologies that the contractor will deploy and will be critical in reducing impacts on the road network, environmental impacts, reduce road risks, congestion and cost.</p> <p>f. Monitoring Construction Impacts - It is unclear within the oTMPfc and the construction update as to what road network impact monitoring is proposed before and during the construction period. Monitoring will be required to ensure impacts of the construction logistics, workforce travel and traffic management required by the scheme on the road network are understood, being actively managed/enforced and impacts on local communities are being mitigated. HE proposes through the oTMPfc a monitoring report (and the FTP proposes monitoring and adjustment) but the scope of monitoring proposed is not clear, no monitoring scheme or KPIs are provided in any detail. These monitoring requirements must reflect all vehicles, including vans/LGVs, visiting the compounds and not just lorries or heavy plant and equipment.</p> <p>g. Marine Transport - The Council is concerned that insufficient work has been undertaken to enable HE to make firm commitments as to the type and amount of material that can be transported by marine transport. At present whilst contractors are encouraged to investigate this further as part of their MHPs and TMPs there is no firm commitment to do so. Maximising use of marine transport will help reduce impacts on the road network and local communities during the construction period and help reduce the schemes environmental and carbon impacts. HE need to take active steps to investigate these matters now, and consult upon their intentions once that investigation has been completed.</p> <p>h. Impacts on Bus Networks – Some increases in bus journey times during the construction period are acknowledged here and in the ward impact summaries. The Council is concerned that there is insufficient recognition here and throughout HE's consultation material regarding impacts on the local bus network during the construction period and in particular how this will be monitored and what mitigation measures will be taken to reduce impacts on operators and importantly on bus passengers. Simply engaging with operators, diverting services and communication of planned changes to users will not mitigate road network impacts that are likely to significantly increase bus journey times and make them more unreliable. To maintain service levels for passengers whilst the construction work take place will require close engagement with bus operators and local authorities in planning traffic management. Service levels on some routes may need to be enhanced to maintain service frequencies and reliability. HE should be indicating a commitment to mitigating impacts on the local bus networks and funding made available.</p> <p>i. Impacts on Bus Networks – re comment above this will have knock on impacts to the communities, equalities and health. Those who do not own a car could be significantly impacted here. These tend to be from lower income groups who experience inequalities in health outcomes. These groups could be therefore</p>

Relevant Section in the Construction Update		The Council's Comments
		<p>disproportionately affected if they have routes to their social networks, health services, food retail etc affected.</p> <p>j. HE has presented a Framework Construction Travel Plan (FCTP) which is proposed to provide a basis from which contractors prepare detailed workforce travel plans and a structure by which to review, monitor and enforce compliance. The FCTP should provide stretch targets for the contractors to minimise the effects of work force travelling by private vehicles. In a separate response on the FCTP (set out in Appendix A), the Council has raised its concerns on the lack of adequate FCTP provisions and targets and the continued reliance on private transport by workers to access the compounds. This concern is substantiated where HE recognises that the 'impact of the presence of staff cars on the highway network would be greatest in the morning peak period....'. This impact should be mitigate by HE and its contractors and this should be required through the FCTP and the subsequent contractors Travel Plans and then evidenced through monitoring and rectified where targets are not met.</p> <p>k. Environmental impacts are not summarised in much detail. All the plans of AQ and noise impacts are based on out-of-date assessments which are currently being updated.</p>
	Our environmental assessment of construction (pg. 200-201)	<p>a. The Environmental Impact Assessment (EIA) does not include a transport chapter and there does not appear to be an assessment of the usual transport environmental criteria, such as: driver delay fear intimidation, severance, pedestrian and cyclist delay and amenity; safety and accidents; hazardous loads, etc. There are some significant increases in traffic during construction (and operation), which may cause some adverse impacts on pedestrians, including school children and elderly using the adjacent footways or crossing the routes, for example. Mitigation has therefore not been identified as a result of not completing this assessment. These matters must be subject to effective public consultation, which thus far they have not been.</p> <p>b. There is no Population and Human Health Chapter listed.</p> <p>c. There is no assessment of the cultural heritage identified in this section, seems largely to have been missed from this consultation.</p>
7.2	Other documents (pg. 202-203)	There is no mention of the Health and Equalities Impact Assessment.
7.4	Our approach to environmental mitigation	Reference should be made to a commitment to CLOCS/FORS which incorporates best practices and standards that help reduce environmental impacts.

Relevant Section in the Construction Update		The Council's Comments
	(pg. 205-206)	
	Air quality (pg. 207-221)	<ul style="list-style-type: none"> a. This section notes that changes in traffic flow during construction would be evaluated. b. See Council comments above about the lack of clarity from HE on the overall approach to monitoring during construction to inform a number of key control, management and governance activities e.g. construction logistics plans, traffic management plans, workforce travel plans, environmental management that will all help manage and mitigate impacts on local communities. c. The figures presented are only changes to traffic movements and HGV movements and offer no information on changes in air quality as a result of the construction itself only the traffic movements. It is not providing the total picture on air quality changes during construction and relies on the temporary nature of the changes to categorise impacts as unlikely to be significant. d. A1089 and Fort Road changes a concern given the pre-existing health conditions presenting in Tilbury. The increases in A1089 predicted run alongside a number of early years and educational sites which line the route. There is also an AQMA (24) on Dock Road/Calcutta road which runs parallel to the A1089 and where there are a number of residential facilities. e. Although the air quality standards are currently met, due to the poor health outcomes of many of the communities within Thurrock that align to the LTC route, increases in air pollution can contribute to the widening of health inequalities within these already marginalised populations. Living with chronic disease increases the burden on all health and social care services and affects communities as a whole both economically and with the increase in isolation and poor mental health. This will also be impacted further by the development of other major infrastructure projects within the borough that will have a cumulative effect on all of these health-related factors.
	Noise and vibration (pg. 221)	<ul style="list-style-type: none"> a. Changes in Noise shown along vehicle routes but is not showing the whole/total picture for noise changes as a result of construction. b. Should Whitecroft Care home, educational facilities along the A1089 and the West of Tilbury be a construction receptor for noise assessment locations? c. Concern re impact on Whitecroft Care home with the noise changes anticipated at Hornsby Lane. d. Concerns still regards to construction traffic impacts and mitigation options for this. e. Construction Noise and Vibration Assessment - currently only indicative impact predictions are available (as charted graphically in the Ward Impact Summaries) in respect of construction noise and these are based on an earlier versions of the project. The revised opening year and traffic management arrangements, together

Relevant Section in the Construction Update		The Council's Comments
		<p>with a requirement for further modelling, mean that quantitative predictions may vary, possibly significantly and it is stated an update will not be available prior to the DCOv2 application (chapter 7.5 (page 201) – 'Recent updates to our environmental assessments').</p> <p>f. The council would request that quantitative construction noise impacts are made available prior to DCO submission to enable analysis, review and discussion, so as to determine appropriate mitigation.</p>
	Cultural heritage – archaeology (pg. 249-251)	It is disappointing that this section fails to identify the loss of a nationally designated Scheduled monument and three listed buildings, these should be the headline factors. The impact on listed buildings is restricted to the Ward summaries (as defined by the side note) and not integrated into his section which should consider all of the cultural heritage. Similarly, it seems to regard the scheduled monument as being built heritage when in fact it is a Bronze Age and Iron Age settlement known from cropmarks. Overall, there seems to be a poor understanding of the cultural heritage throughout the submitted documents.
	Geology and soils (pg. 251)	<p>a. locally important geological sites to the north of the Thames – please add that mitigation measures to protect these features are identified in REAC and identify whether or not these will prevent a permanent impact.</p> <p>b. Reinstatement of temporary land taken – please add that there are actions in the REAC for pre and post conditions surveys.</p> <p>c. Under Mitigation 'This information would help to inform the specific mitigations including those required to address the adverse ground conditions (contamination and stability).</p> <p>d. This would allow our contractor to re-use those soils that are chemically and physically suitable (including those following treatment) elsewhere on the project.</p>
	Offsetting the loss of ancient woodland (pg. 254)	The title for this section should be changed as it covers more than just offsetting the loss of ancient woodland.
	Mitigation (pg. 259-260)	<p>a. Details provided within this section are generally inadequate but do reference REAC and use of general good practice. As a preference we would prefer to see this section enhanced to include reference to extensive use of Sustainable Drainage methods, Green Infrastructure etc. and the requirements outlined in the Essex SuDS Design Guide. This ties into our previous comments made about the overall LTC scheme being aspirational given the scale of development.</p>

Relevant Section in the Construction Update		The Council's Comments
		b. Maintenance of any proposed SuDS features that are utilised during the construction phase should be increased to account for additional siltation that might occur due to construction activities.
	Construction impacts (pg. 261)	<p>a. This section sets out GHG emissions associated with the operation – this needs to be included in the operation update.</p> <p>b. It is referenced that site clearance, such as the removal of vegetation, would result in losses of carbon sinks. Material and soil management practices should be implemented to minimise carbon sink losses, particularly where any areas will be reinstated post-construction.</p>
	Mitigation (pg. 262)	<p>a. “trees, shrubs and hedgerows planted as part of the landscape design would offset some of the GHG emissions” – it is noted that further work is needed to confirm wider tree planting and habitat creation in the Borough, and associated wider carbon sequestration.</p> <p>b. Comments are made in the REAC in relation to ensuring an ambitious approach to specific carbon reduction measures and targets for contractors – in relation to, for example, use of low carbon materials, and for machinery use etc.</p>
Chapter 8: Visualisations of construction works		
	(pg. 266)	Visualisations of operational scheme should be provided or signposted.

2.2 Summary and Recommendations

2.2.1 The construction update from HE provides further information in relation to:

- a. Project wide approaches to construction
- b. Works proposed and compound locations by geographical area (Sections A, B, C, D)
- c. Project wide impacts and approach to mitigation

2.2.2 Key issues and recommendations identified above by the Council can be summarised as:

- a. **Control Plan and Control Documents** – It is not clear how the control plan and the multiple processes and activities set out within them will be managed, co-ordinated and governed by HE during the implementation process. Further clarity from HE is required.
- b. **Governance and Engagement** – At present multiple forums and groups are proposed throughout the consultation document – Joint Operations Forum (JOF), Traffic Management Forum, Travel Plan Liaison Group, Community Liaison Forums etc – but this currently appears disjointed and uncoordinated. The Council would expect (as with other major transport schemes e.g. Silvertown Tunnel) that HE establishes an overarching Implementation Group made up of representatives (at a senior executive level) of all the impacted local planning and highway authorities and the Department for Transport. HE should be required to consult with this implementation group on matters related to planning, constructing and operating the LTC scheme. *Further clarity from HE is required on proposed governance arrangements.*
- c. **Monitoring Road Network Impacts during Construction** - It is unclear within this and various other documents e.g. oTMPfc, FCTP as to what road network impact monitoring is proposed before and during the construction period. Monitoring will be required to ensure impacts of the construction logistics, workforce travel and traffic management schemes required on the road network are understood, being actively managed/enforced and impacts on local communities are being mitigated. The oTMPfc proposes a monitoring report but the scope of monitoring proposed is not clear, no monitoring scheme or KPIs are provided in any detail. The FTP suggests monitoring will take place. *Further clarity from HE is required on proposed construction monitoring arrangements.*
- d. **Wider Outcome Monitoring and Evaluation** – The monitoring that is proposed is very traffic orientated. This Council would have expected to see this road network impact work to form part of a much wider monitoring and evaluation plan for the scheme (including covering the construction period itself – see comments above) to demonstrate the scheme outcomes and impacts in a much wider sense considering a range of social, economic and environmental issues. *Further clarity from HE is required on proposed wider outcome monitoring arrangements.*
- e. **Materials Handling** - The Council is concerned that insufficient work has been undertaken to enable HE to make firm commitments as to the type and amount of material that can be transported by marine transport. At present whilst contractors are encouraged to investigate this further as part of their MHPs and TMPs there is no firm commitment to do so. Maximising use of marine transport will help reduce impacts on the road network and local communities during the construction period and help reduce the schemes environmental and carbon impacts. *A firmer commitment / target for use of marine transport should be made, and its impacts consulted upon, by HE*
- f. **Construction Logistics Plans (CLPs)** – the Code of Construction Practice (CoCP) includes a commitment to contractors producing a CLP and HE has also committed to contractors meeting best practice standards for Construction Logistics and Fleet Management as set out in CLOCS and FORS which is welcomed. This will require the production of a detailed CLP by contractors and notes their importance in planning, managing and monitoring construction logistics. *The Council believes the critical role and importance of the CLP needs to be highlighted further by HE and it should form a key control document.*
- g. **Major Utilities and Viaduct Works** – there are some very significant elements of work for which limited information is provided regarding the nature of works and likely impacts e.g. National Grid power lines, UKPN proposals, Tilbury Viaduct, Chadwell St Mary Link, Orsett

Heath Viaduct. *Further details are requested by the Council.* These matters must be subject to effective public consultation, which thus far they have not been.

- h. **Construction Traffic Impacts** – the Council’s report ‘Thurrock Cordon Model Construction Modelling Review’ provides a high-level review of the impact of the 11 construction phases (throughout the development of the Lower Thames Crossing as set out within Chapter 8 of the LTC DCO Transport Assessment) on Thurrock’s highway network, providing an indication of the forecast impact arising from the traffic arriving and departing at the construction compounds, as well as the temporary diversions and road closures during the construction period. This report raises a series of concerns the Council has regarding high volumes of construction traffic at a wide range of locations on the local Thurrock Road network. It identifies the need for further detailed assessment where there is significant impact and for further details from HE on the mitigation proposed. *Construction Traffic Modelling - No updated construction traffic modelling has been issued alongside this consultation material. This is vital evidence that helps understand impacts on the road network and local communities and informs the development of appropriate mitigation measures.* This material must be provided to the Council before the current consultation can be said to have been effective. At present the Council has not been provided with sufficient information to properly understand the impacts of the project in this respect, and therefore the consultation has been legally defective.
- i. **Impacts on Bus Networks** – Some increases in bus journey times are acknowledged here and in the ward impact summaries. However, the Council is concerned that there is insufficient recognition here and throughout HE’s consultation material regarding impacts on the local bus network during the construction period and in particular how this will be monitored and what mitigation measures will be taken to reduce impacts on operators and importantly on bus passengers. *HE should be indicating a greater commitment to mitigating impacts on the local bus networks and funding should be made available.*
- j. **Cultural Heritage** – In terms of cultural heritage, particularly buildings, the issue is that historic/listed buildings and conservation areas (including the three Grade II listed buildings being demolished) are not mentioned at all, so the solution is for HE to include reference to them.
- k. **Construction Noise and Vibration Assessment** - Currently only indicative impact predictions are available (as charted graphically in the Ward Impact Summaries) in respect of construction noise, and these are based on an earlier versions of the project. The revised opening year and traffic management arrangements, together with a requirement for further modelling, mean that quantitative predictions may vary, possibly significantly, and it is stated an update will not be available prior to DCO application (chapter 7.5 (page 201) - Recent updates to our environmental assessments). The council would request that quantitative construction noise impacts are made available prior to DCO submission as this is vital evidence that helps understand the impacts to enable analysis, review and discussion, so as to determine appropriate mitigation.
- l. **Noise and Air Quality Impacts** – The assessments for noise, air quality and dust have not been updated within the document. This then does not allow for the correct identification of impacts and the appropriate mitigation measures as relates to these environmental factors. Assessment for noise, air quality and dust should cover the whole of the 6 to 8 years of construction so as to aid understanding of the effects on communities and any changes to health inequalities over this time period.



Lower Thames Crossing

Review of Operations Update

On behalf of **Thurrock Council**



Document Control Sheet

Project Name: Lower Thames Crossing
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For and on behalf of Stantec UK Limited				

Revision	Date	Description	Prepared	Reviewed	Approved
A	08/09/2021	Issued to Thurrock Council	-	AN	CS

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1 Introduction

1.1 Overview

- 1.1.1 As part of its technical engagement relating to the proposed Lower Thames Crossing (LTC) Development Consent Order (DCO) application, Highways England (HE) has issued Thurrock Council (the Council) with the assessment details for the Operations Update.
- 1.1.2 This document sets out the Council's comments on the proposed Operations Update and if there are any suitable opportunities to improve the proposals being put forward by HE and the associated infrastructure and mitigation.
- 1.1.3 The document follows the same structure as Operation Update and responds only to the sections relating to the north of the river.
- 1.1.4 The Key themes of concern to the Council are:
 - a. That the document seeks to downplay the effects the LTC will have on the operation of the local road network. This matter has been raised by the Council through many responses to information provided by HE and at many engagement meetings during the years building up to the aborted October 2020 DCO submission, as well as in the engagement period since its withdrawal. Substantive technical evidence has been provided by the Council to HE to demonstrate its concerns and responses on those concerns are still required.
 - b. HE is required to work towards a strategic network which provides for strong connections for walking cycling and public transport. It is the Council's opinion that the proposals do not provide a strong network for walking and cycling and that the corridor hinders public transport connectivity within Thurrock and does not promote opportunities for cross river public transport connections.
 - c. In terms of cultural heritage, particularly buildings, the issue is that historic/listed buildings and conservation areas (including the three Grade II listed buildings being demolished) are not mentioned, so the solution is for HE to include reference to them. The Operations Update does not mention cultural heritage at all.

2 Review of Operations Update

2.1 Comments

Table 2.1: The Council's Comments on the Operations Update

Relevant Section in the Operations Update	The Council's Comments
Chapter 1: Introduction	
Chapter 2: The new road and it's infrastructure	
Leaving a positive legacy (pg.11)	<p>a. The statements made within this section of the Operations Update document are not borne out in the proposals being put forward. Building a road with no local connectivity should not be a mechanism to provide "<i>people more flexibility and choice regarding where they work, live and learn</i>". A long distant strategic road with no local connections can only benefit long distance travel, which is contrary to national and international environmental aspirations around a more sustainable future. The route proposals do not "<i>maximise the potential benefits...to local communities</i>", they do not connect communities or promote active travel, instead it provides severance and challenges to local movement.</p> <p>b. The Council has made many representations to HE on the severance effects of the LTC proposals and that opportunities for local connectivity are not being met, especially by public transport.</p>
Environmental design (pg.24)	Opportunities to achieve significant green infrastructure benefits have been restricted by the limited scope of mitigation measures. While legacy projects have been identified there is significant uncertainty about identifying appropriate funding to ensure mitigation and legacy complement each other. Throughout much of the scheme environmental mitigation has been dominated by false cuttings rather than more ambitious mitigation.
Improvements for walkers, cyclists and horse riders (pg.25-28)	<p>a. The wording in the Operations Update document is disingenuous (to the extent of rendering the consultation exercise ineffective and legally defective) where it is stated that HE has "<i>developed a programme of improvements for walkers, cyclists and horse riders that would connect local communities with green spaces and promote active travel choices</i>". HE simply has not done this and the assertion to the contrary is misleading. WCH infrastructure improvements need to be an improvement and maximise the opportunities, not just reconnecting severed links. The</p>

Relevant Section in the Operations Update	The Council's Comments
	<p>reconnections are not forming part of a broader strategic improvement which would assist in alleviated local traffic impacts, environmental impacts and which would have a role in addressing the severance/accessibility (particularly for those who do not own a car or van) across the borough – these would be:</p> <ul style="list-style-type: none"> • East – West link from Chadwell St Mary through to East Tilbury/Linford <i>and up to Stanford-Le-Hope.</i> • North – South link from North Ockendon/Upminster, <i>through Ockendon through to North Stifford.</i> <p>b. If these were brought through in advance of the construction works it would also assist with mitigation for the construction period impacts.</p> <p>c. The council is preparing a list of additional active travel enhancements that can be delivered directly as part of the mitigation or as part of the LTC legacy.</p> <p>d. A Sub Regional Study of walker, cycling and horse-riding was prepared; however, beyond necessary mitigation no funding has been made available to help implement it. The sub-regional study focussed largely on cycling, particularly for commuter use and is funded largely through Designated Funds.</p>
Chapter 3.1: Changes since our last consultation	
Proposed Order Limits (pg.33-36)	<p>a. Changes to the order limits are highlighted in the report. It has been highlighted by the LLFA previously that design discharge rates for existing ponds 13-001, 14-003 and 14-005 appear to be very high and further clarification should be provided on the methodology used to determine these. Should the design discharge rates, and therefore the storage volume/ basin geometry, need to be reviewed then this could have further implications on the order limits, as they may need to be reviewed.</p> <p>b. Concerns have been raised about the storage structures and their interaction with the existing groundwater table. A detailed Ground Investigation should be carried out on each site to determine the seasonal high ground water level and the storage structure should be designed so that there is suitable clearance to prevent loss of storage capacity. This is typically considered in detailed design of the scheme, but changes to storage structure geometry may have implications on the order limits so should be considered at the earliest possible stage.</p>
Map reference 7 (pg. 60)	<p>The change reduces impact on the Two Forts Way by requiring only a single vehicle crossing. A replacement access will be integrated into the design proposals for Tilbury Fields. This has a small benefit for NMU users. It is incorrect to state that all stakeholders expressed a desire to minimise works in the river, as most local authorities and PLA are strongly recommending more use of the river. HE should state in detail which stakeholders and what their comments were to understand the source of such a blanket statement.</p>

Relevant Section in the Operations Update	The Council's Comments
Map reference R (pg. 61)	The proposed larger culverts would help improve water flow which could improve flood alleviation around Tilbury.
Map reference 7 (pg. 63)	The removal of a jetty may be supported as it will lessen impacts within the river, in view of the fact that it may lessen the impact on the functionally linked habitat for the SPA, therefore it would lessen the ecological impacts (this is an issue currently with Tilbury FGP and Natural England).
Map reference 10 (pg. 63)	This corrects an earlier drafting error which showed part of the ecology area included within the order Limits. This correction was made at the request of Natural England and Thurrock Council.
Map reference 12 (pg. 68)	The changes would require vegetation to be removed on the west side of Buckingham Hill Lane. No length is given for this section.
Map reference J (pg. 69-70)	<ul style="list-style-type: none"> a. HE states that an additional lane is required between LTC and the Orsett Cock interchange to address predicted congestion on that link. The commentary appears to suggest that the congestion was due to the allocation of the Freeport within Thurrock. What assumptions has HE taken on the assignment of traffic associated with the Freeport and if that is shown to be taken through the Orsett Cock interchange it would be destined for London Gateway / DP World which would have an impact on The Manorway junction. How is that impact being mitigated. HE clearly need to provide the data underlying their assertions in this respect so that the Council can review and interrogate it. Unless the Council has been given this opportunity, and been consulted on it, the current consultation exercise will be defective. b. The Council has raised concerns about the design proposals for the 2 lane link between LTC and Orsett Cock interchange, particularly reflecting the revised layout of the Orsett Cock interchange. The Council has not had the evidence it requires to indicate that the layout works and now the addition of a further lane only adds to the concerns that the Council has raised. This point is covered in a number of other representations to HE and within the Issues Log accompanying the Statement of Common Ground. HE clearly need to provide the data underlying their assertions in this respect so that the Council can review and interrogate it. Unless the Council has been given this opportunity, and been consulted on it, the current consultation exercise will be defective. c. HE must demonstrate to the Council what the implications of the additional lane are on the operation of the linkages to LTC and to the Orsett Cock interchange. HE must also demonstrate that the design of the affected link road is safe and viable.

Relevant Section in the Operations Update	The Council's Comments
Map reference 14 (pg. 71)	The proposed changes have been discussed and agreed in principle with the Council.
Map reference 21 (pg. 76-77)	The proposed changes have been discussed and agreed in principle with the Council.
Map reference 25 (pg. 76-77)	The proposed changes have been discussed and agreed in principle with the Council.
Map reference 25 (pg. 76-78)	The Council has not seen these proposed amendments. It is unclear what the heights and locations of the bunds would be and therefore it is not possible to determine their visual effects or if they provide any adequate noise mitigation. This information must be provided to the Council for review.
Chapter 3.2: Special category land	
Tilbury Green (pg. 90)	The proposed changes have been discussed and agreed in principle with the Council.
Walton Common and Parsonage Common (pg. 91)	The proposed changes have been discussed and agreed in principle with the Council.
Ron Evans Memorial Field (pg.92)	The proposed changes have been discussed and agreed in principle with the Council.
Orsett Fen (pg.92)	The proposed changes have been discussed and agreed in principle with the Council.
Tilbury Green – common land (pg.95)	The proposed changes have been discussed and agreed in principle with the Council.

Relevant Section in the Operations Update	The Council's Comments
<p>Ron Evans Memorial Field (pg. 96)</p>	<p>a. What mitigation will be in place to address change in behaviours as a result of the operational environmental impacts of the scheme (i.e. noise and air quality)? To date there is replacement land which will be no less favourable and will be landscaped to match the existing field. It is not clear to what extent the quality of the public recreation site will be improved to ensure that changes in behaviour are mitigated for.</p> <p>b. The existing site is a Local Wildlife Site and used principally for informal access. The existing site is separated from Long Lane by arable farmland. The proposed changes provide an opportunity to create a better entrance from Long Lane and an improved connection to Blackshots Lane. It could be possible to improve the connection through the site. The site however will still need to be principally informal recreation to avoid further harming its ecological value.</p> <p>c. The proposed changes have been discussed and agreed in principle with the Council.</p>
<p>Orsett Fen – common land (pg. 97)</p>	<p>a. How will it be demonstrated that the replacement land at Orsett Fen is more advantageous (i.e. maximising the benefit)? Although there is replacement land greater in size than that acquired, this site will suffer from environmental impacts (e.g. visual, noise) which may lead to a change in human behaviour for exercise and recreation.</p> <p>b. The existing open access land has no public access other than the bridleway as it is arable farmland. It is unlikely that this will change significantly.</p> <p>c. The proposed changes have been discussed and agreed in principle with the Council.</p>
<p>Section 38 (pg. 102)</p>	<p>The affected sites are considered above. This refers to the necessary legal process involving works to commons.</p>
<p>Chapter 3.3: Private recreational facilities</p>	
<p>Linford Allotments (pg. 104)</p>	<p>a. Reduced amenity value of allotments arising from two rows of overhead power lines crossing the allotments, which may affect human behaviour and use of the allotment impacting on health and wellbeing.</p> <p>b. It is unclear what is proposed for this site. Reference is made to burying the utility corridor at depth so the site can continue to be used. Will this require excavations through the site or will utilities be bored? If excavated the works will significantly disrupt the soils and restrict what can be grown in the future. If utilities being buried will there still be overhead pylons?</p>
<p>Orsett Park Royals Football Club pitches (pg. 104)</p>	<p>All of these sites will be used by local community for sport and recreation and so has the potential to impact on health and wellbeing of those using the facilities.</p>

Relevant Section in the Operations Update	The Council's Comments
Orsett Golf Club (pg. 104)	All of these sites will be used by local community for sport and recreation and so has the potential to impact on health and wellbeing of those using the facilities.
Thurrock Rugby Football Club (pg. 104)	All of these sites will be used by local community for sport and recreation and so has the potential to impact on health and wellbeing of those using the facilities.
Mardyke Valley /North Road (pg. 104)	All of these sites will be used by local community for sport and recreation and so has the potential to impact on health and wellbeing of those using the facilities.
Grangewaters Outdoor Education Centre car park (pg. 104)	All of these sites will be used by local community for sport and recreation and so has the potential to impact on health and wellbeing of those using the facilities.
Top Meadow Golf Club (pg. 105)	All of these sites will be used by local community for sport and recreation and so has the potential to impact on health and wellbeing of those using the facilities.
Chapter 3.4: New open space sites	
Tilbury Fields (pg. 106-107)	<ul style="list-style-type: none"> a. There was previous discussion on the installation of some public art here. To encourage and mitigate impacts on behavioural changes on the use of this land as a result of environmental impacts of the result, something like public art which has a connection to the area (for instance the aspects of historical significance which will be viewed from here and/or the links to maritime) to draw walkers and cyclists to actively use the area would be of value here, which is understood to be still under consideration by HE – please confirm. b. The proposed design has been subject to ongoing and continuing discussion with the Council and other stakeholders.
Chapter 4: Traffic impacts	

Relevant Section in the Operations Update	The Council's Comments
Introduction (pg. 110-111)	<ul style="list-style-type: none"> a. The updated modelling evidence, including Forecasting Report and Transport Assessment, has not be provided within the consultation, yet the consultation material appears to be based upon this. Without this updated evidence the Council cannot fully comment on the consultation documents. Unless the Council has been given this information, and been consulted on it, the current consultation exercise will be defective. b. Core comments as set out within the LTC Review of Transport Planning Evidence from Thurrock Council issued in March 2021 have informed the majority of the following comments, as indicated below, the concerns identified previously remain. The associated reference numbers have been included for easy reference against the comments made within the above document.
The need for the Lower Thames Crossing after COVID-19 (pg. 112)	The peak hour traffic flows should be analysed as well as the daily traffic flows when considering whether traffic has returned to pre-covid levels.
The transport model (pg. 113)	<ul style="list-style-type: none"> a. At the time of review of this documentation no updated supporting transport models have been provided alongside this consultation, therefore, the Council refers to the last submitted model review document issued to HE in June 2020 (LTC Consultation - Review the Effects of the LTC within Thurrock - Sup Con Modelling Review) as well as the local junction assessments report (LTC Consultation - Junction Assessment and Mitigation Analysis issued in October 2020) undertaken to identify possible mitigation at key areas within Thurrock. Unless the Council has been given this information, and been consulted on it, the current consultation exercise will be defective. b. HE must respond to these papers and the concerns raised within them relating to the effects on the local road network.
Transport model guidance (pg. 113)	See 'Modelled hours' and 'Model calibration and validation'.
Modelled hours (pg. 114)	Ref 10.15 - The LTAM morning peak hour model is 07:00-08:00hrs, which we understand is the peak hour on the strategic network, but the local network morning peak hour is 08:00-09:00hrs. As a result, there are concerns that the impact on the local network is underestimated.

Relevant Section in the Operations Update	The Council's Comments
Model calibration and validation (pg. 114-115)	Ref 10.1 – No local road traffic counts (except on the A13) have been used to calibrate or validate the model. A comparison of the model flows compared to observed flows undertaken by Thurrock which shows that, in general, traffic flows are low on local roads in the base year model and in particular, low on: the A1013; links near Orsett Cock; on A1014 The Manorway; and A1089 near ASDA. The Council has consistently and repeatedly raised concerns at meetings and via representations that the impacts on the local roads and junctions are likely to be underestimated as a result of the lower level of traffic on the local roads. Detailed junction assessments should be carried out, in any case, at the key pressure points on the network, using accurate baseline traffic data, such as: Orsett Cock, The Manorway roundabout, ASDA roundabout, Daneholes roundabout and Marshfoot Road junction.
Traffic growth (pg. 116)	<ul style="list-style-type: none"> a. Ref 10.5 - Concerns remain regarding the absence of any sensitivity testing for emerging Local Plan development. b. HE is not demonstrating that the proposals are facilitating the local growth agenda, as is required by the stated objectives of the LTC and through national policy.
London Resort (pg. 117-118)	<ul style="list-style-type: none"> a. Ref 10.23 - No evidence with the consultation that the impact arising from London Resort has been included within the current modelling work, although it has been proposed separately that sensitivity testing will be undertaken. Unless the Council has been given this information, and been consulted on it, the current consultation exercise will be defective. b. With the London Resort included, any available capacity is likely to be taken up on the existing A1089, and therefore it is likely mitigation at Asda roundabout will be even more necessary, as a result of the increased traffic from LTC. HE should consider the trip generation of London Resort into the forecast transport model and the suitable mitigation that would be delivered to address impacts. c. The Council has also raised concern with the proposed approach to testing London Resort, as by fixing the London Resort traffic, priority with regards to peak period capacity, will be given to London Resort. d. It is unlikely to be reasonable to expect the Port traffic and other traffic in the area to change time of travel, mode of travel or destination. The Tilbury area relies on a single access via the A1089. Businesses may not be able to operate successfully with their operations displaced to outside of the peak periods, particularly freight movements. e. It will be important to investigate any demand changes and justify whether it is reasonable/achievable for the success of the Tilbury area (or alternatively to fix the Tilbury area destinations).
Forecasts with the Lower Thames Crossing (pg. 122)	<ul style="list-style-type: none"> a. A number of concerns have previously been raised and remain of concern regarding the forecast modelling, including: <ul style="list-style-type: none"> i. Rat-running on local roads and enforcement thereof (Ref 10.2/10.3)

Relevant Section in the Operations Update	The Council's Comments
	<ul style="list-style-type: none"> ii. Impacts resulting from the scheme at ASDA/Tilbury Link Road (Ref 10.018); Daneholes Roundabout (Ref 10.19), and Orsett Village and Rectory Road (Ref 10.20) and Marshfoot Road junction with the eastern slip road from the A1089. b. Furthermore, no model forecast technical model note nor the Thurrock Cordon Models of the future years have been provided to the Council for review since the changes made to the network and zone loading locations.
What the model predicts (pg. 122)	See comments in response to the 'Forecasts with the Lower Thames Crossing' section above.
Changes in flow (pg. 123-133)	<p>See comments in response to the 'Forecasts with the Lower Thames Crossing' section above.</p> <p>Please refer to Report titled “Review of the Effects of the LTC within Thurrock: DCO Cordon Model Review”, October 2020</p> <p>The Council has the following concerns:</p> <ul style="list-style-type: none"> a. Underestimation of base traffic flows, particularly at Orsett Cock, Manorway junction, A1013, A128/Rectory Road, and ASDA roundabout. b. Increases in traffic flows at Orsett Cock and Manorway junctions. c. Traffic flow increases on both the A13 and local roads including the A1014 The Manorway, London Road/Corringham Road, A1013 Stanford Road and A13/A176 junctions. d. Adjustments have been made to zone loading points and addition of new network has been included without any model validation undertaken, thus resulting in local changes in traffic routeing and rat running, specifically noted at Rectory Road, Orsett. This also leads to concerns over an increase in traffic through Orsett village. e. It is not known that as a result of the point above, whether traffic levels and therefore the delays at Orsett Cock are accurate representations of what could occur in the future with LTC in place. f. HGV bans have been redefined; however it is not known how new bans specifically related to port traffic would be enforced. There are no detailed proposals (Note: enforcement is already a challenge and LTC will increase the risk of HGVs using the routes). g. Risk of higher use of Orsett Cock roundabout (and potentially The Manorway junction) for u-turning from the LTC to A1089 than modelled due to quicker journey times (and potential growth in traffic arriving from south of the River Thames and inaccurate future growth locations).

Relevant Section in the Operations Update	The Council's Comments
	<p>h. Risk of higher use of the A1013 and Daneholes roundabout and routes through Chadwell St Mary than modelled due to quicker journey times (and growth not reflective of the future growth locations).</p> <p>i. The modelling shows there is an increase of nearly 14% total travel distance (pcu.kms/hr) with LTC, resulting in 9% to 11% increase in CO2 emissions and 6% to 7% increase in NOx.</p> <p>Please refer to Report titled “Junction Assessment and Mitigation Analysis”, October 2020 The junction modelling shows that:</p> <p>a. The performance of some approaches to The Manorway and Orsett Cock roundabouts will be impacted by the introduction of LTC.</p> <p>b. The off slips from the A13 at both The Manorway and Orsett Cock roundabouts are likely to block back on to the mainline and/or impact on the slip roads from the LTC.</p> <p>c. The LTC causes the performance of the ASDA roundabout to significantly deteriorate.</p> <p>d. Daneholes roundabout is at risk of regularly being used as a rat-run from the LTC, and any more significant use of the A1013 than modelled in LTAM would impact upon not only the traffic, but bus services that operate through the junction.</p>
<p>Percentage change in flow (pg. 134-137)</p>	<p>See comments in response to the ‘Forecasts with the Lower Thames Crossing’ section above.</p>
<p>Percentage of heavy goods vehicles (pg. 138-141)</p>	<p>See comments in response to the ‘Forecasts with the Lower Thames Crossing’ section above.</p>
<p>Journey times (pg. 142)</p>	<p>Through analysis of the journey times extracted from the model, it remains a concern that journey times via Orsett Cock, A1013, Daneholes roundabout, to Grays or via Marshfoot Road junction to the Tilbury area are faster than via Dartford Crossing. It is a concern of the Council that this route will become a rat-run for strategic traffic once LTC is open. This route is not suitable for strategic traffic due to the two schools on that route and residential frontage. Although controlling HGV traffic using minor roads has been noted, this concern has not been specifically mitigated within the DCO application and as such no specific measures have been outlined.</p>

Relevant Section in the Operations Update	The Council's Comments
Change in volume/capacity (pg. 142-149)	See 'Changes in flow '. The LTC results in a significant impact on the local highway network on the east side of Thurrock urban area, specifically focussed along the A13 east of Orsett Cock, Orsett Cock and The Manorway, A1013, Marshfoot Road/Junction and ASDA roundabout. Notwithstanding the previous comments made regarding the validation of the base model and potential further unmodelled impacts, no mitigation has been proposed, which is a concern to the Council.
Scale of predicted impacts on roads and junctions (pg. 150-153)	<p>a. It is noted that the main impact of the LTC on Thurrock's local road network is on the eastern side of the A13/LTC junction and around The Manorway, previously known impacts also remain from the previous DCO application, these include significant impacts at:</p> <ul style="list-style-type: none"> i. Orsett Cock roundabout ii. The Manorway roundabout and links in close proximity iii. ASDA roundabout <p>b. Furthermore, additional impacts on the local road network are noted at the following locations:</p> <ul style="list-style-type: none"> i. A1013 (Daneholes roundabout), A149, Marshfoot Road, ii. Marshfoot priority junction (with slips to A1089) iii. Brentwood Road and Chadwell Hill, Chadwell St Mary iv. A1012/Lodge Lane/Long Lane Roundabout v. Stifford Clays Road vi. A13/A126 eastbound off slip vii. M25 J30 - Mardyke Interchange viii. Devonshire Road/A1012/Hogg Lane <p>c. Additional mitigation measures or schemes to reduce these impacts on Thurrock's local road network are required and further detail on what would be done to do so should be provided during consultation.</p> <p>d. Figure 4-18 identifies major adverse impacts or moderate adverse impacts as a result of the project (operational) although there appears no reference to these areas within the preceding narrative (p142 onwards). It is therefore unclear which routes these are.</p>
Bus routes (pg. 154-158)	<p>a. It is assumed that discussions with the bus service providers have been made during this consultation with the modelled outputs being provided for their assessment, however, there is no evidence that their concerns have been mitigated or recognised.</p>

Relevant Section in the Operations Update	The Council's Comments
	<ul style="list-style-type: none"> b. Bus services between Basildon and the employment in Thurrock will be important to support the growing travel demands. The adverse impact on journeys of the services is a concern. Mitigation should be considered to improve the bus journeys for this route. One of the main hospital sites that Thurrock residents use is the Basildon and Thurrock University Hospital located in Basildon. Impacts on bus journeys to and from this site could have an adverse impact on health, reducing health enhancing behaviours (e.g. attending clinics/checks/screening) if accessibility is reduced. c. LTC is a very significant investment in the nation's transport infrastructure. Notwithstanding the current and future impacts of the pandemic, we are at a point of significant change. New appraisal techniques have been developed and used to take account of the potential implications of these and to make judgements about the resilience of major investments to future change. In the Council's opinion, it would not be in the public interest to have to retrofit at great expense adjustments to the tunnel and associated works, which had only just been completed. The Council would welcome comments on how HE has engaged with the design requirements to accommodate the future change in public transport demand and use. The Council is concerned that HE is at risk of producing a scheme that does not account for future sustainable transport options post LTC/tunnel opening, thus leading to the value for money being limited. d. Identifies a pair of bus stops at Heath Rd that are due to be relocated by 400 metres. This area has the highest proportion of elderly residents in the borough and such a distance could potentially leave many residents unable to reach their local bus stop. This is a lifeline for many as it transports many elderly residents into Grays town centre. e. HE states that "<i>there are currently no proposals to run local buses</i>" on LTC but does not explore why this is so, despite national and government policy (NPS NN and GD 300) requiring that new strategic infrastructure of this type provides for public transport connections. The Council has raised these concerns with HE in other responses during engagement and within this consultation period. HE must reflect on the absence of provision for public transport to use the LTC corridor. f. HE states that "<i>longer-distance coaches</i>" may transfer from the Dartford Crossing to LTC. This would not apply to London bound coaches which are not able to access A13 west of LTC and are therefore not able to open up to the market within Thurrock.
Changes to the transport model since supplementary consultation (pg. 159-162)	<ul style="list-style-type: none"> a. The updated modelling evidence, including Forecasting Report and Transport Assessment, has not be provided within the consultation, yet the consultation material appears to be based upon this. Without this updated evidence the Council cannot fully comment on the consultation documents. Unless the Council has been given this information, and been consulted on it, the current consultation exercise will be defective. The aspects outlined within

Relevant Section in the Operations Update	The Council's Comments
	<p>the Council's LTC Review of Transport Planning Evidence from Thurrock Council issued in March 2021 remain of concern.</p> <p>b. From the plots provided it is clear that there are noticeable increases, around ASDA roundabout and the A1089, between the previous models, which vary between +51 to potentially +1000 PCU, it is not clear on the exact value of this and if substantial impacts on the operation of the local highway network within Thurrock will be further impacted as result of this update to the transport models. HE must respond on how these effects are to be mitigated.</p>
Traffic impacts on the wider network (pg. 163-164)	See comments on the WNIMMP.
Chapter 5: Environmental Impacts	
Introduction (pg. 166)	The document does not include a section on population and human health, which is to be included within the ES. There is also no mention of cultural heritage/archaeology/historic buildings.
Our approach to the environmental assessment (pg. 167-168)	No reference to the historic environment OMS/WSI.
Recent updates to our environmental assessments (pg. 172)	No indication of the extensive trial trenching being undertaken at present or any results/conclusions, in fact no reference to the cultural heritage in this section.
Air quality (pg. 173-174)	<p>a. The summary provided relates only to the AQ modelling reported within the withdrawn DCO and has not been updated for revised transport modelling and assessment years and without provision of the model input data in GIS format it is not possible to assess its adequacy.</p> <p>b. Claim that '<i>overall air quality across the region would improve</i>' appears contrary to increase in regional AQ emissions and HEqIA submitted for DCO which showed overall disbenefit.</p> <p>c. Air quality modelling needs to take into account noted concerns from Thurrock Council on local traffic impacts.</p>

Relevant Section in the Operations Update	The Council's Comments
	<p>d. Perceptible increase in air pollutants noted to the South and East of the scheme in Thurrock, with a perceptible decrease in the West Thurrock area – this modelled data should be shared and used in the HEqIA to determine the health impacts of these changes and any consequential impact on health inequalities.</p> <p>e. Figure 5-2 shows perceptible increases in NO₂ within routes of Tilbury, Chadwell St Mary and Grays where air quality is already perceived as poor. These increases appear unmitigated.</p>
Air quality impacts on biodiversity (pg. 174-176)	Air quality effects on ecology sites are being assessed at 500 sites which is supported.
Noise and vibration (pg. 177)	<p>a. The summary provided relates only to the noise modelling reported within the withdrawn DCOv1 and has not been updated for revised transport modelling and assessment years. The update states that noise models need to be re-run. Therefore, the council would like to see the updated assessment for review prior to DCOv2 submission, as this is vital evidence that helps understand impacts</p> <p>b. Figure 5-3 illustrates areas in Tilbury, Ockendon and dappled areas within Grays with noise increases up to 2.9db or in excess of 3db (after mitigation measures). This is not acceptable, as we requested further information from HE to demonstrate that 'all reasonable steps should be taken to mitigate and minimise adverse effects on health and quality of life while also taking into account the guiding principles of sustainable development' have been implemented with the intention of facilitating further discussion in order to reach an agreed outcome for all parties. These areas are home to some of our most vulnerable communities.</p> <p>c. Major adverse noise effects (after mitigation) will be experienced on the edge of East Tilbury, Linford, in the north of Chadwell St. Mary in and around the A13 junction and to the North of South Ockendon. Further mitigation or compensation required</p> <p>d. Stanford-le-Hope and Corringham not modelled, although will experience changes to traffic.</p>
Geology and soils (pg. 181)	No mention given to the potential important geological sequences being assessed as part of the heritage assessment.
Mitigation (pg.183-184)	This covers at high level the principles of the highway drainage, but again this is quite thin, albeit possibly due to the intended audience for the document. As with the construction update report, we would prefer to see this section enhanced to include reference to extensive use of Sustainable Drainage methods, Green Infrastructure etc. and the

Relevant Section in the Operations Update	The Council's Comments
	<p>requirements outlined in the Essex SuDS Design Guide. Again, this would tie into previous comments made about the overall LTC scheme being an aspirational development.</p>
<p>Climate and carbon (pg. 184)</p>	<ul style="list-style-type: none"> a. The operation update includes previous GHG emission calculations as 5.98M tCO₂e over the 60-year appraisal period, and referenced more detailed assessments. The calculations and results should be provided and referenced for these updated assessments for context. As per comments elsewhere, further information is needed to have a clear understanding of the spatial scope of the operational assessment of traffic, and to understand the associated assessment conclusions. As per our previous comments on the Carbon and Energy Plan (DCOV1 ES Appendix 15.1), we would expect estimates to be made of emissions reduction through phased/ increased use of electric vehicles. We would also anticipate calculations to be included of carbon emissions reduction of operational mitigation measures (Section 1.1.11). b. The mitigation measures included are high level and specific measures relevant to Thurrock should be clarified, for example in relation to the landscape design and GHG emissions offset, and specific measures to maintain existing and provide new connectivity for walkers, cyclists and horse-riders. c. The government's transport decarbonisation plan was published in July 2021. 'Decarbonising Transport: a better, greener Britain' sets out the Government's commitments and the actions needed to decarbonise the entire transport system in the UK and to deliver net zero by 2050 (Transport decarbonisation plan - GOV.UK (www.gov.uk)). d. Clarity should now be provided on how LTC will incorporate measures to reduce road user emissions to support and deliver the transport decarbonisation plan and Highways England's 'Net Zero for Highways Plan' targets, which are now adopted.
<p>Mitigation (pg. 185-186)</p>	<ul style="list-style-type: none"> a. The project should be maximising the opportunity to enable people locally to travel sustainably to mitigate and offset the local traffic impacts (and therefore consequential GHGs). More ambitious plans should be in place to do this and should incorporate at least one "LTC cycle superhighway" in the borough to provide alternatives to the use of vehicles and assisting with mitigating climate change and carbon impacts. b. Mitigation recognises the importance of maintaining connectivity for walkers, cyclists and horse-riders and providing alternatives for vehicle use; however, the Ward Summaries identify several key routes will be closed for at least 5 years with no details yet of possible diversions. c. As part of LTC the Council is seeking a step-change in walking cycling and horse riding usage for commuting and recreation. This needs to help ensure an integrated network of routes is provided. These should be of a specification suitable to accommodate increasing use in the future. It is not acceptable to reconnect severed routes and maintain that that is an improvement in the network provision or is mitigation.

Relevant Section in the Operations Update	The Council's Comments
Operational impacts (pg. 186)	This section recognises the long-term negative effects on the landscape with structures, such as the viaducts remaining visible.
Mitigation (pg. 187-193)	It is recognised that even after 15 years the new planting and bunds will not fully mitigate the impacts of the scheme.
Intra-project effects (pg. 194)	It is noted that intra-project cumulative effects have not been included in the ward summaries for communities. It is therefore assumed that mitigation for these wards has not been addressed.
Inter-project effects (pg. 194)	No description of inter-project effects detailed. No mitigation detailed.
Operations Maps	
	<ul style="list-style-type: none"> a. It has been highlighted that a future junction is proposed immediately north of the Northern Portal tunnel entrance. This would require the proposed pond POS08-001 to be relocated, resulting in additional scheme costs, flood risk and environmental disruption. It is recommended that the location of this structure is reviewed and if practical, it be relocated to a position that would prevent the need for such disturbance. In relocating the structure, greater opportunity should also be sought to deliver multiple benefits, such as enhanced amenity value and bio-diversity. b. There appears to be quite a significant distance between the proposed SuDS storage structures. This would indicate extensive use of 'traditional piped drainage systems' to convey water from the carriageway to the proposed point of outfall. Whilst we are still awaiting details of the proposed piped network design, we would suggest greater consideration is given to increasing the use of open SuDS features across the scheme, rather than concentrating these close to the outfall of each network. This would open up greater opportunity to deliver multiple SuDS benefits across the scheme. c. Further details to be provided on how surface water run-off around the Northern Portal of the tunnel will be managed during the scheme operation. Whilst it is understood that detailed design of the drainage system is still to take place, it is not clear how surface water at the Northern Portal will be managed and whether this process will meet the LLFA policy requirements outlined in the Essex SuDS Design Guide. It should be made clearer within the report what arrangements are being proposed within the scheme to address this issue.

2.2 Summary and Recommendations

2.2.1 Key issues and recommendations identified above by the Council can be summarised as:

- a. **Impacts on the Local Road Network** – The document unacceptably downplays the effects the LTC will have on the operation of the local road network. This matter has been raised by the Council through many responses to information provided by HE and at many engagement meetings during the years building up to the aborted October 2020 DCO submission, as well as in the engagement period since its withdrawal. Substantive technical evidence has been provided by the Council to HE to demonstrate its concerns and responses on those concerns are still required. Unless and until HE show how those comments have been considered, there can not be said to have been an effective consultation.
- b. **Modelling** – The consultation material appears to be based on updated modelling evidence. However, this has not been provided with the consultation, meaning that the Council cannot fully comment on the documents provided. Unless the Council has been given this information, and been consulted on it, the current consultation exercise will be defective. The aspects outlined within the Council's LTC Review of Transport Planning Evidence from Thurrock Council issued in March 2021 remain of concern.
- c. **Local Traffic Counts** – The Council is concerned that no local road traffic counts (except on the A13) have been used to calibrate or validate the model. A comparison of the model flows compared to observed flows undertaken by Thurrock shows that, in general, traffic flows are low on local roads in the base year model and in particular, low on: the A1013; links near Orsett Cock; on A1014 The Manorway; and A1089 near ASDA. The Council has consistently and repeatedly raised concerns at meetings and via representations that the impacts on the local roads and junctions are likely to be underestimated as a result of the lower level of traffic on the local roads. Detailed junction assessments should be carried out, in any case, at key pressure points on the network, using accurate baseline traffic data, such as: Orsett Cock, The Manorway roundabout, ASDA roundabout, Daneholes roundabout and Marshfoot Road junction.
- d. **Walking, Cycling and Public Transport** – HE is required to work towards a strategic network which provides for strong connections for walking cycling and public transport. It is the Council's opinion that the proposals do not provide a strong network for walking and cycling and that the corridor hinders public transport connectivity within Thurrock and does not promote opportunities for cross river public transport connections. Mitigation recognises the importance of maintaining connectivity for walkers, cyclists and horse-riders and providing alternatives for vehicle use; however, the Ward Summaries identify several key routes will be closed for at least 5 years with no details yet of possible diversions. It is not acceptable to reconnect severed routes and maintain that that is an improvement in the network provision or is mitigation.
- e. **Cultural Heritage** – In terms of cultural heritage, particularly buildings, the issue is that historic/listed buildings and conservation areas (including the three Grade II listed buildings being demolished) are not mentioned, so the solution is for HE to include reference to them. The Operations Update does not mention cultural heritage at all.
- f. **Surface Water and the Order Limits** – Order limits could be affected by changes to surface water storage structures, of which the Council has concerns over calculated discharge rates and ground water levels. HE should undertake detailed Ground Investigation work at this stage of the project to determine if the Order Limits will be affected by changes to surface water storage structures and the drainage strategy.
- g. **Human Health** – The Environmental Impacts section of the document does not include a section on population and human health, which is to be included within the ES. Further information is required on the impact on Linford Allotments so the possible effects on human

behaviour can be considered. Concerns are raised on the following sport and recreation facilities as they will be used by the local community:

- i. Orsett Park Royals Football Club pitches
 - ii. Orsett Golf Club
 - iii. Thurrock Rugby Football
 - iv. Mardyke Valley /North Road
 - v. Grangewaters Outdoor Education Centre car park
 - vi. Top Meadow Golf Club
- h. **Air Quality** – HE claim that LTC will improve the overall air quality across the region. The HEqIA submitted for the DCOv1 application however showed an overall disbenefit to the area, hence contradicting this claim. Updated GIS data should be provided to the Council for review to assess the air quality modelling for the revised transport model of this consultation as the summary provided in the Operations Update relates to the withdrawn DCO application.
- i. **Noise** – Likewise, the reported noise modelling summarised in the Operations Updated relates to the withdrawn DCO application. Therefore, the Council requests that updated noise model is shared with the Council, prior to the next DCO submission. This is required so that the impacts can be assessed.
- j. **Climate and Carbon** – The Decarbonisation Plan was issued by the Government in July 2021, outlining the commitments and actions needed to achieve the decarbonisation of the transport system. HE should provide evidence and clarify how LTC fits into this plan, and how the measures will be incorporated.
- k. **Map Reference Points** – Changes to the design are commented on by the Council, many of which the Council request further information on to understand the amendments. These include works in the river, the removal of the jetty amendments to the Order Limits on Buckingham Hill Lane, the Orsett Cock interchange, the proposed landscape design at the Mardyke Crossing and the design of Tilbury Fields which is subject to ongoing discussions.
- l. **London Resort** – The current traffic modelling work shows no evidence that the impact of the resort has been included. With these flows included, it is very possible that any capacity is taken by the existing A1089 and mitigation at ASDA roundabout will prove even more necessary. The Tilbury area relies on a single access via the A1089 and local businesses may not be able to operate successfully with priority given to London Resort traffic.
- m. **Changes in Flow** – The Council has the following concerns, as outlined in the Report titled ‘Review of the Effects of the LTC within Thurrock: DCO Cordon Model Review’:
- i. Underestimation of base traffic flows, particularly at Orsett Cock, Manorway junction, A1013, A128/Rectory Road, and ASDA roundabout.
 - ii. Increases in traffic flows at Orsett Cock and Manorway junctions.
 - iii. Traffic flow increases on both the A13 and local roads including the A1014 The Manorway, London Road/Corringham Road, A1013 Stanford Road and A13/A176 junctions.
 - iv. Adjustments have been made to zone loading points and addition of new network has been included without any model validation undertaken, thus resulting in local changes in traffic routing and rat running, specifically noted at Rectory Road, Orsett. This also leads to concerns over an increase in traffic through Orsett village.

- v. It is not known that as a result of the point above, whether traffic levels and therefore the delays at Orsett Cock are accurate representations of what could occur in the future with LTC in place.
- vi. HGV bans have been redefined; however it is not known how new bans specifically related to port traffic would be enforced. There are no detailed proposals (Note: enforcement is already a challenge and LTC will increase the risk of HGVs using the routes).
- vii. Risk of higher use of Orsett Cock roundabout (and potentially The Manorway junction) for u-turning from the LTC to A1089 than modelled due to quicker journey times (and potential growth in traffic arriving from south of the River Thames and inaccurate future growth locations).
- viii. Risk of higher use of the A1013 and Daneholes roundabout and routes through Chadwell St Mary than modelled due to quicker journey times (and growth not reflective of the future growth locations).
- ix. The modelling shows there is an increase of nearly 14% total travel distance (pcu.kms/hr) with LTC, resulting in 9% to 11% increase in CO₂ emissions and 6% to 7% increase in NO_x.

The 'Junction Assessment and Mitigation Analysis' modelling shows that:

- x. The performance of some approaches to The Manorway and Orsett Cock roundabouts will be impacted by the introduction of LTC.
 - xi. The off slips from the A13 at both The Manorway and Orsett Cock roundabouts are likely to block back on to the mainline and/or impact on the slip roads from the LTC.
 - xii. The LTC causes the performance of the ASDA roundabout to significantly deteriorate.
 - xiii. Daneholes roundabout is at risk of regularly being used as a rat-run from the LTC, and any more significant use of the A1013 than modelled in LTAM would impact upon not only the traffic, but bus services that operate through the junction.
- n. **Bus Routes** – The Council request evidence that during this consultation, discussion with bus service providers have been made. Adverse impacts on bus journeys are a concern for employment areas within Thurrock, particularly from Basildon. Mitigation should be considered to improve the bus journeys for this route. National and government policy (NPS NN and GD 300) require new strategic infrastructure, like LTC, to provide for public transport connections, however HE states, without explanation, that “*there are currently no proposals to run local buses*”. The Council recommend this is reviewed.
- o. **Operational Maps** – Additional scheme costs, flood risk and environmental disruption are the result of relocating proposed pond POS08-001 as a consequence of the additional junction immediately north of the Northern Portal tunnel entrance. HE should review the location of this structure with the view to limit its disturbance. The Council has noticed that the distance between drainage storage features is significant and ask HE to give consideration to using open SuDS features across the scheme. The Essex SuDS Design Guide outlines the LLFA policy, however, further details are required on the management of surface water run-off around the Northern Portal of the tunnel.



Lower Thames Crossing

Review of You Said, We Did

On behalf of **Thurrock Council**



Document Control Sheet

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For and on behalf of Stantec UK Limited				

Revision	Date	Description	Prepared	Reviewed	Approved
A	08/09/2021	Issued to Thurrock Council	-	CS	CS

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1 Introduction

1.1 Overview

- 1.1.1 As part of its technical engagement relating to the proposed Lower Thames Crossing (LTC) Development Consent Order (DCO) application, Highways England (HE) has issued Thurrock Council (the Council) with the assessment details for the You Said, We Did.
- 1.1.2 This document sets out the Council's comments on the proposed You Said, We Did document.
- 1.1.3 The document follows the same structure as You Said, We Did and responds only to those sections relating to the north of the river within Thurrock, where we have comments. Sections where we have no comments have been omitted from the document review.

2 Review of You Said, We Did

2.1 Comments

Table 2.1: The Council's Comments on the You Said, We Did

Relevant Section in the You Said, We Did		The Council's Comments
Chapter 1: Introduction		
para 13-20	How we develop this document	<p>In paragraph 15, the approach by HE to focus their responses on the issues which received the most number of responses runs the risk of missing the key points that might receive few responses but are critical to the success of the proposal and is contrary to advice by PINS, which stresses that issues are not only important due to the numbers of stakeholders raising them, but also for their inherent importance.</p> <p>It is also not clear whether the results that were grouped as one response during the initial consultation were counted as 1 issue also and therefore not picked up as the most number of responses.</p> <p>We do not believe there has been substantial analysis of responses in relation to people's diversity monitoring information. Is there an issue that only affects a particular group with protected characteristics, for example, that is not then picked up through this method of focusing in numbers of responses.</p>
Chapter 2: Statutory consultation		
para 21-38	Developing the project	<p>Para 21 – The Council has not seen the alternative option testing. This has not been made available, other than some commentary (i.e. no modelling results of details or the designs) within the 'Approach to Design, Construction and Operation' in July 2018. The Council has been requesting details on the option testing since 2018, such as modelling results, design assumptions, etc. The reasons for not including the Tilbury Link Road have not been proven in any evidence nor are they all valid anymore. See detailed response to para 95.1-95.7, 95.8-93.10.</p> <p>Para 31 – the Council is not satisfied that the prospects for the Tilbury Link Road have been fully evaluated and it continues to require that HE promotes the link road and a junction with the LTC as part of this Project and not delaying a decision for subsequent non-committed funding through the RIS3 process.</p>

Relevant Section in the You Said, We Did		The Council's Comments
para 43	Traffic assessments	<p>At the time of review of this documentation no updated supporting transport models were provided alongside this consultation, therefore, we refer to the last submitted model review document issued to HE in June 2020 (LTC Consultation - Review the Effects of the LTC within Thurrock - Supplementary Consultation Modelling Review) as well as the local junction assessments report (LTC Consultation - Junction Assessment and Mitigation Analysis issued in October 2020) undertaken to identify possible mitigation at key areas within Thurrock.</p> <p>Our key concerns as provided within this documentation and further outlined within the Operations Update and Ward Impact Summaries, remain unchanged.</p>
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 17-28		
para 65.10-65.11, 66.14-66.18	Transport	<p>Concerns remain regarding the lack of detail regarding option testing, as outlined within the LTC Review of Transport Planning Evidence by Stantec on behalf of Thurrock Council issued in March 2021 Ref 10.11.</p> <p>The Council is seeking transparency on the appraisal of alternative options, i.e. different configurations of the LTC considered, for example the Tilbury Link Road, A13/LTC junction (restricting different movements or all movements with the A13), public transport access to and from the LTC particularly from Thurrock urban area.</p> <p>It seems that HE is considering public transport as an either/or scheme, rather than what additional benefit the LTC could offer for public transport. Given the aspirations for decarbonisation, these opportunities do not appear to have been given consideration.</p> <p>Paragraph 66.17 implies that the currently proposed arrangement for the Project 'could be used by public transport'. The Project is not configured to facilitate viable public transport services along the route of the LTC and HE must reconsider this point. The Council has expressed this point and provided concepts for consideration by HE.</p>
para 65.13, 66.21-66.25	Community	<p>There is no appraisal of environmental transport impacts such as severance, fear and intimidation. This assessment must be carried out (and subsequently consulted upon) through the Environmental Impact Assessment, which currently does not recognise the effect of the project on local travel networks. No mitigation appears to have been offered on the local networks to address the impacts as a result of increasing construction or operational traffic.</p>

Relevant Section in the You Said, We Did		The Council's Comments
		<p>HE's document 'Approach to Design, Construction and Operation', prepared in July 2018, provides reasons for not including the Tilbury Link Road, but no evidence was provided to support the commentary within this report and the stated reasons are no longer all valid.</p> <p>The Council has provided responses on the paucity of robustness and commitment within the proposed control documents, including the Code of Construction Practice (CoCP); the Outline Traffic Management Plan for Construction (oTMPfc), the Outline Materials Handling Plan and the Framework Construction Travel Plan. The mitigation indicated within those documents and the governance of that mitigation and associated management processes must be enhanced to be effective. HE needs to reflect on the balances between the need to minimise impacts on communities from the siting of project compounds set against the need to provide good access to compounds for workers to travel by non-car modes. Both approaches must be equally robust.</p> <p>Documents and consultation information has been very complex, with a vast amount of information. Though this is unavoidable there should be better promotion of easy read versions or summary documents to allow those that are time poor or that require an easy read version to respond. Though HE have said easy read versions are available, however, the ease of navigating the system in order to do so does not align with those that would have the need for an easy read version.</p> <p>The HEqIA needs to assess if there are any particular community groups that are negatively or disproportionately impacted, e.g. those with a disability having a further adverse impacts on their health due to environmental impacts.</p>
para 65.18-65.19, 66.36-66.40	Existing roads	Paragraph 66.38 - the Council is concerned that HE is proposing through the Wider Network Impact Management and Monitoring Plan, a strategy to review the effects of the Project on local roads. The mechanisms within that Plan to then seek funding is flawed in that the funding is not allocated or ring-fenced and could not be achieved, leaving the local network suffering from impacts that should be defined and mitigated through the DCO Evidence and the funding for the Project.
para 65.20, 66.41-66.47	Traffic	Paragraph 66.41 and 66.43 - HE should not blindly follow a course to 'relieve the congestion at the Dartford Crossing' with no thought for mitigating the effects of the resultant Project, such as the excessive sterilisation of land in Thurrock; the creation of a complex and convoluted interchange at A13; and impacts on local roads within Thurrock. The proposed scheme does nothing to encourage a move away from the use of fossil-fuelled vehicles or to encourage active travel or public transport. It is not aligned with the Governments objectives as indicated within the NPS NN, and does

Relevant Section in the You Said, We Did		The Council's Comments
		not help towards the Governments Carbon Budget. These comments are reiterated throughout the Appendices and Main Report in the Council's Consultation Response.
para 65.21-65.22, 66.48-66.49	Transport	<p>Concerns remain regarding the lack of detail regarding option or sensitivity testing, as outlined within the LTC Review of Transport Planning Evidence by Stantec on behalf of Thurrock Council issued in March 2021 Ref 10.11 and Ref 10.12 regarding future-proofing/resilience of the scheme and connectivity for new local bus services crossing the river.</p> <p>The consultation documents make no substantive reference to the implications to the LTC scheme of transport decarbonisation, how the scheme might need to be adapted to respond to this challenge, or to become an enabler of transport decarbonisation and green growth in the Thames Estuary alternative modes and travel patterns.</p> <p>The Council wishes to raise a few key points from the recent correspondence as part of this consultation and for further discussion:</p> <ol style="list-style-type: none"> a. HE suggests that the Lower Thames Crossing will provide for faster journeys by public transport. Public transport services to and from Thurrock urban areas, South Ockendon, Stanford-le-Hope, Corringham and Basildon will be important to the future growth of these areas. However, in the absence of the Tilbury Link Road there is no convenient access for local public transport to the tunnel. Public transport journeys between origins and destinations north and south of the river would be unviable, being too long via the currently proposed Lower Thames Crossing. The Council has suggested the temporary use of the emergency access for public transport access to bridge the anticipated gap between the delivery of the Lower Thames Crossing and Tilbury Link Road, (which could be indefinite), but this has been rejected. Far from being a stimulus for local public transport connections, the Council believes that the Lower Thames Crossing will act as a deterrent to public transport operators and users. b. HE has referred to the importance of the strategic road network for the future of freight movement, government's ambition to achieve zero emission HGV's, and the importance of expanding the rail network and inter-modal terminals in achieving net zero. Setting aside for the time being the issue of rail (and the potential for north-south connections across the Thames and around the congested London rail network), there are important questions to consider about how the strategic road network interfaces with freight movement to transform its operation. For example, encouraging the development of a hydrogen network for freight and construction vehicles, developing locations for intermodal and last mile connections (including transfer to river transport), and delivering enabling

Relevant Section in the You Said, We Did		The Council's Comments
		<p>roadside technology, (such as the development of HGV platooning technology) to support improved logistics functionality and operation, thus enabling safety and environmental gains.</p> <p>c. HE states that the Tilbury Link Road is being developed by HE, and that this will provide an important connection for buses (and freight/ port traffic). If this is such an important component of the overall solution, how can the delivery of this part of the scheme be secured? As it stands, it is entirely possible that the Lower Thames Crossing will be delivered, without the Tilbury Link Road and this could be in perpetuity. In this case, potential benefits for public transport and freight connections, and consequential impacts on local roads will persist indefinitely. The Council therefore wishes to agree a mechanism through which the TLR can be delivered prior to RIS3, in line with programme for delivery of LTC.</p> <p>d. The Council notes HE's comment about the 6th carbon budget methodology currently suggesting that vehicle electrification and the introduction of CAV technology will result in increases in demand, on the basis of assumptions made. Are these good outcomes for carbon reduction and community cohesion? What assumptions would need to be made to secure reductions in single vehicle use, and how might these apply to the road user charging regime for the Lower Thames Crossing. How could the operational regime be used to create positive outcomes from a carbon and community perspective? The Council has seen no assessment of uncertainty as part of the development of this scheme, and no evidence of proposals that could suggest that the Lower Thames Crossing could become a transformational project.</p> <p>The Council believes that HE should be making commitments in the DCO about transport decarbonisation and its implications locally. HE has stated that the DCO commitments on carbon will be stronger and more comprehensive than previously seen, but has expressed concern about committing to delivering outcomes that are inherently uncertain. However, the Council believe that it is possible and desirable to set broad objectives, secured through the DCO. It is not necessary to have all the answers, but it is important to set the framework for future action. At present, there is nothing which acts as an incentive on HE to make a concerted effort to be progressive on this agenda, and the Council believes that this needs to be grasped.</p>
para 65.24, 66.52-66.55	Transport	Concerns remain regarding the lack of detail regarding option testing, as outlined within the LTC Review of Transport Planning Evidence by Stantec on behalf of Thurrock Council issued in March 2021 and Ref 10.6 and Ref 10.18 regarding the option to deliver Tilbury Link Road, further journey time analysis has reinforced that the TLR would benefit traffic movements from the Pot of Tilbury north and south along the LTC, additionally the lack of option testing see Ref 10.11 also remains a concern.

Relevant Section in the You Said, We Did		The Council's Comments
		The Council has expressed that the Tilbury Link Road and an associated interchange with LTC should form part of and delivered with the Project proposals and not be pushed into the future as an unfunded proposal. The Council was not supportive of a stand-alone Rest and Service Area (RaSA), which brought no connectivity advantages to the borough.
para 65.25, 66.48-66.49	Construction	The Council supports the use of excavated material within the trace of the Project and encourages HE to make much greater strides in the use of non-road transport to further reduce the need for moving materials and equipment on the road network. This is in the interests of safety within the local communities and to reduce environmental impacts. The Outline Materials Handling Plan, which has been presented as part of this Community Impact Consultation fall short of any positive commitments by HE to using non-road transport. It will be unsatisfactory to leave the decisions to contractors, whose prime objective will be time and cost savings and not driven by environmental motives. He needs to take a lead on these matters, i.e. they need to identify, appraise and consult upon a positive strategy.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 29-35		
para 72.1, 73.1-73.9	Traffic	<p>As outlined within the LTC Review of Transport Planning Evidence by Stantec on behalf of Thurrock Council issued in March 2021 specifically Ref 10.1 and 10.2/10.3 regarding local model validation, rat-running on local roads and enforcement thereof are still key concerns of Thurrock Council and further information regarding these aspects should be provided.</p> <p>Limited or no local mitigation measures have been identified with only a weak commitment to monitoring of junctions on the opening of the LTC. The Council remains concerned regarding commitment and funding of any local mitigation, if the monitoring shows there are impacts. Ref 10.22 provides further detail on these concerns. Also see Operation Update and Ward impact summary for further information.</p> <p>The Council has also sought to understand the alternatives that have been explored by HE as to the form and design of the A13/A1089/A128/LTC interchange. Thus far, there is no evidence of any alternative designs having been considered or appropriately appraised. The proposed configuration is land hungry, convoluted, confusing and potentially unsafe. The Council does not support the current arrangement and wishes to understand whether suitable alternatives should be pursued. HE should not be entirely driven by the aspiration to reduce congestion at the Dartford Crossing at the expense of other areas.</p>

Relevant Section in the You Said, We Did		The Council's Comments
para 72.2, 73.10-73.16	Environmental impact	"...the Mardyke viaduct and Orsett Fen viaduct lengths were increased by approximately 50 metres, which increased the open aspect and reduced the volume of flood compensation required in this area. The heights of the viaducts were kept as low as possible, to reduce their visual impact and the footprint of the embanked section as far as possible."
para 72.3, 73.17-73.21	Air quality	Response summarises that no changes were made as impacts do not cause exceedance of thresholds in accordance with the LA105 methodology. Comments on this topic cannot usefully yet be made, as the Council and others are still awaiting updated air quality modelling and assessment results.
para 72.5, 73.29-73.36	Community	The Council has raised concerns related to both construction traffic impact and operational traffic impacts in 'Thurrock Cordon Model Construction Modelling Review, May 2021' and 'Review of the Effects of the LTC within Thurrock: DCO Cordon Model Review', October 2020 respectively. No mitigation or response has been issued. No response to specific communities, e.g. travellers site.

TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 37-42

para 82.2, 82.10-82.17	Transport	As outlined within the LTC Review of Transport Planning Evidence by Stantec on behalf of Thurrock Council issued in March 2021 specifically Ref 10.1 and 10.2/10.3 regarding local model validation, rat-running on local roads and enforcement thereof are still key concerns of Thurrock Council and further information regarding these aspects should be provided. Limited or no local mitigation measures have been identified with only a weak commitment to monitoring of junctions on the opening of the LTC. The Council remains concerned regarding commitment and funding of any local mitigation, if the monitoring shows there are impacts. Ref 10.22 provides further detail on these concerns. Also, see Operation Update and Ward impact summary for further information.
para 82.4,	Air quality	Response summarises that no changes were made as impacts do not cause exceedance of thresholds in accordance with the LA105 methodology and relies on the CoCP for control of dust. However, the Council understand that there

Relevant Section in the You Said, We Did		The Council's Comments
82.18-82.24		may be unacceptable increases on the A1013 and on Brentwood Road. However, comments on this topic cannot usefully yet be made, as the Council and others are still awaiting updated air quality modelling and assessment results.
para 82.5, 82.25-82.36	Land	Add mitigation measures in the form of Materials Handling Plan to ensure appropriate segregation of arising types and a soil management plan (reference appropriate guidance) to protect and reinstate soils. No comment on loss of green belt /spaces other than needing further clarity on area of permanent loss and area of compensation.
	Community	This just duplicates their response in the previous question and does not address any specific concerns. Was adding green bridges something the community asked for as a mitigation, Further clarity on what has done to reduce impact is needed.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 44-48		
para 83.3, 83.10-83.19	Land	No comment on loss of green belt /spaces other than needing further clarity on area of permanent loss and area of compensation.
para 83.4, 83.20-83.26	Air quality	Response summarises that no changes were made as impacts do not cause exceedance of thresholds in accordance with the LA105 methodology and relies on the CoCP for control of dust. However, the Council understand that there may be unacceptable increases on the A1013 and on Brentwood Road. However, comments on this topic cannot usefully yet be made, as the Council and others are still awaiting updated air quality modelling and assessment results.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 49-53		
para 84.3, 84.11-84.12	Transport	It should be noted that there are no apparent turnback facilities for dangerous loads or oversized loads and although such occurrences would be infrequent, the lack of facilities should be reconsidered.

Relevant Section in the You Said, We Did		The Council's Comments
para 84.4, 84.13-84.17	Transport	The Council supports the emergency services concerns about the safe operation of the network and the incident response procedures in the event of major incidents which may block the tunnels or cause severe problems between junctions. Access to sections of the corridor is extremely challenging for emergency services, especially due to the absence of hard shoulders and limited lanes. Trapped vehicles have no option but to wait for the incident to be cleared before continuing. With major incidents this could be many hours. The Expressway design and guidance continues to be tested and has been questioned through research into the similar Smart Motorways initiatives. The ESSPSG will be responding on behalf of all the Emergency Services with comments on the consultation and its emergency provision and will set out their requirements.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 55-64		
para 86.1, 86.7a-86.7c	Location	The Council has raised concern about the lack of options appraisal related to the scheme configuration, rather than its broad location.
para 86.2, 86.7d-86.7g	Traffic	LTC Review of Transport Planning Evidence by Stantec on behalf of Thurrock Council issued in March 2021 is the most recent list of issues raised prior to this consultation. The majority of these issues have yet to be responded to by HE.
para 86.6, 86.33-86.46	Land	No comment on loss of green belt /spaces other than needing further clarity on area of permanent loss and area of compensation.
para 86.7, 86.47-86.56	Noise and vibration	No comment as no additional work undertaken. With regards to construction detailed proposals of the planned works, noise monitoring and mitigation measures will be discussed with the relevant local authorities before construction works begin.
	Air quality	Still awaiting air quality modelling

Relevant Section in the You Said, We Did		The Council's Comments
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 66-68		
para 89-90	Northern connections	No comments.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 70-75		
para 93.1, 93.6-93.9	Traffic	<p>The Council has raised its concerns with the current strategic modelling and the absence of robust local network impact analysis. The views are raised across a number of operational and construction focused documents and related correspondence between the Council and HE. The necessary mitigation cannot be assessed until reliable and appropriate modelling has been completed and provided to the Council for review and response. Unless the Council has been given this information, and been consulted on it, the current consultation exercise will be defective.</p> <p>The Council has also yet to see evidence that the layout and design of the Orsett Cock interchange is safe and appropriately designed for the traffic loadings that are envisaged.</p>
para 93.2, 93.10-93.18	Air quality	Response summarises that no changes were made as impacts do not cause exceedance of thresholds in accordance with the LA105 methodology and relies on the CoCP for control of dust. However, the Council understand that there may be unacceptable increases on the A1013 and on Brentwood Road. However, comments on this topic cannot usefully yet be made, as the Council and others are still awaiting updated air quality modelling and assessment results.
para 93.6, 93.32-93.40	Land	No comment on loss of green belt /spaces other than needing further clarity on area of permanent loss and area of compensation.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 77		
para 95.1-95.7, 95.8-93.10	Transport, communities, air quality and noise	Response summarises that no changes were made as impacts do not cause exceedance of thresholds in accordance with the LA105 methodology and relies on the CoCP for control of dust. However, the Council understand that there may be unacceptable increases on the A1013 and on Brentwood Road. However, comments on this topic cannot usefully yet be made, as the Council and others are still awaiting updated air quality modelling and assessment results.

Relevant Section in the You Said, We Did	The Council's Comments
	<p>Unless the Council has been given this information, and been consulted on it, the current consultation exercise will be defective.</p> <p>63% respondents supported (with 14% opposing it). It remains unclear why the junction has been removed.</p> <p>Originally, the Tilbury Link Road (TLR) was included in the DfT's non-statutory consultation, which closed in March 2016 and then it was included in the HE Scoping Report for the LTC scheme submitted to the Planning Inspectorate in late 2017. Subsequently, it has not been included in any Consultation proposals and the rationale for this has not clearly been stated in those consultation materials, particularly as the Department of Transport's April 2018 report 'England's Port Connectivity: the current picture' (it covered 9 regional case studies) confirms that the Lower Thames Crossing is expected to offer new connections, as well as improved journey times and network reliability and it includes a junction for Tilbury Port. It was preceded by the DfT's 'Study of England's Port Connectivity' in 2017.</p> <p>The reasons for not including the TLR were set out in the 'Approach to Design, Construction and Operation' in July 2018. These are not considered valid by the Council but seem to have guided HE's approach since that time, even though some reasons are now out of date.</p> <p>It is clear that access to the Port of Tilbury once the LTC scheme is completed and operational will be circuitous from the LTC north and southbound. The routes vary but in order to access the Port from LTC, traffic would need to go either via the Orsett Cock Roundabout (along the A1013 to Daneholes Roundabout, via Wood View and Marshfoot Road to join the A1089), through Chadwell St. Mary (along Brentwood Road, via Marshfoot Road to join the A1089), U-turning at Manorway Roundabout (back along the A13 to the A1089) or use the existing Dartford Crossing.</p> <p>The local A roads and unclassified roads/junctions are not designed to accommodate these increases in traffic and/or HGV traffic. There are safety, air quality and noise concerns relating to increasing traffic and HGVs, particularly related to the schools, residential dwellings, and local bus services along these routes.</p> <p>The timing of the routes from both directions would involve a journey time of approximately 25-30 mins and 31kms, whereas using the TLR would take just 10-11 mins and 13 kms.</p>

Relevant Section in the You Said, We Did		The Council's Comments
		<p>In view of the non-inclusion of the TLR within the current LTC scheme, then it becomes necessary to find ways to accelerate its delivery before RIS3 using DfT's funding and delivery mechanisms. There are three very important reasons for doing this with the assistance of both HE and the LTC scheme team:</p> <p>e. It is a missed opportunity to remove HGV traffic to/from PoTL from the local road network, by providing the TLR, avoiding reliance on unsuitable local roads where there will be significant risk of accidents and air quality and noise impacts. Currently the A1089 and the Asda Roundabout are used by multiple users often with resulting delays and congestion.</p> <p>f. It is a missed opportunity to assist with the realisation of Thames Freeport, the planned growth of the Port of Tilbury and the expansion of DP World; and, the delivery of Thurrock's emerging Local Plan's employment and housing growth, which will deliver traffic increases, not currently considered by LTC's traffic modelling.</p> <p>g. TLR's delivery is fundamental to support the Thames Freeport and ensuring that there is a deliverable strategy to avoid unnecessary impacts of HGVs accessing LTC on local communities.</p> <p>An interim measure for the LTC scheme would be to legally commit to 'passive provision' for the future Tilbury Junction, i.e. the zone should be committed to be left clear and there not being any obstructions from major earthworks, significant utility diversion routes or equipment and no significant permanent structures or features (such as bridges, balancing ponds and other structures).</p>
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 79-86		
para 97.1-97.2, 97.7-97.16	Transport	<p>Evidence has been sought from HE as to the justification for the A13 junction and its configuration. In recent correspondence, HE has suggested that any options appraisal should be proportionate. The Council agrees with this position, however, has expressed its dismay at the confusing and land hungry configuration of the proposed interchange between LTC, A13, A1089 and the local junction at Orsett Cock, and would argue that the Lower Thames Crossing has a very significant impact on the landscape of Thurrock, with consequential impacts relating to property, severance, health, air quality, noise, accessibility and economy, both in the temporary construction stage and permanent operational condition.</p>

Relevant Section in the You Said, We Did		The Council's Comments
		<p>A technical note has been provided by HE which gives information on the design evolution of the proposed layout but does not indicate why the interchange was proposed in the location and configuration currently being promoted. Also, the Council has not received other information requested in response to queries about model validation, or the assessment of local network and local growth, and it remains unconvinced that sufficient information has been provided to allow meaningful discussion about the optimum design of the A13 junction and local connections.</p> <p>There is therefore insufficient evidence provided by HE to demonstrate that the current convoluted interchange is efficient in managing the predicted traffic flows. Furthermore, the Council has significant unresolved concerns that the configuration is safe or indeed can be delivered within the envisaged Order Limits, when allowing for the many signing gantries and safety fencing and barriers which will be required to mitigate the poor layout of the linkages and connections within the interchange.</p> <p>HE, at Table 1 of its note of May 2021, repeats that the proposed interchange with A13 assists with achieving the stated objectives of the LTC project. It asserts that the proposal “supports sustainable local development and regional economic growth”. The Council does not agree that the interchange achieves this and indeed it is the Council's view that the proposed arrangement sterilises land within the Borough without assisting connections. The proposals are almost entirely about strategic benefit without supporting local growth or environmentally sound travel.</p>
para 97.4, 97.26-97.30	Transport	The Council remains unconvinced that the layout of the A13/A1089/A128/LTC interchange is safe due to specific merge and weaving sections, particularly the approach to the Orsett Cock junction from the west. There are many driver decision points within the extremely convoluted layout. Each of these could cause hesitation and uncertainty and result in drivers taking wrong turns and having to travel significant distances to correct their journeys. The spacing between the complex links appears to be too narrow to allow clear informative signing or safety barriers or light deflection between adjacent links. HE must provide further justification for the layout of the interchange and not leave that detail to its contractors following DCO consent.
para 97.5, 97.31-97.37	Transport	The Council's comments and concerns on strategic local modelling cover this point.

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para 97.6, 97.38-97.54	Traffic and air quality	Response summarises that no changes were made as impacts do not cause exceedance of thresholds in accordance with the LA105 methodology and relies on the CoCP for control of dust. However, the Council understand that there may be unacceptable increases on the A1013 and on Brentwood Road. However, comments on this topic cannot usefully yet be made, as the Council and others are still awaiting updated air quality modelling and assessment results.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 88-92		
para 98.3-98.4, 98.11-98.26	Community and land	No comment on loss of green belt /spaces other than needing further clarity on area of permanent loss and area of compensation.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 94-99		
para 100.06, 100.31-100.36	Land	No comment on loss of green belt /spaces other than needing further clarity on area of permanent loss and area of compensation. Add mitigation measures in the form of Materials Handling Plan to ensure appropriate segregation of arising types and a soil management plan (reference appropriate guidance) to protect and reinstate soils.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 101-112		
para 106.1, 107.1-107.12	Land	No comment on loss of green belt /spaces other than needing further clarity on area of permanent loss and area of compensation. Add mitigation measures in the form of Materials Handling Plan to ensure appropriate segregation of arising types and a soil management plan (reference appropriate guidance) to protect and reinstate soils.
para 106.2,	Air quality	Response summarises that no changes were made as impacts do not cause exceedance of thresholds in accordance with the LA105 methodology and relies on the CoCP for control of dust. However, the Council understand that there

Relevant Section in the You Said, We Did		The Council's Comments
107.13-107.24		may be unacceptable increases on the A1013 and on Brentwood Road. However, comments on this topic cannot usefully yet be made, as the Council and others are still awaiting updated air quality modelling and assessment results.
para 106.3, 107.25-107.35	Climate	<p>The 'summary of what you said' in relation to climate change (paragraph 106.3) states 'you raised concern about the impact of the project on climate change, including additional traffic during construction and operation'. This is a short summary which doesn't capture the full scope of comments made. It should be highlighted that, as per the SoCG, other overarching concerns and comments were made in relation to:</p> <ul style="list-style-type: none"> a. The baseline conditions in relation to climate including temperatures, rainfall etc, and the use of up-to-date climate projection data; b. The assessment of climate change risk and adaptation measures which should be included in the design and delivery of the project; c. The scope of the greenhouse gas emissions assessment, including the spatial scope for the operational assessment; d. The proposed mitigation measures for both the construction and operational phases in relation to reducing the levels of greenhouse gas emissions within the borough and wider areas; and e. The construction and operational mitigation measures and how these will be secured through the DCO. <p><u>Our Response</u> Paragraph 107.25 confirms the assessment of carbon emissions includes the construction and operation of the project. Further information is needed to have a clear understanding of the spatial scope of the operational assessment of traffic, and to understand the associated assessment conclusions.</p> <p>Paragraphs 107.28 and 107.29 discuss the now published Transport Decarbonisation Plan and Highways England Net Zero Highways plan. The proposals should clearly address how the scheme will support the 6 strategic priorities set out in the Transport Decarbonisation Plan (Pages 36-37), and in particular, how the scheme will support and contribute to 1. accelerating modal shift to shift to public and active transport, 2. decarbonise road transport, and 3. decarbonise how we get our goods. The proposals now need to be reviewed in light of these plans and the associated commitments and key actions set out in the Highways England plan. LTC is a significant scheme, which will have the largest road tunnel in the</p>

Relevant Section in the You Said, We Did		The Council's Comments
		<p>UK, and cost >£4bn to deliver (https://www.gov.uk/government/news/highways-england-seeks-partners-to-build-19-billion-lower-thames-crossing-roads). This new route should develop associated ambitious approaches to carbon reduction and has the potential to become a catalyst for developing zero carbon construction capacity in the region. Opportunities to realise this should continue to be explored.</p> <p>Paragraph 107.30 states that ‘. This statement fails to recognise the urgency of the climate emergency, and the scale of ambition required to meet net zero carbon by 2050 in the UK. As noted in our comments on the Planning Statement, as per the IEMA guidance all GHG emissions contribute to climate change and therefore might be considered significant.</p> <p>It is also noted that, beyond reducing carbon to meet our recently adopted national climate change targets, multiple benefits of taking action to reduce carbon and deliver a scheme which is resilient to the impacts of climate change are well recognised and should be priorities for the project. For example, PAS 2080 highlights that through reducing carbon, outcomes can be achieved including “a reduction in the costs of delivering and maintaining our infrastructure – driving more efficient ways of working and helping us to have an even greater impact on society and the communities that we serve”.</p> <p>Furthermore, multiple co-benefits and positive social and environmental outcomes are recognised to be delivered by decarbonising transport. For example, the Transport Decarbonisation Plan states that increased cycling and walking can reduce physical activity costs for the NHS (currently estimated at £1bn per annum), with co-benefits relating to congestion, health, air quality and noise. Improving bus services and increasing patronage can not only reduce carbon emissions, but would realise other co-benefits including congestion, jobs and growth, and air quality benefits.</p>
para 106.5, 107.43-107.50	Health	<p>The concerns are generalised and so is the corresponding response, making it difficult to understand how specific community concerns have been considered or overcome.</p> <p>The noise and air quality assessments are not up to date, making it difficult to assess impact on health and wellbeing outcomes.</p> <p>Health baseline data has not been applied or sufficiently considered with the Ward Impact Summaries (key concerns are provided within each ward summary review).</p>

TABLE OF ‘SUMMARY OF WHAT YOU SAID’ AND ‘OUR RESPONSE’ page 113-120

Relevant Section in the You Said, We Did		The Council's Comments
para 112.1, 113.1-113.8	Land and communities	No comment on loss of green belt /spaces other than needing further clarity on area of permanent loss and area of compensation. Add mitigation measures in the form of Materials Handling Plan to ensure appropriate segregation of arising types and a soil management plan (reference appropriate guidance) to protect and reinstate soils.
para 112.2, 113.9-113.14	Land	No comment on loss of green belt /spaces other than needing further clarity on area of permanent loss and area of compensation. Add mitigation measures in the form of Materials Handling Plan to ensure appropriate segregation of arising types and a soil management plan (reference appropriate guidance) to protect and reinstate soils.
para 112.3-112.4, 113.15-113.26	Land and environment	No comment on loss of green belt /spaces other than needing further clarity on area of permanent loss and area of compensation. Add mitigation measures in the form of Materials Handling Plan to ensure appropriate segregation of arising types and a soil management plan (reference appropriate guidance) to protect and reinstate soils.
para 112.7, 113.41-113.42	Land	As the comment relates to increasing urbanisation clarity on the provision of additional green spaces for human recreation (rather than habitat) may address this better. Provide the areas of temporary and permanent land take.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 123		
para 121.1-121.7, 122.1-122.6	Community, air quality, land	Response summarises that no changes were made as impacts do not cause exceedance of thresholds in accordance with the LA105 methodology and relies on the CoCP for control of dust. However, the Council understand that there may be unacceptable increases on the A1013 and on Brentwood Road. However, comments on this topic cannot usefully yet be made, as the Council and others are still awaiting updated air quality modelling and assessment results.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 125-128		

Relevant Section in the You Said, We Did		The Council's Comments
para 126.1-126.2, 127.1-127.10	Traffic	<p>At the time of review of this documentation no updated supporting transport models were provided alongside this consultation, therefore, we refer to the last submitted model review document issued to HE in June 2020 (LTC Consultation - Review the Effects of the LTC within Thurrock - Sup Con Modelling Review) as well as the local junction assessments report (LTC Consultation - Junction Assessment and Mitigation Analysis issued in October 2020) undertaken to identify possible mitigation at key areas within Thurrock.</p> <p>As outlined within the LTC Review of Transport Planning Evidence by Stantec on behalf of Thurrock Council issued in March 2021 specifically Ref 10.1 and 10.2/10.3 regarding local model validation, rat-running on local roads and enforcement thereof are still key concerns of Thurrock Council and further information regarding these aspects should be provided.</p> <p>Limited or no local mitigation measures have been identified with only a weak commitment to monitoring of junctions on the opening of the LTC. The Council remains concerned regarding commitment and funding of any local mitigation, if the monitoring shows there are impacts. Ref 10.22 provides further detail on these concerns. Also see Operation Update and Ward impact summary for further information.</p>
para 126.3-126.4, 127.11-127.14	Traffic	See comment above.
para 126.5, 127.15-127.17	Traffic	See first comment above.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 130-133		
		No comments.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 135-139		

Relevant Section in the You Said, We Did		The Council's Comments
para 138.3, 139.15-139.18	Traffic	The Council has responded separately on the draft Outline Traffic Management Plan for Construction (Appendix A (1)). It is noted that HE has made progress towards proposals to manage the effects of construction traffic on the local road network, however, the mechanisms for monitoring management and governance of the contractors must be reviewed and strengthened.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 141-145		
para 145.4, 146.20-146.26	Land	No comment other than rather than 'most areas' will be returned to the owner provide a percentage of the overall scheme and/or area of land acquired for utilities.
Chapter 3: Supplementary consultation		
para 157-158	Updating our traffic assessments	<p>The Council's concerns related to the lack of validation on the local road networks and the use of the strategic road network morning peak of (07:00-08:00) with the LTAM was not responded to and no methodology has been proposed.</p> <p>Given that the strategic LTAM is not validated on the local road network and is, in any case, not a suitable tool for testing detailed operations of specific junctions, the Council is of the view that detailed junction assessments (e.g. micro-simulation modelling, TRANSYT or JUNCTIONS 9) should be carried out at key pressure points on the network, using accurate baseline traffic data.</p> <p>In only very recent recognition that the Council is concerned about these issues (although they have been raised since 2018), HE is proposing to undertake a programme of tasks and meetings, starting with the Council's initial concerns raised since Supplementary Consultation in April 2020. HE's proposed programme covers: (1) 2016 baseline model, (2) identify areas of concern in forecasts, (3) mitigation/interventions, and (4) Local Plan Options.</p> <p>The Council has grave concerns that this engagement cannot be completed in advance of the DCO submission and would not provide HE the time to make any changes to the scheme. The Council is unable to comment on those effects until the option testing has been received and reviewed and, therefore, the Council currently remains concerned that the proposals do not recognise the importance of local sustainable growth and connectivity.</p>

Relevant Section in the You Said, We Did		The Council's Comments
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 155-171		
para 178, 202-210	Construction	The Council has responded separately on the management plans which are proposed to govern the traffic and workforce travel associated with the construction period, including the Code of Construction Practice, the Outline Traffic Management Plan, the Framework Construction Travel Plan and the Outline Materials Handling Plan. As yet a framework has not been presented for Construction Logistic Plans. The general view of the Council is that these management plans need to strengthen the commitments from HE; incentive the contractors to reduce impacts and increase environmentally sound initiatives; and set out robust mechanisms to govern the processes.
para 199, 279-289	Land	No comment on loss of green belt /spaces other than needing further clarity on area of permanent loss and the area of compensation provided.
para 200, 290-294	Transport	The Council has made representations on the appraisal of alternative connections with LTC, including to A13. These are summaries in relation to paragraph 97.1 and included in response on other consultation documents. The council does not support the current configuration of the A13/A1089/A128/LTC interchange.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 173-176		
		No comments.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 178-179		
para 343, 353-354	Transport and pollution	See our response to para 95.1-95.7, 95.8-93.10 within this document Further comments are also provided within the Operation Update and Ward Update responses. As outlined within the LTC Review of Transport Planning Evidence by Stantec on behalf of Thurrock Council issued in March 2021 specifically 10.6 Tilbury Link Road regarding the lack of any evidence of modelling and the recognition of the importance of the TLR on the local economy and access to a nationally important port (Port of Tilbury).
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 181-186		

Relevant Section in the You Said, We Did		The Council's Comments
para 363, 369-377	Transport	As outlined within the LTC Review of Transport Planning Evidence by Stantec on behalf of Thurrock Council issued in March 2021 specifically Ref 10.11 option testing of the scheme, there is no further modelling evidence provided regarding the testing of this connection and if scenarios without it have been undertaken as such this remains a concern for Thurrock. Additionally, the impact of this regarding rat-running Ref 10.2 and 10.3 also remain of a concern, with journey times using Orsett Cock or Manorway roundabouts to access Greys and Tilbury being quicker than using Dartford Crossing Ref 10.9 of the above document. Further comments are also provided within the Operation Update and Ward Update responses.
para 364, 378-384	Transport	The Council has made representations on the A13/A1089/A128/LTC interchange. These are provided in response to other operations focused documents and the concerns about the buildability of the interchange are also raised, and not repeated here.
para 366, 390-397	Traffic	The Council has raised its concerns with the strategic and local modelling of the effects of the Project.
para 367, 398-402	Transport	The Council has made representations on the construction period management plans.
para 368, 403-406	Health and wellbeing	406. What are the environmental and community impacts of taking the alternative action and has this been assessed?
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 188-195		
		No comments.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 197-199		

Relevant Section in the You Said, We Did		The Council's Comments
		No comments.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 197-199		
para 489-490, 495.1-495.4	Land and Order Limits	Add what the area within the Order Limit is and permanent land take area.
para 491, 495.5-495.15		The comment regarding duration of temporary land take is not addressed. Is 'the return of land to the satisfaction of the land owner' reflected in the REAC? There is the requirement for pre and post condition surveys – maybe this statement should be amended?
para 494-495, 520-524		Clarity on area of permanent loss and area of compensation of green belt/ recreation being provided. Add to facilitate the return of temporary land take to the original use mitigation measures will be implemented including Materials Handling Plan to ensure appropriate segregation of arising types and a soil management plan (reference appropriate guidance) to protect and reinstate soils.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 210-215		
para 532, 553-562	Transport, noise and air quality	Response summarises that no changes were made as impacts do not cause exceedance of thresholds in accordance with the LA105 methodology and relies on the CoCP for control of dust. However, the Council understand that there may be unacceptable increases on the A1013 and on Brentwood Road. However, comments on this topic cannot usefully yet be made, as the Council and others are still awaiting updated air quality modelling and assessment results.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 217-225		
para 571,	Climate	The ' summary of what you said ' in relation to climate change (paragraph 1063) includes an expanded summary on paragraph 106.3, which is welcomed. As per the comments on paragraph 106.3, we have included a summary of key SOCG issues.

Relevant Section in the You Said, We Did		The Council's Comments
576-588		The 'response' includes an additional section on Biodiversity stating that the project will deliver 15% biodiversity net gain. These commitments are welcomed. Further tree planting and habitat creation in the Borough, and associated wider carbon sequestration and other benefits for Thurrock, should be considered where possible.
para 573, 600-610	Air quality and health	Response summarises that no changes were made as impacts do not cause exceedance of thresholds in accordance with the LA105 methodology and relies on the CoCP for control of dust. However, the Council understand that there may be unacceptable increases on the A1013 and on Brentwood Road. However, comments on this topic cannot usefully yet be made, as the Council and others are still awaiting updated air quality modelling and assessment results.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 227-231		
		No comments.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 233-238		
para 672, 675-685	Visual, health and noise	<p>Conclusions state that no significant negative noise impacts on properties due to realignment. Can evidence be provided to support this statement?</p> <p>676. Where is undergrounding of power lines proposed and what additional benefits does this bring? Where has it been considered and not taken forward and the rationale for this?</p> <p>682. What are the residual impacts for noise and health?</p>
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 240-245		
para 711, 717-722	Traffic	See pervious comments and further comments are also provided within the Operation Update and Ward Update responses (Appendices H and G).
para 712,	Traffic	See pervious comments and further comments are also provided within the Operation Update and Ward Update responses (Appendices H and G).

Relevant Section in the You Said, We Did		The Council's Comments
723-726		
para 713, 727-729	Traffic	<p>See previous comments and further comments are also provided within the Operation Update and Ward Update responses (Appendices H and G).</p> <p>As outlined within the LTC Review of Transport Planning Evidence by Stantec on behalf of Thurrock Council issued in March 2021 specifically Ref 10.1 and 10.2/10.3 regarding local model validation, rat-running on local roads and enforcement thereof are still key concerns of Thurrock Council and further information regarding these aspects should be provided.</p> <p>Limited or no local mitigation measures have been identified with only a weak commitment to monitoring of junctions on the opening of the LTC. The Council remains concerned regarding commitment and funding of any local mitigation, if the monitoring shows there are impacts. Ref 10.22 provides further detail on these concerns. Also see Operation Update and Ward impact summary for further information.</p>
para 714, 730-735	Air pollution	As outlined within the LTC Review of Transport Planning Evidence by Stantec on behalf of Thurrock Council issued in March 2021 specifically Ref 10.16 induced traffic, and no further evidence of the impact this has been provided, additionally, the increases in travel distance, CO2 and NOx remain a serious concern, and the appraisal of variation in impacts uses large bandings and cannot be appropriate to judge the significance of impacts and changes within the ES.
para 716, 740-748	Transport	<p>Concerns remain regarding access from the LTC to the A1089 and the associated traffic impact that may have on the local road network. As outlined within the LTC Review of Transport Planning Evidence by Stantec on behalf of Thurrock Council issued in March 2021 specifically Ref 10.2/10.3 regarding rat-running on local roads and enforcement thereof are still key concerns of Thurrock Council and further information regarding these aspects should be provided.</p> <p>The Council has also raised concerns that, without recognising the importance of local connectivity, LTC does not achieve its stated objective of facilitating local growth.</p>
Chapter 4: Design refinement consultation		
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 254-273		

Relevant Section in the You Said, We Did		The Council's Comments
para 777, 802-812	Transport	HE shows in the responses at this point that it does not consider its role to enhance the propensity of people to move by more sustainable means – such as active travel, public transport, alternatively fuelled vehicles or, indeed, to not travel at all. It states that it is single focused on relieving congestion at the Dartford Crossing. Providing a car and road freight project neglects opportunities to move towards a more sustainable future. HE is not meeting the aspirations of the NPS NN, the general sustainability agenda or the Carbon Budget.
para 779, 823-824	Flood risk	HE maintains that it is to stick to the DfT WebTAG approach, but it does not recognise that that approach is not providing evidence on the effects on severance, delays, fear and intimidation or safety. Without that assessment, the Council cannot conclude on the effects and need for mitigation.
para 796, 894-900	Transport	The Council has made representations on the need for the Tilbury Link Road. These are not repeated here.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 275-278		
		No comments.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 280-283		
para 961, 967-971	Traffic	See previous comments and further comments are also provided within the Operation Update and Ward Update responses (Appendices H and G).
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 285-290		
para 1000, 1005-1014	Traffic	None of the modelling evidence supporting this commentary has been made available. Within 'Lower Thames Crossing A13 Junction Design Approach May 2021', HE states that an options appraisal has been undertaken as part of the preferred route selection, but the Council believes that insufficient evidence has been provided to allow stakeholders to take a view about the performance of alternative options, specifically related to the configuration of the selected Route 3 scheme (as referred to in the Statutory Consultation in 2018). The note focuses more on the reasoning behind the

Relevant Section in the You Said, We Did		The Council's Comments
		<p>linkages provided through the iterations of the interchange at A13, rather than the reasoning for the interchange and the comparative review of alternative interchanges. Unless the Council has been given the modelling evidence, and been consulted on it, the current consultation exercise will be defective.</p> <p>As previously stated, the 2016 consultation did not compare the evidence for alternative route alignments A and C, nor was evidence presented about the form of the junction between the Lower Thames Crossing and A13 (or any option testing including Tilbury Link Road). HE seems to be taking the lack of debate on these matters in previous years, and the passing into its investment strategies, as being sufficient evidence that these matters have been dealt with. The recent experience of the A303 scheme suggests that this is not a safe assumption.</p> <p>'Approach to Design, Construction and Operation' in July 2018 provides some commentary, but there is no supporting appraisal or modelling work. The reasons for removing Tilbury Link Road are not considered valid by the Council and seem to have guided HE's approach since that time, even though some reasons are now out of date</p> <p>See previous comments and further comments are also provided within the Operation Update and Ward Update responses (Appendices H and G).</p>
para 1001-1002, 1015-1025	Transport	The Council has made representations about the configuration of the A13/A1089/A128/LTC interchange. Those representations are not repeated here.
para 1003, 1026-1029	Travellers, noise and air pollution	We have not seen an assessment relating to the travellers site.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 292-296		
para 1045-1046,	Utilities, construction and pollution	1065 the response in relation to the concern regarding increase in pollution due to construction activity is very superficial – please provide examples of the mitigation measures to be implemented.

Relevant Section in the You Said, We Did		The Council's Comments
1059-1070		
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 298-300		
		No comments.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 302-305		
para 1101, 1105-1108	Land use	As previously regarding clarity on the area within the Order Limits and the area of temporary land take.
para 1102, 1109-1115	Land use	Please provide areas for each of the ALC grades for both permanent and temporary land take.
para 1103, 1116-1121	Land use	1119 says returned to the <u>reasonable</u> satisfaction of the owner. There are a number of relevant mitigation measures regarding land in the REAC including pre and post condition surveys, five year aftercare and provision of an agricultural liaison officer that should be presented here.
para 1104, 1122-1128	Waste, visual and health	Regarding waste, the outline Site Waste Management Plan has been developed and we have made comments accordingly, the transport is covered by the comments raised on the outline Materials Handling Plan.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 307-308		
		No comments.
TABLE OF 'SUMMARY OF WHAT YOU SAID' AND 'OUR RESPONSE' page 310-323		

Relevant Section in the You Said, We Did		The Council's Comments
para 1153, 1178-1177	Wildlife, pollutants and contaminants	Regarding the comment on pollutant/contaminants entering the River Thames additional response regarding construction phase mitigation is required.
para 1154, 1187-1197	Consultation and noise	Para 1192 mentions trees being used for screening and environmental mitigation. Trees are not considered to provide adequate noise protection with gaps etc. Please confirm if trees alone are being relied upon as mitigation.
para 1155, 1198-1209	Air quality	Response summarises that no changes were made as impacts do not cause exceedance of thresholds (discounting WHO guidelines) in accordance with the LA105 methodology and relies on the CoCP for control of dust. However, the Council understand that there may be unacceptable increases on the A1013 and on Brentwood Road. However, comments on this topic cannot usefully yet be made, as the Council and others are still awaiting updated air quality modelling and assessment results.
para 1158, 1234-1244	Health and communities	Residual health and community impacts are not communicated in this section. The response has not addressed the specific concerns around impacts on health around schools and care homes.
Chapter 5: Visualisations of the changes		
Chapter 6: How to have your say		
Chapter 7: Find out more		

2.2 Summary and Recommendations

Summary

- 2.2.1 This section does not provide a summary and recommendations for the You Said We Did report, as the detail is provided in the summary report and other appendices.
- 2.2.2 An overall comment about this YSWD document is that unlike the DCOv1 Consultation Report, which only acknowledged that 9 design changes had been made following 3 consultation (reported within the Council's Adequacy of Consultation response), the YSWD does the opposite.
- 2.2.3 Every single design or project change made following each of the previous consultations has now been listed and summarised in a series of Tables. In many cases, it does not appear to be the case that the reasons for a change were directly due to a consultation response, but are as a direct response to required mitigation following further impact assessments or what a result of normal design development within the project; neither of which should be attributable to responses to consultation. Overall, this is considered false and misleading and clearer reasons for changes should be set out
- 2.2.4 These claimed changes are provided in clear maps from Pages 352 – 381, but all they illustrate are changes that were reported in earlier consultations, but which are the only result of necessary scheme mitigation (such as noise barriers) or scheme design development (changes to utility diversions or the Mardyke Viaduct) and not responses to previous consultations. In addition, these maps do not show is the adequacy of some of these changes, which are challenged elsewhere in the Council's Consultation Response.
- 2.2.5 Furthermore, it is not clear from this YSWD document what additional material is offered beyond summarising the contents of the DCOv1 Consultation Report into a public facing document. This needs to be clarified.
- 2.2.6 The sub headings under which the YSWD document is structured, such as 'need for LTC', preferred route selection' 'route north of the river' are considered too broad to be helpful and do not follow the necessary Ward breakdown in the Ward Summaries, which would be more helpful.
- 2.2.7 Clearly, HE is responding to a very narrow focused objective of relieving congestion at the Dartford Crossing, potentially at the cost to local communities and with unresolved impacts. LTC helps to resolve one historic problem, but creating new ones for Thurrock. HE, in doing so, is not observing the Governments own aspirations to decarbonise the transport network and LTC scheme objectives that also include supporting sustainable local development.



Lower Thames Crossing

Review of Your property and... compensation or mitigation for the effects
of our road proposals

On behalf of **Thurrock Council**



Document Control Sheet

Project Name: Lower Thames Crossing

Project Ref: 43879

Report Title: Review of Your property and... compensation or mitigation for the effects of our road proposals

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Date: September 2021

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For and on behalf of Stantec UK Limited				

Revision	Date	Description	Prepared	Reviewed	Approved
A	08/09/2021	Issued to Thurrock Council	<i>RQ/JC</i>	<i>HC/CS</i>	<i>HC/CS</i>

This report has been prepared by Stantec UK Limited ('Stantec') on behalf of its client to whom this report is addressed ('Client') in connection with the project described in this report and takes into account the Client's particular instructions and requirements. This report was prepared in accordance with the professional services appointment under which Stantec was appointed by its Client. This report is not intended for and should not be relied on by any third party (i.e. parties other than the Client). Stantec accepts no duty or responsibility (including in negligence) to any party other than the Client and disclaims all liability of any nature whatsoever to any such party in respect of this report.

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1 Introduction

1.1 Overview

- 1.1.1 As part of its technical engagement relating to the proposed Lower Thames Crossing (LTC) Development Consent Order (DCO) application, Highways England (HE) has issued Thurrock Council (the Council) with the assessment details for the Your property and... compensation or mitigation for the effects of our road proposals.
- 1.1.2 This document sets out the Council's comments on the proposed Your property and... compensation or mitigation for the effects of our road proposals and if there are any suitable opportunities to improve this infrastructure.
- 1.1.3 The document follows the same structure as Your property and... compensation or mitigation for the effects of our road proposals and responds only to the sections relating to the north of the river.

2 Review of Your property and... compensation or mitigation for the effects of our road proposals

2.1 Comments

Table 2.1: The Council's Comments on the Your property and... compensation or mitigation for the effects of our road proposals

Relevant Section in the Your property and... compensation or mitigation for the effects of our road proposals	Summary of Highways England's Policy	Thurrock's Council's Comments on the Policy
Chapter 1: Environmental Mitigation		
(pg. 9)	Powers to acquire land by compulsion to carry out environmental mitigation works.	This policy goes no further than the statutory position in terms of mitigation of any environmental impact and the compensation payable if the compulsory acquisition of land is required in order to undertake mitigation works. In terms of environmental mitigation – the vital consideration is the assessment of environmental impact and the suitability and level of mitigation proposed. We look forward to more information in this regard.
Chapter 2: Off-site Planting Agreements		
(pg. 10-11)	Voluntary agreements with landowners to mitigate the adverse effects (e.g. noise) on land from the construction works, or the new or improved road in use, by planting and then maintaining trees, shrubs or plants on the land, or taking other mitigation measures.	It is not clear at what stage and for whom this policy might be available. For instance, it should be made clear whether it is available for all property uses and is there a qualifying level of impact required before this voluntary option becomes available? The aim of this policy seems to be to reduce the impact of the new road or construction noise due to the LTC scheme and is offered on a voluntary basis.

Relevant Section in the Your property and... compensation or mitigation for the effects of our road proposals	Summary of Highways England’s Policy	Thurrock’s Council’s Comments on the Policy
		<p>However, the potential terms of the agreement noted within the policy impose significant inconveniences on the occupier both in terms of restricting the use of the land, maintenance obligations and a local land charge - all of which may lead to negative consequences solely due to the LTC scheme and no fault of the occupier in terms of re-sale, the local property market and most importantly the occupier’s enjoyment of their property and imposed burden. Furthermore, and as is well understood, trees, shrubs and plants do not mitigate noise.</p>
Chapter 3: Noise Insulation		
(pg. 12-19)	<p>In line with the Noise Insulation Regulations 1975, HE includes a policy to carry out insulation work (or to make a grant for homeowners to carry out the work) in order to mitigate against noise above the ‘specific level’ resulting from the Lower Thames Crossing when operative or due to long exposure to excessive construction noise. In addition:</p> <ul style="list-style-type: none"> a. The offer only applies only to residential dwellings; b. The offer applies only to dwellings that are adjacent to the works (for construction insulation); c. Applies only to properties within 300 metres of the new road; d. For construction noise, the noise level must exceed 70dB(A) Leq over long periods of the day extending over a period of months . 	<p>This offering follows the statutory provisions and does not include any enhanced offer.</p> <ul style="list-style-type: none"> a. We would contest that the offer should be extended to all property types that can evidence a detrimental impact due to the increase in noise - for instance educational establishments, hotels or certain medical facilities could be severely impacted by road and construction noise. b. The distance of a property from the operational road or construction works should not be a limiting factor. If a noise assessment reveals that the property has a qualifying impact from an increase in noise, then noise insulation should be made available regardless of location. For instance, this distance trigger does not take into account vulnerable persons that might be

Relevant Section in the Your property and... compensation or mitigation for the effects of our road proposals	Summary of Highways England’s Policy	Thurrock’s Council’s Comments on the Policy
	<p>e. For noise from the new road, additional carriageway or altered highway, the noise level must be predicted to increase by a minimum of 1dB(A) and be not less than 68dB(A) L10 (18 hour) within 15 years of the new or improved road opening to public traffic.</p>	<p>more significantly impacted by an increase in noise and disturbance in their property.</p> <p>c. There is no stipulated response timeframe or procedure for claiming.</p> <p>d. It is unclear what level and type of noise mitigation will be provided and what involvement the occupier will have in that decision process. Is there a proposed sum or scope of works? Comparable major infrastructure schemes have offered noise mitigation measures costing in the region of £3,000 - £5,000 or up for a full package of sound installation – depending on the degree of noise pollution.</p>
<p>Chapter 4: Noise Payments for Movable Homes</p>		
<p>(pg. 20-21)</p>	<p>In line with the Noise Insulation Regulations 1975, HE includes a policy for claims that can be made for disturbance either from construction works or from traffic using the new or improved road. To qualify for a noise payment due to construction noise, the noise from the construction of a new or altered highway must have seriously adversely affected the enjoyment of a mobile home for a continuous period of six months. To qualify for a noise payment due to noise from traffic using the new or altered highway, the predicted noise level 15 years after the road opens to traffic must be not less than 68dB(A) L₁₀(18-hour).</p>	<p>The policy includes a number of conditions some of which raise concerns and should be amended to protect residents in movable homes impacted by the LTC scheme.</p> <p>a. The movable home must be located within 300 metres of the Scheme. However, eligibility should be based on noise impact and not limited by distance from the Scheme. For instance, this distance trigger does not take into account vulnerable persons that might be more significantly impacted by an increase in noise and disturbance in their home.</p> <p>b. Compensation of £1,650 for the level of impact required in order to trigger the payment is not a fair level of compensation. This should be enhanced – for instance</p>

Relevant Section in the Your property and... compensation or mitigation for the effects of our road proposals	Summary of Highways England’s Policy	Thurrock’s Council’s Comments on the Policy
		noise insulation measures on comparable schemes have been up to a level of £3,000 - £5,000. c. There is no stipulated response timeframe or procedure for claiming.
Chapter 5: Reasonable Additional Expense to Move into Temporary Suitable Alternative Residential Accommodation		
(pg. 22-25)	A policy for residents that live adjacent to the site of the construction works for a new or improved highway where the physical effects of the works are causing such significant disruption and discomfort as to make their continued occupation not reasonably practicable. In this scenario, HE has a discretionary power to pay the reasonable additional expenses (the costs that exceed those that would have been incurred if the resident had continued to occupy their home) to move into ‘temporary suitable alternative residential accommodation’ (‘TSARA’) during the period of those works. TSARA will normally only be accepted: <ol style="list-style-type: none"> a. for periods of up to 5 months; and b. where the occupier’s additional expenses are likely to be less than the cost of noise insulation 	This policy is seemingly in place as an alternative where noise insulation is deemed disproportionately expensive for the length or extent of the construction impact. As a general point, there is not enough detail or support provided within the policy. <ol style="list-style-type: none"> a. The policy is only available to occupiers living adjacent to scheme works. This does not take into account occupiers (including vulnerable persons) that might live close to but not neighbouring the works and who have also been significantly impacted – in some cases more severely. b. There is no allowance for support in maintenance of impacted properties – for instance window, building or front garden cleaning. c. There is no support for medical expenses that might arise from the increase air or noise pollution. d. No procedure or response timeframe for application is included within the policy. There is concern therefore that a resident could be living in very challenging conditions awaiting a response and living with significant uncertainty – especially as the policy notes

Relevant Section in the Your property and... compensation or mitigation for the effects of our road proposals	Summary of Highways England’s Policy	Thurrock’s Council’s Comments on the Policy
		<p>that expenses will only be reimbursed if they are agreed by HE before they are incurred.</p> <ul style="list-style-type: none"> e. There is no detail on what might be a reasonable TSARA for the impacted resident – this is vital as the policy requires the impacted resident to undertake their own searches in this regard. f. Compensation should include the cost of any Council Tax at the resident’s original property or at the TSARA and any pro rata increases in utilities. It should be made clear that all associated costs of the TSARA should also be reimbursed – for instance, if the most appropriate option is hotel accommodation then a kitchen might not be available and contributions to sustenance should be included. g. There should be provision within this policy to provide temporary support to local businesses that are impacted by construction work. For instance, if they have to close or suffer a reduction in trade due to road closures, diversions or access difficulties. h. Similar infrastructure schemes have provided assistance with recording the particular requirements of an applicant (for instance, existing accommodation and location in relation to schools and workplace) and assisting with identifying suitable relocation premises/options and removal services. This assistance should be provided within HE’s policy. i. There should be specific consideration for categories of persons that would suffer an exacerbated impact due to

Relevant Section in the Your property and... compensation or mitigation for the effects of our road proposals	Summary of Highways England’s Policy	Thurrock’s Council’s Comments on the Policy
		noise and construction work – such as but not limited to vulnerable persons and night/shift workers.
Chapter 6: Section 10 Claims		
(pg. 26)		
Chapter 7: Off-line Discretionary Purchase		
(pg. 27)	<p>In line with Highways Act 1980, this policy sets out the options for residential property owners who may have a pressing need to sell their property and are unable to do so except at a significant loss as a result of the LTC scheme.</p> <ul style="list-style-type: none"> a. Section 248 applications can be made for properties on the line of one of our proposed route options (on-line property). b. Section 246 applications can normally be made once the preferred route is announced for properties not on the line of the preferred route (off-line property) but the enjoyment of which is seriously affected c. The offer is only available to persons: <ul style="list-style-type: none"> i. holding a qualifying interest (unless a section 248 application) in a property; ii. where reasonable efforts have been made to sell – marketed for 13 weeks with no offers received within 15% of the unaffected Market Value; iii. with no foreknowledge of the LTC scheme at purchase; and 	<ul style="list-style-type: none"> a. This aim of a policy such as this should be to allow the local market to continue to operate in a normal manner and to provide comfort and certainty to impacted residents and local businesses. In our view, this policy does not provide that support. b. It is noted in the policy that this is a discretionary offer and will only be offered in exceptional circumstances – this does not provide comfort or certainty to impacted occupiers. The offer to purchase is generally time limited and subject to agreement on consideration – the time allowed does not allow for dispute resolution before expiration of the time limited offer. c. The offer extends to residential properties only and does not offer any support for local businesses or other use types. The policy should be extended to all with relevant land interests. d. Other schemes have offered further assistance to occupiers, such as Home Relocation Assistance Schemes (as well as Business Support and Relocation Schemes). This would provide helpful support to

Relevant Section in the Your property and... compensation or mitigation for the effects of our road proposals	Summary of Highways England’s Policy	Thurrock’s Council’s Comments on the Policy
	<p>iv. with a pressing need to sell and hardship.</p> <p>d. The offer if an application is successful is the unaffected MV of the property, professional fees and a disturbance payment (statutory loss payments will be considered for those applicants with properties on the preferred route).</p>	<p>impacted residents and should be included within HE policies.</p> <p>e. HE should expand this policy to create Offer Zone both along the redline of the scheme and for surrounding properties that will suffer noise and construction impacts. In addition, the hardship element of the policy should be removed. This will provide support for any local occupiers that are unable to sell their property at a reasonable unaffected market value. An Offer Zone policy if this type will enable the local market to continue to operate in a more normal manner and provide certainty and support for occupiers under the threat of noise and construction impact due to the LTC scheme. Occupiers that wish to relocate will therefore be able to – either through the usual methods if there are willing buyers in the market at the unaffected value level or to the Secretary of State. This Offer Zone policy should be actioned at the earliest opportunity so that the support is available throughout the DCO submission process.</p>
Chapter 8: Part 1 Compensation		
(pg. 28-29)		
Fees – making a contribution towards your surveyor’s, solicitor’s or other professional adviser’s fees		
(pg. 30-33)		

Relevant Section in the Your property and... compensation or mitigation for the effects of our road proposals	Summary of Highways England's Policy	Thurrock's Council's Comments on the Policy
Annex 1: Glossary		
(pg. 34-35)		
Annex 2: Noise Measurement		
(pg. 36)		
Annex 3: Table of Temporary Re-Housing Noise Trigger Levels		
(pg. 37)		

2.2 Summary and Recommendations

Summary

- 2.2.1 In the most part, the policy, 'Your property and compensation or mitigation for the effects of our road proposals', simply refers to and re-states legislation that provides Lower Thames Crossing with options for mitigating scheme impact both to the environmental and to local residents.
- 2.2.2 The measures for local residents include options in respect of increased noise (including planting, noise insulation and noise payments), expenses for suitable temporary moves and off-line discretionary home purchase. The policies, in most cases, do not go further than the statutory position and provide limited comfort due to their discretionary nature and lack of specific details (including application process, response timeframe and support etc.). Further no support is offered for local businesses or other property uses outside of residential.

Recommendations

- 2.2.3 Our key recommendations in respect of each policy are set out below. In all cases, further application information should be published – for instance, there are very limited details within the policies in respect to response timeframes or procedures for claiming.
- a. **Environmental mitigation**
- i. To date, no specific proposals have been provided. This will be required, and detailed engagement will be necessary in respect of the same, in order to assess the level of mitigation proposed, suitability and whether the proposals are sufficient.
- b. **Off-site planting agreements**
- i. Clarity is required on whether this is available for all property uses and whether there is a qualifying level of impact.
- ii. The burden should be taken off of the landowner in terms of maintenance and restriction of land use.
- c. **Noise insulation**
- i. The offer should be extended to all property types that can evidence a detrimental impact due to the Scheme.
- ii. The distance of a property from the operational road or construction works should not be a limiting factor.
- iii. Information should be published clarifying what level and type of noise mitigation will be provided.
- d. **Noise payments for moveable homes**
- i. Eligibility should be based on noise impact and not limited by distance from the Scheme.
- ii. The compensation level proposed is not a fair level and should be enhanced.
- e. **Reasonable additional expenses to move into temporary suitable alternative residential accommodation**

- i. The Policy should not be limited to adjacent properties only.
 - ii. Other comparable schemes have provided additional support in this regard, such as: assistance with identifying a suitable TSARA; support to local businesses; additional considerations such as related medical expenses; exterior home maintenance; and enhanced support for vulnerable persons and shift workers.
- f. Off-line discretionary purchase:**
- i. An Offer Zone should be created within the Scheme red-line with any hardship requirement removed. This will provide certainty for landowners within the impacted area and will help combat any market stagnation.
 - ii. The offer should relate to all property types and both a Home Relocation Assistance Scheme and a Business Support and Relocation Scheme should be offered, in line with offerings on comparable infrastructure schemes.



Lower Thames Crossing

Review of Thurrock's Land Interests

On behalf of **Thurrock Council**



Document Control Sheet

Project Name: Lower Thames Crossing
Project Ref: 43879
Report Title: Review of Thurrock's Land Interests
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For and on behalf of Stantec UK Limited				

Revision	Date	Description	Prepared	Reviewed	Approved
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This report has been prepared by Stantec UK Limited ('Stantec') on behalf of its client to whom this report is addressed ('Client') in connection with the project described in this report and takes into account the Client's particular instructions and requirements. This report was prepared in accordance with the professional services appointment under which Stantec was appointed by its Client. This report is not intended for and should not be relied on by any third party (i.e. parties other than the Client). Stantec accepts no duty or responsibility (including in negligence) to any party other than the Client and disclaims all liability of any nature whatsoever to any such party in respect of this report.

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1 Introduction

1.1 Overview

- 1.1.1 Our review of Thurrock Council's land interests has identified 174 land parcels that are impacted by the Lower Thames Crossing scheme ("the Scheme"). The Statement of Reasons ("SoR") and Map Books 1, 2 & 3 titled "Proposals for Consultation: Lower Thames Crossing Community Impacts Consultation" which inform the most recently provided draft DCO application dated June 2021 version 0.1, identify three types of parcel that will be affected by the Scheme. These are categorised as:
- i. permanent;
 - ii. temporary; and
 - iii. rights required parcels.
- 1.1.2 We have tried to arrange detailed engagement meetings with Lower Thames Crossing but these have yet to commence. Our responses are subject to change depending on the outcomes of those engagement meetings. A summary of our comments to date are set out below.
- 1.1.3 We note that there have been changes to the Order limits between DCOv1 and the current plans set for consultation. CBRE have carried out a review of the two versions to identify and assess scheme impacts. Whilst there are some minor changes to some parcel requirements, this would likely have a nominal impact to the overall compensation estimate. There are two parcels that have had notable changes to requirements; EX228905 (DCO Plot Ref 26-03) and EX783068 (DCO Plot Ref 26-78) and both of these revisions reduce the impact of the Scheme on the land.

2 Review of Thurrock's Land Interests

2.1 Permanent Parcels

- 2.1.1 CBRE has identified a total of 61 parcels required on a permanent basis, with 23 of these being highways land. The majority of land registered to Thurrock Council is classified as amenity land and verges, with additional parcels incorporating playing fields and residential land.
- 2.1.2 The SoR provides limited justification in respect of the requirement for the permanent acquisition of Thurrock Council land to facilitate the Scheme. The majority of land required on a permanent basis is needed for highways improvement, realignment and construction works - namely the A13 and A112 roads – but there is no visibility on the case on a plot-by-plot basis. Utilities works are also listed as a reason for permanent acquisition in respect to a small number of parcels.
- 2.1.3 As stated above, there are limitations in the information provided and level of detailed justification within the SoR. It is understood that this may be due to the early stage of the project and consultation – however, it is imperative that detailed engagement takes place that provides further information on the required land takes, design justification in respect of the Scheme, the impact of road access due to permanent acquisition, proposed re-provision of public open space, environmental mitigation and any impact on agricultural land. To date this engagement has not taken place.
- 2.1.4 We have specific concerns and site-specific queries on the follow sites which would require enhanced engagement.

Land to the West of Gammonfields Way

- 2.1.5 This 41,124 sqm site currently houses a community of travellers and their homes. The reasons for acquisition include the new A13 westbound link roads, the construction of a new bridge to carry the new link road and utility works, including the installation or diversion of underground utilities within a multi-utility corridor and the diversion or modification of overhead lines.
- 2.1.6 Our initial assessment of compensation assumes that all costs related to the relocation of the site and site utilities will be reimbursed by Highways England. Confirmation of this assumption is required as well as additional details in terms of support in terms of any disturbance costs that might arise and timings for the site move. The support of the community at this site is of vital importance as the Scheme has caused significant uncertainty and we would welcome further details of what support will be provided.

Land at A13, Orsett Grays

- 2.1.7 This parcel is the largest permanent acquisition by size, with an area of 63,036 sqm. The SoR details that the acquisition is justified in order to improvements of the existing A13 dual carriageway and due to the necessary diversion of high-pressure gas utility. In this instance, given the size of the land being sought, greater detail is required to understand the road and traffic impacts of acquisition and re-provision of access to existing roads.

Public Highway, Footway and Verge (Baker Street, B118)

- 2.1.8 This parcel is 2,253 sqm and is the proposed acquisition is justified within the SoR as contributing to the new A122 Lower Thames Crossing highway, with three-lane carriageways in both directions. Given that these parcels are required on a permanent basis, further

information is required on Stanford Road ownership and modelled traffic impact is necessary as this acquisition seems to involve part of the main road in addition to the verge.

2.2 Temporary Parcels

- 2.2.1 The Thurrock Council impacted land review exercise, has identified 16 parcels required on a temporary basis, with 11 of those being highways land. The majority of the Thurrock Council registered land can be classified as verges.
- 2.2.2 Again, the SoR provides limited justification for the compulsory temporary possession powers being sought. The majority of the parcels are required on a temporary basis for access, including provision of a temporary means of access to environmental mitigation works, and provision for temporary access and traffic management for the compound facilitating highways construction, utility works and landscaping. There are a number of temporary possession that are required in association with rights being acquired and these are commented on briefly in the Rights section. Some specific reasons for acquisition include remedial works at the A13 and Mardyke viaduct and compound works at the M25 junction.
- 2.2.3 As with the permanent parcels, there are limitations with the information provided in the SoR. In the case of temporary acquisition, we require more information on
- i. the anticipated dates that temporary possession will be taken;
 - ii. the construction timeframe;
 - iii. how long possession is required for and the extent to which the timescale is binding;
 - iv. details of any anticipated impact or damage to the parcels and mitigation of disruption (including road closures and temporary traffic lights); and
 - v. details as to the condition that the land will be in on return
- 2.2.4 We have highlighted the following site-specific queries.

Land at Fort Road, Tilbury

- 2.2.5 This 19,433 sqm parcel consisting of verge and grassland is required for the provision of temporary access and traffic management for the compound at the north portal of the bored tunnels, including remedial works required to facilitate access. Alongside needing further clarification of the date and length of the possession and the anticipated impact of possession on the land we require detailed engagement on the following queries:
- i. potential closure of Fort Road;
 - ii. closure of the cycle path providing access to Tilbury fort and marshes
 - iii. anticipated impact to World's End Estate and surrounding units; and
 - iv. environmental impact of construction and associated compounds such as to the trees on the identified temporary possession area.

2.3 Rights Parcels

- 2.3.1 The remainder of the compulsory powers being sought over Thurrock Council land are in respect of the permanent acquisition of rights. We have identified a total of 97 parcels required on this basis, with 63 of those parcels being highways land. The majority of the parcels can be

classified as verge or amenity land but there are some parcels where rights are being sought in regard to (and adjacent to) public buildings and residential land.

- 2.3.2 The SoR has provided a variety of justifications of acquisitions of rights and these can be grouped into:
- i. utilities rights;
 - ii. diversions of utilities; and
 - iii. installation of underground utilities.
- 2.3.3 There are additional cases where overage rights are required for the diversion or modification of overhead lines, including rights and restrictive covenants to construct, protect operate, access and maintain.
- 2.3.4 At this stage, the SoR and lack of detailed engagement means that the information provided lacks the granularity required to inform a compensation assessment or to understand the actual impact of the proposed use of powers. In addition, we have not received enough detail where temporary possessions are required in respect of Rights acquisitions – including in respect to the specific area of land required for the temporary possession, which section of that land will be impacted by the Rights required and the timeframe and length of these works. Overall, we require further information from Lower Thames Crossing in respect of:
- i. the length of access required and date of the proposed works;
 - ii. if there is any damage or impact anticipated;
 - iii. the specific location of impact and design justification;
 - iv. the local disruption anticipated and mitigation and local support proposed; and
 - v. how the rights will be acquired and documented.

3 Summary and Recommendations

Summary

- 3.1.1 Our review of Thurrock Council's land interests has identified 174 land parcels that are impacted by the Lower Thames Crossing scheme. The Statement of Reasons and Map Books 1, 2 & 3 which inform the most recently provided draft DCO application dated June 2021, identify three types of parcel that will be affected by the Scheme. These are categorised as
- i. Permanent
 - a. 61 impacted parcels.
 - b. The majority of land registered to Thurrock Council in this category is classified as amenity land and verges, with additional parcels incorporating playing fields and residential land.
 - ii. Temporary
 - a. 16 impacted parcels.
 - b. The majority of the parcels are required on a temporary basis for access and can be classified in the most part as verges of highways land.
 - iii. Rights
 - a. 97 impacted parcels.
 - b. The majority of the parcels can be classified as highways verge or amenity land but there are some parcels where rights are being sought in regard to (and adjacent to) public buildings and residential land.
 - c. A large number of the Rights acquisitions have an associated temporary possession being sought in order to facilitate the relevant Rights works and/or acquisition.

Recommendations

- 3.1.2 The Statement of Reasons includes some (limited) justification and explanation for the sought compulsory powers and land requirement. However, this document is light on detail including (*inter alia*) on design justification, mitigation proposed, predicted local impact, acquisition dates and exact land take and timeframe for temporary possessions. It is hoped that this further information can be provided in detailed engagement meetings between the parties.
- 3.1.3 We have tried to arrange these detailed engagement meetings with Lower Thames Crossing, but these have yet to commence and it is vital that these commence at the earliest opportunity. Our responses are subject to change depending on the outcomes of those engagement meetings.



Lower Thames Crossing Utilities Response

On behalf of **Thurrock Council**



Document Control Sheet

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1 Introduction

1.1 Overview

- 1.1.1 As part of its technical engagement relating to the proposed Lower Thames Crossing (LTC) Development Consent Order (DCO) application, Highways England (HE) has issued Thurrock Council (the Council) with the assessment details for the Utilities Response.
- 1.1.2 This document sets out the Council's comments on the Utilities Response and if there are any suitable opportunities to improve this infrastructure.
- 1.1.3 This technical note reports the findings of a review undertaken of the previously submitted (now withdrawn) A122 Lower Thames Crossing (LTC) Development Consent Order (DCOv1) (October 2020) and of LTC Non-Statutory Consultation Documents (July 2021) in relation to the consideration of utilities diversions, which themselves constitute Nationally Significant Infrastructure Projects (NSIPs). The review contributes to the wider scrutiny by Thurrock Council of the LTC DCOv1 (October 2020) and emerging proposals for a future revised LTC DCOv2 application, in order to identify deficiencies and provide recommendations to improve the DCO.

2 Purpose and Structure

2.1 Purpose

- 2.1.1 Thurrock Council has consistently opposed HE's current LTC scheme ('the Project') due to the negative economic, social, engineering and environmental impacts that it will have upon the borough, as well as the constraints it will place upon future growth. This includes construction and operational phase impacts from proposed utilities diversions, which the Council specifically raised concerns about in responses to HE's consultations prior to submission of the DCO application. The Council's main substantive concerns regarding proposed utilities diversions relate to the extent of land-take required and likely impacts on communities and existing infrastructure, including in terms of disruption and safety. Thurrock Council together with other affected local authorities and consultees also previously raised wider concerns regarding environmental and planning impacts from proposed utilities diversions. We acknowledge that some improvements have been made over the past year, but still seek further improvements/mitigations.
- 2.1.2 To inform Thurrock Council's engagement with HE and position in respect of a revised LTC DCO application, a high-level review of HE's assessment of proposed utilities diversions (including design, environmental impacts and mitigation) has been undertaken. This review has considered both the LTC DCOv1 (October 2020) and emerging proposals (July 2021) for a future revised DCO application. The review focused on assessing compliance with relevant Energy National Policy Statements (NPS), specifically EN-1, EN-4 and EN-5, in respect of proposed utility diversions which themselves constitute NSIPs. However, in doing so the review also identified weaknesses within the approach adopted by HE in their assessment of proposed utilities diversions more generally. Review findings have informed the development of recommendations to improve how utilities diversions and associated impacts are addressed in any future revised LTC DCO, as set out at the end of this note.

2.2 Structure

- 2.2.1 The remainder of this note is structured, as follows:
- Section 3 provides an overview of relevant information and assessment requirements set out within relevant Energy NPS which are engaged by virtue of the Project including proposed utilities diversions which themselves meet applicable thresholds to qualify as NSIPs;
 - Section 4 sets out findings from the review of the LTC DCOv1 (October 2020), including specific comments in respect of individual proposed utility NSIP diversions and general comments regarding the approach adopted by HE;
 - Section 5 sets out findings from the review of utilities NSIPs coverage in Non-Statutory Consultation documentation; and
 - Section 6 provides a suite of recommendations based on the review findings to inform emerging proposals for a future revised LTC DCO application. These recommendations seek to address identified weaknesses and deficiencies in order to improve the application.

3 Relevant National Policy Statements

3.1 Overview

- 3.1.1 The Project as described in the submitted LTC DCOv1 (October 2020) included one overhead line diversion NSIP and four gas pipeline diversion NSIP's to be undertaken by the Applicant. Resultantly, the overarching National Policy Statement (NPS) for Energy (EN-1), NPS for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4), and NPS for Electricity Networks Infrastructure (EN-5) are relevant considerations for the Secretary of State (SoS) when considering the application.
- 3.1.2 The DCOv1 application (2020), including Planning Statement (App. 7.2), has been reviewed against the information requirements and key policy tests set within the identified NPS as discussed below.

3.2 Information Requirements

- 3.2.1 EN-1 sets out the Government's policy on energy and infrastructure development as well as the need for new nationally significant energy. It also covers the cross-NPS Assessment Principles and Generic Impacts which are reflected across the wider suite of NPSs. EN-4 and EN-5 are described as 'technology specific', simply meaning they relate to a particular form of infrastructure. In the case of EN-4, this relates to gas supply and gas and oil pipelines; EN-5 relates to electricity networks. EN-4 and EN-5 sit under the umbrella of EN-1 but draw out specific assessment criteria which are bespoke to their technology. Key policy tests are discussed further below.
- 3.2.2 A number of the information requirements for EN-1, EN-4 and EN-5 are the same as those set out within NPSNN. The below outlines a number of the key information requirements however this is not an exhaustive list:

EN-1

- Projects that are subject to the European Environmental Impact Assessment Directive must be accompanied by an ES describing the aspects of the environment likely to be significantly affected by the project;
- The ES should include an assessment of the biodiversity and landscape and visual effects of the proposed route and of the main alternative routes considered;
- The ES should provide information on how the effects of the applicant's proposal would combine and interact with the effects of other development (including projects for which consent has been sought or granted, as well as those already in existence);
- Applicants are obliged to include in their ES, as a matter of fact, information about the main alternatives they have studied; and,
- Applicants are required to undertake desktop surveys to identify historic or current mine workings, underground cavities serving industrial usage, the nature of any made ground, waste sites, unexploded ordnance, utility services and any other below surface usage when assessing routes for a pipeline.

EN-4

- Applicants should undertake desktop surveys to identify historic or current mine workings, underground cavities serving industrial usage, the nature of any made ground, waste

sites, unexploded ordnance, utility services and any other below surface usage when assessing routes for a pipeline;

- When choosing a pipeline route, applicants should seek to avoid or minimise adverse effects from usage below the surface; and,
- Mitigation measures to minimise any adverse effects on soil and geology should include measures to ensure that residual impacts on the surface are minor and include appropriate treatment of soil.

EN-5

- Wherever the nature or proposed route of an overhead line proposal makes it likely that its visual impact will be particularly significant, the applicant should have given appropriate consideration to the potential costs and benefits of other feasible means of connection or reinforcement, including underground and sub-sea cables where appropriate. Details regarding the consideration of such measures or how the costs of mitigation have been calculated, is to be presented;
- Concerns of the potential adverse landscape and visual effects of a proposed overhead line are to be balanced against other relevant factors, including the need for the proposed infrastructure, the availability and cost of alternative sites and routes and methods of installation (including undergrounding); and,
- Guidelines for the routing of new overhead lines, the Holford Rules¹¹, are cross referenced highlighting the need for utility diversions to also have regard to potential impacts on residential areas as well as ensuring customer supply is maintained.

3.2.3 Whilst a number of the information requirements for EN-1, EN-4 and EN-5 are the same as those set out within NPSNN, these need to be addressed directly for the proposed utilities NSIP diversions within the Project. The relevant energy NPSs may impose specific requirement which needs to be considered and therefore upheld. As an example, applicants are obliged to include in their ES, as a matter of fact, information about the main alternatives they have studied. The relevant energy NPSs also impose a policy requirement to consider alternatives and in some circumstances, there are specific legislative requirements as those under the Habitats Directive.

3.2.4 Whilst Part 5 of EN-1 sets out policy on the assessment of impacts which are common across a range of technologies (generic impacts), EN-4 and EN-5 set out a number of bespoke impacts. The requirements set out in EN-4 and EN-5 are additional to those on generic impacts set out in EN-1 and do not replace them. Additional technology-specific considerations set out in EN-4 and EN-5 include the following, however this is not an exhaustive list:

EN-4

- Climate change resilience measures including how the proposal would be resilient to:
 - Increased risk of flooding;
 - Effects of rising sea levels and increased risk of storm surge;
 - Higher temperatures;
 - Increased risk of earth movement or subsidence from increased risk of flooding and drought; and,
 - Any other increased risks identified in the applicant's assessment.

EN-5

- Biodiversity and Geological Conservation;
- Landscape and Visual;
- Noise and Vibration; and,
- Electro-magnetic Fields.

3.2.5 Applicants are required to assess all likely significant effects of their proposals, including bespoke elements within the NPS's.

3.3 Key Policy Tests

3.3.1 There a number of policy tests set out within the NPSNN, which are detailed within the NPS's. EN-1, EN-4 and EN-5 do however contain a number of bespoke key policy tests including the following, however, this is not an exhaustive list:

EN-1

- Consideration of alternatives;
- Climate change adaptation;
- Air quality and emissions;
- Costal change;
- A presumption in favour of the conservation of designated heritage assets; and,
- Requirement for applicants to consult the local community on their proposals to build on open space, sports or recreational buildings and land.

EN-4

- Hazardous substances.

EN-5

- Individual impacts from individual diversions;
- Undergrounding;
- Climate change adaptation; and,
- Consideration of in-combination effects.

3.3.2 The DCOv1 application needs to demonstrate compliance with policy tests within the NPSNN and bespoke policy tests detailed within the NPS's. EN-1, EN-4 and EN-5.

4 Review of Utilities NSIPs Coverage in LTC DCO Rev 1

4.1 Overview

- 4.1.1 To provide an assessment of how the proposed utilities NSIP diversions have been considered within the DCOv1 application (2020), documentation submitted as part of the application has been reviewed.
- 4.1.2 The main DCO documents which include content directly regarding the proposed utilities NSIP diversions within the Project are:
- Schedule 1 of the draft DCO (App 3.1);
 - Explanatory Memorandum (App. 3.2);
 - Environmental Statement (App. 6.1);
 - ES Appendix 2.1 (Construction Supporting Information);
 - ES Appendix 1.3 (Assessment of Proposed Gas Pipeline Works for the purposes of Section 20 of the Planning Act 2008);
 - Environmental Statement Non-Technical Summary (App. 6.4);
 - Planning Statement (App. 7.2); and,
 - Design Principles (App.7.5).
- 4.1.3 In addition, the main body of the Planning Statement (App. 7.2) sets out the qualification of NSIPs (section 1.5) with paragraph 1.5.4 setting out the qualification criteria of the OHL works. Paragraph 2.5 of the Explanatory Memorandum (App.3.2) details the overhead electric line NSIP as being Work No. OH6. The full set of proposed utilities diversions including NSIPs and Associated Development is detailed within Schedule 1 of the draft DCO (App 3.1).

4.2 NSIP Specific Comments

- 4.2.1 This section identifies the utilities NSIP diversions proposed by the Applicant (based on HE's analysis of NSIPs thresholds) and provides comments regarding how they were considered within the DCOv1 application (2020). Whilst all proposed utilities NSIP diversions are described below, comments regarding assessment and mitigation matters are only made in respect of diversions within or otherwise likely to affect the Thurrock Council area.

NSIP 1 - Works No. G2

Contextual Information

- 4.2.2 NSIP 1 - Works No. G2 is named as "Feeder 5 Phase 1 (LTC asset schedule reference G-NG-HP-0001)" and is within the ownership of National Grid Gas Plc. The proposed gas pipeline is to extend 0.125km extending from grid reference (starting point) Easting: 566379 and Northing: 170326 adjacent to Claylane Woods in Gravesham, Kent to Easting: 566490 and Northing: 170377 within Claylane Woods in Gravesham, Kent (end point).
- 4.2.3 Table 1.1 of Appendix 1.3 (App. 6.3) identifies G-NG-HP-0001 (Feeder 5 Phase 1) Works No. G2 as qualifying as a NSIP in its own right owing to generating likely significant environmental

effects and satisfying other NSIP thresholds (refer to Section 4 for comments on the NSIP screening approach).

- 4.2.4 Annex 1 of the Explanatory Memorandum (App. 3.2) provides the required information under regulation 6(4) in respect of each work which constitutes a gas pipeline NSIP to which that regulation applies.

Assessment of Effects

- 4.2.5 No comment to make as proposed utilities infrastructure is not within Thurrock.

Mitigation & Monitoring

- 4.2.6 No comment to make as the proposed utilities infrastructure is not within Thurrock.

NSIP 2 - Works No. G3

Contextual Information

- 4.2.7 NSIP 2 - Works No. G3 is named as “Feeder 18 (LTC asset schedule reference G-NG-HP-0003)” and is within the current ownership of National Grid Gas Plc. The proposed gas pipeline is to extend 1.5km extending from grid reference (starting point) Easting: 566484 and Northing: 170280 within Claylane Woods in Gravesham, Kent to Easting: 567487 and Northing: 171021 north of Shorne lfield Road in Gravesham, Kent.
- 4.2.8 Table 1.1 of Appendix 1.3 (App. 6.3) identifies G-NG-HP-0003 (Feeder 18) Works No. G3 as qualifying as a NSIP in its own right owing to generating likely significant environmental effects and satisfying other NSIP thresholds (refer to Section 4 for comments on the NSIP screening approach).
- 4.2.9 Annex 1 of the Explanatory Memorandum (App. 3.2) provides the required information under regulation 6(4) in respect of each work which constitutes a gas pipeline NSIP to which that regulation applies.

Assessment of Effects

- 4.2.10 No comment to make as the proposed utilities infrastructure is not within Thurrock.

Mitigation & Monitoring

- 4.2.11 No comment to make as the proposed utilities infrastructure is not within Thurrock.

NSIP 3 - Works No. G4

Contextual Information

- 4.2.12 NSIP 3 - Works No. G4 is named “Feeder 5 Phase 2 (LTC asset schedule reference G-NG-HP-0002)” and is within the current ownership of National Grid Gas Plc. The proposed gas pipeline is to extend 2.85km from grid reference (starting point) Easting: 19956779.4 56 566749 and Northing: 170833 to the south of Astra Drive in Gravesham, Kent to Easting: 568359 and Northing: 172221 to the south of A226 Gravesend Road and St Mary’s Church in Gravesham, Kent.
- 4.2.13 Annex 1 of the Explanatory Memorandum (App. 3.2) provides the required information under regulation 6(4) in respect of each work which constitutes a gas pipeline NSIP to which that regulation applies.

- 4.2.14 Table 1.1 of Appendix 1.3 (App. 6.3) identifies G-NG-HP-0002 (Feeder 5 Phase 2) Works No. G4 in its own right owing to generating likely significant environmental effects and satisfying other NSIP thresholds (refer to Section 4 for comments on the NSIP screening approach).

Assessment of Effects

- 4.2.15 No comment to make as the proposed utilities infrastructure is not within Thurrock.

Mitigation & Monitoring

- 4.2.16 No comment to make as the proposed utilities infrastructure is not within Thurrock.

NSIP 4 - Works No. G6

Contextual Information

- 4.2.17 NSIP 4 - Works No. G6 is named as “HP8 (LTC asset schedule reference G-CG-HP-0008)” and is within the current ownership of Cadent Gas Limited. The proposed gas pipeline is to extend 5.2km extending from grid reference (starting point) Easting: 566078 and Northing: 181450 to the north of A1013 Stanford Road in Thurrock, Essex to Easting: 562151 and Northing: 181373 to the north of Stifford Clays Road and east of Green Lane in Thurrock, Essex.
- 4.2.18 Table 1.1 of Appendix 1.3 (App. 6.3) identifies G-CG-HP-0008 (HP8) Works No. G6 in its own right owing to generating likely significant environmental effects and satisfying other NSIP thresholds (refer to Section 4 for comments on the NSIP screening approach).
- 4.2.19 Annex 1 of the Explanatory Memorandum (App. 3.2) provides the required information under regulation 6(4) in respect of each work which constitutes a gas pipeline NSIP to which that regulation applies.

Assessment of Effects

- 4.2.20 ES Chapter 3 – Assessment of Reasonable Alternatives (App 3.1) notes that four diversion options were considered for NSIP 1 - Works No. G6 (HP8) of which Option 2 was selected due to routing away from the Project, avoiding a historic landfill and providing good maintenance access. The evaluation of the four options only references technical constraints as having been considered but significant adverse environmental (heritage) effects are then introduced at the point of confirming the selection of Option 2. No consideration is given within the appraisal of the other options to heritage or other environmental constraints.
- 4.2.21 The likely significant adverse effects presented in Table 1.1 of Appendix 1.3 (App. 6.3) against corresponding NSIPs provides an indication of relationships between cultural heritage assets and specific NSIPs. However, ES Chapter 6 (App. 6.1) is not clear in this distinction as utilities are only discussed in general terms, without clarifying which elements comprise individual utilities NSIPs or Associated Development.

Construction Phase Effects – Adequacy & Robustness

- 4.2.22 Table 1.1 of Appendix 1.3 (App. 6.3) identifies a range of likely significant adverse effects as a result of the utility diversions. Upon reviewing ES Chapter 6 (App. 6.1), paragraphs (6.6.89) permanent construction phase effects are predicted on the ‘Springfield’ style enclosure and Iron Age enclosures south of Hill House, Baker Street (SM7). A small proportion of the scheduled area, at the eastern end, it noted as being with the working area for buried utilities diversions. As raised above however, with the exception of effects presented in Table 1.1 of Appendix 1.3 (App. 6.3) against corresponding NSIPs, ES Chapter 6 (App. 6.1) does not identify the effect to be directly related to NSIP 4 – Works No. G6.

- 4.2.23 Upon reviewing ES Chapter 6 (App. 6.1), the effect on this asset a moderate magnitude impact on this high value asset, resulting in a moderate adverse effect after mitigation, which is significant. This conclusion is however within the context of the associated non-designated high value Bronze Age (2108) and Iron Age (2078) cropmark complexes that surround the scheduled area, which are also identified to be physically impacted by the utility diversion. This impact is not cross-referenced in Table 1.1 of Appendix 1.3 (App. 6.3) however it is concluded in paragraph 6.6.94 as a moderate magnitude impact and residual moderate adverse effect, which is significant in the context of the EIA Regulations. Additionally, Table 6.8 of ES Chapter 6 (App. 6.1) identifies several other significant construction phase effects however it is unclear whether these are associated with utilities diversions (whether the proposed utilities NSIP diversions or Associated Development).

Operational Phase Effects – Adequacy & Robustness

- 4.2.24 Table 6.8 in ES Chapter 6 – Cultural Heritage identifies several significant operational phase effects however the Chapter is unclear as to whether these are related to the utilities works, whether that for elements comprising the proposed utilities NSIP diversions or associated development.

Mitigation & Monitoring

- 4.2.25 No specific mitigation proposed for NSIP 4 - Works No. G6 beyond general Project-wide mitigation (discussed under the 'Mitigation and Monitoring' subheading below).

NSIP 5 - Works No. OH6

Contextual Information

- 4.2.26 The Planning Statement (App. 7.2) sets out the qualification of NSIPs (section 1.5) with paragraph 1.5.4 setting out the qualification criteria for electrical transmission OHL works. The installation of an electric line above ground near the A13 is considered to meet all relevant thresholds and thus constitute a NSIP in its own right. Work No. OH6 is located in proximity to Claylane Wood. It runs laterally from approximately 2.5km east of Hornsby Lane before turning north for approximately 700m (See sheets 21, 24, 25, 26, 30, 35 and 39 of the Works Plans (App. 2.6)).
- 4.2.27 Schedule 1 of the draft DCO (App 1.3) lists six other numbered OHL works (OH1 – 5 and OH7). These are assumed not to qualify as NSIPs in their own right and thus form Associated Developments.

Assessment of Effects

- 4.2.28 No comment to make as the proposed utilities infrastructure is not within Thurrock.

Mitigation & Monitoring

- 4.2.29 No comment to make as the proposed utilities infrastructure is not within Thurrock.

4.3 General Comments

Identification of Proposed Utilities Diversions within LTC DCO Application

- 4.3.1 The review of each of the proposed utilities NSIP diversions outlined above and the ability to understand the likely effects (thus acceptability) of all proposed utilities diversions has been hindered by:

- a) Inadequacy of reporting in respect of individual utilities diversions, especially within technical assessment chapters of the ES. For example, the assessment section within Chapter 9 – Biodiversity includes three general references to ‘utilities diversions’ as contributing to or generating likely significant effects, without identifying which diversions are responsible (thus it is also not possible to confirm whether these effects arise from the proposed utilities NSIP diversions or Associated Development elements of the Project). In consequence it is not possible to cross-reference the design of individual diversions and any alternatives considered (as detailed within ES Chapter 3 – Assessment of Reasonable Alternatives) with effects identified from the Project including proposed utilities diversions in technical assessment chapters of the ES, or to understand the extent of likely impacts from utilities diversions specifically within Thurrock (or any other geographically discrete area); and,
 - b) Absence of consistent referencing and descriptions even where individual diversions are discussed. Schedule 1 of the draft DCO (App 3.1) and the corresponding Works Plans (App. 2.6) appear to be the only places where each diversion is identified in full as a numbered work. It is particularly problematic that EIA Appendix 1.3 Table 1.1, ES Table 2.11, ES paragraph 2.4.21 (description of ‘more complex’ diversions) and ES Appendix 2.1 (Construction Supporting Information) do not adopt consistent references (e.g. numbered works from the draft DCOv1) as these are the only places where the utilities diversions are described in detail.
- 4.3.2 This lack of clarity prevents the reader from gaining a full understanding of exactly what utilities diversions are required and where, design considerations which informed their individual development and consideration of alternatives, and the extent of likely environmental effects which individual diversions would either contribute to or generate. The ES at paragraph 4.1.1 states that the assessment of likely significant effects reported is based on the description of the Project in ES Chapter 2 – Project Description, yet as above this high-level description (especially Table 2.11) is inconsistent with the set of individual utilities diversions listed as numbered works within the draft DCO (App 3.1). Taken together, this means the LTC DCOv1 (October 2020) provides inadequate information regarding the characteristics and assessment of likely environmental effects from proposed utilities diversions (including but not limited to those which qualify as NSIPs in their own right).
- 4.3.3 It is acknowledged that the ES (App. 6.1)¹ considers the utilities diversion works as split into two classifications,
- a) Non-contestable utilities work which can only be undertaken by the utilities providers and their contractors. This includes network design, connections to their network and strategic asset diversions; and,
 - b) Contestable utilities work which can be undertaken by the Applicant.
- 4.3.4 These classifications do not have a material bearing on EIA reporting, but are of potential relevance to the implementation of mitigation measures by contractors appointed by HE or other parties, as detailed below.

Classification of NSIPs and Associated Development

Utilities NSIPS

Gas Pipelines

¹ As detailed in ‘Application Document: 6.1 Environmental Statement, Chapter 2 Project Description’ (paragraph 2.4.118).

- 4.3.5 Table 1.1 of Appendix 1.3 (App. 6.3²) provides HE's determination which of the 27 proposed gas transporter pipeline works are NSIPs. Ten pipelines satisfy the minimum 7 bar (pressure) threshold and other design related NSIP thresholds, of which the following four have been assessed through a qualitative screening process as being likely to result in likely significant effects on the environment and therefore qualify as NSIPs:
- G-NG-HP-0001 (Feeder 5 Phase 1) Works No. G2;
 - G-NG-HP-0003 (Feeder 18) Works No. G3;
 - G-NG-HP-0002 (Feeder 5 Phase 2) Works No. G4; and,
 - G-CG-HP-0008 (HP8) Works No. G6.
- 4.3.6 The reporting deficiencies identified above regarding lack of consistent referencing and inadequate treatment of individual diversions mean it is not possible to validate the conclusions reached within Appendix 3.1 Table 1.1 regarding the absence of likely significant effects from individual gas pipeline diversions (i.e. that these diversions are therefore not NSIPs). Additionally, Table 1.1 merely provides the title of each affected gas transporter asset rather than any description of the affected pipeline route, location or interactions with other nearby infrastructure. As Table 1.1 does not include numbered works references it is also difficult to pinpoint each individual diversion on the submitted Works Plans (App. 2.6).
- 4.3.7 The screening assessment presented in Table 1.1 of Appendix 1.3 (App. 6.3³) is stated as having taken into consideration the effects identified in the main body of the Environmental Statement (App. 6.1). However:
- Five of the utilities diversions which are considered not to result in any likely significant environmental effects reference individual heritage assets and unnamed ecological receptors as being of relevance. However, the corresponding impact assessments presented in Chapters 6 and 8 of the ES do not provide specific effect conclusions for or even reference the individual utilities diversions within the impact assessment, which makes it difficult to validate the conclusions reached in App 3.1 Table 1.1; and,
 - ES chapters are also unclear at times whether the limited references to utilities diversions relate to the proposed utilities NSIP diversions or Associated Development. As an example, Table 2.11 within Chapter 2 Project Description of the Environmental Statement (App. 6.1) provides a high-level summary of major utility diversions in each section of the Project however this does not indicate which elements correspond the proposed utilities NSIP diversions or Associated Development (i.e. numbered works within the draft DCO (App 3.1), and subsequent technical assessment chapters largely do not reference individual diversions as contributing to or generating identified environmental effects. In addition, the Works Plans (App. 2.6) and Engineering Section Drawings (Application Document: 2.9) do not clearly distinguish between utilities diversions which constitute the proposed utilities NSIP diversions or Associated Development.

Electricity Transmission Infrastructure

- 4.3.8 The Planning Statement (App 7.2) at paragraph 1.5.3 sets out the relevant electrical transmission NSIP qualification criteria and relates this to the proposed electricity overhead

² Appendix 1.3: Assessment of proposed gas pipeline works for the purposes of section 20 of the Planning Act 2008, App. 6.3 Environmental Statement Appendices

³ Appendix 1.3: Assessment of proposed gas pipeline works for the purposes of section 20 of the Planning Act 2008, App. 6.3 Environmental Statement Appendices

line (OHL) works. Pertinent NSIP thresholds are a minimum route distance of 2km and 60m divergence from the existing OHL which needs to be diverted.

- 4.3.9 Unlike ES Appendix 1.3 for gas pipelines a full list of proposed OHL diversions is not included anywhere within the ES and there is no screening assessment for individual OHL diversions to confirm why only one of the diversions constitutes a NSIP in its own right. This is problematic as the suite of proposed OHL numbered works within Schedule 1 of the Draft DCO (App 3.1) includes multiple works which satisfy the minimum 2km route length threshold, e.g. OH1. It is therefore assumed that all but one of these works fail the 60m divergence requirement or other NSIP thresholds, but no evidence is provided to confirm this. Consideration of whether each proposed OHL work constitutes a NSIP is important as this determines whether and the extent to which relevant tests within Energy NPS EN-5 are engaged in respect of individual impacts from individual diversions, as well as from the Project overall (as it is established the Project includes at least one electrical transmission NSIP).

Associated Development

- 4.3.10 The Explanatory Memorandum (App. 3.2) states that all utilities works either constitute part of the NSIP or are 'Associated Development' within the meaning of section 115(2) of the 2008 Act, and so it is claimed can properly be authorised by the DCO. However, neither the Explanatory Memorandum nor any other DCOv1 application document explains why those proposed utilities diversions not qualifying as NSIPs in their own right can properly be authorised within the DCO as Associated Development.
- 4.3.11 It is acknowledged the Explanatory Memorandum identifies a need to avoid overlap and potential duplication between different elements of the Project. However, the scale of proposed utilities diversions, their specific purpose and design characteristics (i.e. relocation of utilities away from the Project) mean there is limited potential for overlap, whilst utilities diversions would generate some specific impacts. HE's stated rationale therefore does not provide a robust basis for the lack of any justification for Associated Development status having been provided in respect of proposed non-NSIP utilities diversions. Government Guidance (Planning Act 2008: associated development applications for major infrastructure projects (DCLG, April 2013)) makes clear that Associated Development will be determined by the Secretary of State on a case by case basis, so whilst utilities diversions are listed as potentially being an accepted as Associated Development and there are DCO precedents, this does not negate the need for HE to still confirm why that should be the case for this specific project.
- 4.3.12 This omission is of particular importance for proposed electrical transmission diversions as, in the event a diversion (or multiple) does not qualify as an NSIP and is not accepted as Associated Development, it would be necessary to seek alternative authorisation under Section 37 of the Electricity Act 1989 and the diversion would need to be assessed as a specific cumulative development. However, the potential need to seek alternative authorisation under Section 37 of the Electricity Act and the implications of this are not identified within App 3.3 – Consents and Agreements Position Statement. App 3.3 refers to all "powers to carry out required utilities diversions" as being incorporated within the DCO application, without consideration of the potential for any utility diversions to not be accepted as Associated Development.

Consideration of Alternatives

- 4.3.13 Paragraphs 3.4.15 – 19 of the ES explain how the preferred route was developed following multiple consultations regarding candidate crossing locations, routes and types. It is clear that the preferred route was selected based on factors including environmental impacts, but paragraphs 3.4.18-3.4.19 do not reference utilities diversions or associated environmental impacts as factors which were taken into account. Rather, it is clear from ES Chapter 3 that the need for and design of utilities diversions has been considered as a necessary consequence of the preferred route rather than a major design consideration at the outset.

This is unfortunate given the scale of the proposed utilities NSIP diversions (and other utilities diversions) now required to facilitate the project.

- 4.3.14 As noted above, the LTC DCOv1 (October 2020) suffers from a lack of consistency and clarity regarding the identification of individual utilities diversions. This also applies in terms of the assessment of reasonable alternatives, as whilst paragraphs 3.6.7 – 3.6.19 within ES Chapter 3 outline how five major utilities diversions have evolved, this does not confirm which numbered work(s) the diversions relate to. It is therefore not possible to confirm how these five diversions relate to the proposed utilities NSIP diversions (including four gas pipelines). This matters as it undermines the ability to demonstrate compliance with reasonable alternative requirements within NPS EN-5.
- 4.3.15 Table 3.5 – Other Design Changes within Chapter 3 of the ES explains that the preferred route was adjusted at Ockendon Landfill Site to avoid the landfill, instead passing through a proposed solar farm and crossing a gas pipeline. The table concludes that impacts on the gas pipeline could be mitigated, without providing any details of the affected pipeline or mitigation solution (including whether any diversion would itself generate environmental impacts). In addition the table does not confirm whether any alternative diversion routes to avoid Ockendon Landfill Site without crossing the gas pipeline (details unspecified) are feasible or were considered.
- 4.3.16 Table A2.2 within the Planning Statement (App. 7.2) Appendix A2 National Policy Statements for Energy Infrastructure Accordance Tables sets out the detail for undergrounding the infrastructure associated with the new 74m pylon, assumed to be NSIP 5 - Works No. OH6 discussed above.

Assessment of Effects

- 4.3.17 As noted above, key deficiencies regarding the consideration of utilities diversions are a lack of consistent references to individual diversions between (and within) DCOv1 application documents, and the absence of clear assessments of effects generated by individual diversions (either as a standalone impact or where a utilities diversion contributes to a wider impact from the Project). Combined with the assumed treatment of all non-NSIP utilities diversions as Associated Development, the consideration of utilities diversions only in general terms rather than individual references within EIA reporting (i.e. ES technical assessment chapters) significantly hinders the ability to clearly understand the types and levels of environmental impacts associated with each proposed diversion. In consequence, the LTC DCOv1 does not clearly establish the environmental acceptability of all proposed utilities diversions in accordance with relevant requirements set out within EN-1, EN-4 and EN-5.

Mitigation and Monitoring

Undergrounding

- 4.3.18 LTC DCO documents including Planning Statement Appendix A2 and ES Chapter 3 discuss the possibility of undergrounding electrical transmission cables (currently OHLs) in specific locations to reduce likely environmental effects. However, neither the Planning Statement Appendix A2, ES Appendix 1.3 (App. 6.3) nor the wider ES fully address the tests set out in paragraph 2.8.9 of NPS EN-5 regarding whether:
- Difficulties associated with undergrounding are ‘technically surmountable’ (our emphasis, NB not economically feasible or preferred on design and/or cost grounds); and,
 - The benefits of non-undergrounding (NB not the need for a Project) clearly outweigh extra environmental, social and economic impacts caused by not undergrounding and proceeding with an OHL diversion.

- 4.3.19 The main deficiencies are that text regarding undergrounding in different LTC DCOv1 documents/sections does not set out consistent and comprehensive criteria regarding firstly the selection of candidate locations for undergrounding and secondly the types of environmental, social and economic impacts which HE has taken into account when balancing extra impacts against the benefits of non-undergrounding. For example, paragraph 3.6.11 of the ES states that undergrounding of an OHL at the A13/A1089 junction was discounted due to horizontal directional drilling (HDD) being required in sensitive locations (Blackshots LWS), land-take and cost. However, no explanation is provided regarding potential impacts on the LWS and, taking account of the designation's local status and HDD requirements, whether these would be more or less acceptable than not under-grounding the OHL.
- 4.3.20 Additionally, whilst the various justifications provided by HE as to why undergrounding in specific locations is not proposed present a binary choice between the proposed OHL diversion and a specific (discounted) under-grounding design, without reference to potential wider OHL route changes that may well extend the length of diversions but could offer the potential to then under-ground route sections in more feasible locations and thus reduce overall environmental impacts from the utility route.

Relevant Mitigation Measures

- 4.3.21 Table 4.1 below lists proposed environmental mitigation measures identified through the EIA process and now listed within HE's Register of Environmental Actions and Commitments (REAC, App 6.3) of specific relevance to the implementation of all proposed utilities diversions (including the proposed utilities NSIP diversions). Other elements of Thurrock Councils review have considered the adequacy and proposed details of mitigation measures where appropriate.

Table 4.1: Mitigation Plans and Measures – Utilities

Mitigation Plan or Measure	Secured By	Summary
REAC (App. 6.3) Ref No: LV001	Landscaping scheme - Requirement 5	The detailed design for the alignment of diverted utilities is to avoid trees and vegetation as far as reasonably practicable, and in accordance with the landscaping scheme as approved by the SoS.
REAC (App. 6.3) Ref No: LV002	Landscaping scheme - Requirement 5	Land temporarily impacted by works to divert utilities is to be reinstated to its former condition and composition upon completion, as far as reasonably practicable, unless otherwise specified in the Environmental Masterplan (App. 6.2).
REAC (App. 6.3) Ref No: RDWE008	Protective Provisions – Schedule 14	Where below ground utilities diversions are required, watercourses would be crossed using trenchless techniques in order to avoid disturbance to channel form, flow regimes and riparian habitats and species, unless other techniques are agreed with the Environment Agency or LLFA, where relevant.

4.3.22 The following additional mitigation commitments and measures listed within the REAC (App 6.3) are also of potential relevance to all utilities diversions by virtue of applying to all elements of the Project. However, the wording of these proposed measures does not explicitly relate to utilities diversions.

Table 4.2: Mitigation Plans and Measures – Other considerations

Mitigation Plan or Measure	Relevance to Utilities Diversions
REAC (App. 6.3) Ref No: C004	The Contractor(s) would procure electricity from renewable electricity suppliers to cover the consumption from the Project's construction compounds.
REAC (App. 6.3) Ref No: C007	Electricity used for operation of the Project would be procured from renewable electricity suppliers.
REAC (App. 6.3) Ref No: GS001	The Contractor would complete further Ground Investigations prior to construction to inform detailed design of the Project.
REAC (App. 6.3) Ref No: GS006	All excavated materials and soils proposed for re-use under a Materials Management Plan would be required to meet risk-based acceptability criteria applicable to its intended use.
REAC (App. 6.3) Ref No: GS009	Soils would be handled and stored to allow their sustainable re-use in line with the Defra Construction Code of Practice for the Sustainable Use of Soil on Construction Sites (2009) and the MAFF Good Practice Guide for Soil Handling (2000).
REAC (App. 6.3) Ref No: GS010	Characterisation of the existing soil to determine its resilience to handling and stripping depths would be based on detailed soil surveys.
REAC (App. 6.3) Ref No: GS011	Land required temporarily during the construction phase would be reinstated to support the required end use in-line with land use identified on the Environmental Masterplan.
REAC (App. 6.3) Ref No: GS012	Reinstatement of soils affected by temporary works would aim to avoid any reduction in soil function.
REAC (App. 6.3) Ref No: GS013	Procedures for the management of soil resources.
REAC (App. 6.3) Ref No: GS014	Following soil reinstatement there would be a 5 year aftercare period during which defects would be corrected.
REAC (App. 6.3) Ref No: GS018	The ground gas regime across the Project and especially in close proximity to landfill sites would be investigated.
REAC (App. 6.3) Ref No: GS030	A temporary access road is proposed across the former Esso petrol station on the northside of the A2/M2 junction. .

Securing Mechanisms

4.3.23 The CoCP (App. 7.11) details that delivery of the Project has been split into several tranches of contracts to best serve the Project's requirements and programme (paragraph 3.1.1). Whilst each tranche refers to the contracts including the diversion and protection of existing utilities, cross reference to each of the proposed utilities NSIP diversions is not made within the document. This matters as each utilities NSIP should map to clear DCO Requirements and associated implementation plans and mitigation measures in the same way as would be required if the relevant diversion was a standalone DCO application.

4.3.24 The CoCP (App. 7.11) states in paragraph 1.4.4 that the appointed contractors (including those carrying out the utilities works) will comply with applicable environmental legislation at the time of construction, together with any additional environmental controls required under the DCOv1, including commitments set out in the CoCP and the REAC (App.6.3, Appendix

2.2). The requirement for the Contractors to comply with these measures is stated as to be embedded within their contract for the Project.

- 4.3.25 Requirement 4 in Schedule 2 (Part 1) of the DCO (App. 3.1) requires no part of the authorised development (the Project) to commence until an Environmental Management Plan (EMP2) in accordance with the CoCP (App. 7.11) and which “reflects” the REAC (App 6.3) has been submitted to and approved in writing by the Secretary of State (SoS), following consultation with the relevant planning authority.
- 4.3.26 Section 1.3 of the REAC (App. 6.3) details all mitigation commitments and securing mechanisms within the DCO. Whilst these commitments would be secured through Requirement 4 within Schedule 2 of the draft DCOv1, they are high level and there is no specific assurance that all identified individual actions and commitments would be implemented as intended when first devised (through the EIA process) within the Environmental Management Plan (EMP2).
- 4.3.27 The approach adopted by HE therefore limits the ability to secure effective mitigation to prevent, avoid and minimise likely significant effects from the Project, including specifically from proposed utilities diversions. This is of potential concern as HE will have less control over the implementation of ‘Non-Contestable’ works by (or contractors on behalf of) utilities statutory undertakers rather than by HE, so if specific mitigation measures identified within the ES and subsequently the REAC are not set out in full within the EMP2 there is a risk they could be missed by contractors.

Access/Traffic Diversions for Utilities Works

- 4.3.28 Neither the REAC (App. 6.3) nor the CoCP (App. 7.11) make specific requirements for traffic/access diversions in relation to carrying out proposed utilities works. However, general traffic/access diversions detailed within the CoCP (App. 7.11) will apply to the whole Project, and thereby all utilities diversions. As required by Requirement 10 of Part 1 of Schedule 2 of the DCOv1, the Contractors will be required to produce Traffic Management Plans for construction before commencing work, focused on:
- a) Strategic road network traffic management including lane closures speed control and temporary road closures and diversions;
 - b) Local road network, including temporary contraflows, road closures, diversions both on-line and off-line and weekend closures; and,
 - c) Traffic management within the worksite, such as traffic routes and workforce pedestrian management, strategic and local road networks due to the different highway authorities.
- 4.3.29 Table 5.2 Additional working hours of the CoCP (App. 7.11) provides that periods of low demand or traffic flows will be used to carry of utility diversions, without this being further defined or restricted. This means the deliverability and phasing of acceptable traffic/access diversions has not yet been fully confirmed, including in relation to undertaking proposed utilities works.
- 4.3.30 Embedded mitigation is included within the Design Principles (App. 7.5) or as features presented on Figure 2.4: Environmental Masterplan (App. 6.2). A number of the technical chapters within the ES cross reference best practice with regards to utilities.

5 Review of Utilities NSIPs Coverage in Non-Statutory Consultation Documentation (July 2021)

5.1 Overview

5.1.1 In July 2021, HE published a suite of technical and supporting documents for non-statutory consultation to inform the preparation of a future revised LTC DCO application. This review, focused on assessing the compliance of proposed utilities NSIPs with relevant Energy NPS, has considered the following July 2021 consultation documents:

- Review of Ward Impact Summaries - North of the River - Part 1;
- Review of Ward Impact Summaries - North of the River - Part 2;
- Code of Construction Practice First Iteration of Environmental Management Plan (June 2021);
- Appendix E – Design Principles (June 2021);
- Construction Update (July 2021);
- Large Scale Construction Maps – Sheet 1 to 6 (July 2021);
- Operations Update (July 2021);
- General Arrangement Maps – Sheet 1 to 6 (July 2021);
- Framework Construction Travel Plan
- Outline Traffic Management Plan for Construction;
- Schedule 2 Requirements and Explanatory Memorandum; and
- You Said, We Did (July 2021).

5.2 General Comments

Identification of Proposed Utilities Diversions

- 5.2.1 Paragraph 146.24 of You Said, We Did (July 2021) states that the proposed Order Limits have increased by 24% compared with the LTC DCOv1 (October 2020), with an increased from 20 km² to 26.3 km² detailed in Paragraph 150.
- 5.2.2 Paragraph 146.1 to 146.9 of You Said, We Did (July 2021) provides a qualitative description of a number of changes to utilities infrastructure associated with the Project. North of the Thames proposals for utilities infrastructure including high-pressure pipeline works are identified at Folkes Lane, Warley Street, north of Ockendon Landfill, Green Lane, Orsett, the Orsett Showground and Brentwood Road. It is however unclear from the discussion within this document whether some or all of these proposed utilities works constitute (or form part of) utilities NSIPs in their own right or Associated Development.
- 5.2.3 Figure 2.7 within the Operations Update (July 2021) shows updated proposals for relocated utility infrastructure. This clearly depicts the location of the utilities NSIPs, which have been

revised since the withdrawal of the LTC DCOv1 (October 2020). Utilities NSIPs are now described as follows within the Operation Update (July 2021):

- 1) NSIP High Pressure Gas Pipeline Diversion;
- 2) NSIP High Pressure Gas Pipeline Diversion;
- 3) NSIP High Pressure Gas Pipeline Diversion; and
- 4) NSIP National Electricity Transmission Diversion.

5.2.4 In addition, Figure 2.7 lists two other proposed utilities diversions:

- New Primary Substation & Switchgear Equipment;
- New Gas Valve Compound;

5.2.5 From the wording used on the key within Figure 2.7 it is assumed these two utilities diversions do not qualify as utilities NSIPs and are thus Associated Developments, although this is not confirmed. Additionally, Figure 2.7 depicts multiple additional proposed utilities works or diversions (gas and OHL) along the M25 corridor within Thurrock, without providing any labels or descriptions in the key to identify the scope of these works.

5.2.6 Therefore, whilst Figure 2.7 is a useful visual representation, the Operation Update (July 2021) provides limited descriptions of each utilities NSIP and issues identified in the review of the LTC DCOv1 (October 2020) regarding a lack of clear, consistent and adequate reporting remain unresolved. The absence of consistent referencing and descriptions continues to prevent a full understanding of the characteristics, classification and impacts of proposed utilities diversions within Thurrock.

5.2.7 Whilst Appendix E – Design Principles (June 2021) applies to the Project's permanent physical structures thereby excluding utilities diversions, reference is made to the need for specific Utility Logistics Hubs (ULHs) and efficient working with utility providers.

Classification of NSIPs and Associated Development

5.2.8 Whilst the consultation documentation (July 2021) provides further detail regarding utilities work, documentation often adopts a qualitative description of proposed works, without specific cross-references to individual numbered works. This is at times challenging to follow, as it relies on an existing contextual understanding to determine whether the text is discussing the proposed utilities NSIP diversions and/or Associated Development.

Utilities NSIPS

Gas Pipelines

5.2.9 Reporting deficiencies within the LTC DCOv1 (October 2020) regarding lack of consistent referencing and inadequate treatment of individual diversions continue to be present within the consultation documentation (July 2021). For example, the Operations Updates (July 2021) states that a permanent compound along Stanford Road will be built for the operation and maintenance of the high-pressure gas network, however it is not clarified whether this supports proposed utilities NSIP diversions or Associated Development.

5.2.10 The Construction Update (July 2021) discusses two NSIP gas transmission pipelines which would need to be diverted near the A2/M2: NSIP 1 - Works No. G2; and NSIP 2 - Works No. G3. NSIP 2 - Works No. G3 is noted as requiring diversion in two separate locations - around 0.12km in length at the Claylane Wood area and 2.7km from the west of Thong Lane to the

A226 – with each section constituting an NSIP. It will be important for the interaction between these utilities works to be identified when two linked diversions are presented as numbered works within Schedule 1 of a new draft DCO that will need to underpin any revised LTC DCO application.

Electricity Transmission Infrastructure

- 5.2.11 LTC DCOv1 (October 2020) described NSIP 5 - Works No. OH6 as including a new 74m pylon associated with a OHL diversion (refer to Table A2.2 of the Planning Statement (App. 7.2)). The Construction Update (July 2021) now identifies the need for a 75-metre high pylon, indicating an update to proposed utilities infrastructure. NSIP 5 - Works No. OH6 is described as having a requirement of three new pylons to cross the route and Thong Lane; removal of four existing pylons; and two temporary diversions of the power line on four temporary pylons to maintain electricity supply while new pylons are installed.
- 5.2.12 Paragraph 86.41 of You Said, We Did (July 2021) details that Land near Bulphan, a village in Thurrock, is now included in the Order Limits for the project. The land is approximately 800 metres by 30 metres and is required as UK Power Networks would need to carry out temporary works to replace and upgrade OHLs to provide power for LTC construction sites. This land is stated to be required temporarily with permanent rights for maintenance.
- 5.2.13 Section 3.3 Private recreational facilities of the Operational Update (July 2021) identifies a small area to the north-east of the Thurrock Rugby Football Club that would be used for the diversion of OHLs associated with works to the A13/A1089 junction. Permanent rights are to be acquired over the area affected for the operation and maintenance of those utilities. The text does not clarify if this falls within proposed utilities NSIP diversions or Associated Development, although the latter is assumed. The Update states these works are not expected cause any impact to the Rugby Club without providing any further explanation.
- 5.2.14 Paragraph 79 of the Ward Impact Summaries - North of the River Part 1 details two ULHs will be located in East Tilbury. Paragraph 81 and 82 details that these will support the following works however it is not clarified whether these fall within the proposed utilities NSIP diversions or Associated Development:
- Modifications to an existing 400kV overhead power line, around 2.5km in length, including the removal of three pylons and construction five new ones; and
 - Realignment of an existing 132kV overhead power line, around 1.5km in length. This lies partially in the East Tilbury ward and would involve the removal of four existing pylons and construction of five new ones. This utility diversion however is stated to be managed out of the Brentwood Road Compound (located in Orsett ward, Thurrock).
- 5.2.15 Paragraph 102 of the Ward Impact Summaries - North of the River Part 1 states that the following land has been removed from the Order Limits as it is no longer required for utility diversions: land parallel to Beechcroft Avenue, north and north-west of Ashlea Farm and to the east of High House Lane (land at Sugarloaf Riding Association for the Disabled also included in removal). As detail in Chapter 3 of the Operations Update (July 2021), land north of East Tilbury is now proposed as an alternative location for the re-stringing of overhead lines north of Linford and refinement of Order Limits around Hoford Road. The text does not clarify if this falls within proposed utilities NSIP diversions or Associated Development, although the latter is assumed.

Associated Development

- 5.2.16 The consultation documentation including draft DCO Schedule 2 Explanatory Memorandum does not elaborate on the very limited consideration of Associated Development status provided within the LTC DCOv1 (October 2020). No further explanation is provided as to why

proposed utilities diversions not qualifying as NSIPs in their own right, can properly be authorised within the DCO as Associated Development.

Consideration of Alternatives

- 5.2.17 As noted above, following from weaknesses identified within the LTC DCOv1 (October 2020) the consultation documentation (July 2021) continues to suffer from a lack of consistency and clarity regarding the identification of individual utilities diversions. This also applies in terms of the assessment of reasonable alternatives which undermines the ability to demonstrate compliance with reasonable alternative requirements within NPS EN-5.
- 5.2.18 Paragraph 73.15 of You Said, We Did (July 2021) states that the routing of a utilities diversion has now been moved 200 metres south-west to reduce impacts on the environment, utilities and landfill works in the area. This has, however, resulted in alterations to the layout of structures over the Mardyke River and associated sewers (Orsett Fen Sewer and Golden Bridge Sewer), thereby generating the potential for new or different environmental effects. Reference to any assessment of effects from this change is, however, not provided and there is no evidence of alternative diversion routes having been considered.

Assessment of Effects

- 5.2.19 Updated plans for construction and the diversion of utilities have been accounted for within the consultation documentation (July 2021). This is based on consultation feedback, an increased understanding of the scale and nature of works of the project, outline HGV routing, increased data from utility companies and additional land within the Order Limits.
- 5.2.20 Amendments have been made to the Lower Thames Area Model (the project's strategic transport model) since the DCOv1 application (October 2020). The Operations Update provides information on the latest traffic modelling results, which for Thurrock shows reductions in congestion on some local roads and an increase in traffic flows on others as a result of the Project. The Ward Impact Summaries also identify forecasted changes in traffic flows at a local level once the Project is operational.
- 5.2.21 A review of Table 1.1 within the Ward Impact Summaries - North of the River Part 1 indicates that the project extends through the following wards, located within Thurrock: East Tilbury; Tilbury Riverside and Thurrock Park; Tilbury St Chads; Chadwell St Mary; Orsett Thurrock; Little Thurrock, Blackshots, Little Thurrock Rectory; Stifford Clays, Chafford and North Stifford, Belhus; West Thurrock and South Stifford; Ockendon. A chapter is dedicated to discussing impacts of each Ward.
- 5.2.22 Paragraph 1013 of You Said, We Did (July 2021) states the project proposals do not impact Thurrock Council's A13 widening works. These works would be complete before the construction of the project is planned to begin, and the design has been developed to tie into the finished A13 works.
- 5.2.23 It is of note that the Operations Update (July 2021) states that HE is working with Thurrock Power Ltd on their proposed Thurrock Flexible Generation Plant development, which is currently undergoing a DCO Examination. A number of potential interfaces have been identified including a proposed high-pressure gas pipeline beneath Tilbury Viaduct and adjacent to Low Street Pit in Thurrock. The Update states that if both projects are consented they can be developed in tandem although realignment of the identified high-pressure gas pipeline would be required. The consultation documentation (July 2021) does not provide further evidence to clearly establish the environmental acceptability of all proposed utilities diversions forming part of the Project in combination with relevant cumulative developments.

Mitigation and Monitoring

Relevant Mitigation Measures

- 5.2.24 Proposed mitigation measures are identified within the consultation documentation (July 2021) include those of specific relevance to the implementation of all proposed utilities diversions (including the proposed utilities NSIP diversions) and also those of potential relevance to all utilities diversions by virtue of applying to all elements of the Project. The documentation highlights a number of proposed changes to mitigation.
- 5.2.25 Thames Chase Community Forest covers 40 square miles, including parts of Thurrock. Thames Chase Community Forest and Shorne Woods Country Park are noted in paragraph 113.26 of You Said, We Did (July 2021) as being directly affected by the Project. Land is noted as being required permanently to construct and operate the Project, with additional land needed temporarily (with permanent rights) to carry out essential utility diversions. It is, however, unclear whether this relates to the proposed utilities NSIP diversions or Associated Development. As mitigation, however, replacement land is proposed which would be next to the affected site, with planting, landscaping and public rights of way designed to integrate the new land into the existing site. Paragraph 145.5 states that an identified trunk water main in the Thames Chase Community Forest area would be affected, however, the extent of impact and appropriate mitigation is unclear.
- 5.2.26 Paragraph 146.17 of You Said, We Did (July 2021) states that to reduce to impacts of utilities on local communities, it is now proposed to reduce the number of OHL pylons near the route between Chadwell St Mary and Tilbury, within Thurrock (removal of 16 existing pylons and installation of 10 new ones).

Undergrounding

- 5.2.27 The Operations Update (July 2021) makes reference to proposed undergrounding of sections of existing OHL and associated pylons at Thames Chase Forest and west of East Tilbury and Linford. The Update indicates that 11 smaller permanent substations (five metres by five metres) would be required as part of these works.
- 5.2.28 Figure 3.12 Tilbury Area notes that the extended Order Limits includes land to the south of Substation Road where it passes between the existing power transmission site to the north and the site of the old Tilbury Power Station. This new land is now included within the Order Limits to allow for a new power line to be undergrounded, reducing impacts on the utility companies. The Operations Update states this undergrounding decision has been made in light of discussions with Port of Tilbury in relation to proposals for Tilbury 2, a proposed new port facility. There is, however, no cross reference to any technical assessment evidence nor the tests set out in paragraph 2.8.9 of NPS EN-5.

Securing Mechanisms

- 5.2.29 The Code of Construction Practice First Iteration of Environmental Management Plan (June 2021) confirms that the delivery of the Project has been split into several tranches (paragraph 4.1.1). This approach adopted by HE limits the ability to secure effective mitigation to prevent, avoid and minimise likely significant effects from the Project, including specifically from proposed utilities diversions.

Access/Traffic Diversions for Utilities Works

- 5.2.30 The Construction Update (July 2021) indicates some variance to the working hours of the CoCP (App. 7.11), stating 24-hour working would be necessary to construction the two deep tunnels beneath the new Lower Thames Crossing. These works are associated with land to the west of Thong Lane for NSIP 2 - Works No. G3. The CoCP First Iteration of Environmental Management

Plan (June 2021) details in Table 6.1 that underground work (tunnelling, shaft works and portals) will be undertaken on a continuous 24-hours, seven days a week basis. Table 6.3 provides a detailed breakdown of the 24/7 construction working locations specifically for utilities. This is additional detail which was lacking from the LTC DCOv1 (October 2020). The CoCP First Iteration of Environmental Management Plan (June 2021) is, however, a draft document meaning the deliverability and phasing of acceptable traffic/access diversions has not yet been fully confirmed, including in relation to undertaking proposed utilities works.

- 5.2.31 The Construction Update (July 2021) is supported by Large Scale Construction Maps – Sheet 1 to 6 (July 2021) which depicts access routes for utility works and utility logistic hubs. The Operations Update (July 2021) is supported by General Arrangement Maps – Sheet 1 to 6 (July 2021). These maps have dedicated elements relevant to utilities including: maximum length of OHL to be removed; realigned gas; realigned or modified overhead cable; and as compound or electricity substation. Both the construction and operational mapping fails to clearly indicate which routes relate to the proposed utilities NSIP diversions or Associated Development. Additionally the mapping does not cross reference numbered works, either from the LTC DCOv1 (October 2020) or Schedule 1 of a new draft DCO that will need to underpin any revised LTC DCO application.
- 5.2.32 Table 3.1 of the Construction Update (July 2021) provides detail of four temporary Utility Logistics Hubs (ULHs) south of the River Thames required for the construction of the project. Traffic management required as a result of the compounds and the utilities works is included in the Ward Impact Summaries and the Outline Traffic Management Plan for Construction (OTMPfC).
- 5.2.33 Paragraph 79 of the Ward Impact Summaries - North of the River Part 1 details two ULHs will be located in East Tilbury: Muckingford Road ULH located east of the new road and south of Muckingford Road. Access for utility companies using this ULH would be via Muckingford Road and a temporary road off the haul road; and Low Street Lane ULH would be north of the Tilbury Loop railway and west of the proposed Tilbury Viaduct. It would be accessed from the north, via a temporary access built off the haul road.
- 5.2.34 There would be no ULHs within Tilbury St Chads ward (paragraph 399) however an area at the north-eastern edge of Tilbury St Chads ward would be used for utility works (paragraph 398). This is identified to be limited to underground utility diversions along local roads in paragraph 408. An area of farmland south of the Condovers Scout Activity Centre has been removed from the Order Limits as it is no longer required for utility diversions. Paragraph 410 however details that HE propose to acquire permanent rights over an area of land at Walton Common and Parsonage Common for utility works required for the northern tunnel entrance.
- 5.2.35 Chadwell St Mary will contain no ULHs however access to Brentwood Road ULH would be through Chadwell St Mary along Brentwood Road. There is to be substantial works to divert utilities away from the ward as required for the new road. This includes:
- The diversion of a 272kV overhead power line, building two new pylons and removing two existing ones in the north-west of the ward;
 - Part of the realignment of the 400kV overhead power line, also removing two existing pylons and building two new ones as part of restringing works in the north-east of the ward;
 - Diverting a high-pressure gas pipeline, 0.27km in length, that runs alongside Brentwood Road; and,
 - Installing a new underground power cable, 3km of which goes along Marshfoot Road and Brentwood Road.

- 5.2.36 The text however does not clarify whether these works fall within the proposed utilities NSIP diversions or Associated Development.
- 5.2.37 The design and layout of Long Lane ULH states to account the setting of heritage assets, and avoid light glare, light spill and light pollution during night-time construction, as detailed in Design Principles (paragraph 326). This is within the Chadwell St Mary ward.
- 5.2.38 Most of Orsett ward is outside the proposed Order Limits, but a large amount of construction activity essential to building the main route and the proposed A13/A1089 junction would take place in the south-west of the ward, near the existing A13/A1089 junction. Paragraph 685 of the Ward Impact Summaries - North of the River Part 1 details several ULH within the ward: Stanford ULH; Brentwood Road ULH; Hornsby Lane ULH; Long Lane ULH; Stifford Clays Road ULH and Green Lane ULH. Paragraph 686 states these will be used as bases for both works within and external to the ward. Utilities works include:
- Realignment of 400kV OHLs, around 1.7km in total length, with four new pylons, one of which would be in Orsett ward;
 - Four existing pylons would be removed, including one in Orsett ward and one on the ward boundary with Chadwell St Mary;
 - Realignment of 275kV OHLs, 3.2km in length, with eight pylons to be removed in total and 10 new pylons to be constructed, two of them temporary;
 - High-pressure gas pipeline, 5.2km in length;
 - New permanent high-pressure gas valve Compound and permanent access from Stamford Road; and,
 - High-pressure gas pipeline, around 0.3km in length.
- 5.2.39 The text however does not clarify whether these works fall within the proposed utilities NSIP diversions or Associated Development. Modifications to local utility networks are however detailed to be undertaken across several local roads within Orsett ward, which are assumed to be Associated Development.
- 5.2.40 Paragraph 734 states that the 'spur' of the Order Limits that runs north-south through the Ron Evans Memorial Field, is to be removed from the Order Limits as a result of utilities works being conducted elsewhere. Two small new areas of land are however proposed to the north of the ward for a utilities working area. The location of this is not identified.
- 5.2.41 Paragraph 904 of the Ward Impact Summaries - North of the River Part 1 states that substantial works to realign utilities under the A1089 would be required, as would works to divert utilities along the A1013, within the Little Thurrock Blackshots ward. It is not stated whether this is the proposed utilities NSIP diversions or Associated Development, however it is assumed to be the latter. No ULH's are to be located within the ward however Long Lane ULH is close to the ward boundary.
- 5.2.42 As discussed in Paragraph 1063 of the Ward Impact Summaries - North of the River Part 1, the Green Lane ULH would be located in Stifford Clays ward. This ULH would provide an area from which utility diversions could be organised and delivered, including the diversion of two high-pressure gas pipelines, one north of Green Lane and one around the north of the A13. It is not stated whether this is the proposed utilities NSIP diversions or Associated Development.
- 5.2.43 There is no construction activity or elements of the completed project in West Thurrock and South Stifford ward, apart from the use of the M25 and the A13 as routes for construction traffic accessing the project. There is no ULH located within the ward.

- 5.2.44 There is a high-voltage overhead power line in the east of Ockendon ward, which is crossed by the proposed new road. Paragraph 1307 of the Ward Impact Summaries - North of the River Part 1 details the following utility works is needed:
- Realignment of the overhead power lines running north-south is required, with e modifications to the existing overhead power lines include removal of one pylon and its replacement with one around 16 metres taller;
 - A temporary overhead line diversion is stated to be needed, along with the associated re-stringing work;
 - Diversion of gas pipelines along the alignment of the new road;
 - Divert or seal off the existing high-pressure gas pipeline used for the operation of Barking Power Station;
 - Diversions of multiple utility networks along the B186 North Road, including gas, water, power and communications; and,
 - Installation of temporary utilities (water, waste, communications and power) for the Medebridge and M25 Compounds would also take place within Ockendon ward (paragraph 1308).
- 5.2.45 The text does not clarify whether this is whether these works constitute the proposed utilities NSIP diversions or Associated Development.
- 5.2.46 The Ward Impact Summaries - North of the River Part 1 provides a tabulated summary of the main traffic management measures across identified wards. Whilst cross references to the undertaking of utility works in made, it is not possible to determine whether the text is discussing the proposed utilities NSIP diversions and/or Associated Development. The ward sections also provide data on average daily vehicle numbers going to compounds located near or in wards, with commentary on the anticipated visual impacts of the ULH's where appropriate.
- 5.2.47 It is of note that Section 12.5 of the Ward Impact Summaries - North of the River Part 1 identifies a number of footpaths, bridleways and cycle routes to be impacted during construction, with specific reference to utilities: Footpath FP60 temporarily closed for eight months; Footpath FP64 temporarily closed for four months; Footpath FP78 closed for nine months; Footpath FP79 closed for five years; Bridleway BR219 within the Order Limits (north-west of Orsett Fen) would need to be closed for five years; Footpath FP97 closed for eight months; Bridleway BR223 closed for five years; Footpath FP135 closed for nine months; the section of FP136 within the Order Limits would need to be closed initially for five months. As above it is unclear whether this is the proposed utilities NSIP diversions and/or Associated Development.

6 Summary and Recommendations

6.1 Summary

- 6.1.1 This technical note reports the findings of a review undertaken of the previously submitted (now withdrawn) A122 Lower Thames Crossing (LTC) Development Consent Order (DCOv1) (October 2020) and of LTC Non-Statutory Consultation Documents (July 2021) in relation to the consideration of proposed utilities diversions which themselves constitute Nationally Significant Infrastructure Projects (NSIPs). The review contributes to the wider scrutiny by Thurrock Council of the LTC DCOv1 (October 2020) and emerging proposals for a future revised LTC DCO application.
- 6.1.2 Thurrock Council has consistently opposed the Project due to the negative economic, social, engineering and environmental impacts that it will have upon the borough, as well as the constraints it will place upon future growth. This includes construction and operational phase impacts from proposed utilities diversions, which the Council specifically raised concerns about in responses to HE's consultations prior to submission of the DCO application. The Council's main substantive concerns regarding proposed utilities diversions relate to the extent of land-take required and likely impacts on communities and existing infrastructure, including in terms of disruption and safety. Thurrock Council together with other affected local authorities and consultees also previously raised wider concerns regarding environmental and planning impacts from proposed utilities diversions. We acknowledge that some improvements have been made over the past year, but still seek further improvements/mitigations.
- 6.1.3 To inform Thurrock Council's engagement with HE and position in respect of a revised LTC DCO application, a high-level review of HE's assessment of proposed utilities diversions (including design, environmental impacts and mitigation) has been undertaken. This review has considered both the LTC DCOv1 (October 2020) and emerging proposals (July 2021) for a future revised DCO application. Key findings from this review are:
- a) Inadequate of reporting in respect of individual utilities diversions, especially within technical assessment chapters of the ES. Both LTC DCOv1 and the non-statutory consultation documentation (July 2021) to inform a future LTC DCOv2 discuss utilities diversions in general terms and suffer from a lack of specificity;
 - b) Absence of consistent referencing and diversion descriptions even where individual diversions are discussed;
 - c) By virtue of the above two deficiencies, inability to validate the NSIP screening conclusions reached within Appendix 3.1 Table 1.1 regarding the absence of likely significant effects from gas pipeline diversions (i.e. that proposed diversions are therefore not NSIPs);
 - d) Lack of clear identification and screening of proposed OHL works to confirm whether each qualifies as a NSIP in its own right or requires to be treated as an Associated Development;
 - e) Absence of any justification to support the assumed Associated Development status of all proposed non-NSIP utilities diversions is not helpful and raises concerns regarding the adequacy of App 3.3 – Consents and Agreements Position Statement;
 - f) The need for and design of individual utilities diversions has evidently been considered as a necessary consequence of the preferred route rather than a major design consideration at the outset. This is unfortunate given the scale of the proposed utilities NSIP diversions (and other diversions) and associated land-take now required to facilitate the project;

- g) Weak and inconsistent application of the undergrounding test set out at paragraph 2.8.9 of NPS EN-5; and,
 - h) Weak approach to EIA mitigation being secured through an EMP2 which merely “reflects” the REAC is of potential concern as HE will have less control over the implementation of ‘Non-Contestable’ works by utilities statutory undertakers.
- 6.1.4 The above deficiencies significantly hinder the ability to clearly understand the types and levels of environmental impacts and mitigation requirements associated with each proposed utilities diversion. In consequence, the LTC DCO does not clearly establish the environmental acceptability of all proposed diversions including the proposed utilities NSIP diversions in accordance with relevant requirements set out within EN-1, EN-4 and EN-5.

6.2 Recommendations to inform LTC DCO Rev 2

- 6.2.1 The review reported in this technical note focused on assessing compliance with relevant Energy NPS, specifically EN-1, EN-4 and EN-5, in respect of proposed utility diversions which themselves constitute NSIPs. However, in doing so the review also identified weaknesses within the approach adopted by HE in their assessment of proposed utilities diversions more generally.
- 6.2.2 Review findings have informed the development of the following recommendations to improve how utilities diversions and associated impacts are addressed in any future revised LTC DCO application. HE is respectfully requested to carefully consider and implement these recommendations in the preparation of the LTC DCOv2 (all references below to specific DCO application documents refer to LTC DCOv1 which it is assumed will be revised or replaced as appropriate).

Identification of Proposed Utilities Diversions within LTC DCO Application

- a) The root cause of many identified weaknesses is a lack of clear and consistent referencing of individual utilities diversions. To address this, consistent referencing of individual diversions should be inserted throughout all DCO application documents based on the numbered works listed within Schedule 1 of any future draft DCO. Full consistency in relation to both referencing and descriptions of proposed works is required between the draft DCO, ES Appendix 1.3, ES Chapter 2 – Project Description and ES Chapter 3 – Assessment of Reasonable Alternatives.
- b) To enhance consistency and enable a full understanding of proposed gas pipeline diversions, ES Appendix 1.3 Table 1.1 (NSIPs screening table) should include an additional column providing a brief description of the locational/route characteristics of each affected pipeline and a cross-reference to the relevant Works Plan(s) showing the proposed diversion.

Classification of NSIPs and Associated Development

- c) To enable the conclusions of ES Appendix 1.3 Table 1.1 to be validated, the reporting of likely effects associated with individual utilities diversions needs to be strengthened. All technical assessment chapters of the ES should confirm whether individual (or multiple) utilities diversions contribute to specific likely environmental effects (significant or not significant) and clearly state which individual diversion(s) is responsible, including by reference to the relevant Works Plan.
- d) Where effects are contributed to or generated by proposed utilities NSIPs (as opposed to by Associated Developments), this should be confirmed within the relevant ES technical assessment chapter.

- e) A screening assessment supported by evidence should be provided (as an ES appendix) to explain in full why only one proposed electrical transmission diversion constitutes a NSIP and why each of the other proposed electrical transmission diversions do not. This screening assessment should cross-reference the numbered OH works listed within schedule 1 of any future draft DCO.
- f) Works Plans and Engineering Section Drawings should be amended to clearly distinguish between utilities diversions which constitute proposed utilities NSIP diversions or Associated Development.
- g) In accordance with PINS Guidance (2013), a relevant DCO application document (e.g. Planning Statement) should provide a clear justification for why those proposed utilities diversions not qualifying as NSIPs in their own right can properly be authorised within the DCO as Associated Development.
- h) Amend App 3.3 – Consents and Agreements Position Statement to reference the potential need to seek alternative authorisation under Section 37 of the Electricity Act 1989 in the event of any proposed electrical transmission diversion not constituting a NSIP or being accepted as Associated Development.

Consideration of Alternatives

- i) Amend ES Table 3.5 – Other Design Changes in respect of proposed utilities routing at Ockendon Landfill Site to:
 - i. Provide details of the affected pipeline and mitigation solution, including whether the proposed utilities routing would generate environmental impacts; and,
 - ii. Confirm whether any alternative diversion routes to avoid Ockendon Landfill Site without crossing the unnamed gas pipeline are feasible and have been considered by HE.
- j) Amend ES Chapter 3 to explain why alterations (2020) to the M25 Junction 29 layout to reduce the extent of required OHL diversion, resulting in major negative visual changes, are considered to be appropriate and acceptable.
- k) Amend ES Chapter 3 to confirm the specific OHL at Chadwell Link which triggered a route realignment (2020) to avoid a utilities diversion.

Assessment of Effects

- l) The above recommendations need to be implemented to enable any future revised LTC DCO application to clearly establish the environmental acceptability of all proposed utilities diversions, including specifically each proposed utilities NSIP in accordance with relevant requirements set out within EN-1, EN-4 and EN-5. In particular, the ES needs to provide clearer assessments of effects generated by individual or multiple diversions (either standalone impact or where a utilities diversion contributes to an impact alongside other elements of the Project).

Mitigation and Monitoring

- m) Define clear, consistent and comprehensive criteria for:
 - i. Identification of candidate locations for potential OHL undergrounding; and,
 - ii. Consideration of whether undergrounding at each of the candidate locations should be pursued or discounted.

Selected criteria should cover all relevant environmental, social and economic considerations and should be applied consistently to fully address the tests set out in paragraph 2.8.9 of NPS EN-5.

- n) Amend the CoCP to include references to individual proposed utilities NSIP diversions where relevant.
- o) Extend the REAC to explicitly state that:
 - i. Required actions and commitments apply to all elements of the Project, including the utilities NSIPS; and,
 - ii. For the avoidance of doubt, this includes all 'Non-Contestable' works to be carried out by utilities statutory undertakers rather than by HE. All REAC measures relevant to proposed utilities works (Contestable and Non-Contestable) must be secured within the Environmental Management Plan (EMP2) and thereafter implemented.