TRO10032 LOWER THAMES CROSSING

WRITTEN REPRESENTATIONS
For Deadline 1 (18th July 2023)

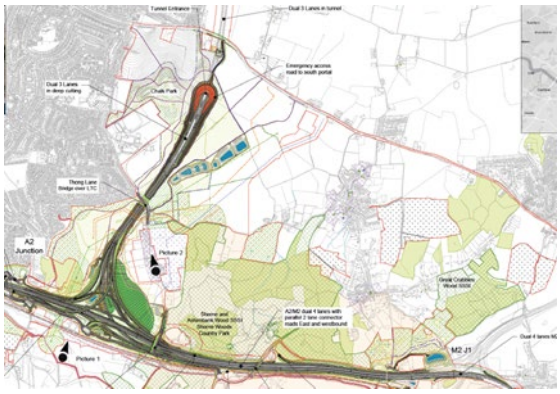
SHORNE PARISH COUNCIL (IP ref 20035603)

SECTION 1: INTRODUCTION

Shorne Parish is located east of Gravesend, a "reverse-L" shape extending from the middle of the A2 in the south to the middle of the Thames in the north. It is bounded by Chalk and the urban border of Gravesend to its west, and Higham Parish and the Medway Towns to the east. It includes several areas of ancient woodland, SSSI's and part of the North Kent Marshes Special Protection Area and the adjacent part of the Ramsar Site.

The Parish includes among others the residential areas of Shorne West, Thong, Shorne Ridgeway, Pear Tree Lane, Shorne Village and Lower Shorne.

Boundaries of Shorne Parish:



National Highways General Arrangements, (May 2022):

As can be seen from comparing the two maps above, the bulk of the LTC project roadbuilding and road widening south of the river Thames will occur within or very close to the Parish. Shorne Parish will, if Highways England's proposal goes forward, suffer enormous disruption and destruction of our local environment south of the A226, losing large areas of land under tarmac and for compensation and mitigation – nearly one third of our total land area. Fall-out from the project will adversely impact everyone in the Parish in various ways.

This land is Green Belt that is supposed to be protected from development and is designated as a Strategic Gap preventing urban sprawl between the built-up areas of Gravesend and the Medway Towns. It is the first remaining piece of countryside north of the A2 as one heads east from central London. The proposal would divide Shorne Parish either side of a massive road and junction

complex, permanently taking and destroying Green Belt land (that we and others have spent decades working to protect) as well as highly productive agricultural land, ancient woodlands, sites of special scientific interest etc. The clean air and tranquillity of the area will be destroyed forever, as will the amenity of local parks, walking routes (some long-distance) and the Area of Outstanding Natural Beauty.

Shorne Parish Council is a Local Authority constituted under the Local Government Acts. The Parish Council has responded to and participated in all the previous iterations of the Lower Thames Crossing proposals, and the assorted, numerous Consultations (six since 2017), which now stretch out over the past decade.

Parish Councillors and other residents are, through living in the area, very familiar with the natural environment east of Gravesend, plus as business, work and personal users of the nearby roads and major roads network are also very familiar with local traffic levels and problems and those on the A2 and M2 and wider road network. We have a variety of professional backgrounds and, while not necessarily expert in specialist matters included in the LTC DCO, we have the detailed local knowledge that the Applicant lacks plus the ability to evaluate the submitted content from first principles.

We are very grateful for the opportunity to provide these representations to the Inquiry.

Preamble:

This document, our Written Representations, reflect the points raised previously in our Relevant Representations, our SoCG and PADS Tracker documents, matters explored in submissions following ISH1, ISH2 and OFH's 1, 2 and 3 and in previous Consultation submissions.

We have tried to cover topics within section titles that seem appropriate however many of the issues interconnect and overlap in both location and timeframe of relevance.

For completeness, and to facilitate other IP's commenting on our WR's as invited for Deadline D2, we apologise that there is some necessary duplication of content with previous submissions.

The DCO Application includes a vast amount of documents which have been difficult to get through. At the same time, much of the baseline data is poor but then highly massaged in favour of the proposals, so it is very difficult sometimes to make find real information so as to make pertinent comments.

Some issues are of major national interest and likely to be debated at a high level, or are outside our specific expertise. We have tried to raise the issues that particularly impact on local residents.

SECTION 2: RATIONALE ISSUES

2.1 The need for the project as presently proposed:

- The need for the LTC at Location C east of Gravesend is predicated upon it being a sufficient and cost-effective solution to problems at the Dartford Crossing and approach roads.
- We disagree that the project as proposed will make a sufficient improvement.
- We furthermore consider that it will merely shift and reproduce the same problems in a new location where costly remedial action will then again need to be taken, if even possible.

- Meanwhile, the existing problems at Dartford will continue and get worse due lack of direct and definitive action being taken at the actual problem location, coupled with Dartford's expansion aims.

2.2 The Scheme Objectives as proposed:

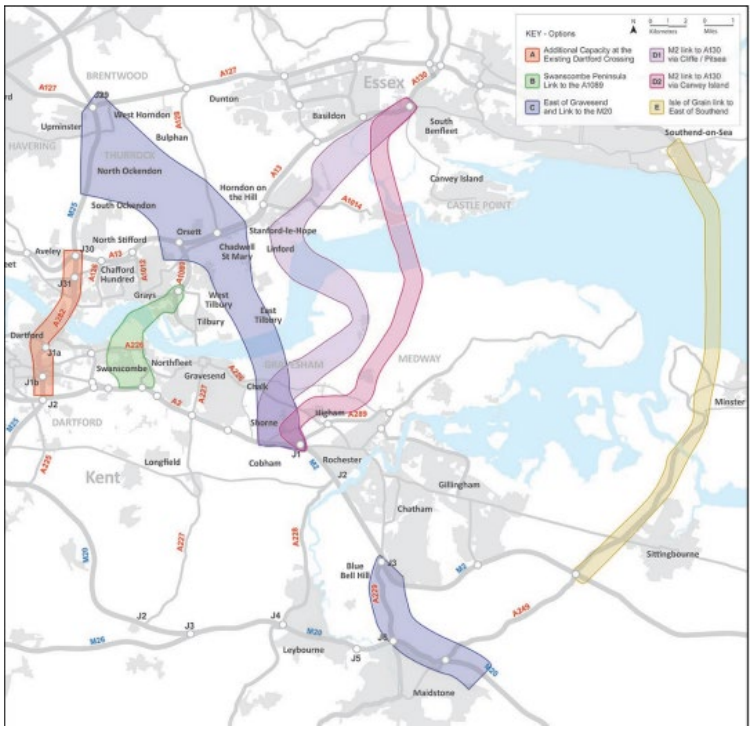
- We are not attempting an in-depth discussion of the Scheme Objectives as it is obvious that they are woolly while highly selected, and do not match with either solving the problems of the Dartford Crossing and Approach Roads or what can actually be delivered in practice by this LTC proposal.
- If one examines the actual problems at the Dartford Crossing and Approach Roads, they are that:
    - The M25 ring road has never been completed as it has a section of A road, the A282, at Dartford.
    - Traffic using the A282 is a mixture of long-distance traffic already on the M25 ring road, medium distance traffic similarly using the M25 ring road for a minor part of its overall journey, and local traffic using the A282 for only a short distance/junction hopping.
    - In total, that traffic is too much for the capacity available and gets held up in a constrained bottleneck, particularly when travelling from south to north, by dividing into two two-lane tunnels plus the need for traffic lights before those tunnels to facilitate lane changing by overheight vehicles and passage of dangerous load convoys.
- The proposed LTC east of Gravesend does not solve any of those physical problems at Dartford, which will still exist.
- Rather than overall providing an alternative route, as they are so close together, the existing Dartford Crossing and the proposed LTC will mutually impact each other when there are incidents at either. Due to the pull effect of the LTC, this will gridlock a much greater area than happens presently.
- Dartford BC have already built large amounts of business and retail space and housing very close to and around the existing Dartford Crossing, so causing/exacerbating the problems. Additionally, as we heard from the Dartford BC representative at OFH3, Dartford BC intend to encourage more traffic onto the Crossing and Approach Roads and use up any/all capacity that might anyway be freed up by the proposed LTC. So the whole situation of strategic traffic being impeded will recur even sooner than NH predict through their (albeit flawed) traffic modelling.
- In championing the LTC as proposed, NH are conflating different aims: putative relief at the Dartford Crossing (plus "Resilience") and bypassing of the Dartford Crossing for Dover strategic traffic. They have focused on what they want to achieve and not on what needs solving, whether it can be solved by the project or the reality of the receiving location areas. The Project not sufficiently connected to the reality of existing and predicted background traffic levels in north-west Kent, which the Project will worsen by pulling in additional traffic.
- The immediate area around the proposed LTC crossing south of the Thames will receive no benefits only deteriorations, and the Project does not directly help the very deprived areas nearby in North Kent (Grain and Sheppey).
- We do not believe that the project aims and objectives can be provided in combination and optimally at the LTC location east of Gravesend, and consider that the proposals need a major re-think.

- If the actual objectives are to remove cross-Channel freight from the Dartford Crossing then this could and should be achieved much further east – there is no point bringing all the HGV's as far west as Gravesend, they should be diverted off instead by a route using the A249 to Sheppey, then via Grain to Essex. Both Sheppey and Grain are development locations which would benefit from additional connectivity and employment opportunities.
- It should also be re-considered whether a solution at Dartford (such as second bridge/tunnel A1 and/or Option A14 long tunnel) and/or another location further east than C would lead to better outcomes overall.

SECTION 3: OPTIONS APPRAISAL AND ROUTE SELECTION ISSUES

3.1 Crossing locations east of Dartford:

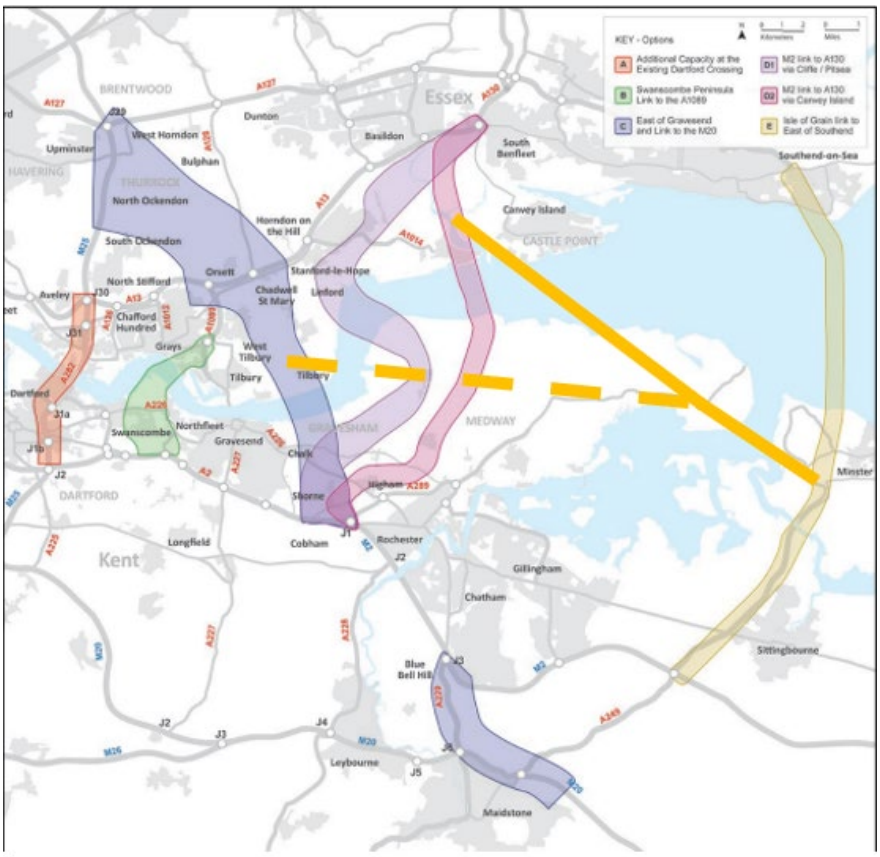
- We do not agree with many of the assessments found in APP-141, which read like retrospective attempts at justification.
- The earliest Option Appraisals in 2009 (Dartford River Crossing Study into Capacity Requirement, Parsons Brinckerhoff, no longer accessible online) looked as if route swathes had been identified with no greater planning skills than placing a compass point at the Dartford Crossing and drawing arcs.



2009 Route Options studied, from APP-141, page 15

- The selection criteria for evaluation were routes where all choices out of bridge or immersed tunnel or bored tunnel were possible. No hybrid options, such as described below, were studied.
- Having decided on a bored tunnel, all possible options should have been re-evaluated on that basis alone.
- Since then, NH and their predecessors have been working only towards what they want to provide, rather than what the Country needs them to provide. This is despite Consultation outcomes preferring Option A solutions, which had less adverse scoring and a higher BCR.

- The sequential approach discarded potentially better options from proper consideration: Options "D" and "E" were discarded early on but principally over the cost and difficulty of a bridge structure.
- Although it is stated that there was a reappraisal of earlier discarded route options, no work was done looking at hybrid options or new route possibilities arising as bored tunnels offer more flexibility of delivered route.
- We consider that options east of route C were not fully or properly evaluated and were disregarded too early in the processes, as also were subsequently the Option A solutions. There are also aspects that suggest "Pre-determination".
- Once a "tunnel only" solution had been decided, all the options should have been reconsidered in that format, also including hybrids between options C/D and E connected to M2 J5 (currently being massively reconfigured) via the A249 and M2 junction 1 via the A289. These would connect Sheppey to Grain (both areas needing economic development) and then to Essex. There is also little point (and there is economic disbenefit) to unsustainably bringing strategic traffic past the Medway Towns via the M2 when it could have crossed the Thames much further east. Such options should be revisited in detail.
- If they had been considered, then the hybrid option would have been demonstrated to provide the same amount of putative relief at Dartford as Option C as the starting points from the A2 are only a short distance apart. The BCRs would likely be improved as the very costly LTC:A2 junction and replacement bridges etc would not be needed.



As above, lines show possible Hybrid Options in Orange:
D+E solid, C+E dashed then solid, using A289 and A249 access links

- There has been longstanding talk about needing an "outer M25", parts of which can be imagined from the existing road network, but what is proposed presently does not appear to contribute to that aim.
- A choice was not really provided south of the river Thames as there was only one location for the tunnel.
- The ESL suggestion appeared to have been provided only as an "unacceptable green-field option" to divide opinion and be shot down, as evidenced that there were no proper designs produced.
- We have no doubt that what is under discussion, if properly planning for the future of the Thames Estuary, is the location of the first crossing east of Dartford, not the only one. Our contention is that the situation has changed over the decades since first mooted so that Option C is not nowadays the right place for that to be delivered.

3.2 Option A interventions are needed at this time rather than C as proposed:

- We support views expressed by various persons at OFH2 about the need to implement solutions to Dartford's problems at Dartford – these are probably Options A1 and A14 together.
- NH are not making any attempts, or apparently planning, to improve the A282 Dartford Crossing approach road and the Crossing itself in a south to north direction, even though that is obviously a major problem so it is hard to understand how this has been omitted from the Scheme Objectives.
- Option A1 is needed to improve flows across the river from south to north and to negate the impediments to free-flow caused by the now substandard original tunnel.
- Option A14, the long tunnel, is also needed as a bypass of the Dartford Crossing for longer distance M25 ring road strategic traffic that is already on the M25 so will not (we hope) need to use the LTC. The A14 Option is the only intervention that will truly remove HGV pressure from the Dartford Crossing as by bypassing the A282 it would provide a motorway to motorway, 70mph completion of the M25 ring around London.

SECTION 4: CONSULTATION AND INFORMATION ISSUES

4.1 Consultation issues:

- There have been too many Consultations. Leaving aside the two DCO applications and the recent Minor Refinements Consultation there have been six Consultations since 2017. It has been very difficult for residents to force themselves to read all the documents and respond.
- The number of responses received have been sequentially reducing (from a high of 47,034 in 2016 to a low of 1,206 in 2020) which is indicative of Consultation Fatigue. This is presently manifesting in the fact that very few Interested Parties have attended OFH hearings.
- The Option C proposal was "sold" to earliest consultation participants as intended to solve problems with traffic levels and pollution at Dartford. It is now clear that only marginal and temporary improvements can be delivered there, with these only being effected by creating excessive traffic levels and pollution elsewhere in a different, even more unsuitable area.
- Questions were framed so that they inappropriately linked separate parameters in favour of the proposals and which therefore also skewed the outcomes.
- Publicising of Consultations varied greatly, affecting the number and nature of responses elicited. The first Consultation was underhandedly sent to the entire DART-Charge subscribers e-mail list, this elicited responses from a very wide area where responders would

not understand the drawbacks. It skewed the quantity and quality of the responses, with few responders likely to have looked at the full documentation rather than just the biased headlines.

- In repeated Consultation materials, changes were not highlighted in text making it difficult to identify what was different.
- Information provided, and therefore comments that had to be made were often very similar, other times there were very large differences.
- The published designs were minimal in size in the earliest Consultations. The first Consultation showed a bucolic artist's impression of a two-lane tunnel, no other structures, a very small A2 junction footprint, narrow emergency access, no side feeder roads etc. These and other aspects were then superseded by very different and greatly expanded proposals. The previous omissions would have misled responders about the true impact as later revealed.
- Consultation documents had varied availability and ease of access. Getting hold of the documents was sometimes difficult and they were not easy to access or view on computer screens. This includes viewing the DCO documents. Cross referencing is extremely difficult as is finding references indicated in National Highways responses.
- Not all concerns raised in Consultations were addressed or given a public response. For one of the Consultations no responses at all were given to matters raised about south of the Thames. The Response documents discussed the most frequently raised concerns but there could be important points raised by fewer or only one person, these should be included rather than being edited out and hidden/ignored. All matters raised should be published and not just a limited selection.
- Responses in NH response documents are often repetitive pasting and not answering the point raised, they can come over as dismissive of valid concerns.
- Data was not always new/updated but re-presented in different formats which was misleading and prevented direct comparisons, it should be made clear when there is new data or just reformatted old data. Some information provided had misleading information and data presentations, use of old data, and statistically invalid treatments in calculations.
- Presentation of the data in documents appeared sometimes selected to obscure negative impacts while disguising that actual benefits may be lower than desirable.

4.2 "Ward summary" presentation:

- This format disguised disbenefits for the largest Ward south of the river Thames (Shorne, Cobham and Luddesdown) as the adverse impacts of the Project varied greatly within its area, being greater north of the A2 than to its south.
- Our request that future publications should split the ward along the A2 into north and south sections was ignored.
- We gave NH advance notice that the warding arrangements were being changed following an Electoral Boundary Review. We advised in support of the previous point that Shorne was to be combined into a Ward with Higham.

4.3 Non-Provision of requested information:

- Some information was withheld or only provided confidentially to certain IP's and not to ourselves so not all information needed/requested was provided to the Parish Council.
- Updated traffic data in particular had been provided by NH to Gravesham Borough Council and Kent County Council (also Medway Council) but under Confidentiality agreements. This

led to us being "given the runaround" in trying to obtain the data, with NH saying that GBC/KCC will supply it but those bodies refusing to do so for legal reasons. We gave up trying.

- This also impacted negatively on possibilities for collaboration. Secrecy agreements should not happen inappropriately, and collaborative working between Authorities with differing responsibilities should be a requirement.

4.4 3D modelling requested but not provided:

- Like others stated at ISH2 we had from early on asked for 3D modelling of the LTC:A2 junction. While some people can realise the full likely horror from viewing the flat plans, these are exceedingly complex and others need 3D renderings and proper elevation drawings in order to be able to understand the proposals.
- Initially nothing was provided but later there were the bucolic fly-throughs, however these do not provide an image that can be viewed from all directions, or truly demonstrate the elevations of the roadways plus the tallest associated structures, where there will be noise fences, lights and light pollution etc.
- There are plenty of 3D CAD programs available, both commercially and publicly. It would be very surprising if NH do not already have these along with expertise in their use. If not, we would have expected them to commission such work from outside.
- We note that NH have been asked by the Inspectorate to provide elevation section plans

SECTION 5: ECONOMICS, COST-EFFECTIVENESS, BCR CALCULATION

5.1 Calculation of Economic benefits

- The arguments about the calculation and validity of the BCR at ISH2 were at high level and perhaps above us but as lay people we can make general observations.
- The BCR appraisal includes both factual and conjectural aspects, matters that are assured versus those that are only potential. Notwithstanding other matters like DfT choice to use and believe the high level and generic TAG outputs and LTAM modelling, a decision to spend potentially over £9billion should surely be made only on good quality data inputs and assured outcomes.
- The reversion to 2010 prices and values as the basis of calculations for "Appraisal" and comparison purposes is understandable, although now that we are in 2023 one might think that at least a 2020 base year should instead be used. However, the main point here is that the purpose of the DCO is a stand-alone evaluation and approval and not to compare this proposed scheme to others.
- It has been said that this is the largest and most costly scheme that NH have ever proposed, in which case there cannot be any valid comparator in existence.
- Economic improvement cannot be a hard Objective as delivery is not assured.

5.2 Affordability and VFM:

- We question whether the Project is affordable and represents value for money, especially compared to interventions at Dartford which actually have a higher BCR, and with the BCR of the proposed project showing only marginal benefit. Over the passing of time through all the Consultations, even with excluding so many necessary essential linked road

improvements, the BCR has continually fallen, so it has to be wondered what it will eventually become.

- Estimated costs have so far increased by 50% - the current figures of the estimated cost being between 5.2 to 9.0 £Billion (Ref APP-063) have a very wide range which conveys considerable uncertainty as to the final cost.

5.3 Omitting essential associated road and linkage provision/upgrades:

- Several essential enabling nearby junction upgrades (A229 to M20 and M2) and important additional road links (Tilbury,) have been left out of the scheme proposals. These are however still costs of the project even if omitted to reduce the scheme costs and falsely improve the apparent BCR.
- All essential enabling and predictable consequential costs should be part of the Project and included in the financial evaluation, even if they lie outside the order limits but are nevertheless required nearby.
- The amount of improvement that might be achieved at Dartford relies on traffic migrating to the LTC and not persisting with their previously used routes so having convenient and functional links is essential.

5.4 Economic disbenefits for Shorne residents and others:

- Economic disbenefits might not appear to be significant when balanced out across the whole project but that disguises that there are significant disbenefits in Gravesham and especially for Shorne residents.
- Shorne is a popular place to live due to easy access via the Brewers Road junction to the A2 and M2 and A289 for schools and employment, and also personal leisure use.
- All directions of travel are being made more difficult and indirect, particularly:
    - To in future access the M2 eastbound will require an enforced 4km detour on the A289 to the A226 junction and then back again.
    - To access the A2 westbound will require a slow and blockage-prone, over 1.2km detour via negotiating an additional 3 traffic-light controlled roundabouts.
- Similarly in reverse for users of Gravesend East junction, wanting to reach the A289.
- The increased personal costs and economic disbenefits to Shorne residents and many local businesses from increased journey distances and times will be considerable.
- National Highways, somewhat laughably, stated that journeys to Higham and Gravesend Stations would be unaffected – unfortunately that is not where local residents principally want to go.
- They want to go to Ebbsfleet International Station, Sole Street station, Bluewater Shopping Centre and all the local supermarkets which are along and/or all involve using the A2 which will be much more difficult to access and more blockage prone (due to traffic congestion and gridlock) than at present.
- Economic disbenefits also arise from drivers using different routes to presently, involving longer journeys, in order to get round the above problems, such as via the A226 Higham and Strood rather than the M2 as at present.

5.5 Weighting factors are needed for disbenefits:

- The above local disbenefits need to be given greater consideration in the proposals, perhaps a weighting system is needed with disbenefits near the LTC given a higher negative value than distant disbenefits and even positively valued benefits.

- The project also does not benefit the very deprived areas nearby in North Kent (Grain and Sheppey), so lack of benefit to such areas should also be a factor ascribed a negative value. In contrast, a crossing further east, combined with another crossing of the Medway (currently under consideration) would benefit these areas directly.

5.6 Community Severance reduction:

- This was not an existing Objective of the project although perhaps implied within the Economic ones.
- At the introduction in ISH1 NH said that the LTC would reduce community severance. It is debatable whether this is a problem for communities which are located in less populated areas of Kent and Essex as well as their being physically separated across the Thames. It is true that there is effective severance by the Thames but the biggest effect is at Dartford itself where there are highly populated areas, with a lot of job opportunities, located both sides of the river Thames.
- Improvement to traffic flow at Dartford through the LTC would reduce severance there but this would only be temporary due to background traffic increases combined with Dartford BC's intended development.
- There is also severance between major housing and commercial areas upstream from Dartford yet nothing has been done about that, with completion of the South Circular by a Woolwich Ferry bridge, and proposed additional local crossings at Gallions Reach, Thamesmead and Erith being cancelled. These omissions persist and increase pressure on Blackwall/Silvertown as well as local traffic use of the Dartford Crossing.

SECTION 6: TRAFFIC VOLUME ISSUES

6.1 Theoretical aspects (predicting LTC success or failure):

- Overall, we are not qualified to say whether the modelling is correct or not – we do not have all the required input information (whether from NH or others) or a variety of programs for interrogating the data so must leave detailed discussion to higher level IP's.
- We are also hampered by the lack of data provision (please see Section 4 above), and not having had sight of modelling, which appears to be more realistic, that is being undertaken on behalf of Kent County Council and Medway Council.
- Discussion on the veracity and minutiae of transport modelling methodology is otherwise beyond our specialist expertise.
- However, even as lay people we are able to use basic scientific principles to review and pass comment on the easily identifiable deficiencies in the data collection and the evaluation processes used to support the proposals.

6.2 Reliability of the Transport Models:

- NH said at ISH1 that their Transport Model is reliable and robust in accordance with DfT guidance but that is not the same as saying that it would be judged as being reliable and robust when considered on its own or by others, that it is the same model that one would choose to use when having a completely free choice or that it adequately models local impacts of the LTC.
- Local impacts of the LTC are ignored by NH as they are thinking strategically at too high a level. By ignoring existing conditions on the ground they are not guaranteeing delivery of a functional and practical outcome.

- The statement by NH that they have modelling of junction performance but only share it when they deem appropriate was somewhat astonishing.
- They also appeared to state that Construction phase traffic modelling had not been done yet, which means that they do not know whether and how the Construction phase traffic can route and flow, and therefore whether the project can be built in constrained locations.
- Traffic data and predictions (and hence derived noise and pollution data) are simply not credible due to using flawed and inappropriately high-level models.
- The modelling being used is only said to be valid at regional level yet is being applied to a highly individual area. DfT's own documents warn against using such modelling (see page 23 of the Department for Transport's January 2018 Consultation document "Proposals for the creation of a major road network", https://www.gov.uk/government/consultations/proposals-for-the-creation-of-a-major-road-network).

6.3 Age of software programs used:

- In several places in the discussion at ISH1, by both NH and IP's, there was reference to software programs being "historic" (COBALT accident appraisal) and use of the out-of-date TEMPro 7.2 rather than the latest version 8.0.
- Using old programs and old versions of software when newer programs/versions are available does not provide confidence in the data manipulations and outputs. Similarly, the use of old and outdated data inputs ensures low confidence in the quality of outputs.
- We find it surprising that a project as complex and costly as the proposed LTC is not being supported by the most recent data and the latest software.
- We are concerned that using old data and programs increases inaccuracy of the BCR calculations.

6.4 Age and reliability of the data, poor data gathering:

- The same document as referenced under the Reliability section as above wanted road funding to be "….based on the latest available data.".
- This is patently not the case with this project which uses data from 2014-2016 passed through an old computer program which reverts it to 2010 when traffic levels have increased considerably in the local area since then.
- We will develop this point further for the forthcoming ISH on Traffic and Transportation as the NH WebTRIS system is unfortunately not presently working properly for obtaining historic MIDAS (automatic count) information.
- As an example though from the DfT manual counting system (https://roadtraffic.dft.gov.uk/#6/55.254/-6.064/basemap-regions-countpoints), the AADT at point 36100 (A2 viewed from Brewers Road overbridge) increased by 59% over 20y, from 84658 in 2000 to 133669 in 2019. The impact of adding induced LTC traffic to that, combined with lane reduction from 4 to 2 both directions through Gravesend East (see below), can be imagined.
- By the point that traffic reaches the top of Swanscombe Cutting to approach the M25, the manual figures at point 16092 give a 2019 figure of 140335 (151151 was recorded in 2018 with an automatic counter).
- Data collection for turning point surveys were not representative – for example, the survey for Forge Lane (Shorne) to the A226 was carried out during non-peak hours on a single

Saturday in June 2019 whereas on normal weekdays there is a lot of traffic going to and from schools and other/work destinations. When we asked NH about this we were told that the turning point surveys were only being used for pedestrian crossing information. If so:
    - The Information was still inaccurate whatever its intended use.
    - Information about for example turning movements at Brewers Road to the A2 eastbound would surely be essential given the proposed removal of that link.
- The data collection point for traffic levels on Brewers Road was located between the current A2 slip roads and Park Pale (leading to Harlex haulage yard and the Rochester and Cobham Golf Club) and the entrance to the Country Park. Therefore the data collected does not represent vehicle use of Brewers Road itself (as it continues on through Shorne).
- This may in part explain the difficulty we are having in marrying up our own data (obtained from our Speed Indicator Device) with NH's. We are therefore concerned about possibly incorrect data then being used by NH to predict traffic volumes, and consequent noise and pollution in residential roads accessed through this stretch of Brewers Road.
- Overall we have many concerns about validity and credibility, and the consequences of using old and incorrect, sometimes only partial data inputs.
- Low quality inputs ensure low quality outputs ("Rubbish in = Rubbish out")
- The DCO should use new/recent data in an industry-wide agreed model that operates at local levels.

6.5 Outputs within DfT acceptable range, confidence limits, Covid impact:

- The outputs of calculations were said at ISH1 to be within the range acceptable to the DfT but that tells us nothing about veracity of the DfT's standards.
- A question arises as to where in the acceptable range the particular output falls, as there can be a big difference between the lower and higher ends.
- Similarly, confidence intervals of the outputs tell us how certain the output is and whether the confidence intervals could take the output figure out of the acceptable range.
- The impact of the Covid pandemic on traffic volumes, caused by changes in working and leisure practices, has been very interesting but further weakens the case for the project as traffic volume predictions have been invalidated.

6.6 Human behaviour can confound predictions:

- Reliable prediction and influencing of human behaviour, in this case of drivers (who can be very inventive), is a very difficult matter – prediction is not always translated into reality.
- Although aspects like journey time and reliability were quoted as major influences, we would also mention the use of satnavs and a preference to keep moving as being major influencers of route choice that can confound even the most expert predictions.

6.7 "Capping of outputs":

- Outputs are being "capped" at regional level (a vast geographical area) so actual predicted traffic levels are not factored into plans.
- "Capping" means modifying above average figures downwards as growth is not allowed to be predicted to exceed a certain percentage even if the modelling output figure is higher. "Capping" is inappropriate and counterproductive as it pushes the Project further from reality.
- It is obvious that within a regional average figure in the computation there will be very low growth areas that balance out very high ones.
- We question the validity of pretending that a very high growth area is only average and are unclear how this approach can deliver a functioning project.

- Both the capped and uncapped figures should be published so that the extent to which traffic levels are being underpredicted is transparent.
- There are many reasons why traffic levels in North-West Kent would be higher than the Regional average, for example that it is a major growth area, and additional housebuilding is continuing. Many of these and other developments/local threats such as London Resort are not being adequately factored in.

6.8 Lack or reality checks to predictions:

- The proposed narrowing of the A2 from 4 lanes currently to only two in the future is apparently supported by the modelling predicting that two lanes will provide enough capacity however this is just not credible.
- Data presentations and evaluations must explicitly real, it is not to anyone's benefit for the project to be unsuccessful.

6.9 Important adverse impacts are not being considered:

- Migration of traffic between M20 and A2/M2, and adverse impacts: It is obvious that a large amount of traffic will migrate between the M20 and the A2/M2.
- Impact on A2 east of Shorne/the LTC – The Applicant considers that traffic westbound on the A2 west of Shorne will reduce but we consider that there will be considerable pull of traffic heading eastbound to use the LTC, pulled in from the M25 and further west on the A2 (i.e. from south-east London). This will have other detrimental effects on traffic volume and pollution levels.
- Impact on M2 east of the river Medway – The Applicant predicts that, due to the great increase of traffic volumes on the M2, compounded by another long hill particularly heading eastbound, traffic will be greatly slowed to an extent that we consider to be incompatible with provision of and classification as a motorway.
- A289 impacts – see below in relation to comments made by Medway Council.
- Migration from M25 anticlockwise – It also needs to be factored in that, particularly when there are problems at the Dartford Crossing (as there still will be), traffic that is further back on the M25 and travelling anticlockwise will use the M26 and then the A227 and/or A228 to move across to the LTC. Trying to do so will gridlock the area. These roads are not suitable for additional traffic and are in some parts highly residential.
- Existing traffic levels in the area – these are already too high and rapidly increasing. Imposing the LTC here will make traffic much worse and untenable. The project intends to pull more traffic onto the M2 and A2 including e.g. reducing capacity past Gravesend from four lanes to only two, and deliberately slowing traffic speed on the M2, including LTC traffic, due to excessive volumes.

6.10 Constraint through excessive traffic levels:

- Discussion on constraint to the LTC through excessive traffic at the ISH1 hearing only related to the "proposed alignment" of the LTC itself.
- NH mentioned already foreseeable slowing of slip-roads to/from the LTC and wider network effects. By the latter they mean over a very wide area, which does not adequately consider effects nearby, on the A2 to its west and the M2 to its east.
- The approach taken disguises that there are significant negative impacts close to the crossing that will impact on its functioning.

6.11 Concerns raised by Medway Council over the A289 and M2J1:

- We support the concerns expressed by Medway Council at ISH1 over the M2J1 junction with the A289.

- We are additionally concerned about the eastbound on-slip from the A289 to the M2 being changed from a lane gain to a merge, which is less functional and less safe.
- Also about the additional traffic being put onto the A289 including the forced 4km diversion from the current Brewers Road eastbound on-slip to the A2 in order to in the future get back to the M2 eastbound.
- We have shared our concerns with Medway and Gravesham to hopefully inform their LIR's.

6.12 AADT data and design capacities:

- With NH having always previously provided and relied on AADT data it is surprising that they apparently now favour journey time and reliability theoretical calculations over hard data.
- We note that NH always refer to problems with traffic volumes exceeding design capacity at Dartford as a justification for their LTC proposals but refused at ISH1 to provide a design capacity for the LTC. This prevents direct comparison.
- NH however, as Medway Council commented, also refer to design capacity problems when expressing concern about development pressure on existing roads and junctions, for example the A289:M2J1.
- If LTC design capacity will be greater than anticipated peak traffic volume for considerably into the future then there is no reason to refuse to provide this information. Refusal creates its own suspicions. We note that the Dartford Crossing has 4 lanes and the LTC has 3 in the tunnel but only 2 for some approach roads, so speculate that LTC design capacity is actually only ½ to ¾ compared to the existing Dartford Crossing.

SECTION 7: GENERAL DESIGN ISSUES

7.1 "Smart Motorway" by stealth:

- Arguments against "Smart" roads have been well aired in the public domain so we will not revisit that discussion.
- The Applicant insisted in ISH1 that the LTC will be an "All-purpose-trunk-road" but nobody outside NH can discern any difference from it being a Smart Motorway.
- Influence of other local roads – NH said that LTC has to be an A road because there are other A roads locally nearby. We do not agree with that statement however as said above the LTC is anyway still functionally the same as a motorway.
- What is proposed is a Smart road - When it was recently announced centrally that the rollout of Smart Motorways was being scrapped, "due to financial pressures and lack of confidence felt by drivers" (https://www.gov.uk/government/news/all-new-smart-motorways-scrapped) we doubt that it was considered that simply changing the name of the classification of the LTC would be used to provide exactly the same features.
- "Best-in-class" safety features etc will be provided – the Applicant stated that a maximal range of safety features is being provided, which is an additional financial pressure, and this again underlines that the road is really a Smart Motorway by stealth.

7.2 "Hard shoulders" and A roads:

- Hard shoulders are the norm locally - The Applicant stated in ISH1 that all-purpose-trunk-roads do not usually include a hard shoulder. The statement might be true for recent builds if standards have been reduced but it is the norm locally and in wider Kent for hard shoulders to be provided.
- Volume of traffic – The LTC will be carrying considerably more traffic than the usual average A road.

- Ability to get off the running lanes - The issue actually is not the presence necessarily of a formal hard shoulder as such but having the ability to get vehicles (and occupants) fully off the running lanes so as to avoid being fatally rear-ended by an HGV. The issue therefore is about there being an accessible (not very) soft verge to which access is not prevented by fixed barriers placed very close to the running lanes. The Applicant stated that a minimum width from the edge of the carriageway to any hard barrier is being provided however the LTC route is designed to take large numbers of HGV's, for which soft verges and only a 2.3m width are inadequate.
- The decision about providing adequate hard shoulders should also be informed by the likely incidence of breakdowns – The presence of long hills, which there are on the LTC route and nearby, increases the likelihood of vehicles breaking down. The LTC will have a 4km long incline from the tunnel heading south to the junction with the A2 and then a further incline heading eastbound. We consider that adequately wide hard shoulders are essential for that reason.

7.3 Other design/safety issues:

- Locations of proposed safety refuges - The LTC is supposed to have frequent safety refuges although depending on the problem experienced, broken down vehicles cannot always proceed to a refuge area before stopping. This is especially the case on inclines, of which there are many in the local area. The proposed refuge locations are not easy to identify on the plans in order to be reviewed, clarification is requested.
- Extent of safety features being provided – If a maximal range of safety features is to be provided the expenditure must be justified by there being significant safety concerns. The very fact that NH consider them justified to install is a safety concern in itself.
- Slow moving vehicles and safety – It was said by the Applicant at ISH1 that slow moving vehicles would be prevented from using the LTC, especially the tunnel, however there is not supposed to be any restriction on wide and heavy loads so items such as slow moving very large cranes could proceed through unchecked. Also, the 4km southbound slope after the tunnel will automatically have slow moving HGV's which will cause dangerous bunching of traffic and frustration to other road users.

7.4 Design change process

- Aspects of the proposals have at times changed without us being able to understand how or why. This is sometimes connected to Statutory Bodies such as Natural England and the Area of Outstanding National Beauty, "stakeholders" who do not consult or communicate with residents and Parish Councils but influence the plans from afar without having or seeking any local knowledge or input. NH sometimes give opinions from these non-representative organisations too great a weight.
- Changes must be transparent and always the result of involving local councils including Shorne PC in the discussions in order to achieve local input and agreement with outcomes.

SECTION 8: SPECIFIC DESIGN ISSUES

8.1 Over-complex junctions:

- There was an interesting discussion at ISH1 concerning whether the LTC:A2 junction was more complex than it needed to be, through trying to provide all-directions connectivity.

- If there were other "Option C" tunnel location or road and junction design options considered by NH they were not shared with us for consideration. A fresh look at an aerial map and further thought/discussion might be worthwhile.
- Simple connections to a lower-level tunnel/cut and cover between M2 junctions 1 and 2, and provision of all-directions access by modifying Gravesend East on the A2 or perhaps M2J1 (both failing anyway), and M2J2, plus a lane gain from the A2 eastbound to the LTC, could work and be much less costly and much less trouble to all local residents.
- Plans have developed based on what we were offered, in a situation where a large number of residents need to access all directions for their existing routes for example to schools and employment and these cannot be summarily cut off. The ESL suggested junction was worse than the WSL is that regard.
- The northern connection to the M25 is a simple merge/demerge junction in a relatively unpopulated area and only allowing traffic to go to/from the north whereas in the south the LTC lands as a T-junction with the A2 in a highly populated residential area where there are many junctions close to each other, reflecting residents current needed use of the A2, which by-passes Gravesend.
- It should be noted though that the connectivity at present offered by the LTC project does not in fact replace what is being taken away, with many journeys by local residents being made longer and more difficult, which has Economic impacts.
- Proposed junctions are overcomplex yet at the same time inadequate. We would cite in respect of this the entire proposed junctions south of the A2, which are highly detrimental for local residents.

8.2 Loss of important functionality/detrimental changes:

- Loss of Direct access to the M2 at Brewers Road eastbound on-slip – this is being removed and replaced with access only to the northern feeder side road which then requires a 4km detour to get back to the M2. NH say this is satisfactory as the same traffic movement is being provided but clearly what is being provided is regarded as impractical by residents. It is also likely to lead to increased traffic on Pear Tree Lane to Higham traffic lights, or through Shorne Village, neither of which are suitable routes so protective solutions should be integral to/integrated with the Project. A link back from the feeder road to the M2 was provided in the earlier plans but was removed without any discussion, we do not accept claims of safety concerns over unsafe merges and consider that it should redesigned to increase separation and be reinstated. Residents have made their annoyance about this matter clear to NH at every Consultation Event.
- Long detour from Brewers Road to access A2 westbound – presently the A2 is accessed very easily at the end of Brewers Road but this access is being removed and replaced with a very long 1.2km detour which also involves an additional 3 traffic-light controlled roundabouts. This is also regarded by residents as unhelpful and impractical. The Applicant stated in APP-139 (Page 27) that "provision has been made to reconnect the roads or a reasonable alternative route would be available" - we disagree that what is being provided in this and the previous point meets that definition, being instead unreasonable.
- Gravesend East is joined directly to the LTC at "Nell's Café" – this is bound to cause many mistakes due to local residents and others turning on to the LTC instead of the M2, we therefore suggest that link should be removed. Otherwise a very long distance has to be travelled before being able to turn back, and two DART-Charge payments might be incurred. If Gravesend East traffic needs the LTC then it can first head west to turn back at Gravesend Central or east to do the same at M2J2.

- Only one lane from A2 eastbound to LTC - If Resilience is to be provided, and as we anticipate a lot of traffic is pulled from the A2 eastbound to use the LTC, one lane from the A2 to the LTC is not enough. However, there is also presently a connection to the LTC by leaving the A2 at Gravesend East, using the two roundabouts and then the Nells Café on-slip. It is very predictable that LTC destined traffic will do that manoeuvre so choking the Gravesend East junction. This is another reason why the LTC on-slip here should be removed from plans.
- Gravesend East losing connection to A289 – As above, Gravesend East eastbound on-slip will be connected to the LTC and the M2, to reach the A289 requires negotiating 5 extra traffic light controlled junctions, and will also encourage rat-running through Shorne. The Gravesend East eastbound on-slip should be reconnected to the northern feeder road.
- Reduction of M2 traffic to two lanes each way through Gravesend East junction – this proposed change is not credible and will build new bottlenecks into the plans. The A2 was only relatively recently increased from 3 lanes to 4. NH claim that their modelling indicates that only two lanes will be required but no-one in the area believes that at all.
- Sight lines exiting Shorne Ifield Road to Thong Lane need improving - the road layout is being altered so that Shorne Ifield Road will emerge on the inside of a blind bend with inadequate visibility, this needs to be corrected by revising the alignment of Thong Lane.
- Traffic light facilitation - Several junctions and roundabouts will become much busier, increasing traffic delays in some directions of flow and increasing accident risk. Traffic light facilitation is needed in several locations as an integral part of the project.
- Loss of A2 highly wooded central reservation – this is something that local residents particularly object to but it is played down in the application documents.

8.3 The "Ground Protection Tunnel", Thames and Medway Canal, and Milton works compound:

- This cross-references to concerns (please see Section 11) about water issues and potential damage to the North Kent Marshes SPA and Ramsar Site and the Thames and Medway Canal, and the discussions about "dis-application" of legal powers that took place in ISH 2.
- The "Ground Protection Tunnel" seems to be needed because the main tunnel is too shallow under the marshes so the ground is unstable.
- We have repeatedly raised concerns about this proposed ground treatment, asking where this technique has been used before and successfully, but did not receive an answer so we remain concerned that it is an untried technique as regards protected marshland.
- We are very concerned that, with the ground protection tunnel being even shallower than he main tunnel that there could be permanent damage caused, and also risk of pollution from introducing the alien grout material.
- In the 2021 Community Impacts Consultation documentation and events it was implied this was not likely to be needed – is it or isn't it going to happen?
- For the Milton compound there are great concerns about a number of aspects. This compound is seemingly on top of an important ditch and weir. Haul access is supposed to be along the Canal towpath which is made ground (manually packed earth and clay from the 1800's and not a "road" as stated by NH. Although weighty vehicles must have been involved in constructing for example the police college and sea training centre, bringing containers etc, the substructure of the roads and of the canal bank itself is unclear and would need to be established prior to use. Considerable strengthening might be needed as longitudinal cracks (showing poor substructure) are already evident. It should also be remembered that the canal towpath is a cycle route and footpath and not officially a track or

a "road" for all of the length that HE propose to utilise. It is not clear how the route could possibly be widened without damaging the Canal or important ditches.

- The Thames and Medway Canal passes through Shorne parish. The Canal might be disused as a mode of transport in the present day but it remains an important community asset in terms of the local Environment, therefore we are concerned about anything that poses a threat to its existence.
- Direct damage to the Canal – The degree to which Canal is to be interfered with is increasing through successive Consultations – originally there was no impact, then maybe a hole drilled in the centre, but now somehow it appears that closure and removal of a section is needed. This seems like a classic "softening up" approach to information provision.
- Previous documents had referred to a "Possible tunnel shaft in canal to enable grouting under railway". The documentation refers to managing and agreeing impacts on the canal with the "asset owners" however the owners are not the only relevant persons requiring consultation. We understand that these proposals have been discussed with the Thames and Medway Canal Association. Much is possible but HE will need to make considerable repairs to the canal bed and towpath afterwards. Access to the shooting range would need to be maintained. Footpath/cycle route closures must be coordinated and safe alternative routes provided. Full restoration will be needed post works to return it to its pre-existing state, which is navigable to kayaks and small boats.

8.4 Omission of necessary junctions and link roads (including Ports/Business Parks):

- This section interconnects with inappropriate cost-cutting under Economics (Section 5).
- As stated by TCAG at OFH2 we also consider that matters such as the upgrading of Blue Bell Hill A229 and its junctions with the M20 and M2 (also known as option C-variant) are essential to the intended functioning of the LTC.
- If HGV's on the M20 heading west from Dover either see (by using Satnavs) or just think that the A229 will generally be difficult to use or blocked then they will continue west on the M20 and then the M25 north to still use the Dartford Crossing. As a result, the amount of putative traffic reduction etc at the Dartford Crossing will be lower than predicted.
- In our view migration in a south-to-north direction to reach the LTC could therefore be constrained by route availability, with consequent greater persistence of existing south-to-north traffic flows on the M20, M25 anticlockwise and the Dartford Crossing northbound.
- This links with the flawed Scheme Objectives, under which the LTC is not intended to provide free-flowing south to north travel
- It appears that the Tilbury Link to the LTC was taken out of the scheme for the same reasons, to reduce the scheme costs, and therefore to artificially increase the BCR of the LTC. If an Objective of the scheme is to provide employment opportunities and wider economic benefit then this should be maximised by the scheme through including the above two associated road projects.
- Similarly, southerly connections from the Ports should be provided as that would further reduce journey times as well as traffic congestion on the A13 westbound and the Dartford Crossing southbound. This would however increase southbound flow on the LTC and probably westbound flow on the A2 to the M25 in contradiction of NH's postulation that traffic levels in that direction will reduce.
- We were very interested in the discussions about Ports connectivity that took place particularly at ISH1 and OFH2.
- It is clear that rather than being enhanced by the project, this will actually be damaged by the penny-pinching approach.

- Even if they must exclude the Tilbury connection from the scheme, the full junction facilitation must be built into the project.
- Connection of the Ports to and from the southern LTC seems essential and completely in accordance with the scheme local and wider economic benefits Objectives. Similarly, existing junctions need to function adequately in the face of additional pressure from the LTC. We therefore support the inputs from Thurrock Council, Tilbury and DPWorld on these matters.
- We are also concerned that if there are poorly functioning junctions north of the Thames, there could be tailbacks onto the LTC through lanes, and even back through the tunnel to the Kent side. As well as using the LTC, vehicles need to be enabled to get off and clear of it.

8.5 Green bridges:

- From the beginning of the project we and others asked for the three new bridges in Shorne to be "green bridges", as wildlife corridors and for local user ambience.
- This was adopted to an extent but we have had to repeatedly ask for them to be widened. This has also happened incrementally but we still do not consider that they are yet wide enough.
- We have explained repeatedly to NH that a green bridge should be something that means that users (including wildlife) are unaware of crossing a road at all.
- NH seem to consider that a standard bridge with a few wispy whips at the edge is enough but we still disagree.
- NH have also said that the Thong Lane N bridge is now the widest they have ever built but there is still deficiency in their thinking as there are wider ones in other countries. It needs to be viewed as more than just a bridge structure and expanded using for example cut-and-cover techniques, which would also increase protection of nearby residents from noise, light and air pollution.
- We also have concerns about how much green growth there can be when the pollution generated underneath them will be so very high and this still requires further information.

What will be able to grow on this "green bridge"? (Extract from NH 2023 fly-through video)

- The path to be taken by users at is at Thong Lane S, including horseriders, is as presently planned, on the sparsely planted side rather than the green side.

Extract from APP-509, page 45

SECTION 9: TRAFFIC ISSUES:

9.1 Providing "Resilience":

- Provision of Resilience is a major Scheme Objective but has been little discussed so far. It is not clear how it can be delivered without additional costly enabling works and/or gridlocking the whole of north-west Kent in the process as the two crossings are too near each other.
- NH seem to consider that simply adding the LTC to the network map provides Resilience, they do not discuss how a useful quantity of Resilience will be delivered in practice. Our contention is that it cannot be.
- We note that some charts modelling Resilience in practice (although only a least-worst scenario) were included in the documentation relating to the 2016 Lower Thames Crossing Route Consultation (Pre-Consultation Scheme Assessment Report - Volume 5: Traffic and Economics Appraisal, Section 13: Appendices, Page 9).
- That implies that operational Resilience had been modelled but no discussion has been included subsequently.
- That omission leads us to believe that NH's studies showed that Resilience cannot be provided by the LTC. This is because it is too close to Dartford, so would get caught up in problems there as already happens at present.
- Resilience modelling needs to be for both Crossings and to robustly include everything from planned lane/tunnel closures through to major accidents. Also include showing in detail how traffic will migrate between routes, and the local impacts.
- NH also need to identify and incorporate costs and plans for required enabling works to ensure that resilience can be delivered.
- When there is a problem at Dartford all the approach routes in Gravesham already get clogged, having the LTC will make this worse rather than better.

9.2 Traffic volume issues:

- The documentation predicts that traffic volume will increase on residential roads, some of which are very narrow and can get blocked by excess traffic as there no passing places, traffic increases need to be prevented especially if there is rat-running due to the project.

- Traffic in the area is already heavy and often congested. The proposals will make it worse by drawing more traffic into the area. Further increase cannot be supported by the local and wider traffic network in North-West Kent.
- Suggestions that the Project will lead to traffic reductions on small links such as the A2 west of Gravesend East are not credible as the Project will tend to pull in new traffic travelling by different routes, so cancelling out any putative reductions.
- Concern about traffic increases on connecting roads between the M20 to the LTC: the A227, A228 (and A229) plus also the A226. Although "A" roads, they are not all designed for additional traffic in the modern era, especially HGV's, often having residential properties close to the roadway. Also problems on other unsuitable local connecting roads caused through rat-running.
- The M2 and A289 immediately east of the LTC are already at capacity with frequent jams, the LTC will only make this worse. The suggested solution from NH is to impose lower than standard motorway speed limits, which is not a helpful solution or a successful Project outcome as it will increase journey times for all users including LTC users.
- Further information and assurances are needed that identified adverse effects will be addressed and in a rapid timeframe.
- Local traffic impacts and difficulties are being created/exacerbated, not being adequately considered or addressed, including rat-running on residential roads, greatly increased length and difficulty of journeys.

9.3 Dartford Borough Council's aspirations:

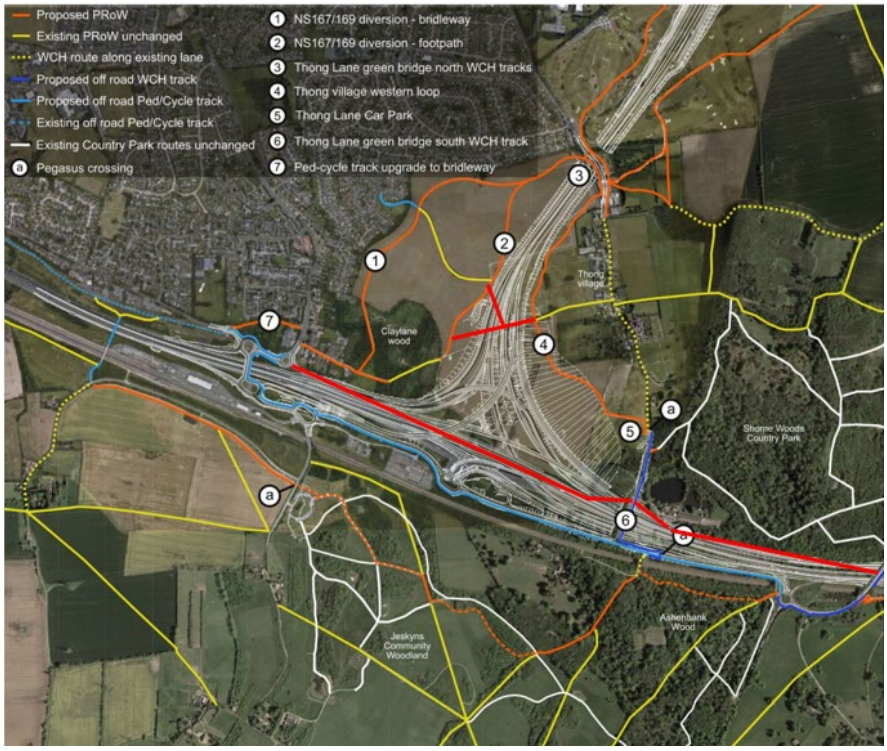
- The situation we have at present is that too much local traffic is using, and being encouraged to use, the Dartford Crossing approach roads, having been attracted there by Dartford business development and regional shopping centre destinations. This traffic is then polluting housing some of which is newly built right up to the A282 boundary fences.
- Dartford have also built, and are still building out, massive additional housing provision that is impacting on the A2 as well.
- Dartford BC stated rather shockingly at OFH3 that their concern about the project happening is because they apparently intend to continue all this behaviour so will clog up the Dartford Crossing approach again even faster than NH are predicting it will happen.
- Dartford BC expect to shift problems onto Gravesham with the LTC but should perhaps be tailoring their aspirations to the capacity that they actually have within their own borough rather than seeking the creation of new traffic problems and pollution elsewhere.

9.4 Other non-motorised user issues:

- Bridleway south of the A2 - We support the comments made by the British Horse Society at OFH2 over the desirability of increasing bridleway provision south of the A2 as a part of/a result of the project. Land ownership by Forestry England and the Woodland Trust were mentioned by the Applicant as impediments but we consider that NH should be leading/facilitating these organisations to provide, together with NH, what impacted local residents want particularly as regards the displaced NS177 route.
- Maps in APP-320 - The Applicant referred us to APP-320 but the scale of the maps makes them difficult to understand, as well as possibly incorrect. For example (on Fig. 13.4, page 1) to the east of the tunnel portal an existing path is labelled as new, and to the west a new bridleway is connected to the very urban area of Riverview.
- Nature of paths - We agree with the representative from Essex Ramblers regarding the ongoing lack of information about the exact nature of paths being provided and how/whether they are to be shared by different categories of users, which is a major concern for safety and useability in all weathers. Residents want assurance about such

matters now as horses can churn up surfaces making them impassable in wetter months, and cyclists and horses together with pedestrians are a poor safety mix. Where there are multi-user routes they should have separated areas for safety reasons.

- Severance of paths and communities – the LTC line causes major severance of west to east paths and communities locally, especially NS177 long distance cycle track and NS167 at Shorne West/Thong. Contrary to the negative value judgements made by the author of APP-512, residents are happy with the existing layout.



From APP-512, page 17 – Annotated in red to show severed approximate previous routes

- Poor replacement provision – To replace the routes long diversions are required which are not practical for all users. The replacement for NS177 in particular is long, tortuous, urbanised and involves crossing several major roads and junctions including 6 roundabouts and a busy T-junction. It is a very impractical and off-putting solution. Originally in the plans a route was shown on the north side of the A2. The design was poor but could have been be improved, an additional WCH bridge just north of the LTC:A2 junction should be considered.
- New paths requested – New paths have been requested, particularly in NOx compensation land but these requests have not been implemented. There should be creation of continuous longer distance paths that connect up communities. Some of the existing paths that residents use are former woodsman's tracks for coppicing, although shown on maps these are not public footpaths but need to be made so, with this being enabled as part of the project. SPC particularly mention Court Wood and Great Crabbles Wood in this context and we would like this to be facilitated through the project. An off-roadway track could be added where there is a missing section on Shorne Ifield Road, and an extra formal all-user link to the Country Park (currently informal).
- Facilitation of NMU routes through the LTC – this has been discussed elsewhere, physical improvements to facilitate bus routes are needed. There need to be bus routes that connect Kent and Essex. There have been requests for shuttle buses to assist cyclists to cross, but NH say that they are expected to use the Gravesend to Tilbury ferry.

SECTION 10: LANDSCAPE AND ENVIRONMENTAL ISSUES

Landscape issues:

- Order limits and land take - The project has a large and so far expanding land take. After considerable expansion of the order limits (shown misleadingly small in the earliest consultation) and the amount of compensation/mitigation land needed, Shorne Parish now has about one third of its total area affected.
- Nature of land involved and impacted - The land that the crossing will take is Green Belt, what is supposed to be a strategic gap between built up areas and providing them with green recreational space and clean air.
- Importance of remaining Green Belt – The Green Belt east of Gravesend is nearly the narrowest in all of the London Metropolitan Area as that west of Gravesend (in Dartford Borough) has been lost to development, even though it was supposed to be remediated after quarrying had finished. As a result, the Green Belt east of Gravesend is even more valuable as open space in the wider area. There is a "chicken and egg" situation as the only reason that the land could be taken for the LTC is because it has been kept open and free of housebuilding, due to its status being respected. Residents feel aggrieved as they didn't battle to preserve it only for NH to swoop in and destroy the whole area.
- Agricultural land loss – There is a large loss of productive Agricultural land with severance and threat to farming viability.
- Golf Course loss - Also concern that the area is losing (has now lost due to recent closure) its only, and very popular, "Pay and Play" golf course, this is not being re-provided.
- Opaque selection processes – The selection methods over inclusion/exclusion of some land parcels are opaque and appear to sometimes be unduly influenced by landowner motives, not always aligned or in best interests of the community. Land take should focus firstly on minimising impact on residents, then businesses/farms.
- Land further away from the LTC line being taken - Except when impacting viability of businesses/farms as currently existing (excluding theoretical future desired expansion/development) land take should be as close to the line of the LTC as possible.
- Landscape changes - Landscaping should be focused on and primarily to benefit local residents rather than LTC user experience.
- A2 wooded central reservation being lost - There is particular unhappiness over the loss of the current extensive A2 wooded central reservation which softens the appearance and masks noise. The visual benefits of retaining as much of the A2 wooded central reservation as possible should be reconsidered.

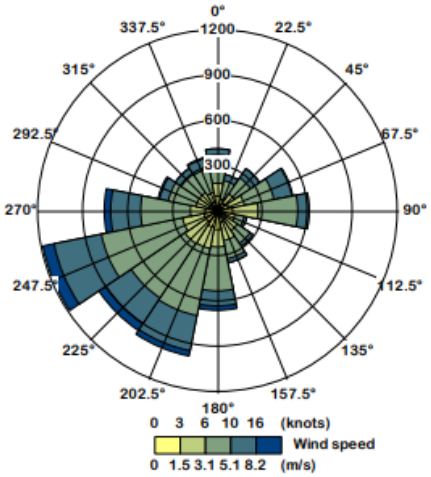
Light pollution and structure visibility issues:

- The area is presently completely dark but however shielded will be demonstrably lit at night causing light pollution for nearby residents and in the landscape.
- Several illuminated gantries and other road signs will be visible where none previously existed.
- Where lighting is for emergency use it should only be switched on when demonstrably needed.
- A 75m pylon is being introduced (a replacement for less tall) in order to get electricity cables across the width of the LTC. It will not be possible to effectively screen this so there will be visual impact caused.

- A 50msq electricity substation is being introduced close to the new Chalk Park, from where (and other higher ground locations) it will be visible in the landscape, impacting on ambience and views.
- Also sometimes the reverse - A noise mitigation fence at Park Pale that was in the plans was inexplicably removed apparently to reduce visual impact but this was not discussed, it would have some beneficial visual screening effect and anyway is needed to block headlights that would cause driver confusion on the northern feeder road so should be reinstated.
- The imaginary pictures in APP-243 etc suggesting that the whole LTC will barely be noticeable were fascinating, unfortunately what the eye sees, or is seen from a vehicle, can be very different.

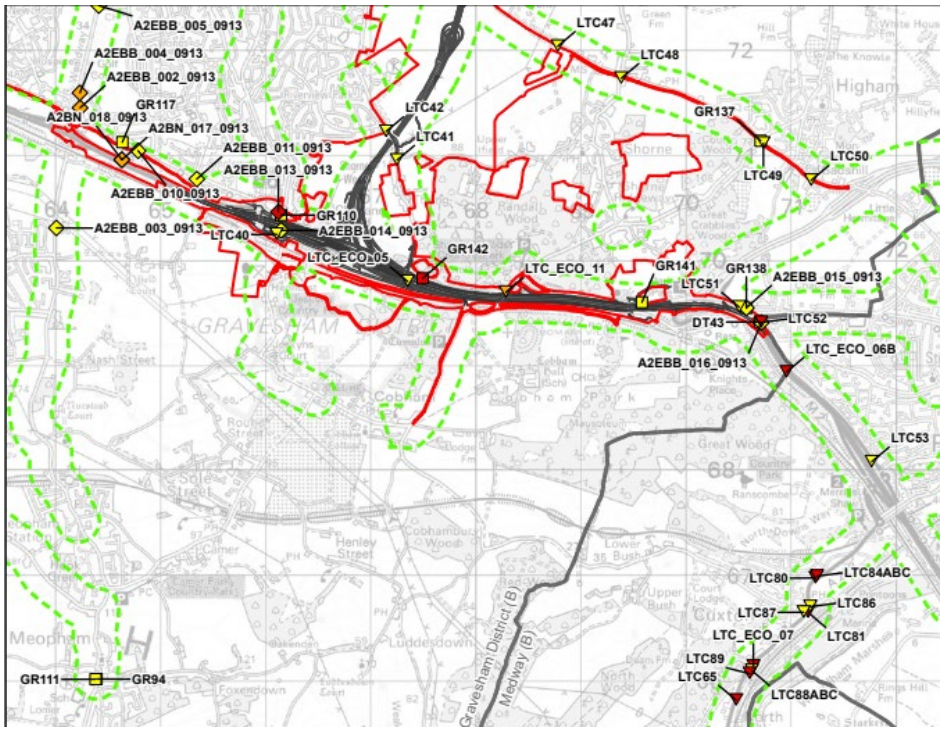
Air pollution:

- Much of the Air Pollution data presented has been at very high level. Discussion of these matters is also being undertaken at National Level, by independent persons capable of undertaking expert analysis and providing assurance if that is possible, so we will leave the making of detailed comments to others.
- However, while we are not experts in this field we are able to review provided information using basic scientific principles.
- Interdependence on traffic data - The Air pollution calculations depend on the output from the traffic data calculations, which are "capped" and widely regarded by IP's as being somewhat dubious. Hence the data outputs could be artificially low. Predictions use outputs from the traffic modelling and reconvert them into AADT rather than using actual AADT inputs.
- Non-credible reductions predicted - This also may explain why completely non-credible reductions in air pollution are being suggested when traffic volume is patently increasing.
- Overmanipulation of data, complex presentations and use of subjective assessments – APP-143 again details all the ways in which the air quality data is manipulated, usually downwards/in NH's favour. Some of the data presentations are very difficult for ordinary people to understand. In places, subjective assessments (opinion and value judgements) have been used which is inadequate methodology. In some instances data for particular major roads was individually adjusted.
- Predominant wind direction and pollution destination - The wind rose as published in APP-143, page 23 (see below) shows that wind will predominantly blow road and tunnel pollution over residential areas.



Wind rose (from APP-143, page 23)

- Adjustment factors for junctions and long inclines – The earliest air quality calculations that were published only related to straight, flat roads. The LTC:A2 junction is very large and complex, it is not clear to us that sufficient adjustments have been made in calculations to reflect this. Likewise for slopes as there is a 4km 4% slope from the lowest point of the tunnel up to joining the A2 and beyond, and slopes are known to greatly increase the pollutant outputs of HGV's which are the heaviest polluters. Assurance is needed that the figures factor these aspects into the calculations otherwise this could also cause underestimation.
- Sampling methodology – There was some baseline air quality sampling undertaken but this mostly used NO2 diffusion tubes which are known to be more unreliable and give lower readings than fixed sampling stations. The calculations could be also underpredicting for this reason.
- Sampling locations – Sampling by NH was not undertaken in all relevant locations, both within and outside the order limits. Examples are between M2 J1-2, and on the A228 at Cuxton, A227 at Meopham, and A226 at Higham, all places where there is housing close to the roadway and traffic levels are predicted to rise because of the project. The best way to not have a problem is of course to not take any measurements.
- Existing data – Albeit 2016 data but APP-175 shows a plethora of exceedances on roads that are precicted to have major increase in traffic levels due to the LTC.



Extract from APP-175, Figure 5.4 sheet 15 showing exceedances on the A2, M2 and A228

- Including impacted areas in the order limits - If air pollution is being caused by the project then all those locations should also be included in the project,
- Creation of new exceedances – Despite the caveats above, the data showed that new exceedances of regulatory limits were being created. We question whether it is legally permissible to ignore adverse effects on human health.
- Lack of mitigation attempts: No attempts are being made through the project to provide mitigation for these. The mitigation has to be located in the impacted area, not justified or offset by reductions 10 miles away.

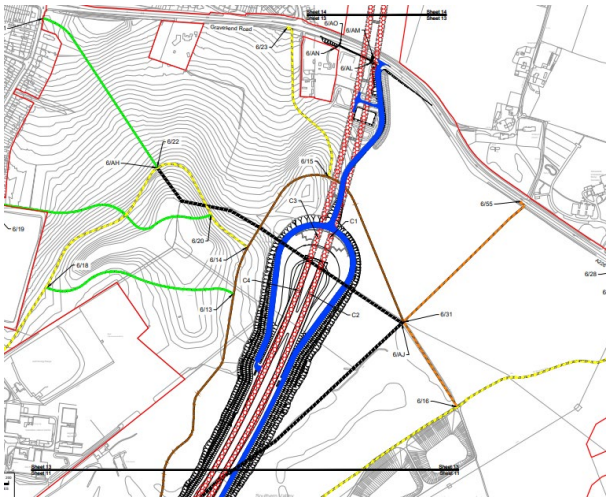
- Age of the data: The bulk of the data used in assessments is from 2016, since when local traffic levels have increased by about 10%.
- Location of AQMA's – much of the A2 AQMA became irrelevant after the last modification of the A2 when the road line was moved southwards, so lack of impact on this AQMA cannot be used to support the project. It is unclear why other areas have not had AQMA's declared by the relevant Local Authorities but lack of declaration has no reducing effect on their importance and relevance to the project if pollution there is being increased.
- NO2 readings in Gravesham – Note from APP-143 page 37 that readings at GR142, which are the highest in Gravesham, are at the Inn on the Lake Hotel – clearly these are not going to be improved by increased proximity to roads at the LTC junction with the A2. NH state that the location is not representative of human exposure but that is not true, as humans work at and are in residence at the hotel and at Boughurst Cottage nearby. It also shows that readings are double the regulatory limit for Ancient Woodland, and in fact the highest figures of anywhere being monitored. GR 110 ("Nell's café") is close to the regulatory limit.
- Actual example figures for inclines: We note that annual mean NO2 diffusion tube readings in 2022 in the A2 area across the potential LTC junction rose from 33.08 at GR110 Nell's Café up to 57.1 (the highest recorded in Gravesham) at GR142 Inn on the Lake (ref gravesham-council-diffusion-tube-data-ricardo-2022-63eca69e3e53c598336744). We believe this to be demonstrating very clearly what happens to NO2 levels on long inclines where slow lorries are overtaking each other.
- Overall outcome of the project - It has been stated that a greater number of residential locations will be newly subjected to bad pollution levels than those who may have their air quality levels improved, which is not a good overall outcome for the Project.
- Impact on Ancient Woodland and the Shorne Woods Country Park – with the regulatory levels for Ancient Woodland being lower than those for human health impacts, there will be exceedances in the areas of Shorne Woods and Cobham-Ashenbank. We understand that trees already show signs of inhibited algal growth and this will be worsened by the project, spreading further up the trunks and further into the Park. There seems little point in having Country Parks which are then so contaminated that their biodiversity is compromised.
- Other impacted land – Land other than Ancient Woodland and designated SSSI's could also be impacted, just because it hasn't been designated does not mean lack of value. The Parish Council owns "Crabbles Bottom" which borders the A289 near to M2J1. It is part of intended local National Park proposals, includes meadow areas and ancient apple trees and could be negatively impacted by increased traffic on the A289 caused by the project yet is not being evaluated and considered. Data in the documents shows that Court Wood to its north will definitely be impacted.
- Significant effect criteria assessment for impact on rural areas, not valid for low property numbers – The impact assessment is used to claim that there is not a significant adverse effect but the methodology is flawed. The significant effect criteria assessment considers the absolute number of properties, so concludes that there is no risk if very few properties are affected, but where there are low numbers of properties in an area with scattered properties or large curtilages, this artificially downplays the problem. For example, five affected properties may sound insignificant but there is a great difference in impact between 5/1000 compared to 5/5, i.e. if all the properties in a particular low population density area are adversely affected.
- Lack of pollution assessments in future years – data is only presented for the opening year but traffic levels, and therefore the amount of pollution, especially due to particulates, are likely to rise.
- Predictions of air quality improvement immediately west of the LTC - Predictions that air quality will improve on the A2 immediately west of the LTC (close to the major junction) are

not credible as additional traffic will be pulled eastbound from the west to use the LTC, cancelling out any possible reduction through westbound traffic instead taking the LTC.

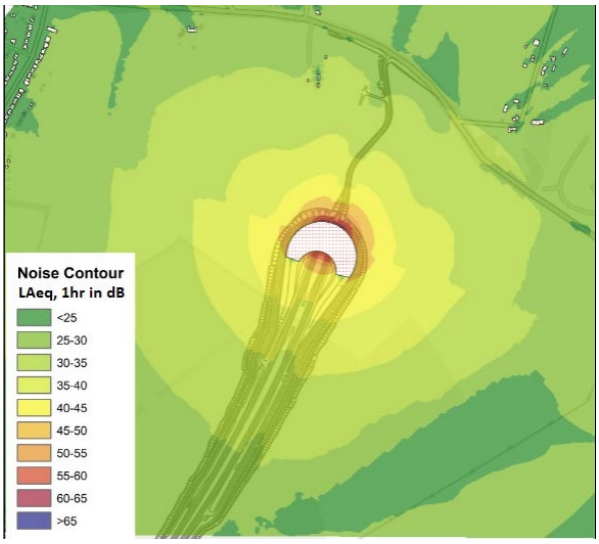
- Impact of any shift to electric vehicles - Arguments that more vehicles will be electric are not really quantifiable or predictable, especially for long-distance HGV's and rural residents. Electric vehicles are heavier and will still cause pollution of air from tyres and brakes, and noise pollution.

Noise and vibration pollution:

- Interdependence on traffic data - The Noise and Vibration data is a calculation based on the "capped" and dubious traffic data. Hence the noise predictions will also be too low. It really isn't possible that the very large increase in traffic on the A2 can end up with a noise reduction for the AONB area.
- Data validity – the background noise levels quoted in documents appear too high, which has the additional effect of concealing the impact of construction and operational noise however additional readings were being taken.
- Background noise levels and predictions - We are very surprised that background noise levels can credibly be as high as stated, for example 47-60dB at night, 50-65 during the day. We are equally surprised that predicted construction noise does not exceed the 65dB limit but will be pleased to be proved wrong during any construction. Our experience locally is that land topography and geology causes some noise to travel considerable distances, particularly pile driving.
- Duration of noise surveys – the survey durations were too short to be able to form an opinion or provide a basis for any conclusions, see (APP-150, page 34).
- Impact on recreational land – As with the air pollution issues we are very concerned about noised and vibration pollution impacting on recreational areas such as footpaths near the LTC line, the new Chalk Park and the existing Woodlands including Shorne Woods Country Park. The entire area and recreational routes and facilities currently valued for their tranquillity, such as Shorne Woods Country Park (the most visited park in Kent, with more than 1M visitors per year) will become subject to greatly increased traffic noise.



Footpaths layout (from APP-025, sheet 13)



South Portal Ventilation noise map (from APP-442, page 15)

- Predictions of reduced traffic noise – as with similar predictions of air pollution reduction, we just do not find these concepts credible. The predictions are based on putative shift to electric vehicles which have lower engine noise, but these are also heavier so generate greater road and rolling noise. Also use of lower noise road surfaces, but even if a valid consideration the latter depends on repairs being done promptly and using the same materials. The state of the existing road network locally is testament against this happening.
- Reduction predictions are also disbelieved because the heavily wooded central reservation on the A2 is being removed, as are maturing tree cover planted for the previous widening of the A2. In any case, the reductions are also shown to be temporary.
- Noise impact on residential properties and recreational areas close to the Project – These are a concern. Although it was obvious that there would be noise pollution, noise contours were only first published in July 2021 and showed that residential properties and recreational areas, including the new Chalk Park, will be badly affected by noise from the Project including from tunnel ventilation systems.
- Acoustic barriers – none are being provided south of the Thames in operational phase although the raised nature of the LTC:A2 junction should indicate these are needed.
- Effect of weather – noise impacts depend on the wind direction and weather so we regard it as very doubtful that there can be no operational noise impacts predicted for properties.
- Dust (and fumes/odours) - The area affected will depend on wind speed and direction. Reality is likely to be different from theory and there are some very sensitive receptors locally.
- 24h working: We have significant concerns about the impacts on local residents given likely noise propagation.

Mitigation/Compensation/Biodiversity issues in general:

- Concern that compensation cannot truly be provided - The location has areas of high environmental sensitivity which cannot truly be compensated.
- How do we know that enough area multiplied by ecological uplift is being provided? - This question also applies to all the mitigation and compensation land identified. Quantitative and qualitative means are needed to identify how much compensation and mitigation and NOx offset land is needed, and to confirm it has been provided. It is unclear to us whether or not the acreage of land identified is correct. It also does not make sense to e.g. take existing grazing land, relabel it as mixed mosaic grassland and then claim it to be compensation land for the LTC. That area already existed and the ecological enhancement is small.
- The meaning of "minimisation" - An objective of the project is to minimise adverse impacts on (health and) the environment but the location chosen is one of maximal damage or threats to Ancient Woodland, SSSI's, SPA's, Ramsar Site, landscape areas and Shorne Woods Country Park (the most visited park in Kent). "Minimise" is a "weasel word" that should be avoided as e.g. damage that is reduced from 100% to 99.9% can be said to have been minimised if all possible reduction measures have been applied yet there is no discernible difference or reduction in the damage caused.
- Unwarranted destruction – Existing habitat should be preserved. Residents are concerned that existing good wildlife habitat may be bulldozed when it might better be incorporated into the plans, as happened previously at Jeskyns where nesting skylarks were destroyed.
- Which landscape plan? - In early plans there were plenty of hedges in the compensation land, going back to the original small field landscape of the early 1800's. These then disappeared later and instead a very open landscape was proposed which provides less habitat and screening. Hedges, of mixed native species, should be maximised.

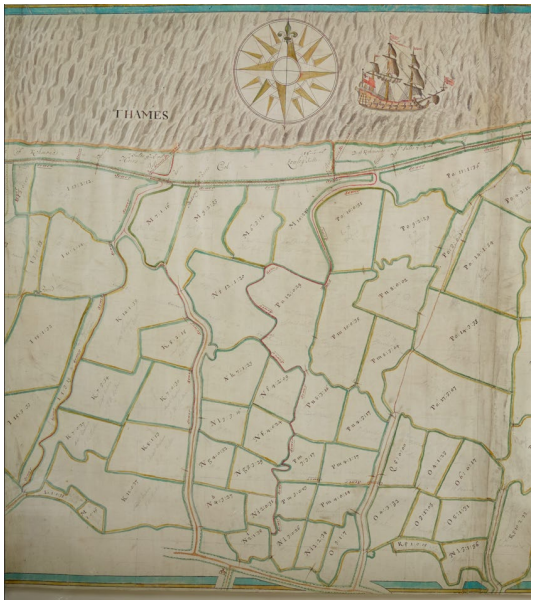
- Maximisation of hedges and ponds for biodiversity – Existing hedges should be retained and maximal new ones planted. Ponds are also important and should be provided where possible and they can be made permanent.
- Safeguarding against future development - If land is taken for compensation and mitigation and NOx offset then this must be permanent. We have great concerns that if management of the land is vested in local authorities (GBC and KCC) it might later be declared redundant and sacrificed for development, against the original principles of its acquisition/provision.
- Quality of restoration of land post-works - The documents state that after works are complete, that land will be restored to the satisfaction of the landowner, but it also needs to be to the satisfaction of the Parish and Borough Councils.
- NOx compensation land, physical area and double counting - Despite the discussion at ISH1 the situation remains very confusing but our conclusion is that there is still double-counting taking place. NH cannot count initiatives to be delivered by others, that are outside their red line boundaries, as being "their" NOx mitigation. (Otherwise this is equivalent to saying that any new tree planted privately near the LTC can also be counted). As with all the other proposed mitigation and compensation land, it is very difficult to be certain that the right amount of area and ecological uplift is being provided.

SECTION 11: WATER ISSUES, RISKS TO NORTH KENT MARSHES SPA AND RAMSAR SITE

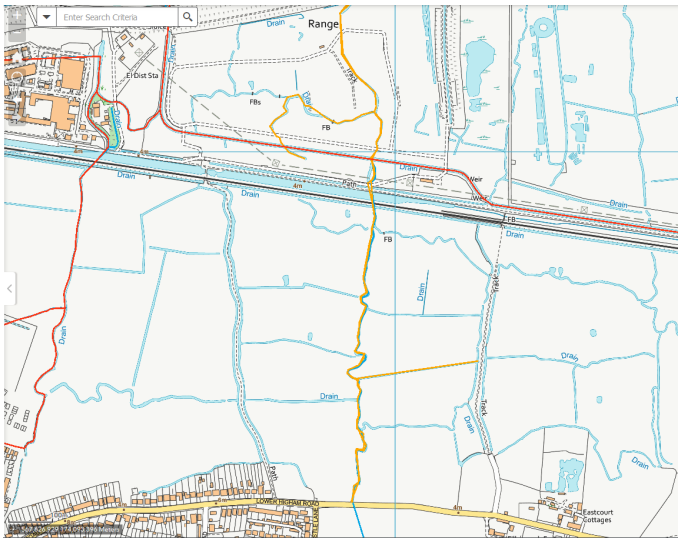
- As potential damage to the Ramsar Site is so important, we have given it a separate section.
- There is a considerable amount of information about water issues in the project documentation but some of the studies were only undertaken for a limited timeframe in the driest times of the year.
- Organisations such as the Environment Agency and Marine Management Organisation, together with the North Kent Marshes Internal Drainage Board, should be dealing satisfactorily with the various proposals and arising issues from their expert viewpoints so we will generally leave the issues in their hands.
- However that does not mean that we do not have significant concerns.

Valuing the marshes:

- The marshes are highly valued by residents, the ditch pattern is largely unchanged over centuries, despite changes since the late 1700's with the Canal and Railway.



Extract from 1694 map of the marshes (From Kent Library at Maidstone), shows Castle Lane in the south joining Lower Higham Road and the tracks to each side heading north, the "Ramsar Ditch" is that shown on the left.



Same area today (from https://webapps.kent.gov.uk/GIS/public/Floodmaps/)

<u>The water ecosystem of the marshes and sunken streams:</u>

- The water ecosystem on the marshes is a balance of water arriving from direct rain and indirect land drainage, and saline seepage from the Thames Estuary.
- In APP-152, page 35 NH state that "rainfall is the main input (to the Ramsar site), with a smaller and less certain input from leakage from the Thames." Although NH said that they found no evidence of streams, this is not strictly correct as the Ramsar site receives water from sinking streams such as at Swillers Lane, from which the water appears near Nuralite.
- There is another sinking stream at Shorne Ifield Farm, the farmer remembers it flowing on the surface. At that time, it headed north-east but what direction it now flows is seemingly not known.
- We have repeatedly expressed concern to NH about sinking streams because the official water map shows a route of flow from Shorne Ifield Farm to the area between Castle Lane and Chalk Church, which would be transected by the LTC. We asked NH to check with Southern Water as they had commissioned surveys some years sago but that does not seem to have happened. NH said that they did not find evidence of a culvert and Natural England are reported (by GBC) to have said that there is a mapping error. We would like to see firm and evidenced information.

<u>Shallowness of the tunnels (including the "ground preparation tunnel") under the Thames riverbed and North Kent Marshes</u>:

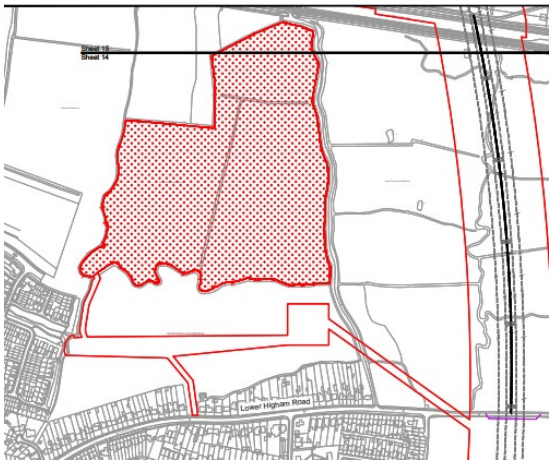
- The PLA and all the involved ports, as expressed in ISH2 and other hearings, are quite rightly worried about the inadequate depth of the tunnel structures under the river Thames as regards dredging requirements now and in the future.
- We have a similar concern about the lack of adequate depth under the North Kent Marshes and potential damage being caused to the overlying marshland.

- In addition to the main tunnel structure we will also have the "ground preparation tunnel" about which we have considerable concerns as it is even shallower and there is a lack of confidence in the methodology. (Please see Section 8.3 for further discussion.

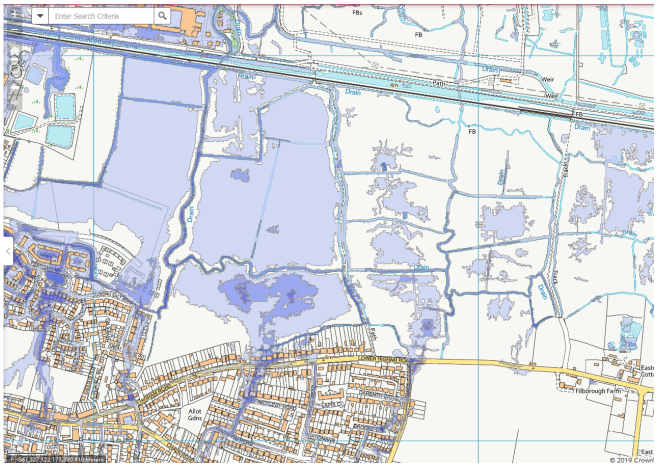
Adequacy of drainage proposals:

- Roadway drainage needs to be able to cope with very heavy, sudden, peak rainfall downpours due to Estuarine weather patterns. NH have already experienced this torrent twice just when holding Consultation Events at Cascades Leisure Centre.
- The safety margins need to be very high or risk overflow contamination to the SPA and Ramsar Site. For the Ramsar site there must be no chance of even unpredicted risk.
- Water drainage both during construction and in operation is a major concern to us as regards contamination implications for The North Kent Marshes SPA and the Ramsar Site.
- We note that Ramsar is not mentioned in AS-039. It appears once in APP-057 but that is only in the terminology for the Deemed Marine License.
- NH's proposals involve the construction drainage from the works south of the Thames being discharged into the Ramsar site – the ditch that they refer to as the "western ditch" is also known as the "Ramsar ditch". In App-058, page 15 NH refer to using "….a ditch that would convey flows to the River Thames" due to "…. potential for entrainment of chalk fines." We are therefore concerned about potential chalk particle and other contamination impacting negatively on the interconnected marshes ecosystem.
- It is unclear whether this is temporary or permanent. No further details have been provided but squared edged areas on the red line boundary suggest structures/machinery, which will be very close to houses and would potentially remove/ruin their view of the river.
- However it is also well known that this is an area which floods badly, due to a combination of rainfall and high winter tides seepage/restricted outflow, raising queries about the compatibility and viability of the proposal.
- Residents need much more information about this proposal.

Extract from Map of Ramsar site (from https://rsis.ramsar.org/ris/1025)



Extract showing drainage area (APP-016, sheet 14



Extract of Surface Water Flood Risk Map, from https://webapps.kent.gov.uk/GIS/public/Floodmaps/)

Other water issues:

- There are concerns about intended and unintended dewatering.
- During construction, and until they are removed, run-off could occur from the chalk stockpiles and if drainage/storage is overwhelmed during peak rainfall – design and capacity must be adequate for local weather maxima.
- It was reported that some enquiries had been made to landowners such as RSPB but, as they have not owned all the land for very long, we are not assured that they would know the answers to the questions. We would regard the North Kent Marshes Internal Drainage Board as being the people who know in detail about water in the marshes, we note that they do not have an SOCG.
- In APP-328, Figure 14.7 - Water Framework Directive - Protected Areas, Page 1 of 3, the inset area does not cover the whole of the order limits/area of interest including the proposed drainage to the Ramsar ditch.

SECTION 12: CONSTRUCTION ISSUES

Control over the Construction stage:

- It is stated in documentation and was discussed at ISH2 that there would be Forums/working groups and Community Liaison but we have significant worries over the extent that these would actually take note of valid community concerns and then implement actions to rectify/improve problem situations.
- These groups are not going to have any true power over NH or Contractors, so could just be frustrating “talking shops” that do not effect any changes in response to problems being raised.
- This is why it is essential that Local Authorities have involvement and control when they consider it is appropriate.

Construction staff vehicles using residential roads to access works compounds:

- Many roads locally are narrow and not suitable for increased traffic.

- Staff vehicles should as much as possible also access compounds through routes within the construction boundary rather than by public/residential roads.
- Although NH call staff vehicles "cars" the concern is that staff vehicles will be larger, heavier and more damaging, noisy and disruptive than what residents would regard as standard private cars.

Protection of residents and important buildings during construction:

- Tree planting in final position plus protective earth bunds should be put in place at the earliest possible date.
- Ensure maximal consideration of needs of residents and maximal protection measures are implemented.
- Night-time working should be avoided as much as possible, maps of affected areas were not clear.
- Summer working hours are too long (06.00 to 23.00).
- Haul roads are very close to residential locations.
- Concern for St Mary's Church, Chalk which is very close to the tunnel mouth and could be affected by increased noise and vibration and through nearby dewatering.
- Duration of bridge closure must be minimised, we consider that NH should review the possibilities for off-line/altered line construction.
- If full closure (Thong Lane N and S, and Brewers Road) is truly unavoidable then these should not be undertaken simultaneously.
- Greater balance is required over duration versus disturbance from night-time working, especially at Thong Lane N, where 24h working should be minimised due to proximity to residential properties.

Use of A226:

- The A226 may seem a relatively quiet A road that could take additional traffic but that is because it was bypassed by the original development of the A2.
- It originally had a central overtaking lane which was removed due to safety issues.
- It is a vital arterial link for local residents, especially for school and emergency traffic but rapidly gets gridlocked whenever there is a problem on the A2.
- As noted by Higham PC at OFH1 there are no zebra crossings on the A226 between Lion Roundabout in Gravesend and the A289, facilitated crossing points will be needed
- Current junction performance is not optimal but just about tolerable for local residents however additional traffic during construction, especially during bridge closures, and after opening will tip the balance towards interventions being required.
- At least temporary, then permanent traffic lights will be needed at all junctions.
- We are very concerned about the inclusion of the entire A226 within the order limits with threat of widening. However that does mean that junction and crossing facilitation is the responsibility of NH.
- As the A226 is already wide, for safety reasons, the only place that widening might be needed should be where there are works compound entrances. Any such widening must be reversed at the end of the project.

Routing of Construction HGV's:

- Originally plans showed these accessing the main works compound by means of the A2, and this should be done wherever possible rather than using the A226.

- However, the route involved using the Gravesend East junction and the eastbound A2 on-slip.
- That caused concerns adding traffic to the roundabouts when there are already eastbound off-slip queues back onto the A2 itself at peak times.
- To avoid a crossing-over of traffic conflict there are other methods for doing this such as traffic light controls.

Closures of footpaths and cycle routes:

- Proposed closures of footpaths and cycle routes include long distance routes.
- These closures need to be minimised, and using access controlled rather than full closure.
- Otherwise there must be safe and suitable alternative routes already in place.
- Rights of way closure: We would like to see more facilitation of continuing use through controlled access points rather than outright closure, and minimisation of any closure durations. PROW's should only be cut off as and when needed rather than all at once at the beginning, unless alternative routes have already been provided. Safety aspects are important but so is facilitating ongoing exercise/recreational routes for local residents particularly in Shorne West and Riverview.

Tunnelling issues:

- Please see our representations made in ISH1 as regards the Minor Refinement Consultation, these are not reproduced here.
- We note additionally though from reviewing documents for this submission, we identified that the driving of the two TBM's from north to south is anyway not now simultaneous.

Noise and pollution impacts:

- There are concerns over these impacts during construction. Noise from work such as pile driving has been found to travel considerable distances in the local area, as with recent work at Tilbury, and had to be stopped for noise reduction measures to be taken. Works related HGV's will also cause noise and vibration impacts to local residents .

Moving goalposts

- We find that as figures have moved through sequential documents some impacts have been reduced, while this may be due to refinement of detail some of the changes are not credible such as reduction in number of HGV movements on the A226 despite change of access to the main works compound.

SECTION 13: OPERATIONAL ISSUES

Air pollution impact from tunnel ventilation system:

- We are very concerned that particularly bad air will be pushed out of the tunnel mouth, without any cleaning, and impact on residential areas due to variable wind direction.
- This will also impact on the footpath network and new recreational area of "Chalk Park".

Noise Pollution:

- As well as impact on local residents at home, there will be significant impact on the new recreational area of "Chalk Park" and footpaths which are currently very peaceful.
- Tunnel ventilation – the documents claim that there will not be increased noise pollution to the nearest residential properties however there will be adverse effect on WCH routes, some of which go very near the tunnel mouth and are currently quiet and peaceful.

Charging Policy:

- A discount for Gravesham residents is something that residents consider important, although it only provides fractional compensation for the worst affected residents.
- Provision of a local residents discounts has been promised and is assumed but there remain concerns over charging policy.
- We consider that if the reasons for the LTC are linked to the Dartford Crossing then the Gravesham residents discount should also be applicable there.
- When the LTC and approach routes are blocked residents would be forced to use the Dartford Crossing instead and should not be charged for that. It would be better to have freedom of choice all the time.

Variable charging:

- Variable charging was discussed earlier in the Consultations regarding routinely using variable charging to influence which route drivers would take.
- We are opposed to this as it increases the pressure on unsuitable routes that drivers would then use to the LTC.

Monitoring and implementing solutions:

- Monitoring should be a means to an end, not an end in itself.
- The proposals for monitoring and subsequent corrective actions are inadequate as the frequency of monitoring (1y and 5y) are too far apart and solutions must be guaranteed interventions not with problems just left to languish amidst a queue of other schemes – while the latter might well have higher safety priorities it is not reasonable if local residents might be left suffering bad situations that were predictable consequences of the project.
- We also question what measures can and will be taken if predictions are shown to be incorrect, i.e. more traffic, noise and pollution than expected/predicted. How adverse outcomes identified by post-operational monitoring are going to get resolved is not clear. There will be problems where it is not physically possible to widen the roadway, and others where the source of funding is not clear or assured. Funding to resolve consequential operational problems must be assured and resolution expedited.
- We understand the point made by the Applicant at OFH3 that NH are not responsible for solving existing traffic problems, but where a problem, particularly rat-running, is obvious in advance or predicted to get much worse or predicted to newly occur due to the LTC then advance preventative measures by NH should be included in the scheme.
- NH should anyway not be making traffic to increase on unsuitable, residential roads.
- Similarly, if problems are found to arise or existing problems are demonstrably made untenably worse by the project then there has to be a guarantee of a rapid solution being implemented.
- We support the comments made by Dartford BC at OFH3 about post-opening monitoring, that it has to result in solutions.

- Perhaps funds should be set aside for such solutions at the outset rather than vaguely hoping that someone else will pay for them at some equally unspecified time. That approach would of course raise project costs and further decrease the BCR.

SECTION 14: CONCLUDING COMMENTS

There are plenty of allegories that can be applied to this project: "Flogging a dead horse", "like trying to stop the Queen Mary" (or even perhaps the Titanic) and being like a scene from "The emperor's new clothes" all readily come to mind.

Fundamentally, the LTC proposals are not fit for the actual purpose on which they are predicated as they ignore, do not address and cannot sufficiently improve the actual problems at the Dartford Crossing and approach roads.

The concept of an LTC just east of Gravesend may have seemed a good idea when mooted decades ago but life, and particularly increased housing developments and car ownership, have moved on unrecognisably since then, so as a result the proposed location is no longer suitable.

Similarly, the Covid pandemic seems to have permanently altered working and leisure practices around car driving, so invalidating previous assumptions about traffic volume growth. That further questions the need for this project.

If our area is to be sacrificed on the altar of NH's dogged pursuit of this project then the scheme needs to work in regard to all parameters of evaluation: traffic improvement at Dartford, lack of constraint on A2, M2 and interconnecting routes from the M20 to the A2/M2, lack of creation of traffic problems locally and on unsuitable roads, VFM etc. We wonder just how bad the negative aspects of the proposed LTC location have to be before they become game-changers or show-stoppers leading to need for abandonment of the proposals.

Despite NH's claims that the LTC will be barely noticeable and have no adverse effects (that they care about), the simple answer is that it does not and cannot work in this location in the real world.

Our objections to the proposals are not a case of Nimbyism, but due to awareness from our knowledge and experience of the local area and road network that the scheme simply will not work as the traffic levels in North-West Kent are already too high to accommodate such a large amount of additional traffic.

In the opening comments to the Inquiry the Inspectorate stated that the question in the Inquiry is whether consent should be given to "…..this particular project located in this particular location…." – in our view the answer that will emerge, after this robust examination process, will be a resounding "No". The whole Application process should be paused for a very necessary, major re-think.

We are very grateful to the Inspectorate for considering our representations.

Shorne Parish Council
18th July 2023