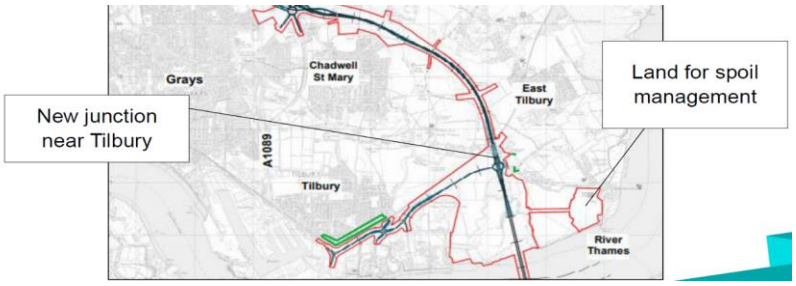
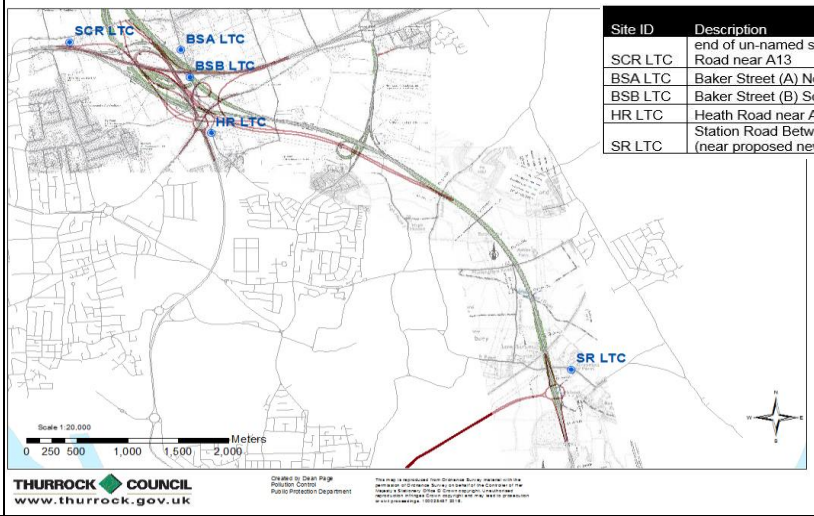
Thurrock Council Response to Lower Thames Crossing - Environmental Impact Assessment Scoping Report

Schedule of Comments and Observations

Promoter	Highways England
Reviewer	Thurrock Council
Document Reviewed	Lower Thames Crossing - Environmental Impact Assessment Scoping Report

ID	Chapter / Section	Comments/Observations (Including Recommendations)
1	Overall Comment	We strongly request that a Health Impact Assessment (HIA) is required and that this is completed in relation to this proposed development to ensure that any negative consequences of the development are identified and mitigated and that opportunities for improving the well-being of the community are maximised. We note that an Equalities Impact Assessment is being undertaken as a separate assessment. We have also noted that precedents have been set by several NSIP developments such as the Silvertown Tunnel and the A14 have had health impact assessments completed as part of their applications.
2	Chapter 1 Introduction and Chapter 2 The Project / General	These chapters contain project specific details and is has been assumed this reflects the current existing knowledge of the proposed development. Thurrock Council should be consulted on regarding any further updates to the project that take place following the receipt of this EIA Scoping Report.
3	Chapter 1 Introduction / Section 1.2.8	Please substantiate how the new crossing will open opportunities for regeneration - how will the crossing bring in this benefit for the local community?
4	Chapter 1 Introduction / Section 1.3.1	Under Project Objectives there is a clear objective for the Environment and Community to minimise adverse impacts on health and the environment, yet no suggestion has been made that there will be a full health impact assessment undertaken as a separate chapter or as a standalone assessment. This project objective will not be achieved without this.
5	Chapter 2 The Project / Section 2.2.7	How will the new junctions be managed safely to reduce the number of road traffic accidents resulting from the new road network?
6	Chapter 2 The Project / Section 2.5.1	Consideration should be paid to the use of green bridges including foot bridges and underpasses. This not only create a visually pleasing environment but may potentially work towards mitigating some of the air pollution that already exists as well as that possibly generated by the proposed development.
7	Chapter 2 The Project / Section 2.5.3	The report lists a number of new bridges, underpasses etc. but does not provide any detail as to which if any will be provided for public rights of way.
8	Chapter 2 The Project / Section 2.6.1	The report states that the LTC north of the Thames will be at grade or on embankments though the Kent section will be in a deep cutting which is likely to lessen its visual effects. The reasoning for this will need to be clearly presented and fully justified. In order to assess the landscape and visual effects we will need plans showing which sections would be on embankments and which at grade.
9	Chapter 2 The Project / Section 2.7	The proposed lighting design has not yet been finalised. This will be an essential component of any Landscape and Visual Impact Assessment (LVIA) as it is likely to have major effects if lighting is proposed on elevated sections across the Mardyke Valley.
10	Chapter 2 The Project / Section 2.9	Non-Motorised User Provision - The statement recognises the need to ensure public rights of ways remain open by providing suitable crossing points and/or diversions. It will be vital that the studies take into account the closure of public rights of ways during the construction period, which is estimated to be 5 years.
11	Chapter 2 The Project / Section 2.10	Consideration will need to be paid to what the flood defences look like and their impact on accessibility to the river. Visual impact and access to nature can impact on health and well-being.
12	Chapter 2 The Project / Section 2.11.2	Further clarification required in relation to the potential detour route for over-sized vehicles in terms of where this is likely to be and how it will be safely managed. How will this impact on reducing the number of such over-sized vehicles still accessing the Dartford Crossing?
13	Chapter 2 The Project / Section 2.12	The tunnel construction is likely to be from north or south. This is resulting in large areas of land east of the power station site being set aside for construction purposes. This is adjacent to the Two Forts Way recreational route. The material extracted during the tunnel construction is likely to be stored in this area which will have visual effects. We will need to know maximum proposed heights of stored materials plus heights of machines etc being used during the construction. It is also proposed that a substation will be required in this area. Again we will need to know the sizes of this. The final restoration of this area will need to demonstrate landscape and ecological benefits e.g. restoring the land immediately west of Coalhouse Fort as coastal grazing grass or wetland.
14	Chapter 2 The Project / Section 2.12.5	It is noted that consideration will be paid to the feasibility of using rail and river to transport materials during construction which will aim to reduce the level of transport by road. If found to be feasible it is possible that additional construction works will be required. This may include the construction of new jetty or modification of a new jetty, as well as new rail heads. Consideration of the potential impacts of the possible additional construction works needs to take into account a potential for increases in noise, air pollution and dust emissions.
15	Chapter 2 The Project / Section 2.14.4	Consideration of the mental health and wellbeing of landowners whose land falls within the design boundary (64 residential and 4 commercial properties North of the Thames) whose land may be acquired for building the new junction at the A13. Further information is required in relation to how this will be managed, and what will likely happen should landowners decline to sell their land/properties and potential impacts on their livelihoods; whilst the project will create new employment opportunities, is it possible that it will damage existing ones?
16	Chapter 2 The Project / Section 2.14.5	The report recognises that the scheme would have a direct effect on the Orsett Fen Open Access Area. It will be necessary to ensure that there are links between the two halves plus also to consider how mitigation measures for landscape, ecology and water management effects can be integrated to ensure that the historic fenland habitat can be recreated.
17	Chapter 2 The Project / Section 2.18	A residence scheme should be considered for those living in Thurrock and areas affected in Kent.
18	Chapter 3 The Reasonable Alternatives Considered / General	The reason why Location C was chosen as the Preferred Route rather than Location A (Route 1) is not fully justified. The reasons provided focus on the Scheme objectives and cost and do not take into consideration the effects on the environment / communities / Thurrock's Strategic Growth Plans. Please refer to the report produced by Peter Brett on behalf of Thurrock Council, which sets out Thurrock Council's reservations relating to the approach to determining a preferred route (this can be found under item 169. on the following webpage: http://democracy.thurrock.gov.uk/ieListDocuments.aspx?CId=134&MID=4804#AI4397).
19	Chapter 3 The Reasonable Alternatives Considered / Table 3.1	We note that Option B was discounted due to severance, when the preferred route Option C creates severance throughout the borough of Thurrock.
20	Chapter 4 Consultation / General	Please provide a breakdown of the results of the consultation as part of the EIA document, in particular those from the local community of Thurrock.
21	Chapter 5 EIA Method / General	Agree with the approach to EIA and inclusion of a Habitat Regulations Assessment (HRA).

22	Chapter 5 EIA Method / General	In line with the new requirements of the EIA Regs. to assess 'the expected significant effects arising from the vulnerability of the proposed development to major accidents or disasters that are relevant to the development', sensitivity testing should be undertaken to assess unusual but not uncommon traffic scenarios due to major accidents, e.g. closure of both crossing, and the impact this would have on traffic, noise and air quality.
23	Chapter 5 EIA Method / Section 5.2.2	Mentions opportunities to deliver environmental enhancements, however there is no explicit mention of any enhancements that have been identified. Opportunities should consider enhancements particularly to the existing Rights of Way network in line with Thurrock Rights of Way Improvement Plan (currently in draft form), as well as enhancements to the landscape.
24	Chapter 5 EIA Method / Section 5.5.3	We would request that a dedicated chapter be provided to cover the subject of Human Health. This will provide a clearer, more concise assessment of the potential impacts on human health and how these will mitigated against to reduce such impacts in subsequent EIAs, ES and planning applications. Additionally, we strongly request that a separate Health Impact Assessment (HIA) is required and that this is completed in relation to this proposed development to ensure that any negative consequences of the development are identified and mitigated and that opportunities for improving the well-being of the community are maximised. Assessment on human health, and methodology on how this will be done is not made clear in any of the chapters highlighted in 5.5.3.
25	Chapter 5 EIA Method / Section 5.6.1	It is noted that study areas will be individually designed for environmental topic based on the geographical scope of the impacts. It will be important to ensure that the full health impacts for residents living in the 9 Wards in Thurrock closest to the proposed development (Tilbury Riverside and Thurrock Park, Tilbury St Chads, Ockendon, Belhus, Stifford Clays, Little Thurrock Blackshots, East Tilbury, Orsett and Chadwell St Mary) are undertaken. A focus on the Tilbury wards, Ockendon, Chadwell St Mary and Stifford Clays in particular will be vital due to the existing health inequalities that assist in these wards. Wider borough health impacts as a result of the traffic modelling and as such should also be considered.
26	Chapter 5 EIA Method / Section 5.7.4	Future Baseline - We will need to agree this as there are a number of former minerals sites on or close to the route that are currently being restored. It is important that these are taken into account of as they would then have a higher landscape value once restored.
27	Chapter 5 EIA Method / Section 5.11	Agree that a separate equalities impact assessment is undertaken. This should include information relating to the severance through the borough in terms of ensuring that all residents residing in Thurrock are able to access the same social and economic opportunities across the borough. Health inequalities should be considered as a part of this assessment - there are significant health inequalities across the borough and an assessment should be undertaken to ensure that these will not be further increased. Again a full HIA should be able to support this. It is noted that a EIA is being undertaken and we would request a full HIA.
28	Chapter 6 Air Quality / General	This chapter predominantly focuses on exceedances to Air Quality Objectives and EU limits, which whilst important, it does not focus in on the potential impact on health, particularly on identified vulnerable populations, from increases in air pollutants and exceedances as a result of the proposed crossing. In addition annual means are focussed on, but it is known when there are incidents on the existing crossing the local road network is impacted significantly, thereby impacting in the short term on air pollutants. Consideration should be paid to frequency and average number of daily exceedances in an annual period and the impact this might have on vulnerable populations. This supports the point above (ID 22) which states that sensitivity testing should be undertaken for different unusual, but not uncommon traffic scenarios.
29	Chapter 6 Air Quality / Section 6.3.2	Section 6.3.2 outlines that baseline monitoring was agreed with Local Authorities for nitrogen dioxide (NO2) and particulate matter (PM10). However the proposed road layout has changed since this consultation was conducted, which has introduced some new potential receptors not considered in the original proposed baseline monitoring. There is now to be an additional road junction in the south of Thurrock linking onto a trunk road which will potentially serve the new proposed Tilbury2 Port facility. In addition to this it may serve as an access road for Heavy Goods Vehicles (HGVs) from the original Port of Tilbury. This will likely generate more traffic along this new access road, where there will be potential residential receptors in close proximity to the new access road in Tilbury itself. (See Figure 1) Figure 1: marked in [Green] (potential new receptors not previously considered in consultation)  We propose that some additional baseline monitoring is setup in these areas by Highways England, in order to establish a more appropriate baseline for use in the detailed dispersion modelling assessment.
30	Chapter 6 Air Quality / Section 6.3.2	In addition to the above there is a change in the design of the main junction linking the A13 and A1089 to the new crossing. There is proposed to be a new roundabout junction which links onto the A1013, this also links to the A1089 dock approach road, but in the process will sever the existing A1089 dual carriage way and introducing a pinch point for traffic on this road as they will now have to navigate via the new roundabout junction. This will likely cause queuing at this junction, a lot of this traffic will be from the Tilbury Docks and predominantly HGV's. The A1089 serves as the primary route for all traffic generated by the Port of Tilbury, this roundabout will likely hinder the currently free flowing nature of this dual carriageway. This new junction will also introduce a number of residential receptors which were not considered in the previous design. There are a number of residential properties just off the A1013 along Heath Road which will be close to this roundabout junction. I recommend that further baseline monitoring is introduced here as well. Also there are residential properties along Baker Street which lie in close proximity to the proposed junction which have not been included in the baseline monitoring, I propose that further baseline monitoring sites should be setup in in key locations along this road also.
31	Chapter 6 Air Quality / Section 6.4.3	It is agreed that the baseline PCM model (2015 base) should be applied to the assessment and not CAZ or CAZ+additional measures scenarios.

32	Chapter 6 Air Quality / Section 6.4	Thurrock Council have in response to the new proposed road layout set up its own NO2 diffusion tube monitoring sites in key locations as of November 2017. There are a total of five new monitoring locations (see Figure 2). These should be included within Highways England air quality assessment for establishing a baseline and for model verification.  Site ID / Description / site height / X ref / Y ref SCR LTC — end of un-named street Off Stifford Clays Road near A13 — 2m — 562381 — 181155 BSA LTC — Baker Street (A) North of A13 — 2m — 563481 — 181070 BSB LTC — Baker Street (B) South of A13 — 2m — 563572 — 180770 HR LTC — Heath Road near A1089 — 2m — 563782 — 180155 SR LTC — Station Road Between Tilbury & East Tilbury, (near proposed new tilbury junction) — 2m — 567349 — 177552
33	Chapter 6 Air Quality / Section 6.6.4	Section 6.6.4 of the report states that PM2.5 is not currently assessed and reported as part of the DMRB HA207/07 and hence will not be included within the assessment for the project. We believe that this should also be included as part of the assessment, as it is PM2.5 which is potentially more prejudicial to health than PM10. The evaluation of significance of this pollutant should also be assessed, particularly as it is the very fine elements of particulate matter i.e. PM2.5, such as brake & tyre ware emissions and diesel exhaust emissions that contribute to the bulk of PM2.5 emissions and it is this element which is most prejudicial to health.
34	Chapter 6 Air Quality / Section 6.6.4	In support of our Air Quality experts at the council (comment above), we agree that P.M 2.5 should be assessed alongside NOX and PM10. This is due to the fact that 5.6% of premature deaths in Thurrock are attributable to air pollution particulate matter (PM2.5) which is higher than the England average (4.7%). Thurrock have the highest number of deaths attributable to particulate matter when compared with their CIPFA comparators and 2nd highest across the East of England region.
35	Chapter 6 Air Quality / Section 6.7.6	Modelling of construction vehicles would be welcomed. The number of construction vehicles in each phase/year of construction should be quantified. A good reason for scoping out a simple or detailed construction phase assessment should be included in the EIA when construction vehicle numbers are available. It is considered that an increase in construction vehicles just below the DMRB screening criteria may still lead to long term effects due to the duration (6 years) of construction.
36	Chapter 6 Air Quality / Section 6.7.14	The EIA should confirm that the opening year (currently 2026) is worst case in terms of air quality impacts.
37	Chapter 6 Air Quality / Section 6.7.26	The EIA must include the latest PCM data available at the time of assessment. This paragraph states that the PCM 'model provides predicted concentrations for each link in a number of years at five year intervals.' The latest (August 2017 (as referred to in other places in this scoping report)) PCM data should be applied to the assessment. This data is provided by Defra as yearly concentrations from 2017 and not five year intervals as suggested in paragraph 6.7.37.
38	Chapter 6 Air Quality / Section 6.7.41	Section 6.7.41 of scoping report states that emissions from vehicles in particular diesels, do not perform to their prescribed European standards and limited evidence on Euro 6 emissions. Any modelling using DEFRA's Emission Factor Toolkit V7.0 (EFT 7.0) is likely to underestimate these emissions considerably, as they are known to greatly under-represent real world emissions. A conservative approach should be adopted for this, upscaling of diesel emissions in particular should be undertaken. Air Quality Consultants (AQS) have developed such a conservative approach known as CURED V2A, which better represents diesel emissions than EFT 7.0, something similar should be adopted in this case also.
39	Chapter 6 Air Quality / Section 6.7.47	Section 6.7.47 of the scoping report states It will only consider receptors which exceed the Air Quality Standards / Objectives i.e. (annual mean of 40 µg/m³ for NO2 and PM10) in either the, with or without scenarios are used to inform the evaluation of significance. We recommend that any receptor be considered in the evaluation of significance proposed if it has a medium >2 µg/m³ or large >4 µg/m³ magnitude of change. As some of these may be near the objective limit and have a large magnitude of change but fall just below the objective limit. Considering the uncertainties associated with air quality modelling I'd like to see these sites listed as well as those above the objective limits.
40	Chapter 6 Air Quality /Section 6.9	It is assumed that best practice mitigation measures will be applied during the construction phase.
41	Chapter 6 Air Quality / General	Other than the points that have been raised, the proposed methodology for assessment is acceptable. However, the recommendations that have been outlined should be considered as there has been a significant of change in the proposed layout of the new crossing and change in the road junctions, that warrants further consideration before the full EIA and subsequent Air Quality Assessment is undertaken.
42	Chapter 7 Cultural Heritage / General	A Heritage Statement should be undertaken and reported in compliance with Historic England Good Practice Advice Note 3: The Setting of Heritage Assets 2015.
43	Chapter 7 Cultural Heritage / Section 7.2	There is no consideration of local policy, this needs to be considered in the EIA.
44	Chapter 7 Cultural Heritage / Section 7.3.4	The heritage stakeholders identified should not be consulted in isolation. Any future meetings should, where possible, include all relevant heritage advisors.
45	Chapter 7 Cultural Heritage / Section 7.4.1	This should include any existing (as mentioned in 7.5.1) or emerging Local Heritage Lists which have yet to be adopted.
46	Chapter 7 Cultural Heritage / Section 7.5.1	This section should include the rectification of all available aerial photographs with an assessment of images available online such as Google Earth.
47	Chapter 7 Cultural Heritage / Section 7.6	It would be useful to understand the proximity of the assets to the scheme.
48	Chapter 7 Cultural Heritage / Section 7.6.7	Tilbury Fort and Coalhouse fort as combined monuments forming defensive structures along the Thames could be viewed as Very High Value. This should be discussed with Historic England.
49	Chapter 7 Cultural Heritage / Section 7.6.7	Consideration should be paid to the value rating of Tilbury Fort as a historic building. As a significant heritage site, access, supporting tourism and celebrating heritage should be considered. Impact of the proposed crossing on views, access and economic viability for the fort and other heritage sites (Coal house fort for instance) should be considered. These sites provide am important sense of community, pride, space for leisure activities, visual and scenic landscapes which all impact on health and well-being.

50	Chapter 7 Cultural Heritage / Section 7.6.7	This list is not exhaustive, for example The Grade II* Riverside Station is not listed, though it is within the search area of Fig.7.1. It is accepted that this list will continue to evolve.
51	Chapter 7 Cultural Heritage / Section 7.7.4	It has been recommended that as an initial survey a programme of aerial photographic rectification is undertaken as part of the desk based phase of work. This will then feed into the follow up stages of ground investigation.
52	Chapter 7 Cultural Heritage / Section 7.7.4	Will the analysis of the aerial photography and LIDAR be rectified and mapped to provide an accurate representation of identified archaeological remains? This would be useful.
53	Chapter 7 Cultural Heritage / Section 7.7.4	Applicants should also be using the Historic Environment Characterisation Work undertaken by Essex County Council for the Thurrock area, and should also look at the work undertaken by Chris Blandford on Characterisation in the Thames Gateway.
54	Chapter 7 Cultural Heritage / Section 7.7.6	Visual inspection of listed buildings and other designated assets should be carried out as part of the desk based assessment, not following results of it.
55	Chapter 7 Cultural Heritage / Section 7.7.6	Is 'Aerial Photogrammetical Survey' the rectification and mapping of features identified on the aerial photographs and LIDAR? If so this should be done in conjunction with the desk based assessment.
56	Chapter 7 Cultural Heritage / Section 7.7.6	Trial trenching should be used in its own right, not just related to geophysics. For those areas where geophysics cannot be used, a general trial trenching evaluation at 5% should be considered.
57	Chapter 7 Cultural Heritage / Section 7.7.6	Consideration needs to be given in any EIA for the appropriate recording of the scheduled monument at the junction with the A13 considering the extensive damage that will be caused. Consideration needs to be given to undertaking a total excavation of the scheduled area and associated elements of this nationally important complex.
58	Chapter 7 Cultural Heritage / Section 7.7.6	ZVI should be defined in conjunction with heritage consultees. This will be in accordance with Historic England's Advice Note 3.
59	Chapter 7 Cultural Heritage / Section 7.7.6	Setting assessments of assets should be carried out at DBA stage. Note that setting does not solely relate to intervisibility and views but can relate to sound, tranquillity, relationship with the landscape, air quality etc (see Historic England guidance in GPA3).
60	Chapter 7 Cultural Heritage / Section 7.7.8	The Local Authorities, as curators, should be undertaking monitoring visits to all of the sites investigated.
61	Chapter 7 Cultural Heritage / Section 7.7.8	Where possible, the number of separate contractors should be kept to a minimum to ensure consistency of results. A consortium of large contractors has been successful on large scale projects in the past.
62	Chapter 7 Cultural Heritage / Section 7.7.10	There should be consideration to using side scanning sonar for the Thames, or this should be discussed with Wessex Archaeology who probably have already undertaken this for London Gateway.
63	Chapter 7 Cultural Heritage / Section 7.7.11	In addition to Noise/Traffic Impact, the assessment will need to cross over with reports/analysis into associated lighting and potential light pollution, as this also impacts upon Cultural Heritage. This assessment can utilise Thurrock Councils Night Time Skys data/resources.
64	Chapter 7 Cultural Heritage / Section 7.7.12	What is the methodology for determining where the study area can be refined? This needs to be clarified.
65	Chapter 7 Cultural Heritage / Section 7.7.13	This states that the ZVI used will be the same as for the landscape assessment. In the landscape chapter the ZVI is defined as a 2km buffer around the application boundary. However, it is stated in Section 7.7.12 that the study area for cultural heritage will be 1km. Clarification is needed in regard to the ZVI study area that will be used in the cultural heritage assessment. The study area for cultural heritage should be extended further than 1km for certain receptors that lie outside the 1km buffer but which may experience visual impacts from the proposed development.
66	Chapter 7 Cultural Heritage / Section 7.7.13	Designated assets outside of the study area requiring assessment should be identified by the applicant and should be agreed with the consultees.
67	Chapter 7 Cultural Heritage / Section 7.7.14	Assessments should always assess 'worst case scenario' for all elements of the proposed.
68	Chapter 7 Cultural Heritage / Section 7.7.26	The term 'harm' relates to any adverse change in the heritage significance of an asset and should not be categorised simply into a large adverse effect. Substantial harm is a more nuanced categorisation of a change in significance which is separate to the DMRB significance of effect terminology. Under the methodology in the scoping report only a high or very high value asset could be subject to substantial harm, whereas substantial harm could be subjected to any heritage asset, regardless of value. For instance, demolition of a grade II listed building would certainly constitute substantial harm.
69	Chapter 7 Cultural Heritage / Section 7.7.26	It would be more appropriate to discuss the terms of harm with all of the specialist heritage advisors not just Historic England.
70	Chapter 7 Cultural Heritage / Section 7.8.1	No impact on archaeological remains has ever been shown through ground movements associated with the TBM. Also it is not vibrations from the TBM, but ground settlement following the tunnelling which can effect historic structures.
71	Chapter 7 Cultural Heritage / Section 7.8.3	In relation to changes in groundwater level, the impact on the grazing marsh area and the potential heritage assets it contains will need to be assessed.
72	Chapter 7 Cultural Heritage / Section 7.8.5	This section notes that there may be some beneficial impacts to conservation areas and listed buildings outside of the study area through the amelioration of the deteriorating effects of traffic pollution. These effects should not be considered if they lie outside of the study area. If these effects are to be considered then the study area needs to be widened and any other adverse effects within the study area would also need to be reported.
73	Chapter 7 Cultural Heritage / Section 7.9	Mitigation should include measures set out in the CEMP/COCP to ensure best practice construction methodologies and ensure accidental damage to heritage assets is avoided.
74	Chapter 8 Landscape / Section 8.2.1	The LVIA should have regard to the new (currently draft) Landscape Character Assessment for Thurrock (a timetable for its completion should be agreed by end of November 2017). In addition, consideration should also be given to the Land of the Fanns Landscape Character Assessment which covers a large proportion of the affected landscape north of the Thames. The Land of the Fanns is an HLF Landscape Partnership scheme which should be considered as part of any landscape, ecology and cultural heritage assessment.
75	Chapter 8 Landscape / Section 8.2.1	It suggests that the text in italics is taken directly from the NPSNN as it appears in italics within speech marks, however, the bullet points are not a full representation of that provided within paragraphs 5.151-5.155 of the NPSNN. In addition to this it is noted that sentences that may not align with the scheme vision are actually left out altogether. This appears misleading and a misrepresentation of the NPSNN.
76	Chapter 8 Landscape / Section 8.2.6	No mention is made of the relative tranquillity of the upper Mardyke Valley where there are few dwellings and no street lights. This area should also be assessed for the combined effects of noise and visual intrusion in the same way as the Thames Estuary.
77	Chapter 8 Landscape / Section 8.2.14	Need to be clear on where off-site mitigation may be required as this will need to be included in the EIA and DCO.
78	Chapter 8 Landscape / Section 8.4	Natural England's proposed England Coast Path needs to be considered in the assessment. This path is planned to go through Tilbury and will be an important leisure trail from the Thames Nature Reserve at Mucking through to the Coalhouse Fort and onto Tilbury Fort, and the ferry crossing to Gravesend. Natural England will need to be consulted on this.
79	Chapter 8 Landscape / Section 8.4.4	Reference is made to the Saxon Shore Way - this is only on the Kent side of the river. The reference should be Thames Estuary Path (including the Two Forts Way). Grangewaters is a recreation site close to the proposed route so should be included on the list of recreation/sports sites.
80	Chapter 8 Landscape / Section 8.5	The Council will need to agree any proposed viewpoint receptors in advance of the LVIA commencing. These will need to ensure that all settlements are assessed, as well as sites used for public recreation, cultural heritage assets and public rights of way and existing transport routes. Long views will also need to be assessed e.g. from Thorndon Park in Brentwood. Some future baseline viewpoints will also need to be considered.

81	Chapter 8 Landscape / Section 8.5.1	Reference to Identifying TPOs - clearly this does not remove the need to a proper arboricultural assessment as not all good quality trees are covered by a TPO e.g. they are not placed on council owned trees or on trees where there is no perceived threat.
82	Chapter 8 Landscape / Table 6.2	Reference is made to the Local Character Areas defined in the current Landscape Capacity Study. The list should follow the new LCA which should be finalised soon.
83	Chapter 8 Landscape / Section 8.7	There is a lack of methodology for photomontage production, it is presumed these would be produced for year 1 and year 15 but this is not stated. There is also no mention of the methodology for production of the ZTV, will this be done using ground modelling software etc.?
84	Chapter 8 Landscape / Section 8.7.3	It is not clear whether the night time impacts will simply be informed and presented in line with the Lighting assessment undertaken in accordance with the Institute of Lighting Professionals Guidelines or whether it will be assessed from a LVIA perspective. The lighting assessment does not consider the sensitivity and change in view in the same way as an LVIA should. The lighting assessment simply looks at changes in lighting levels, not whether a series of lights will now be visible against an otherwise dark landscape etc/ take into account existing views, sensitivity to change of a landscape/view and the likely magnitude of change etc.
85	Chapter 8 Landscape / Section 8.7.3	It's not clear whether tranquillity would be assessed for each character area. It does not appear to be mentioned. Only that tranquillity will be assessed on recreational receptors within AONB and on cycle routes and LDF. Tranquillity needs to related to character and be assessed for all landscape character areas within study area.
86	Chapter 8 Landscape / Section 8.7.8	No justification/explanation is given to the decision to adopt a 2km Zone of Visual Influence. This should follow standard best practice and identify a ZTV which is likely to be much larger. While this is not too much of an issue for the land south of the A13 the land to the north is much more open. It is likely that the route (which is likely to be elevated through this area) would be very prominent from a long distance e.g. from Thorndon Country Park in Brentwood.
87	Chapter 8 Landscape / Section 8.7.11	As stated previously it is important to take into account approved restoration schemes in the locality (see comment (ID 26) above).
88	Chapter 8 Landscape / Section 8.7.18	It would be clearer to show significance as a matrix rather than a description.
89	Chapter 8 Landscape / Section 8.9	Important to restate the importance of avoiding harm rather than mitigating it. We need to see evidence that design options have been considered that will reduce the landscape and visual harm being caused.
90	Chapter 8 Landscape / Section 8.9.2	Mitigation measures should also include opportunities to restore/recreate historic landscape features such as marsh and fen which would link to biodiversity and water management mitigation. Green bridges will be important for public rights of way and biodiversity mitigation and the Council will wish to see several provided.
91	Chapter 8 Landscape / Section 8.10.1	Agree there is no LVIA aspects than can be scoped out.
92	Chapter 8 Landscape / Figure 8.1	Include Grangewaters Outdoor Pursuits Centre. Thames Chase shown as the Visitor Centre only. It needs to include the whole designated boundary. It also shows the limited ZVI study boundary. This should be based on an appropriate ZTV with obscured viewpoints scoped out. Present approach is not considered acceptable as the boundary is arbitrary and not based on a sound justification.
93	Chapter 8 Landscape / Figure 8.1	The drawing title suggests that visual receptors are shown but none are actually identified- it appears more as a constraints plan only.
94	Chapter 8 Landscape / Figure 8.2	Need to agree LCA areas.
95	Chapter 8 Landscape / Figure 8.2	Would benefit from reference other than just colour from Gravesham LCA as there are lots of colours.
96	Chapter 9 Biodiversity / Section 9.2.8	Ecological corridors/networks should also have regard to the landscape character and seek to restore/enhance landscape features.
97	Chapter 9 Biodiversity / Table 9.1 and Section 9.7.8	Table 9.1 and Appendix C States that Extended phase 1 habitat survey (botanical) of application boundary + 50m buffer. Paragraph 9.7.8 states the extended Phase 1 survey covers the application boundary plus a 500m buffer. This needs to be clarified and consistent. A 500m buffer would be expected to be used for Extended phase 1, which will increase for some protected species.
98	Chapter 9 Biodiversity / Table 9.1	Have barn owls been considered? They have a buffer of up to 1.5km from new roads. There is no mention in the table of this, they need to be considered in the assessment.
99	Chapter 9 Biodiversity / Table 9.1	Bat emergence and activity surveys - make sure to include Hangman's Wood and Deneholes SSSI as designated for its bat roost.
100	Chapter 9 Biodiversity / Table 9.1	Invertebrates - agree that surveys of Thames Terrace Grasslands and Ancient woodland are important but should also consider any brownfield. Open Mosaic Habitat sites such as Blackshots Nature Park LWS which are designated in part due to their value for invertebrates. OMH is also a s41 HPIE.
101	Chapter 9 Biodiversity / Section 9.5.4	The project is over a 6 year period and there is no suggestion of a long-term fish monitoring project. Can you confirm that the Environment Agency are conducting this?
102	Chapter 9 Biodiversity / Section 9.5.4	Pollution associated with engineering works during the construction phase of the project, no mention of water quality surveys to be conducted during the works. Confirmation needs to be provided as to whether this will be covered in the proposed survey mentioned in Table 9-2- Collection and analysis of sediments and contaminant samples.
103	Chapter 9 Biodiversity / Table 9.5	The boundaries of the Local Wildlife Sites around Tilbury Power Station and Goshems Farm have been amended as a result of the LWS Review carried out in 2016 but which is still in draft (nearly finalised). They should work to the revised boundaries as they make more sense on the ground following recent restoration works at Goshems Farm.
104	Chapter 9 Biodiversity / Section 9.7	Agree with guidance referenced.
105	Chapter 9 Biodiversity / Table 9.6	Good comparison of sources for determining valuation/importance.
106	Chapter 9 Biodiversity / Section 9.7.12	It is important that any surveys take into account the ways animals move through the area and what effects the new route would have - e.g. does it form a barrier to commuting bats - how can these effects be mitigated?
107	Chapter 9 Biodiversity / Section 9.7.15	Future baselines - take into account sites where restoration works should be completed during this period and where restoration is for biodiversity. Agree that while much of area is arable some sites around Goshems Farm and East Tilbury will change during this period.
108	Chapter 9 Biodiversity / Section 9.7.19	CIEEM guidelines proposed to be used to determine significant effects. Significance criteria is based on CIEEM guidelines only, which are used for ecological assessment of non-infrastructure projects in the UK. However, this isn't consistent with other disciplines included within the assessment. As the project is an infrastructure project, the assessment should describe the impacts and significance in accordance with DMRB, where effects of Moderate Adverse or Beneficial and above are considered to be significant. The CIEEM guidelines do not translate this across in a way which is consistent with other topics. Although the CIEEM guidelines should be referred to (as they are the recognised standard for EcIA in the UK), the conclusion to the assessment should also use the terminology outlined within the DMRB to ensure language/consistency is maintained throughout the assessment.
109	Chapter 9 Biodiversity / Section 9.7.20	Consideration of increase of plastics into the marine environment during construction.
110	Chapter 9 Biodiversity / Section 9.8.25	Only details of potential impacts to the qualifying features of the rMCZ during construction are acknowledged in table 9-10. Implications to other species of conservation importance i.e. marine mammals is not listed, although are acknowledged in the text in section 9.8.24.

111	Chapter 9 Biodiversity / Section 9.8.30	Retention of the jetty could also provide substrate for subtidal communities (shellfish, fish species etc.). Possible negative implications of the jetty, re. invasive species habitat, as well as its construction to be covered in the hydrographic modelling. As part of any mitigation procedures, is there any additional opportunities for ecological enhancement within the Projects zone of influence that will enhance the designated sites identified features and support biodiversity and ecosystem services, especially in connection with the marine environment intertidal and subtidal especially.
112	Chapter 9 Biodiversity / Section 9.9.1	Marine mammal mitigation for underwater noise emission during any piling or dredging.
113	Chapter 9 Biodiversity / Section 9.10	Agree that no topics are to be scoped out of the EIA assessment.
114	Chapter 9 Biodiversity / General	In general the Biodiversity section has been prepared following consultations with statutory agencies responsible for nature conservation as well as national and local conservation NGOs. The survey methodology is therefore considered generally appropriate. The key points however is to consider sufficient weight is given to the potential severance of ecological corridors for species such as bats. Also 'temporary disturbance during construction' is for a period of 6 years.
115	Chapter 9 Biodiversity / General	As a general point, access to nature and the impact this can have on human health could also be considered. Access via PRoW offer opportunity for people to have closer access to nature.
116	Chapter 9 Biodiversity / Appendix C Survey Methodology	Has consideration been given for the need for hedgerow surveys to determine if they are important under the Hedgerow Regs. 1997? There is no mention of this survey type specifically.
117	Chapter 9 Biodiversity / Appendix C Survey Methodology	Bats - have crossing point surveys and landscape scale transects been considered as part of the survey methodology? With reference to methods outlined in Berthinussen & Altringham (2015).
118	Chapter 9 Biodiversity / Appendix C Survey Methodology	Bats - surveys proposed to continue 2 hrs after sunset. Natural England advise that transect and emergence/re-entry surveys are extended to 3 hours after sunset to account for late-emerging bat species, such as Horseshoes, if they are likely to be present. Please consider extending survey requirements.
119	Chapter 9 Biodiversity / Appendix C Survey Methodology	Reptiles - proposed methodology of 7 surveys. This will only give presence/absence data. Has consideration been given to understanding population i.e. undertaking 20 surveys or more over a season to establish this?
120	Chapter 9 Biodiversity / Figure 9.1	Local Wildlife Site boundaries around Tilbury Power Station/ Goshems have been amended.
121	Chapter 9 Biodiversity / Figure 9.3	The Priority Habitats don't accord with what is on the ground, though they are of use as a reference.
122	Chapter 10 Geology and Soils / Section 10.1.3	Geological designations and SSSIs etc covered in biodiversity and ecological conservation chapter - these should be included within the geology and soils chapter for completeness.
123	Chapter 10 Geology and Soils / Section 10.1.4	Also interrelationship with the materials chapter.
124	Chapter 10 Geology and Soils / Section 10.4	Any designated sites with direct or indirect geological value should be considered (e.g. if none designated for geological value, those with habitats dependent on underlying geology/groundwater quality etc).
125	Chapter 10 Geology and Soils / Section 10.4.43-10.4.52	It is also worth mentioning the potential margin for error in landfill locations. Not all historic records are accurate and landfill extents can vary and presence can sometimes be unmarked.
126	Chapter 10 Geology and Soils / Section 10.4.68-10.4.72	Is there a reference which can be provided for this information. Is this based on MAFF (1975) data, post 1988 ALC data or ALC survey data?
127	Chapter 10 Geology and Soils / Section 10.4.73 and 10.4.74	Is there any indication on the potential number of individual farms present?
128	Chapter 10 Geology and Soils / Section 10.6	Key environmental receptors and value section - receptors have been identified but value has not been assigned. It may be helpful to separate geological resources (superficial/bedrock deposits of resource value) from soil resources (ALC etc). Would normally expect to see designated sites dependent on geological conditions/with geological value in this list.
129	Chapter 10 Geology and Soils / Section 10.7.4	It might be worth stating a wider area for controlled water impacts.
130	Chapter 10 Geology and Soils / Table 10.6	Geological site importance is discussed in this table (and also in Table 10.7) but previously it has been stated that this is covered in biodiversity chapter. We would normally expect this to be included. Very High would normally count as international importance (World Heritage Sites etc) with High being National. It may be worth including built environment receptor (concrete structures, buried pipes etc) and including a description for geological resource value.
131	Chapter 10 Geology and Soils / Table 10.7	Definition of magnitude for impacts on superficial/bedrock geological resources (e.g. potential for sterilisation) and for generation of excess quantities of geological materials for re-use elsewhere (tie-in with materials chapter) should be included. Could potentially quantify controlled water quality impacts e.g. changes with regard to Drinking Water Standards (DWS)/Environmental Quality Standards (EQS).
132	Chapter 10 Geology and Soils / Table 10.9	Could the quantity of land owned by a farm also be an important consideration as well? For example, a farm with a greater area of land is likely to be able have a greater degree of diversification, i.e. Crop/ livestock types, whilst a farm with a smaller area of land will have less flexibility.
133	Chapter 10 Geology and Soils / Table 10.10 and Table 10.11	Surely magnitude of impact should be major, moderate, minor (adverse or beneficial), negligible or no change as per DMRB Volume 11 Section 2 Part 5? For Table 10.10, this should also consider severance impacts and changes to drainage.
134	Chapter 10 Geology and Soils / Section 10.8	Impacts relating to the generation of excess geological materials should be included (and tied in with the materials chapter).
135	Chapter 10 Geology and Soils / Section 10.8.5	Additionally effects include, the necessity for dewatering and requirement to manage potentially significant quantities of contaminated groundwaters, and the generation of significant quantities of potentially hazardous waste/soils requiring treatment.
136	Chapter 10 Geology and Soils / Section 10.8.6	A Foundation Works Risk Assessment may be required in areas of piling/other foundations works in accordance with EA guidance to determine the potential likely effects relating to the driving of piles through any contaminated Made Ground/landfilled materials and into the underlying Aquifers, and to identify what mitigation measures will be appropriate for the site.
137	Chapter 10 Geology and Soils / Section 10.8.11	Highlights significant contamination of ground with the potential for migration of land gases from these contaminated areas during construction - report mentions mitigation measures to prevent but should this be more enhanced to include emergency measures for local residents in the event of failed mitigation leading to significant risk to public health? Impacts to human health need to be fully assessed.
138	Chapter 10 Geology and Soils / Section 10.9.1	A Contaminated Land Risk Assessment and Detailed Quantitative Risk Assessment are required.
139	Chapter 10 Geology and Soils / Section 10.9.7	A Soil Management Plan should also be included as part of the Construction Environmental Management Plan (CEMP) (separate from the Materials Management Plan).

140	Chapter 10 Geology and Soils / General	The Council is satisfied that the proposals within the chapter are adequate to address the potential impact of the development with regard to potentially contaminated land as long as the measures outlined in Section 10.9 are implemented. Particular regard should be given to the potential contamination at the former Goshems Farm landfill (THU0048), the ground investigation will need to identify if significant contamination is present here.
141	Chapter 11 Materials / General	A clear understanding of the potential effects for Thurrock needs to be provided. These include increased minerals extraction e.g. opening new quarries or extending the life of existing operations with associated visual and ecological effects. Also storage and disposal of material arising from tunnelling and wider construction, which could provide threats or opportunities in terms of land raising or restoring poor quality former landfill sites. There is issue of wider storage of materials during construction e.g. maximum heights or areas of pallets etc to reduce visual effects.
142	Chapter 11 Materials / Section 11.3.3	The consultation focuses on waste, is there a plan to consult on material availability, such as aggregate?
143	Chapter 11 Materials / Section 11.7	No methodology has been outlined. The methodology needs to be fully defined to ensure full understanding on how the conclusion regarding effects will be reached.
144	Chapter 11 Materials / Section 11.9	Although mentioned in section 11.2.7, the use of a SWMP, MMP and CTMP has not been specified in the mitigation section.
145	Chapter 12 Noise and Vibration / Overview	The Noise and Vibration Section has been produced in a normal ES format and scopes in all the matters relevant to Noise and Vibration for a project of this scale and extent. In general the Council is satisfied that all relevant noise and vibration matters have been included and the proposed standards and methodologies are acceptable. If the Council has any concerns, comments or requests to make relating to specific paragraphs these will be shown below. The remaining paragraphs are accepted.
146	Chapter 12 Noise and Vibration / Section 12.2	There is other over-arching legislation e.g. National Planning Policy Framework which should be referred to and referenced.
147	Chapter 12 Noise and Vibration / Section 12.2.6	Explanation of Noise Important Areas should be included. Clarification as to what they mean and how they are defined should be included.
148	Chapter 12 Noise and Vibration / Section 12.3.2	Local authorities should be consulted - not 'as appropriate'.
149	Chapter 12 Noise and Vibration / Section 12.4.5	Baseline Information - proposed noise survey locations to be agreed. In particular, the Council would like to see a long-term monitor in Baker Street closest to the proposed southbound new road to A13 eastbound slip road.
150	Chapter 12 Noise and Vibration / Section 12.4.6	Noise Action Plans and Noise Important Areas. There are a number of NIAs that may be affected by the operational noise from the project directly or indirectly where traffic flows on local roads are perturbed. These NIAs fall within the responsibility of Highways England and the Thurrock Council Highways Authority.
151	Chapter 12 Noise and Vibration / Section 12.5.3	Baseline Information - The proposed noise survey locations are to be agreed.
152	Chapter 12 Noise and Vibration / Section 12.5.4	The Indicative noise monitoring locations in Figure 12.1 in Appendix F are generally in satisfactory positions. There are potentially some additional locations. In particular, the Council would like to see a long-term monitor in Baker Street that will be closest to the proposed southbound road to A13 eastbound slip. Further monitoring may also be necessary in the south of Tilbury where the link could be preferentially used by the existing Tilbury port traffic rather than the A1089 dock access road.
153	Chapter 12 Noise and Vibration / Section 12.6.3	The study area should be clearly defined by DMRB and not subject to development.
154	Chapter 12 Noise and Vibration / Section 12.6.5	The proposed Receptor Importance/Sensitivity criteria designations in Table 12-1 are acceptable. However, aligning sensitivity to receptors should be more than just professional judgement, references should be made to IEMA guidelines and DMRB Assessment of Environmental Effects.
155	Chapter 12 Noise and Vibration / Section 12.6.8	The LOAEL and SOAEL levels assumed for operational road traffic noise in Table 12-2 are acceptable. It is assumed that LAeq levels are free-field and LA10 levels include a façade reflection component. It is assumed that the day is 16 hours 07:00 to 23:00, night is 8 hours 23:00 to 07:00 and LA10 is 18 hours 06:00 to 00:00. This should be confirmed.
156	Chapter 12 Noise and Vibration / Section 12.6.9	The LOAEL and SOAEL levels assumed for construction noise in Table 12-2 are reasonable. Clarification of the LAeq,T period will be needed. Thurrock Section 61 consents typically have upper noise limit levels with T as 1 hour for more sensitive times of the day and the whole night time period. Weekdays T is 10 hours 08:00 to 18:00 and Saturday T is 5 hours 08:00 to 13:00.
157	Chapter 12 Noise and Vibration / Section 12.7.2	What are the proposed vibration LOAEL and SOAEL level values for construction? Are these to be taken from BS5228-2 +A1:2014? (ref. to paragraph 12.7.18).
158	Chapter 12 Noise and Vibration / Section 12.7.4	Reason for limiting construction study area to 300m needs clarification, including the guidance referred to. What about haul routes?
159	Chapter 12 Noise and Vibration / Section 12.7.13	How will these be calculated and assessed?
160	Chapter 12 Noise and Vibration / Section 12.7.20	Not consistent with other approaches set out , e.g. traffic noise.
161	Chapter 12 Noise and Vibration / Section 12.7.20	It would be useful to have an understanding of what this criteria is, and any potential impacts this would have on local resident's health.
162	Chapter 12 Noise and Vibration / Section 12.7.21	While the noise prediction models proposed are acceptable, Thurrock does not have a proprietary noise model and the Council would like access to the link-level input data used so that individual receptor location levels may be verified using a CRTN spreadsheet program.
163	Chapter 12 Noise and Vibration / Section 12.7.25	While the noise prediction models proposed are acceptable, Thurrock does not have a proprietary noise model and the Council would like access to the plant sound power (or SPL @distance) input data used so that individual receptor location levels may be verified if necessary using a ISO 9613-2:1996 propagation method spreadsheet program.
164	Chapter 12 Noise and Vibration / Section 12.7.23	What is the rationale for not looking at the short term noise impacts as well? Consideration needs to be paid to the role that noise can play in relation to individual's sleep. A good night's sleep is beneficial for health, as it is increases concentration, mood and wellbeing.
165	Chapter 12 Noise and Vibration / Section 12.8.4	Consideration will need to be paid to implementing appropriate mitigation measures to reduce the impact of noise on local residents in Thurrock.
166	Chapter 12 Noise and Vibration / Section 12.8.6	As above, clear mitigation measures will need to be included, to minimise resident's for experiencing sleep disturbance which in turn could affect their mental health and wellbeing.

167	Chapter 12 Noise and Vibration / Section 12.9.2	The construction works will require a CEMP that will include construction work noise. A Control of Pollution Act 1974 Section 61 Prior Consent may also be sought from Thurrock Council. This is not mandatory, but the HE usually require contractors to apply for a S61 for major road construction projects.
168	Chapter 12 Noise and Vibration / Section 12.9.5	The Council understood that all new HE projects and resurfaced carriageways would have a low-noise road surface as standard. Is this now not the case?
169	Chapter 12 Noise and Vibration / Section 12.10	Ground borne vibration from road traffic is unlikely to cause issues and the Council agrees that this may be scoped out of the EIA.
170	Chapter 13 People and Communities / Section 13.1.3	Are changes in traveller views and driver stress relevant to NMUs? - equally are changes in amenity relevant for vehicle travellers.
171	Chapter 13 People and Communities / Section 13.1.3	Local and wider economy should be expanded to include opportunities and threats to local economy. Increased accessibility could improve the attractiveness of locations in Thurrock for new and existing business and could enable these to be by-passed for other locations.
172	Chapter 13 People and Communities / Section 13.2.8	The NPSNN expects applicants, where possible, to improve access on and around the networks - "applicants are advised to seek to deliver improvements that reduce community severance and improve accessibility" . . . It is not clear at this stage how these improvements will be achieved and this should be scoped into the EIA.
173	Chapter 13 People and Communities / Section 13.3	Refers to consultation that has been undertaken and is proposed - there is no mention of a wide range of community and business groups, businesses and residents, amenity groups etc. Clarification that this will be done and about what will be done is required.
174	Chapter 13 People and Communities / Section 13.3.2	It should be made clear that consultation with Thurrock will continue.
175	Chapter 13 People and Communities / Section 13.3.2	Third bullet refers to 'identified facilities' - but there are many that are not referred to here. I also note that the red line now includes Coalhouse Fort, a scheduled Ancient Monument that the council manages for conservation and leisure. Which is not included. Needs to be a cross reference to wider consultation
176	Chapter 13 People and Communities / Section 13.3.14	As outlined previously, the use of green tunnels/underpasses and bridges to replace any PRoWs permanently affected by the development would be beneficial in creating visually pleasing environments as well as the potential to reduce some of the impacts of air pollution. Consideration should be paid to how the local walking and cycling infrastructure will be significantly enhanced to across the borough to mitigate congestion/air pollution/severance across the area.
177	Chapter 13 People and Communities / Section 13.4.13	Coalhouse Fort needs to be included.
178	Chapter 13 People and Communities / Section 13.4.19-13.4.22	This Scoping Report does not acknowledge all of the concerns Thurrock faces in terms of health and wellbeing which could be further impacted by the proposed crossing - in particular the variation across the borough in terms of lower life expectancy, higher cancer rates, higher mortality due to cardiovascular disease and respiratory illness, deprivation levels etc. Please see additional information provided in support of a HIA.
179	Chapter 13 People and Communities / Section 13.4.25	Consideration of other routes, i.e. footways, crossings, long distance footpaths, national trails etc. is required.
180	Chapter 13 People and Communities / Section 13.4.25	Also needs to take into consideration the proposed Natural England proposed English Coastal Path (from Tilbury to Southend).
181	Chapter 13 People and Communities / Section 13.4 and 13.5	There doesn't appear to be any baseline information for existing amenity. Are there any designated crossings/ bridges or underpasses for NMUs?
182	Chapter 13 People and Communities / Section 13.4 and 13.5	The baseline would benefit from including more detail on the settlements that are likely to be directly affected by the scheme. Including reference to the travellers community that is located on the proposed route.
183	Chapter 13 People and Communities / Section 13.4 and 13.5	Provide more details need to be provided on the development sites in the area which will be considered in the assessment. For example a table listing them.
184	Chapter 13 People and Communities / Section 13.4 and 13.5	Baseline information on existing severance needs to be included. Given the level of detail on other topics, this feels like a significant omission.
185	Chapter 13 People and Communities / Section 13.4 and 13.5	It would be useful to include statistics in the local and wider economy baseline section to support the text.
186	Chapter 13 People and Communities / Section 13.5.1	It's not clear if NMU surveys will be undertaken? If there would be permanent modifications to NMU facilities, with the potential for significant effects, these should be undertaken.
187	Chapter 13 People and Communities / Section 13.6.3 and 13.6.4	What is the value of these receptors (i.e. NMUs and vehicle travellers)? Would expect NMUs to be highly sensitive to change.
188	Chapter 13 People and Communities / Section 13.7	What engagement will be carried out with representatives of the community assets that will be affected by severance or demolition, and key interest groups such as those interested in cycling and walking in the local area affected by the severance of the PRoWs, in order to gain local knowledge on the effects on impacted assets.
189	Chapter 13 People and Communities / Section 13.7.4	Refers to the impact on Community and Private Assets caused by demolition and land take, the severance of catchment areas could have a significant impact particularly in the short to medium term on a variety of such interests.
190	Chapter 13 People and Communities / Section 13.7.4	Community and Private Assets: Clarity on what assessment will be done in the local impact and wider impact areas is needed. More reference to the relevant parts of DMRB Vol 11 Section 3 Part 6 and how the method will comply with the guidance.
191	Chapter 13 People and Communities / Section 13.7.7	The methodology for assessing impact on health and wellbeing is not acceptable - a full HIA should be undertaken with recommended best practice methodology (for e.g. HUDU), Thurrock Council Public Health and Public Health England should be consulted on the methods for full HIA.
192	Chapter 13 People and Communities / Section 13.7.8	Refers to an assessment of impact on development land being based on planning applications and development plans. This should consider the strategic planning sites set out in the new Local Plan. The Council also has regeneration strategies which promote growth in locations and have been the basis for generating funding from other sources for implementation-these should also be included in scope. Also needs to recognise that the scheme could improve the attractiveness of some development land and reduce the attractiveness others impacted by noise, reduced site areas etc.

193	Chapter 13 People and Communities / Section 13.7.8	Development Land: Clarity on what assessment will be done on the effects of development land is needed (not just identifying what development land is in the area). Will this focus on land taken, on accessibility or other factors?
194	Chapter 13 People and Communities / Section 13.7.9	Local and wider economy: detailed modelling of the wider economic impacts was published for the appraisal of the shortlisted options. Will the method used to assess economic impacts in the EIA build on this?
195	Chapter 13 People and Communities / Section 13.7	Changes to Journey Length and Severance: The method steps could be set out more clearly. Existing journey lengths will need to be identified by mapping routes to key community facilities, and the changes to the journey lengths assessed. The scoping report states "The methodology to identify existing non-motorised traffic will be agreed with local authorities". We recommend that traffic counts are carried out at the site of PRoWs, using video monitoring at set times to identify the traffic at these routes. The data should then be used to identify the number of people affected by the changing journey length. This needs to be carried out in line DMRB Vol 11 Section 3 Part 8 by relevant transport planning specialists.
196	Chapter 13 People and Communities / Section 13.7.11	Are NMU surveys going to be undertaken? DMRB Volume 11 Section 3 Part 8 Chapter 9 states that 'counts of pedestrians and others should be undertaken where this is necessary to achieve the objective of this stage of assessment' i.e. where there are going to be permanent changes to journey times, and safety and amenity is likely to be prejudiced. Furthermore, where 'pedestrians and others' travel patterns are complex and a scheme could have a major impact, origin destination surveys should be considered'.
197	Chapter 13 People and Communities / Section 13.7.14 and 13.7.15	Table references are incorrect. Are Table 13-5 and Table 13.6 still in the assessment? It isn't clear what the scale of impacts will be for changes in journey length or amenity or what the methodologies are based on, without the tables.
198	Chapter 13 People and Communities / Section 13.7.15	How about changes in barriers between people and traffic as well? In addition, the ES should at least include a reference to forecast traffic flows (DMRB Volume 11 Section 3 Part 8 Chapter 4) for routes.
199	Chapter 13 People and Communities / Section 13.7.15	Refers to changes to amenity in terms of impact on pleasantness of the journey and driver exposure to fumes etc. Amenity of people living and working in the area and using established leisure facilities such as parks and PROWS should be in scope.
200	Chapter 13 People and Communities / Section 13.7.21	What is the justification for a 200m local study area? Additionally, the Local Study Area needs to be more flexible. Some impacts could be outside of this zone such as severance of catchment areas for community and private assets, changed traffic flows etc.
201	Chapter 13 People and Communities / Table 13.4	States that the local study area is an area approximately 200m from the application boundary. It is generally accepted that 250m is the appropriate study area for the majority of people and community effects.
202	Chapter 13 People and Communities / Section 13.7.22	It is not clear what the study area will be for effects on driver stress.
203	Chapter 13 People and Communities / Section 13.7.28	States "The ES will set how significance of effects are to be determined for the People and Communities topic". The approach to significance levels should be set in the scoping report. There are tables referred to earlier in the method. However, they appear to have been removed from the report. This needs to be clearly set out in the ES.
204	Chapter 13 People and Communities / Section 13.8.3	States "As outlined in section 1.14 of this EIA Scoping Report". There doesn't appear to be a section 1.14. More detail on the impacts on properties and community assets would be beneficial.
205	Chapter 13 People and Communities / Section 13.8.14	Will all PRoWs be mitigated by a footbridge or underpass? Or will they be provided at appropriate locations as determined by NMU Surveys? The mitigation for PRoWs is not clear and needs to be clarified. The use of green bridges and underpasses to replace any PRoWs that are permanently affected by the development would be beneficial.
206	Chapter 13 People and Communities / Section 13.8.15	What about severance of the community in regard to the crossing severing links across the community and essentially creating two sets of communities that work in isolation from each other?
207	Chapter 13 People and Communities / Section 13.9	The mitigation proposals for NMUs are not clear - Will permanent diversions or crossing be provided for NMUs?
208	Chapter 13 People and Communities / Section 13.9	Proposals should also include enhancements for the existing public rights of way networks, which should take into consideration Thurrock's Rights of Way Improvement Plan (which is currently in draft form), particularly it's aims to increase east to west connectivity for equestrians.
209	Chapter 13 People and Communities / General	It is not clear from reading the section what sources of information are intended to be used. There is reference to assessments of business, community health etc. but there are existing sources of information that would inform this assessment.
210	Chapter 14 Road Drainage and the Water Environment / General	A key concern the Council has is that the redline boundary only takes account of the area needed for the road itself and does not consider the space that will be required for attenuation storage and flood zone compensation. It is critical to consider this as early as possible so that we do not have any space issues further down the line.
211	Chapter 14 Road Drainage and the Water Environment / General	With regards to WFD, there is no mention of whether any of the waterbodies effected by the proposals are heavily modified waterbodies (HMWB). This is an important factor which should have early consideration - liaison with the Environment Agency at an early stage to discuss whether there are any mitigation measures for the waterbodies which could be delivered as part of the project should be undertaken.
212	Chapter 14 Road Drainage and the Water Environment / General	Again with regards to WFD, there is no specific mention of watercourse crossing design (where new watercourses are being crossed) which is a key consideration in highways schemes and the design for which needs to involve clear span bridges and not culverts etc. Early communication with Environment Agency on this will be essential.
213	Chapter 14 Road Drainage and the Water Environment / Section 14.2.4	It is stated that a WFD assessment will be prepared and appropriate design and mitigation measures would be incorporated into design to facilitate WFD compliance - will this be a separate, standalone assessment or included as part of the environmental statement? Additionally, the WFD will need to be considered as part of project design development (as an ongoing input) to facilitate WFD compliance, then a WFD assessment will need to be produced when the final design is frozen/confirmed so that compliance can be proven.
214	Chapter 14 Road Drainage and the Water Environment / Section 14.2.7	It is noted that consultation with relevant regulatory authorities with regards to consents and licensing for project activities will occur (this is good), but it is also noted that there will be engagement with the 'ecology team'. This is a bit vague, does it mean ecology team at H.E or at the council, at the Environment Agency, or within a consultancy?
215	Chapter 14 Road Drainage and the Water Environment / Section 14.2.7	Text says 'none of these waterbodies [unnamed rivers and ordinary watercourses] are monitoring under the second cycle of the water framework directive', although they are not monitored under WFD anymore, it would be worth clarifying that works affecting the waterbodies still needs to comply with WFD, as they should be assessed as part of the downstream waterbody (as cumulative effects will need to be accounted for).
216	Chapter 14 Road Drainage and the Water Environment / Section 14.3.2	We would expect compliance Essex County Council's (ECC's) Sustainable Drainage Systems Design Guide, Non-statutory technical standards for sustainable drainage systems, The CIRIA SuDS Manual (C753), BS8582 Code of practice for surface water management for development sites. We would aim to treat the development consistently with major planning applications which we are a consultee for. If evidence can be provided as to why the criteria cannot be achieved we may accept a lower standard.

217	Chapter 14 Road Drainage and the Water Environment / Section 14.4	There is no mention of WFD objectives for the waterbodies within the study area. This should be clarified including where they are the study area, current status, HMWB classification and objectives.
218	Chapter 14 Road Drainage and the Water Environment / Section 14.5.2 and 14.5.5	Agreed there is probably enough baseline data available to characterise quality of surface water receptors, though as noted, approach will definitely require confirmation from EA. The Water Features Survey also sounds like a very suitable and sensible approach to verify/check baseline data.
219	Chapter 14 Road Drainage and the Water Environment / Section 14.5.6	The Thames Local Flood Risk Management Strategy including the Critical Drainage Areas included in this document should be considered. We would expect to see a detailed analysis of the impact of the scheme with reference to the latest surface water modelling in the Surface Water Management Plan. Any other relevant document should also be considered.
220	Chapter 14 Road Drainage and the Water Environment / Section 14.5.8	It must be ensured that infiltration testing and groundwater testing in line with BRE 365 is conducted. In line with the discharge hierarchy, infiltration is first preference. Supporting infiltration tests will need to be provided if this is the proposed method and should be demonstrated that any infiltrating water will not be contaminated. The next preference is to discharge to watercourses, then sewers as a last resort (evidence from the water company of available discharge capacity to be provided if this is the proposed method). If discharging to the estuary then tide locking and surcharging must be considered.
221	Chapter 14 Road Drainage and the Water Environment / Section 14.5.9 and 14.5.10	Methodology regarding sediment contaminants to create a 'baseline' sounds sensible, particularly initial consultation with EA/MMO/PLA for any sediment analysis data prior to undertaking any sampling. Comparison to CEFAS criteria/guidance also sounds very appropriate.
222	Chapter 14 Road Drainage and the Water Environment / Table 14.2	River Thames Estuary has been assigned 'medium' value for water quality with rational that the waterbody is currently at moderate status. The Council disagrees with this - just because the waterbody isn't in good condition (and may never be) it does not mean that the water quality should be valued any less. The value should be high/very high, as the project must present no deterioration to WFD status. The Council queries whether WFD waterbody status should be used as a rationale for receptor value, if a WFD assessment is being done separately to the assessment of effects.
223	Chapter 14 Road Drainage and the Water Environment / Table 14.2	Same comment as above but for Mardyke waterbody - value for water quality should be high/very high status.
224	Chapter 14 Road Drainage and the Water Environment / Table 14.2	Unnamed main rivers and ordinary watercourses - value for water quality is 'low', with rationale that the waterbodies are unclassified under WFD with 'low rarity' at local scale. These two should be split up in to two separate categories (main rivers, and then ordinary watercourses and drainage ditches). The value for main rivers should be at least medium if not high. The value for the latter might be medium.
225	Chapter 14 Road Drainage and the Water Environment / Section 14.7	Methodology for assessment of potential effects on water environment following DMRB guidance, study area/assessment periods/future baseline/significance criteria all sound appropriate. Same applies to the FRA.
226	Chapter 14 Road Drainage and the Water Environment / Section 14.7.12	The Essex SuDS Guide and CIRIA SUDS Manual C753 provides an index approach to mitigating surface water /groundwater pollution which should be followed. This may help to pick appropriate SuDS in terms of water quality requirements.
227	Chapter 14 Road Drainage and the Water Environment / Section 14.7.15	The EA updated climate change allowances should be referred to.
228	Chapter 14 Road Drainage and the Water Environment / Section 14.7.15	Consideration should be paid to the impact of flooding on local resident's health. Flooding can result in loss of a home and possessions, place of work and as such can have a major impact on mental health and wellbeing. More severely flooding could result in loss of life and family members left behind may experience poor mental health through bereavement (see justification for a full HIA provided). Flood mitigation measures will be of vital importance in relation to the proposed development. The selection of flood defences is also vitally important to the visual amenity and character of the local landscape, as well as access to the riverfront.
229	Chapter 14 Road Drainage and the Water Environment / Section 14.7.15	How water pollution will be mitigated should also be included in the FRA.
230	Chapter 14 Road Drainage and the Water Environment / Section 14.8 and 14.9	It must be ensured that during construction and operation, flood risk or water pollution is not increased off site. If any features that will be used to manage surface water during construction will also be used as part of the final drainage scheme, it must ensured that appropriate features are in place to stop pollution/sediment entering these features. Any final surface water features should be fully inspected to ensure they are working efficiently.
231	Chapter 14 Road Drainage and the Water Environment / Section 14.8	Description of significant effects (construction and operation)seem comprehensive and sensible.
232	Chapter 14 Road Drainage and the Water Environment / Section 14.9	Potential mitigation measures seem sensible, however as part of the attenuation storage, opportunities to (re) create new wetland features, e.g. fens on the Mardyke, to also benefit landscape and biodiversity need to be considered.
233	Chapter 14 Road Drainage and the Water Environment / Section 14.10	Agreed that no aspects can be scoped out at this stage.
234	Chapter 14 Road Drainage and the Water Environment / Figure 14.1	SuDS should be located outside of undefended Flood Risk Zones. Additional volumes of water shown to flow to the site must be stored for/accommodated to ensure no increase in flood risk as a result of the development.
235	Chapter 15 Climate / Section 15.4	The baseline information does not mention and actual average temperatures, rainfall etc., only observed changes, so there is no base to start from. Would have expected to see average met data for the South East for Temperature, Rainfall, Wind, Sunshine and Air Frost, etc.
236	Chapter 15 Climate / Section 15.4.4	Bearing in mind the design life for the tunnel is 120 years, why has the 2080 scenarios not been taken into account?
237	Chapter 15 Climate / Section 15.4.5	There is no mention of local GHG emissions to the scheme, or embodied carbon from the construction industry. Bearing in mind the UK construction industry is the largest consumer of natural resources with an average of over 400 million tonnes of material consumed every year. This accounts for approximately 10% of the total UK carbon emissions (Embodied Energy and Carbon, ICE (Accessed September 2017)- https://www.ice.org.uk/knowledge-and-resources/briefing-sheet/embodied-energy-and-carbon).
238	Chapter 15 Climate / Section 15.7	No reference has been made to Highways England Major Projects' Instructions 'Environmental Impact Assessment: Implementing the Requirements of 2011/92/EU as amended by 2014/52/EU (EIA Directive)' (MPI-57-052017).

239	Chapter 15 Climate / Section 15.7.4	No mention of embodied carbon from use of materials in construction.
240	Chapter 15 Climate / Section 15.7.6	Are you using any particular methodology to carry out the climate change risk assessment? Not clear from the text.
241	Chapter 15 Climate / Section 15.7.10	Clear and adequate mitigation measures at both the construction and operational phases of the project will be required to reduce the levels of GHG emissions, which in turn will aid in reducing the impact of climate change in the borough and wider areas. This will also work towards reducing poor air quality which can be detrimental to human health (for example leading to premature mortality and exacerbation of conditions such as Asthma and COPD). Climate change can lead to more extremes in the weather and is predicted to lead to hotter summers. In terms of health hotter summers may lead to increased A+E attendances related to heatstroke and other heat related ill health. Extreme weather events should be considered in terms of impact of this proposed crossing and consideration for mitigation measures such as tree planting which can provide shade and SUDS as well as other health benefits.
242	Chapter 15 Climate / Table 15.2	Although mentioned further on in the chapter, there is no mention in this table of embodied carbon from materials used in construction, which for an average highways scheme will make up approximately 70%-80% of the construction carbon footprint.
243	Chapter 15 Climate / Table 15.3	Again there is no mention of embodied carbon associated with materials in the GHG assessment. This should be considered.
244	Chapter 15 Climate / Section 15.7.17	General comment - PAS2080 was bought in to try and reduce carbon and cost across the infrastructure industry, is any effort going to be made to encourage Low Carbon design by monitoring Carbon throughout the project not just at the end with HE's Carbon Calculation tool?
245	Chapter 15 Climate / Section 15.8.9	When the Project is operational, i.e. has vehicles on it, the GHG emissions from the increased volume of traffic has the potential to be significant. Why is this not considered here?
246	Chapter 16 Cumulative Effects / General	Consultation with the planners at Thurrock Council should be undertaken to agree on the final list of developments to be included in the cumulative assessment.
247	Chapter 16 Cumulative Effects / General	Tilbury Energy Centre has not been included within the list of developments for inclusion in the cumulative assessment. This is an NSIP located adjacent to the proposed development. Due to the proximity of all three NSIPs (Tilbury2, Tilbury Energy Centre and Lower Thames Crossing) the cumulative effects of these developments need to be thoroughly assessed, including the impacts on traffic due to the increased number of vehicles and HGVs all three NSIPs will create.
248	Chapter 16 Cumulative Effects / General	Consideration needs to be given to the cumulative effect of the various developments (Tilbury II, New power station< Wood processing plant and the Lower Thames routes). How does these various developments impact on the designated assets within the Thames Corridor.
249	Chapter 16 Cumulative Effects / General	Consideration of existing planning applications (both residential and commercial)and developments in close proximity to the proposed LTC and the cumulative impacts of construction and operation of all of these developments in terms of noise, air pollution, access and social cohesion and employment will be vital in developing appropriate mitigation measures that will reduce the impact on local resident's health.
250	Chapter 16 Cumulative Effects / General	The chapter uses guidance outlined in the PINS Advice Note 17, which is the most up-to-date guidance on a methodology for assessing cumulative effects for Nationally Significant Infrastructure Projects.
251	Chapter 16 Cumulative Effects / General	Cumulative impact on wider marine environment also needs to be accounted for.
252	Chapter 16 Cumulative Effects / Section 16.2	The methodology does not include a significance criteria/indication as to how significance will be established. Section 3.4.7 of PINS Advice Note 17 provides information on the requirements of the significance criteria for cumulative effects assessment.
253	Chapter 16 Cumulative Effects / Section 16.2	The approach for the cumulative effects assessment of air quality and noise and vibration should be clarified in the methodology; as per Section 3.4.4 of PINS Advice Note 17, operational assessments for air quality and noise are often already due to the use the traffic forecast results. If this is the case, this should be included for clarity.
254	Chapter 16 Cumulative Effects / Section 16.2.3	For 'Intra-Project Cumulative Effects', reference is made to results being presented in a matrix. Further clarity is required on this method, and sight of the assessment matrix proposed would be useful.
255	Chapter 16 Cumulative Effects / Section 16.2.5	Reference is made to the EIA Regulations (2009) as amended - it is recommended that reference is made to the Infrastructure Planning (EIA) Regulations (2017).
256	Chapter 16 Cumulative Effects / Section 16.2.10	In accordance with the Infrastructure Planning (EIA) Regulations 2017, the assessment of cumulative effects should include 'effects with other existing and/or approved projects'. The assessment methodology presented within the chapter states that all Tiers of 'other development' are included; it is advised that justification is provided to support this, such as the use of the Precautionary Principle.
257	Chapter 16 Cumulative Effects / Appendix E	The PINS Advice Note 17 recommends a table for recording the Long List of 'other developments' and the subsequent Short List. The table contained within Appendix E only contains the Short List of 'other developments', the Long List should also be included for clarity.
258	Chapter 16 Cumulative Effects / Appendix E	It is recommended that a series of drawings are produced to accompany the ES, showing the proposed Scheme in relation to each of the 'other developments' with the ZOIs around both, so that the ZoI overlaps are shown visually.

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