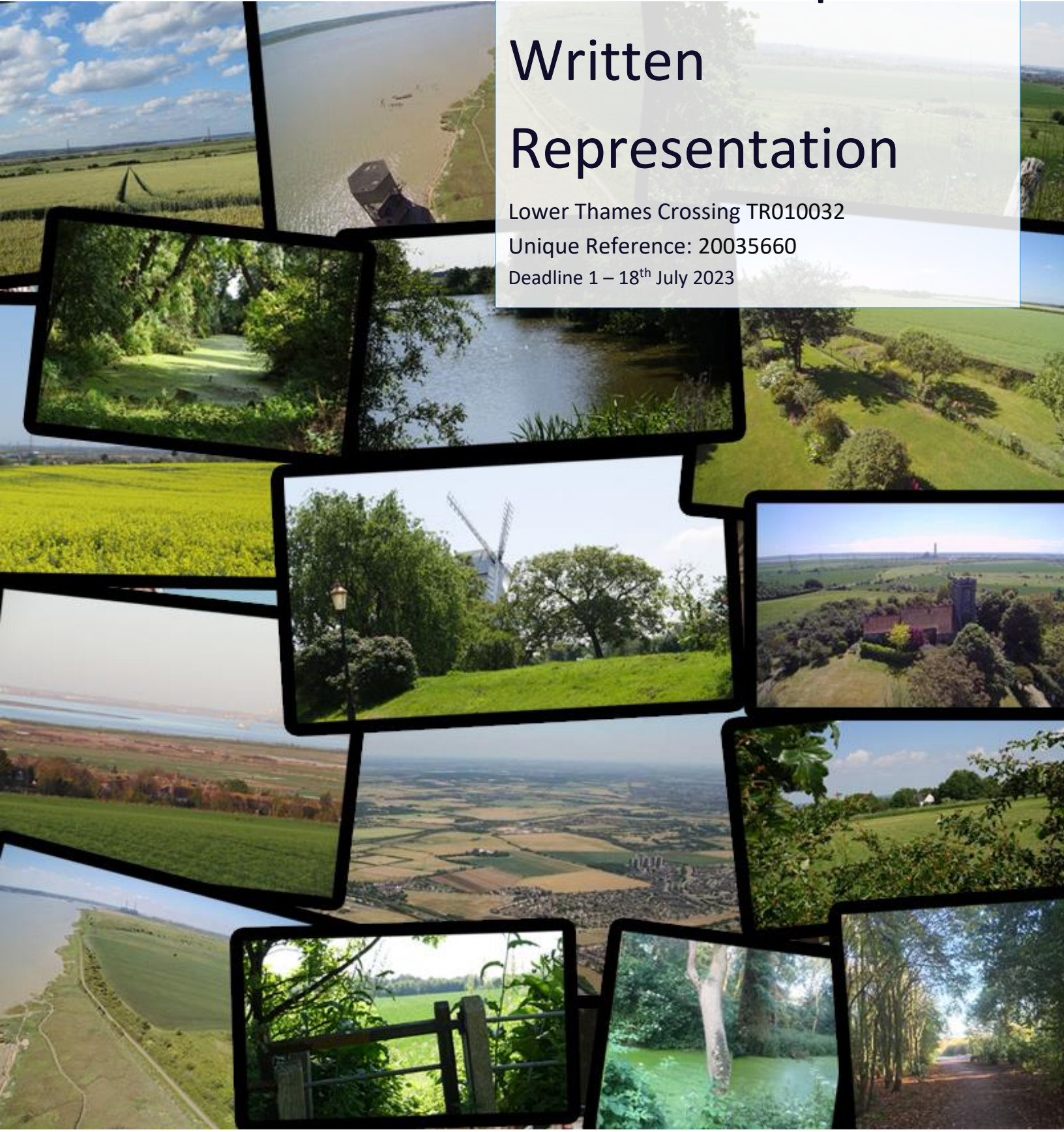


Thames Crossing Action Group - Written Representation

Lower Thames Crossing TR010032

Unique Reference: 20035660

Deadline 1 – 18th July 2023



Introduction

1. Thames Crossing Action Group are a community action group representing thousands of people from all areas opposed to the proposed Lower Thames Crossing (LTC).
2. We also have a seat on Thurrock Council's LTC Task Force Meeting committee.
3. We have taken part in every single National Highways LTC consultation to date, as well as having meetings and ongoing communications over the years.
4. We are doing our best to make representations, but have concerns that the consultations have been inadequate and large amounts of info that we have been asking for for years, have only been made available when the DCO application documents were released. It is a huge task to try and wade through so many documents, especially when many are at a far more technical level than would be expected to be shared with the public at consultation stage. We are also aware that some important information such as PM2.5 data has yet to be shared, and other info may not be up to date and accurate.
5. Please consider this our official Written Representation for the LTC DCO Examination. We hope it will also offer more insight and clarity to the oral representation we made at Open Floor Hearing 2, as we appreciate that we presented a lot of info in a short space of time!
6. We also appreciated the time and pressure constraints on everyone, so thought it would be better to present this evidence sooner rather than later where possible.
7. We have endeavoured to keep the 'Representation' section within the 1500 word limit, by presenting a summarised representation and also include relevant evidential appendices, which we hope will be helpful.
8. We have also included a Table of Contents below for ease of reference.
9. We would be more than happy to provide further info and evidence on any aspect if requested.

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Representation (Summary)

Our objection to the proposed LTC

1. We believe there is evidence to prove that none of the scheme objectives, as detailed in 7.1 Need for the Project [[APP-494](#)] Table 1.1 would be met.
2. The Dartford Crossing would still be over design capacity, even if the proposed LTC goes ahead, so all the same issues associated with the congestion and pollution would remain.
3. It is predicted there would be a 50% increase in cross river traffic, from induced demand, if the proposed LTC goes ahead.
4. There are many issues that would result in rat running, detours, additional pressure on the existing road network.
5. The proposed LTC route only works by utilising the already busy existing road network.
6. In addition, National Highways are not planning for how traffic would migrate between the two crossings when there are incidents, and there would not be adequate connections.
7. This would result in more chaos, congestion and pollution. This means the number of incidents at the current crossing is still likely to be high, and indeed the LTC would increase accidents in its own right.
8. It would also be a 'Smart' Motorway by stealth, adding further safety fears and risk.
9. We have concerns about accidents, demands on emergency services, Unexploded Ordnance, contamination, glint and glare, and have also experienced health and safety issues already in regard to the proposed LTC.
10. The proposed LTC would create a toxic triangle and worsen air quality. There is evidence the whole proposed route would fail against legal targets for PM2.5. NH are yet to present their analysis for this aspect.
11. It would also impact people's health and well-being, adding to the cost of healthcare, the NHS.
12. The project would be hugely destructive and harmful. Destroying homes, lives, health and wellbeing, greenbelt, woodlands (inc ancient woodlands), agricultural land (inc grade 1 listed

land) at a time of food security issues, solar farms, wildlife and habitats, countryside (inc AONB), the environment, leisure, heritage, communities and so much more.

13. It would fail to meet new legal requirements for Biodiversity Net Gain.
14. It is estimated to emit 6.6 million tonnes of carbon, so not compliant with Net Zero legislation.
15. We have concerns about flood risk, since much of the proposed route is across flood plains.
16. We do not feel that the proposed environmental mitigation and compensation is adequate or has been adequately assessed or presented.
17. We have serious concerns about the construction of the proposed LTC, if it goes ahead.
18. With 24/7 construction hours in some places, and unacceptably long construction periods in others, the impact would be felt throughout communities along and surrounding the entire proposed route for at least 6-7 years.
19. Host local authorities have concerns about impacts to the local economy and environment, which would impact us and our communities.
20. We do not believe that alternatives have been adequately considered, and we believe there are better and more sustainable alternatives. Also, that active and public transport provision should be much better than is being proposed.
21. It is contradictory to suggest that regional economic growth would be beneficial too, since this appears to largely relate to connectivity for the ports in the South East through to the Midlands and beyond. More growth means more traffic, more traffic means more congestion, which negatively impacts the economy. A vicious circle that leads to calls for more roads, it doesn't work!
22. The cost has risen from £4.1bn and as at August 2020 was up to £9bn.
23. The adjusted BCR has dropped from 3.1 down to 1.22 (as at August 2020)
24. In addition, there is a false economy whereby other works that would be needed as a direct result of LTC are not being included in the LTC project/budget.
25. The estimated cost of the proposed LTC is ever rising, and the current estimate is outdated and underestimated for a number of reasons.

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26. We believe if adequate assessment were to be carried out, including updating the costings and including all LTC related costs, the BCR would drop even further, lowering the value for money to poor.
 27. We believe there are gaps in the information that has been provided for the application, and that some of what has been submitted is misleading.
 28. We have done our best, but not had time to review everything, but we are sure that there will be other points we could provide evidence on time allowing.
 29. To summarise further, we do not believe the proposed LTC is fit for purpose. It would fail against all scheme objectives. Would be hugely destructive and harmful. It would be a waste of a huge amount of public money. There are better and more sustainable alternatives. We need and deserve better.
 30. We therefore remain strongly and completely opposed to the proposed Lower Thames Crossing.

Appendix A

Supporting evidence on Scheme Objectives

1. The scheme objectives are detailed in 7.1 Need for the Project [APP-494] Table 1.1.

Scheme Objectives	
Transport	<ul style="list-style-type: none">• To relieve the congested Dartford Crossing and approach roads and improve their performance by providing free-flowing north-south capacity• To improve the resilience of the Thames crossings and the major road network• To improve safety
Community and environment	<ul style="list-style-type: none">• To minimise adverse impacts on health and the environment
Economic	<ul style="list-style-type: none">• To support sustainable local development and regional economic growth in the medium to long term• To be affordable to government and users• To achieve value for money

Would not relieve the congested Dartford Crossing and approach roads and improve their performance by providing free-flowing north-south capacity

Congestion

2. 7.1 Need for the Project [APP-494] 4.2.2 states that the Dartford Crossing has a design capacity of 135,000 vehicles per day, and that regularly carries over 180,000 vehicles per day.
3. This means that we'd need to see a reduction of more than 25% to bring the Dartford Crossing back below design capacity. (180,000 - 25% = 135,000)
4. 5.2.1 of the same document states that the proposed LTC would reduce traffic flows on the Dartford Crossing by 19% in 2030 (opening year).
5. We would highlight that the opening year has now been pushed back, following the Government announcement that the start of construction has been delayed by 2 years, if permission for the LTC is granted.

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6. We do not believe that year by year data is available, as National Highways have only provided certain years for traffic modelling data. So, whilst we are unable to find an exact figure, we know that traffic generally increases year on year.
 7. 4.2.33 of 7.1 Need for the Project [[APP-494](#)] states, *“Further to the existing congestion, the average daily traffic flow using the Dartford Crossing without the Project is also predicted to continue to increase by nearly 21% in the period 2016–2030.”* This period is of course pre-opening year, if the LTC goes ahead, and to date we have been unable to locate reference to predicted traffic growth post 2030.
 8. We also know that NH predict that the amount of traffic the proposed LTC would take away from the Dartford Crossing by 2045 drops to 12%, as per 5.2.11 of 7.8 Traffic Forecasts Non-Technical Summary [[APP-528](#)]
 9. We believe this shows that the Dartford Crossing would remain over capacity, even if the proposed LTC goes ahead.
 10. We also highlight that Thurrock Council were provided with official NH traffic modelling and their analysis showed that the proposed LTC would take as little as 4% of traffic in the am peak hour and 11% in the pm peak hour.
 11. This further highlights the questionable claims by NH that the proposed LTC would solve congestion at the Dartford Crossing.

Would not improve the resilience of the Thames crossings and the major road network

Incidents

12. Furthermore, there are more than 3000 incidents per year at the Dartford Crossing , as per Plate 4.8 of 7.1 Need for the Project [[APP-494](#)]
13. 4.2.50 of 7.1 Need for the Project [APP-494] states, *“Due to the Dartford Crossing frequently operating above capacity, closure in either direction, even for a relatively short time, can lead to significant additional congestion.”*
14. This shows that the combination of congestion and incidents only worsens the congestion.
15. Since evidence shows that the Dartford Crossing would still be over capacity, it is highly likely that there would still be large numbers of incidents.
16. When there are incidents at either crossing, if the proposed LTC goes ahead, traffic would want to migrate to the other crossing.
17. However, National Highways are not considering and planning for how traffic would migrate between the two crossings. We have been told it is not industry standard to plan for migration.
18. Let’s consider what would happen when there are incidents at the Dartford Crossing.

19. When there's an incident at the Dartford Tunnels

20. If traffic comes off the M25 onto the A2 coastbound in an attempt to get on to the LTC there would be just one single lane from the A2 coast bound onto the LTC.

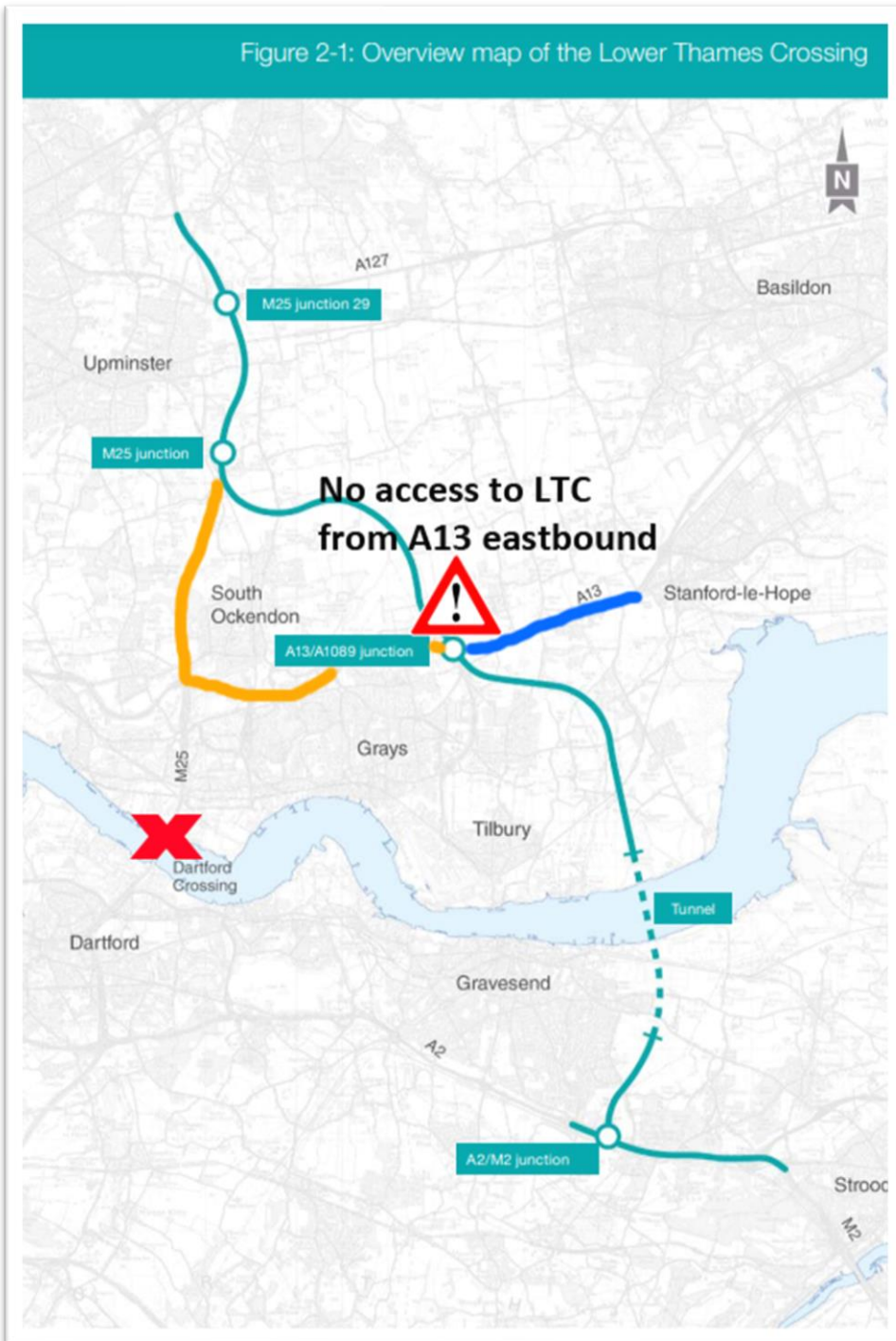
21. Or maybe traffic would come off the M25 earlier at junction 3 onto the M20, down to the A227 or A228 to cut through to the A2/M2, and then try to get onto the LTC that way.

22. How long would take for traffic to start trying to cut through by any route it can either to try and access the LTC, or start heading westbound into London to use a different crossing, as it does now?

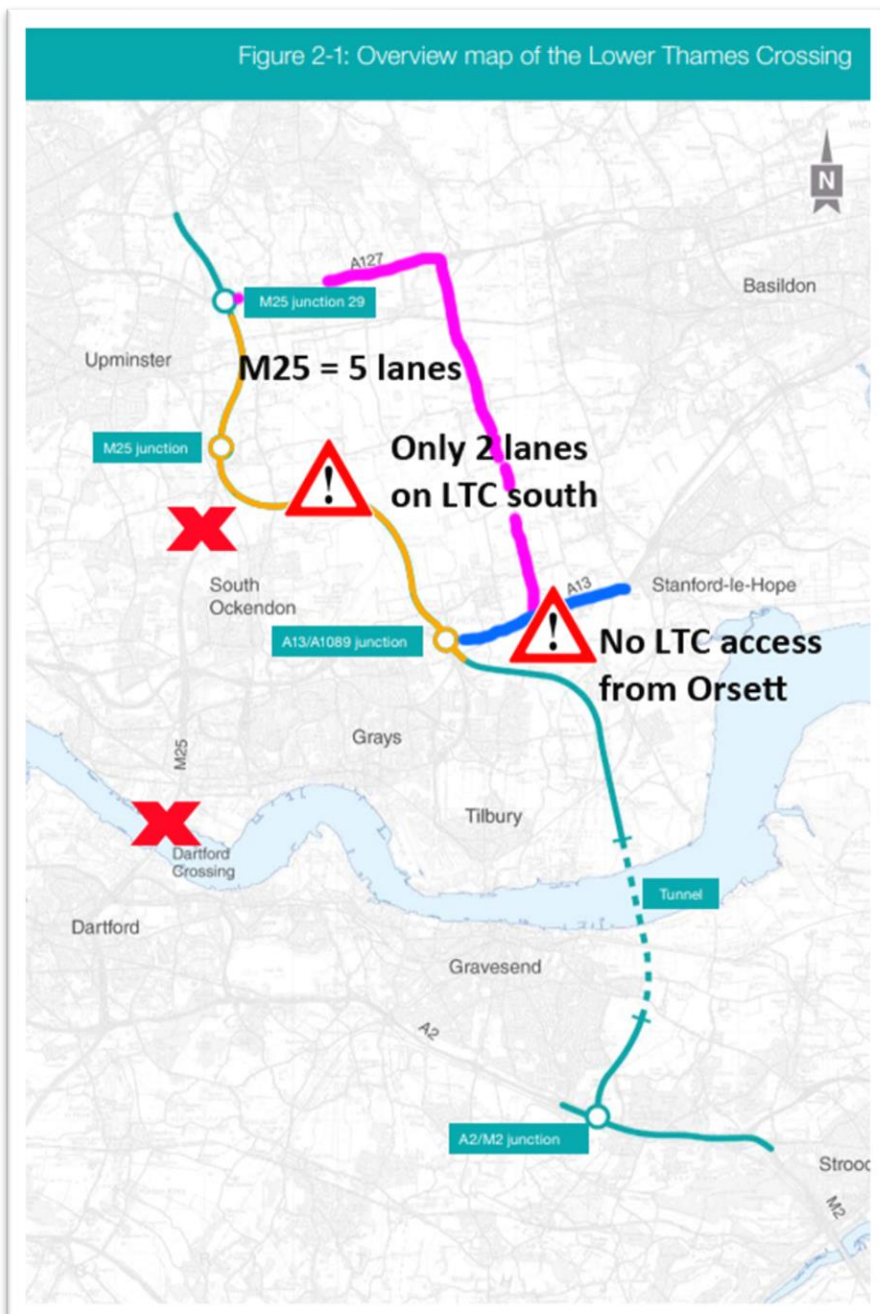


23. When there's an incident at the QE2 bridge

24. If traffic were to come off the M25 onto the A13 eastbound (junction 30), it would have to go all the way down to the Stanford (1014) junction. Then up and around the traffic lighted roundabout. Remembering this junction is used by the likes of DP World and London Gateway so already a busy junction. Then back westbound on the A13 until just past the Orsett (A128) junction, to the new joint LTC (both directions) junction. Note the LTC is not accessible from the Orsett junction. This has now been dubbed the Stanford Detour, and is shown in blue on the map.



25. If instead it attempts to come off the M25 directly onto the LTC, the M25 at this point would be 5 lanes of traffic, and the LTC southbound (between the M25 until just past the A13) is just 2 lanes of traffic.
26. When that all starts to back up, if traffic instead tried to come off the M25 onto the A127 (junction 29) to cut down the A128 (shown in pink) in an attempt to reach the LTC it would need to take the Stanford Detour (shown in blue), because remember there is no access to the LTC from the Orsett/A128 junction.
27. Alternatively, traffic could also very likely start heading into London on the various routes it currently does when there are incidents.

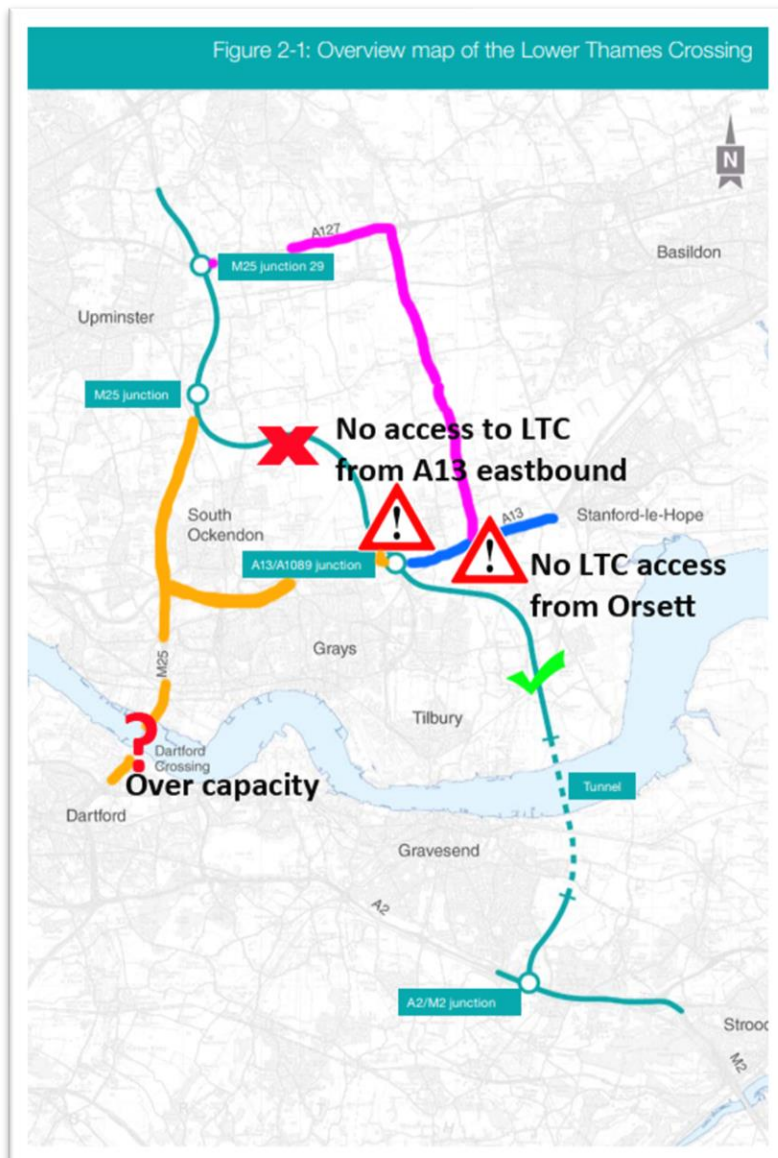


28. When there's an incident on the LTC between the M25 and A13 (for traffic travelling southbound)

29. For traffic travelling southbound

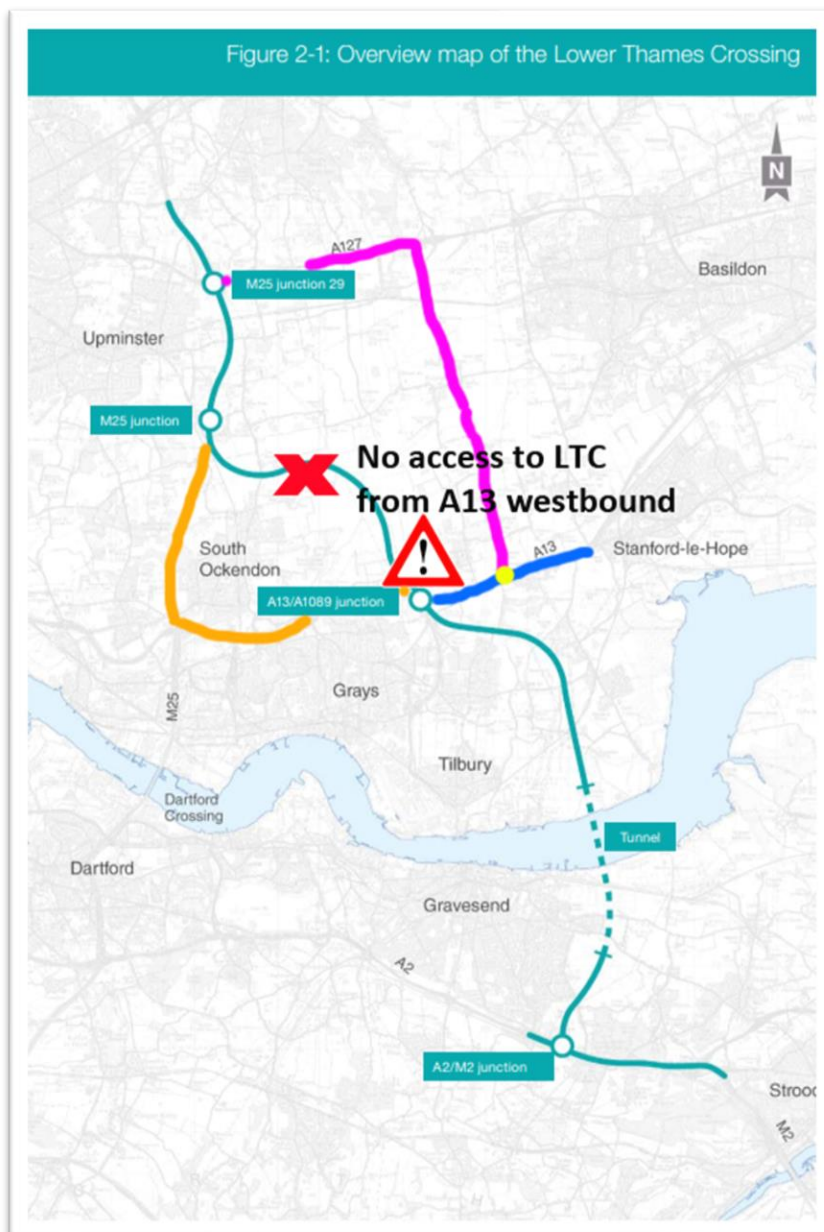
30. If traffic continues southbound down the M25 it would then either take the Dartford Crossing, which would still be over capacity. Or it would take the A13 eastbound, again having to take the Stanford Detour as outlined previously and shown in blue.

31. Alternatively, some traffic may think it can come off the M25 at junction 29 onto the A127 to cut down the A128 (shown in pink). But of course yet again it would need to take the Stanford Detour (shown in blue) to get back onto the LTC to cross the river.



32. For traffic travelling northbound

33. If traffic came through the LTC tunnels heading northbound and then could not continue on the LTC past the A13, it would have to come off the LTC at the A13, but there would be no access to the A13 west bound. Instead it would have to head east on the LTC to A13 connecting slip road to the Orsett Cock roundabout (marked with yellow dot), round the traffic lighted roundabout and then back westbound along the A13 to the M25. Or possibly try cutting up the A128 (shown in pink), or via local roads. to the A127 and onwards either back to the M25 or other routes. Or as traffic starts to build, which wouldn't take long, it may try to use the Stanford Detour (shown in blue) rather than sitting waiting to get round the Orsett Cock roundabout.



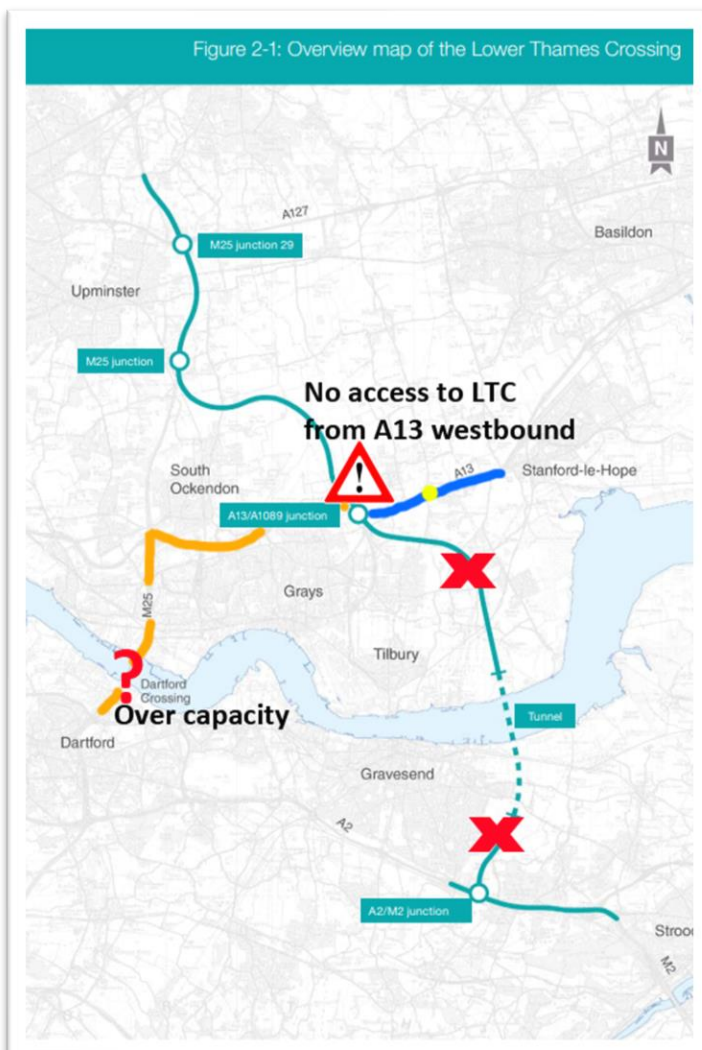
34. When there's an incident on the LTC between the A13 and the A2/M2 (inc tunnels) – southbound

35. For traffic travelling southbound

36. If traffic has left the M25 on to the LTC south and then faces an incident on the LTC south of the A13, it would need to come off the LTC on the slip road to the A13 where via the connecting slip road it would have to go around the traffic lighted Orsett Cock roundabout (marked with yellow dot), to head back west on the A13 to get back on the M25 to use the Dartford Crossing.

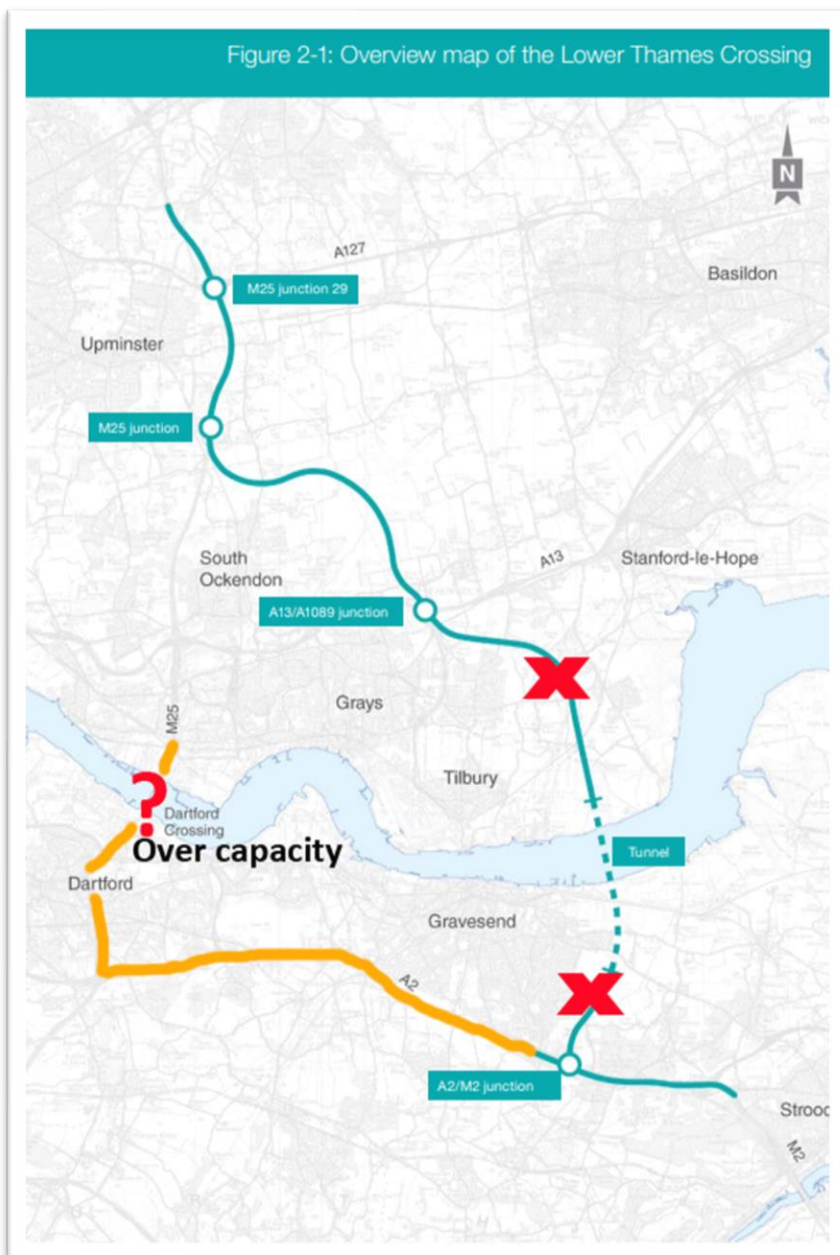
37. Again, when the traffic is queuing to get around the Orsett Cock roundabout, traffic is also likely to use the slip road from the LTC onto the A13 eastbound to take the Stanford Detour (shown in blue) to turn around and head back westbound on the A13 to the M25, and/or use other local roads to cut through wherever they can to get to their destination.

38. If the incident is in the tunnels or further south traffic could be 'turned around' via the newly proposed operations/emergency access point.



39. For traffic travelling northbound

40. If you were driving along the M2/A2 hoping to travel northbound on the LTC and there was an incident on the LTC, you would need to continue westbound on the A2 to the M25 and use the Dartford Crossing. If this happened it is highly likely that traffic would also use any route possible to try and cut through to the Dartford Crossing, which would of course still be over capacity.
41. Since the proposed LTC utilises the local road network, in particular the Orsett Cock and A13 section this also adds pressure and congestion to the existing road network to the extent that Thurrock Council have advised it would cause issues from the opening year.



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42. None of these provide adequate connections, and it is apparent that congestion, pollution, and chaos would only worsen, and impact a wider area, and add to already busy and congested roads throughout the region.
43. 4.2.53 of 7.1 Need for the Project [[APP-494](#)] states, *“The sections between M25 junction 1b and junction 2 and between junction 1a and junction 31 (the Dartford Crossing itself) perform particularly badly. The former is significantly worse than the national average, attributable to a combination of factors including the close proximity of junctions and wide approaches to the tunnels which result in weaving as drivers make late lane changes with associated sudden reductions in speed as they are uncertain of the correct lane to enter the tunnel.”*
44. We draw attention to the fact that the proposed LTC includes the ‘Operations and emergency access point’ at Tilbury.
45. NH have stated that *“the operational access could potentially accommodate further development in the future”* – pages 76/331 in 5.1 Consultation Report - Appendix T - Local refinement consultation material [[APP-088](#)]. As this is in the vicinity of where the Tilbury Link Road is proposed to join the LTC, it would seem that this may be the “further development in the future” that is being referred to.
46. This ‘junction’ is close to the LTC northern portals, in a similar way to junctions being close to the Dartford Crossing, so seems ludicrous to be proposing, considering the comment about close proximity of junctions being attributed to the number of incidents at the current crossing.
47. Considering that the Tilbury Link Road is predominantly a provision to serve the Port of Tilbury (Thames Freeport) it can be expected that a large percentage of vehicles using this junction would be HGVs.
48. These larger vehicles are heavier so would also be slower on the uphill gradient out of the LTC tunnel. They are also longer, particularly with the recent announcement of longer HGVs in the UK. This again seems ludicrous when you view the proposed layout for the ‘operational access’ and note the roundabouts and contemplate large HGVs attempting to manoeuvre around them.
49. This would all add to traffic flow issues and associated congestion and pollution.
50. In regard to the proposed layout of the ‘operational access point’, ie the roundabouts, if the junction would need to be redesigned to accommodate the Tilbury Link Road, this hardly seems like a good investment of public money to build a ‘junction’ that would need to be redesigned and rebuilt.

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51. It is unclear if and when the proposed Tilbury Link Road is being progressed. It was detailed as a Road Investment Strategy 3 (RIS3) pipeline project previously. However, RIS3 hasn't been confirmed, and it appears that new road projects are likely to be greatly reduced from RIS3 forward, so there is a high level of uncertainty.
 52. At this point we'd like to highlight that, at the time of route options, the Port of Tilbury have publicly stated that they would only support Option C3 (which is now known as the LTC), if they got their own junction.
 53. The Tilbury Link Road was added to maps of the proposed LTC, only to later be removed, with the Tilbury Link Road now being progressed as a separate stand-alone project. (*Please also see 'False Economy' in Appendix C*)
 54. We believe the above shows that the proposed LTC would not improve the resilience of the Thames crossings and the major road network, and that in fact it would likely make things worse.

Would not improve safety

55. We believe there are a number of safety concerns in regard to the proposed LTC, if it goes ahead, and that it would not improve safety.

'Smart' motorway by stealth, accidents, emergencies, fires, UXO, contamination, glint and glare

56. 'Smart' Motorway by Stealth

57. Whilst NH say that the proposed LTC would be an All Purpose Trunk Road (APTR), we refer to 7.7 Combined Modelling and Appraisal Report - Appendix C - Transport Forecasting Package [APP-522] where it states at 6.2.3 "...the mainline is coded as a three-lane motorway (except for the northern section between the M25 and A13 where the southbound direction has two lanes)"

58. The same document states at 2.2.6, "...the A122 would operate with no hard shoulder..." and "...It would also feature technology including stopped vehicle and incident detection, lane control, variable speed limits and electronic signage and signalling. The A122 design outside the tunnel would include emergency areas..."

59. The proposed LTC was referred to as a motorway until awareness rose about the dangers of 'smart' motorways, at which point they started referring to it as an expressway, road, the project, and now as an APTR.

60. Despite NH stating in 6.1 Environmental Statement - Chapter 3 - Assessment of Reasonable Alternatives [APP-141]:

3.10 Road standard

- 3.10.1 At PRA, it was assumed that the Project's route would be an all-purpose trunk road (APTR), although it was acknowledged in the Post-Consultation Scheme Assessment Report that the Project could be designed to emerging 'expressway' standards introduced in the Road Investment Strategy (DfT, 2020).
- 3.10.2 Following the PRA, consideration was given to the following three road standards:
- g. APTR
 - h. Expressway
 - i. Conventional/smart motorway
- 3.10.3 Following assessment of the alternative road standards available, it was decided that the Project should be designed to the expressway standard.

61. Just prior to the Preferred Route Announcement (PRA) in the 2016 Summary Business Case ¹ suggests it would be 'motorway standard':

2.8.6 Compared to a bridge, a bored tunnel is more complicated and expensive to operate and maintain. There are a number of successful modern 'motorway standard' tunnels operating in other countries and Highways England already operates a number of road tunnels in the UK.

62. Whilst [APP-141], as shown above states that after assessment following PRA (2017) it was decided the project should be designed to the expressway standard, the 2018 Statutory Consultation declared that the proposed LTC would be a new motorway. As can be seen in 5.1 Consultation Report - Appendix M - Statutory consultation material [APP-082], see page 48/191 for example.



63. The available evidence continues to show that the proposed LTC would actually be a 'smart' motorway by stealth, so should therefore be scrapped in line with the government decision to scrap new 'smart' motorways.

64. We have to wonder why the applicant declined to comment on this point at both Issue Specific Hearing 1 and also an Open Floor Hearing 2 when we raised this concern.

65. Please also see Appendix B for more detailed evidence that TCAG has been presented to government regarding 'Smart' LTC.

66. Accidents

67. In addition to the fact that we do not believe that the number of incidents at the Dartford Crossing would be greatly reduced, since it would remain over design capacity, it is concerning to see the predictions for the LTC.

¹ https://highwaysengland.citizenspace.com/ltc/lower-thames-crossing-consultation/user_uploads/lower-thames-crossing-consultation-summary-business-case.pdf

68. There are forecast to be 2,147 additional accidents over 60 years, including 26 fatalities, 220 serious injuries and 3,122 slight injuries.

69. How can even this alone be considered to improve safety?

70. Emergencies (inc fires from EVs)

71. We are concerned that there would be impacts to the emergency services and hospitals, both during construction and operations, if the LTC goes ahead.

72. Road closures and the amount of staff working on the project would bring their own pressures to services and accessibility, and could put people's lives, health and well-being at risk due to delays and worries about delays in regard to emergency services response times due to the closures and diversions.

73. As with a lot of the country, our regions are stretched when it comes to hospitals, healthcare, and emergency services. If the proposed LTC goes ahead, and as seen above the number of accidents increases, and the LTC doesn't solve the issues that are contributory to incidents, it would just add further pressure to hospitals and emergency services.

74. We do not believe there would be adequate access for emergency services to and from the proposed LTC either, and understand that the emergency services steering group still have concerns about the proposed LTC that they will make their own representations on.

75. Another specific aspect of emergencies that we wish to comment on is in regard to increased risk from Electric Vehicles (EVs).

76. Procedures to attend EVs when there are incidents can take longer because of the potential of the vehicle being live (electricity).

77. They are also largely heavier due to the additional weight from the batteries, which can result in more tyre wear. This could lead to people choosing cheaper tyres due to more regular need to replace their tyres which could again lead to safety issues on the roads.

78. EVs also have serious issues when it comes to catching fire, for whatever reason. EV fires can also reignite even after they have been put out, and there are growing reports about spontaneous combustion of EVs.

79. With the LTC including the tunnel section the increasing use of EVs and potential of highly combustible and explosive hydrogen, the risks are a serious concern.

80. In addition, the tunnels are not ventilated, rather the design is for moving vehicles to push the air along with pollution through and out of the tunnels. We have been told that if the traffic slows/stops in the tunnel fans would come on. Obviously if there was a vehicle fire in the tunnels we have additional concerns that the fans coming on would literally fan the flames and feed the fire.

81. UXO

82. Peter M. Haddock (MA.,MBA.,Dip.SM.,MIIRSM.,jsdc) has shared some of his vast knowledge on the subject, and his serious concerns over what could potentially happen unless extreme care is taken.

83. Mr Haddock has spent the past 50 years, extensively researching unexploded ordnance in the Thames Estuary. In 1974, he served at Maplin Sands, when thousands of tons of WW1, WW2 and other ordnance was removed from the sands for the then proposed Maplin Airport.

84. He also grew up within 10 miles of the SS Richard Montgomery, located offshore at Sheerness.

85. He stated to us that his biggest concern was the unexploded V1 & V2 vengeance weapons, fired at London. Hundreds of the weapons fell into the river Thames and sank into the soft clay without exploding. He has located maps showing where and when these weapons entered the Thames in an area between Southend and Sheerness and up river to the site of the proposed Lower Thames Crossing.

86. These maps show hundreds of black dots representing each of the V1's & V2's, which are still lying in the Thames mud.

87. He also suggested the concept of sympathetic detonations should be considered, whereby a direct strike on one V1 or V2 could set many others off causing a tremor, which could affect the Richard Montgomery and the rest of the ordnance still located under the Maplin sands.

88. If this were to happen, Southend, Sheerness, the River Medway could be destroyed with a massive tidal wave surging up the Thames to London itself.



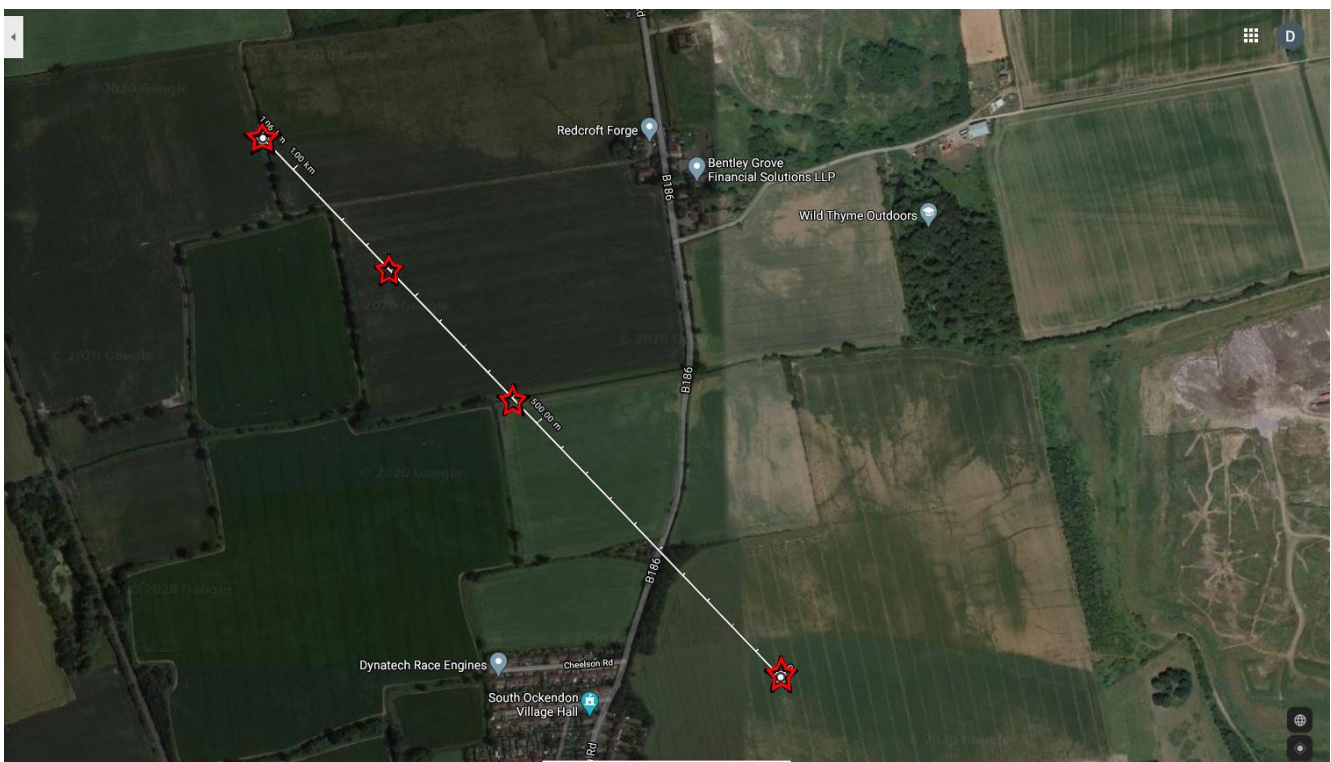
89. For background information, The SS Richard Montgomery was a cargo ship built in Florida to carry vital supplies for the war effort, in World War 2. It was wrecked off the Nore sandbank in the Thames Estuary, near Sheerness, England in August 1944, whilst carrying a cargo of munitions. Around 1,400 tonnes (1,500 short tons) of explosives remain on board.
90. From experience, our communities are more than aware of the risks of UXO being located, which is why concerns on this aspect of the proposed LTC are high.
91. Information on UXO through consultation stage was very poor, with literally a free desktop version, map being shared at one point.
92. TCAG actually put a Freedom of Information request in to try and obtain further info/data on UXOs in regard to the proposed LTC. Our request was initially refused. After we requested an internal review we were issued with an apology for withholding the info and the info/data requested was shared.
93. This goes to show how little the applicant has wanted to communicate with us on important safety concerns previously, and why we have little if any confidence in them.
94. We are also concerned to read in 6.3 Environmental Statement - Appendix 10.10 - Unexploded Ordnance (UXO) Desk Study and Risk Assessment [[APP-433](#)] that Zetica state conditions on any potential liability from their survey results.
95. Also, in the same document that further assessment would be needed, if LTC is granted permission, before construction begins. Surely, this kind of risk needs to be fully assessed before permission is granted, if it is to be granted?

96. Local knowledge and experience places communities in a position of having concerns that the info being presented by the applicant appears to reduce the risk factor compared to what we have known and lived with for decades.

97. The stress the risk of UXOs has already had on residents should also be noted. Ground investigation works having been carried out in areas known to have a highly likelihood of UXO.

98. For example, the image below shows the locations of bombs that went off in WW2 marked by red stars, with a clear pattern, and a distinct gap in that pattern where there is a very high likelihood that there is a UXO based on info shared with us by people who lived through WW2 in this location.

99. Ground investigations have already taken place in this vicinity and caused nearby residents a high level of stress. This would only get worse again, if permission is granted, and construction goes ahead.



100. **Community experiences to date**

101. Is it any wonder communities have concerns based on what we have experienced dealing with the applicant and their contractors to date, and through ground investigation stage.

102. We had an instance of a gas main being hit, poorly set up lighting rigs that were causing glare hazards to road users (and properties), LTC vehicles parked on footpath/cycle routes, an LTC

related vehicle hitting and damaging someone's fence, damage to trees and verges, workers urinating in fields near homes, signage being positioned in narrow roads causing hazards, contamination of land, littering from compounds and works, near miss accidents due to badly managed lane closures, a protected species of snake being run over despite the land owner warning the applicant of their presence on the private land, a number of issues regarding health and safety breaches during covid when investigation works continued, to highlight some of what communities have experienced so far.

103. We have also witnessed the sink holes and bubbling incidents from HS2 recently, which we hear is reported to be due to chalky grounds. This gives us no confidence with LTC, since our region is predominantly chalky. Not to mention NH have been promoting that they are 'learning' from HS2.

104. Contamination

105. The proposed LTC route would pass through various locations that are subject to hazardous and contaminated land, such as historic landfills.

106. It would also pass through valuable habitat and agricultural land, including some that is Grade 1 land.

107. Since spoil from the construction would be used for various landforms and embankments, as well as even being temporarily stored on construction compounds, we have concerns that there could be cross contamination to both agricultural land and the natural environment.

108. Solar Farm glint and glare

109. With how the proposed route would bend through the solar farms, which are now being constructed across the Mardyke valley, we have concerns about the risk of glint and glare from the solar panels.

110. These are large new solar farms, with raised panels that must surely catch the sun to be worthwhile as a solar farm! It would therefore be expected that there would be glint and glare from the panels at certain angles, and with how the road bends so much through that section it would seem highly likely that this could impact road users, if the LTC goes ahead.

Would not minimise adverse impacts on health and the environment

Health and environment – toxic triangle, PM2.5, pollution, carbon, biodiversity, agriculture/food security, leisure impacts, heritage, flooding.

111. Health and Environment

112. The proposed LTC would create a toxic triangle, in areas that are already suffering with illegally high levels of air pollution, if it goes ahead. The impacts to health and well-being would also incur cost for healthcare (the NHS).



113. PM2.5 and legislation

114. In 2019 Professor Karen Lucas, who at the time was Chair of the *Community Impacts Public Health Advisory Group (CIPHAG)* tweeted the below



115. For background, *The CIHP Advisory Group* was established in November 2018 comprising an independent chair, representatives from the LTC project team and senior representation from Local Authorities potentially affected by the project (invited Local Authorities have been by virtue

of their proximity to the project and registered interest and include Kent CC, Essex CC, Thurrock Council, Medway Council, Southend-on-Sea BC, Gravesham BC, Dartford BC, London Borough Havering and Brentwood BC).

116. The levels for PM2.5 that Professor Lucas referred to are the same levels that have just been put into UK law for the Environment Act, what has become known as WHO-10 levels.
117. We therefore believe that the whole proposed LTC route would fail against the newly set legal targets for PM2.5.
118. We have asked NH for their assessment of PM2.5, and been told that it is still being worked on. We question when this will be introduced to the DCO application, and also highlight that this new legislation was expected around the time the LTC DCO application was resubmitted. We question why knowing this NH pushed ahead with resubmission rather than waiting to submit an application that included the associated assessments and info in this regard, as obviously it is not just PM2.5 it would be all new legislative targets from the Act.
119. NH has also always attempted to suggest that EVs are the solution to air pollution. The reality is that EVs still emit PM2.5, often at a higher level than lighter fossil fuel vehicles.
120. NH have also attempted to claim that air pollution disperses within 200 meters of the road. Again, this is not true of PM2.5 which can travel thousands of miles, and be picked up and moved by wind and/or rain.
121. PM2.5 not only pollutes the air we breathe, but also the water we use, the soil we grow produce to eat in, and adversely impacts the natural environment as well as us.
- 122. Pollution**
123. The general health and environmental impacts of all types of pollution (air, noise, light, vibration) are a serious concern to us.
124. In regard to noise pollution we do not feel it is acceptable that noise barriers would be decided on by the construction company. How is anyone supposed to believe that they will do what is best, rather than what is cheapest and easiest for them?
125. Our communities also know from experience the importance of adequate noise barriers from experience when the M25 was constructed.

126. All of these types of pollution can have a negative impact on people's health and well-being, and concerns over these impacts are during construction as well as operations.

127. ULEZ is supposed to be about cleaning up the air we breathe, but the LTC and M25 would both pass through the ULEZ expansion zone, but users of these NH roads would be exempt from ULEZ.

128. *We wish to note that we are not making representation in support of or opposition to the ULEZ expansion with the above comment, only highlighting the fact.*

129. Nitrogen Deposition

130. Not only do we have concerns about the adverse impact of nitrogen deposition, we also have concerns that we do not feel NH have adequately considered or consulted on this aspect.

131. For instance, people in the vicinity of Epping Forest Special Area of Conservation have not been consulted, despite NH admitting in the Local Refinement Consultation that Natural England and others do not agree with NH's assessment and they consider nitrogen deposition mitigation to be necessary. (See page 170/331 - 5.1 Consultation Report - Appendix T - Local refinement consultation material [[APP-088](#)]).

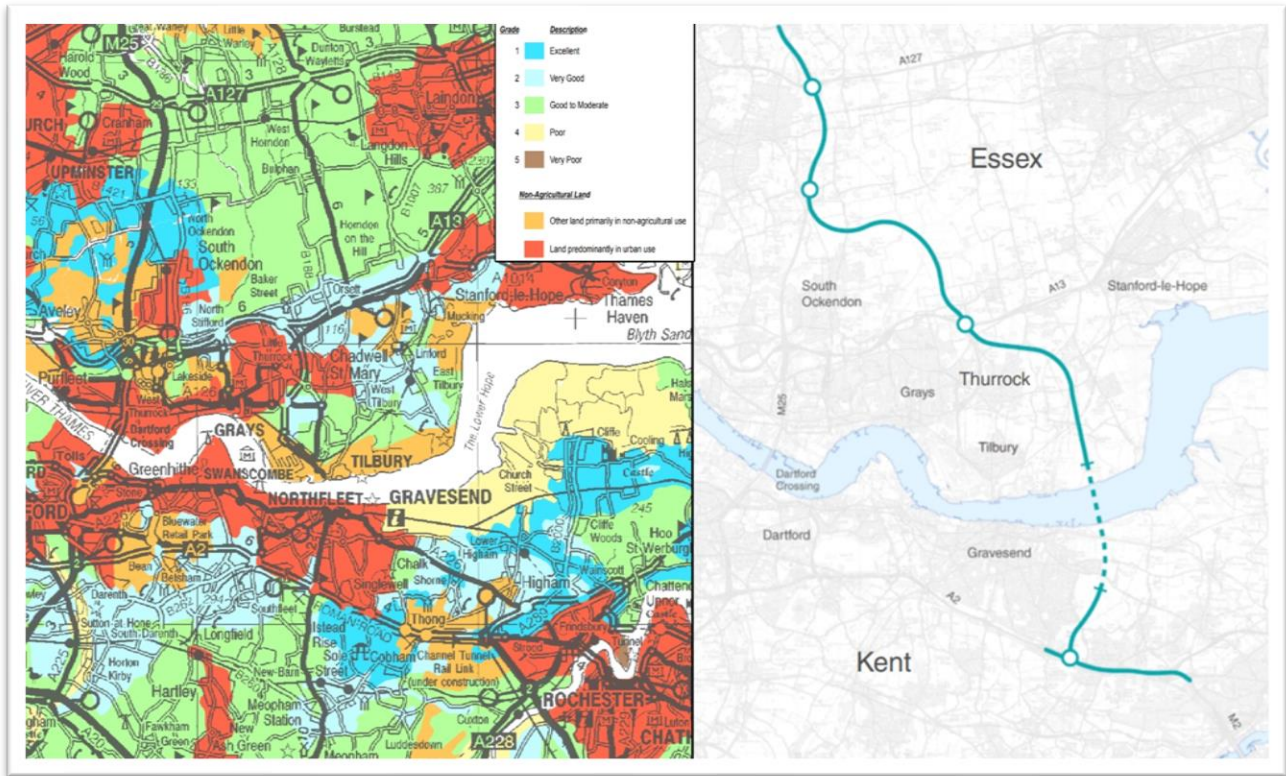
132. As has already been highlighted at Issue Specific Hearing we have concerns over creative accounting in regard to Nitrogen Deposition (Burham site).

133. Agriculture/Food security

Not only is agricultural land needed for food security, it is important that the land we grow our food in is as healthy as possible.

134. The proposed LTC would destroy and impact agricultural land, including grade 1 listed land.

135. Not only that but the loss of land could also lead to more food having to be imported from further afield, which also contributes further to food miles and environmental impact. An increase in food miles would also lead to more traffic on the roads, which in turn leads to congestion and calls for yet more roads/lanes.



136. Agricultural grades map alongside proposed route.

137. Leisure impacts

138. The proposed LTC has already impacted and reduced leisure within our communities, including but not limited to Southern Valley Golf course, which has also resulted in antisocial behaviour in the area since closing as a golf club.

139. Of course, it would impact far more than this, and as well as leisure facilities would also destroy and impact people’s enjoyment of the outdoors and natural environment.

140. NH like to promote the bridleway aspect of their proposals, with little if any regard for the fact that the proposed road would destroy and impact people’s ability to stable and graze their horses in the area, as so many yards, stables, and grazing would be lost and impacted.

141. The proposals include what NH refer to as new ‘parks’, but the reality is they are dumping grounds for the spoil from the tunnelling.

142. Pollution would not be filtered from the tunnels either, we have been told that the air in the tunnels, complete with pollution, would be pushed through the tunnel by the movement of the traffic. This would result in the pollution being pushed out into the so called ‘parks’ and our local

communities. NH say that pollution would disperse within 200 meters of the road. However, PM2.5 can travel thousands of miles, it does not disperse as NH like to suggest.

143. Who wants to walk, cycle, horse ride, near to a busy road breathing in the pollution, hearing the sound of the traffic?

144. Heritage impacts

145. Our heritage is also under threat of the LTC, with listed buildings, archaeological important sites at risk of being lost and impacted. Placing a road that would change so much between two historic forts, Tilbury and Coalhouse Forts, and through the area where Queen Elizabeth I gave her great speech to troops in August 1588.



146. Carbon Emissions

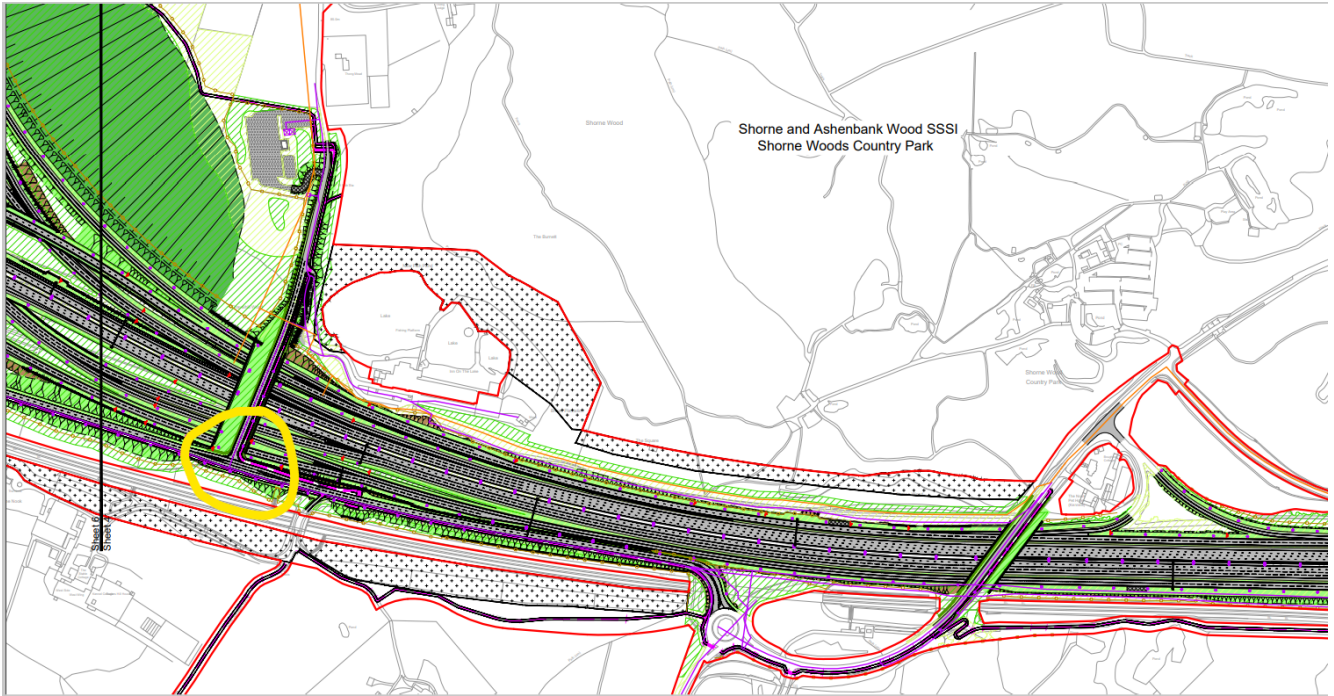
147. In 6.1 Environmental Statement - Chapter 15 – Climate [APP-153] it details that the estimated carbon emissions for the project are around 6.6 million tonnes of carbon.

148. However, NH have been attempting to claim further reductions in carbon emissions for the project. There have been instances when they have been asked for further evidence of the claims being made about further reductions, by us and leading industry journalists, where they have had to admit the evidence does not exist.

149. Most recently in response to our comments on their press release regarding the potential use of hydrogen machinery during construction, if LTC goes ahead, they have claimed that the use of hydrogen has been factored into the DCO application.

150. However, if the cost of the hydrogen has been factored in, we would expect the LTC Exec Director to have been able to provide a figure on how much more the use of hydrogen would be when asked by ITV News Meridian, but he admitted they do not know!

-
151. Additionally, if the use of hydrogen has been factored into the DCO application then we should also be able to assume that the 6.6million estimation includes the use of hydrogen and the associated reduction in carbon emissions.
152. How can NH expect to have it both ways!?
153. Our Government have committed to Net Zero, the Climate Change Committee (CCC) have said that new roads should only be built if they can be shown not to increase emissions. By this reckoning the proposed LTC should not be granted permission.
154. Of course, the CCC have also recently recommended a review into current and future road building, in a similar way to as has happened in Wales. Again, by this reckoning the proposed LTC should at very least be paused whilst the review takes place, and ultimately we believe should be scrapped.
- 155. Biodiversity Net Gain**
156. The proposed LTC would fail against newly set legal targets for Biodiversity Net Gain. For a project that is declaring it would be ‘the greenest road every built in the UK’, to not show good practice and at least comply with this new legislation is hypocritical and unacceptable. Anything else is hardly minimising the impacts to the environment.
- 157. Wildlife and habitats**
158. Our country is one of the most nature depleted in the world, so we need to be saving, protecting, and enhancing our natural environment, not destroying and negatively impacting it with hugely destructive and harmful road projects like the proposed LTC.
159. We are concerned that the ecology surveys are now extremely out of date, and also question their adequacy as some were carried out during unusual seasons for some species.
160. ‘Green’ bridges like the one in Thong Lane South come to a T-junction with a busy road, leaving wildlife no safe route, and in fact guiding them to the danger of this junction.
161. Please see image below - Sheet 4 - 2.5 General Arrangement Plans (Volume B) (Sheets 1 to 20) [\[APP-016\]](#)



162. We also highlight that there is no proven mitigation in regard to bats and new roads.

163. As well as wildlife the impacts to habitats that include irreplaceable ancient and long established woodland is totally unacceptable.

164. The Wilderness



165. We will pop this image here to introduce you to the magical place that is The Wilderness, and invite you to view further evidence in Appendix C.

166. As a community action group we have found evidence dating back further than NH came up with in regard to The Wilderness, which is concerning, but also unsurprising as they likely do not want there to be strong evidence of this woodland being ancient or even long established as attempting to avoid it would cause them extra issues and cost.

167. It incenses us that in Issue Specific Hearing 1 [\[EV-023\]](#) the applicant said *“In this location, we’ve also sought to minimise the impact on the environmentalist sensitive areas of the wilderness.”*

168. This is simply not true, as in the 2020 Supplementary Consultation [[APP-085](#)] the proposed LTC route was actually realigned to avoid the nearby historic landfill, with no concern about pushing the route through the oldest section of The Wilderness. So they can realign for a historic landfill but not an ancient/long established woodland.

169. We understand that The Wilderness will now be included in the Accompanied Site Inspections, which we have requested to join you on.

170. TCAG have permission to access The Wilderness any time we wish, and have considerable knowledge of the woodland that we are more than happy to share.

171. Mitigation and compensation

172. As has already been commented on during Issue Specific Hearing 1, there is questionable creative accounting in regard to Hole Farm Community Woodland and the Burham site.

173. We are also curious in regard to the fact that the Blue Bell Hill improvements project would also need to ensure environmental mitigation and compensation in the same area, and question what overlap there might be, since there is only so much space to facilitate such mitigation and compensation.

174. We find it contradictory that demolishing an existing solar farm (in Cranham), and then labelling the area on maps during consultations as environmental mitigation land questionable and ludicrous.

175. Climate Resilience

176. We have concerns about things like flood risk regardless, but at a time of climate emergency these concerns are even greater, not only for the direct impact on the people and the environment, but also whether the infrastructure is climate resilient and any associated impacts climate change may have in regard to viability and value for money of such a huge bit of infrastructure.

177. The recent announcement about potential use of hydrogen during construction leads us questioning the amount of electricity used to produce hydrogen, and what impact increased usage of hydrogen might have on electricity supply, at a time when there is concern about shortages.

178. Also, water usage during construction for the Tunnel Boring Machine, when the proposed source is actually a water supply that is supposed to help with future demand on local water supply.

179. With climate change consideration needs to be given to how our basic essential needs like power and water will be supplied and could be impacted by projects like the proposed LTC.

180. **Flooding**

181. 6.3 Environmental Statement - Appendix 14.6 - Flood Risk Assessment - Part 1 [[APP-460](#)] sets out the National Planning Policy Framework on flood risk in 3.1.1 (as captured below)

3.1 Flood risk assessments for development consent

National Planning Policy Framework

3.1.1 The NPPF sets out Government policy on development and flood risk. Paragraph 159 of the NPPF states that:

'Inappropriate development in areas at risk of flooding should be avoided by directing development away from areas at highest risk (whether existing or future). Where development is necessary in such areas, the development should be made safe for its lifetime without increasing flood risk elsewhere.'

182. This clearly states that both existing and future risk needs to be considered, and that there can be no risk of increasing flooding elsewhere.

183. Flooding - East Tilbury area

184. Whilst we refer to this section as East Tilbury area, the impacts from LTC in this area would be felt much further afield.

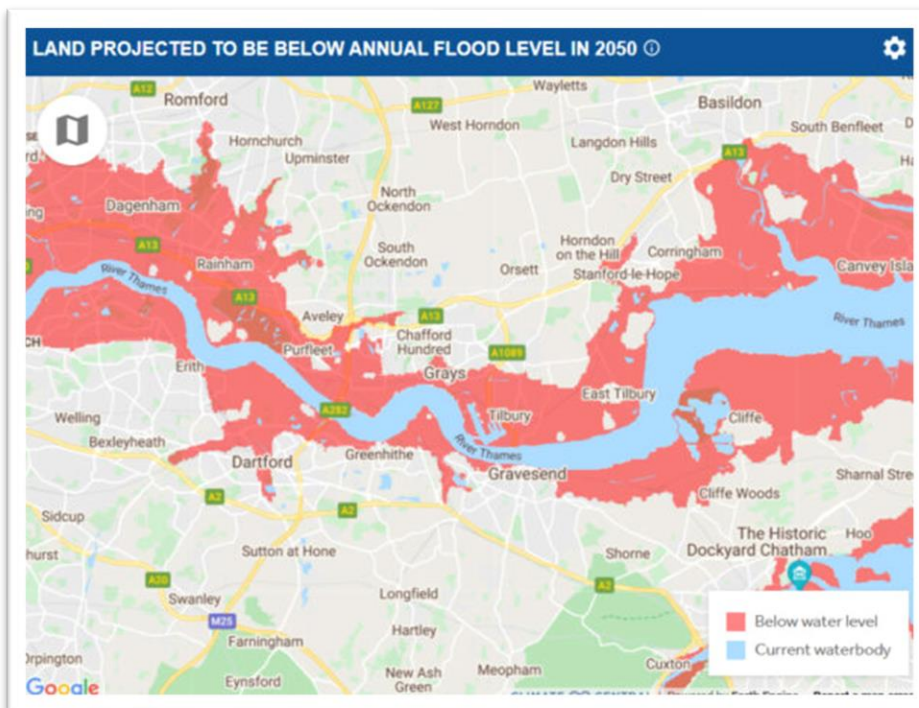
185. We would like to stress that we have been asking questions over flood risk for a number of years, and have always been advised that the information would be available once the DCO application documents are published. With such vast, complex technical documents relating to this topic, it is not easy for members of the public to get answers to address their concerns.

186. This has meant that we have had to try and research by our own means as best we can. In doing so we have used the maps below, which all show a flood risk in the vicinity of the proposed LTC route.

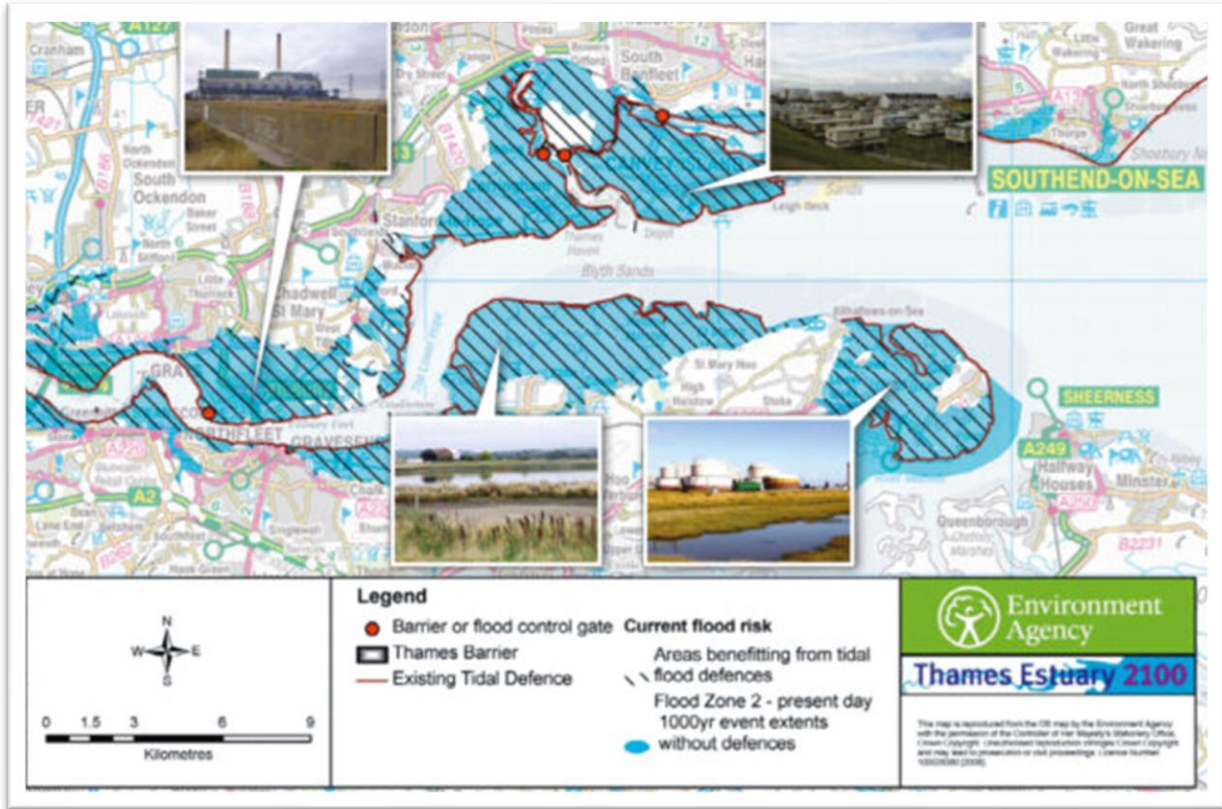
187. Map below from Government's 'Flood Map for Planning'



188. Map below from Climate Central



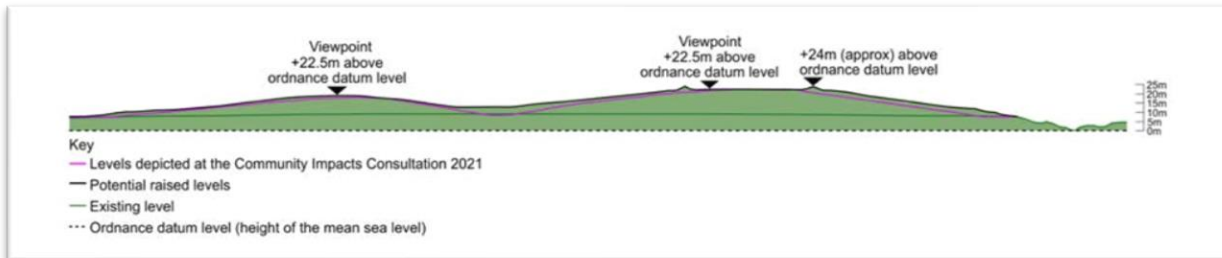
189. Map below from Environment Agency's Thames Estuary 2100



190. In addition to this we know from local experience that our local marsh/flood plains along the River Thames are part of the flood protection for London along with the Thames Barrier when it is closed.

191. We know from the London Corporation's Thames Estuary 2021 plan that flood defences need to be raised to 5.85m above the average sea level by 2065 and 6.35m by 2100.

192. Part of the LTC design is the landforms around the northern tunnel portals. These would be between the River Thames and the tunnel portals, creating a huge large barrier between the river and the marsh/flood plains.



193. At its highest the landform is proposed to be 22-24m above mean sea level, considerably higher than what is being suggested by London Corporation to protect London from flooding.

194. We therefore question where water would go instead, and have concerns about flood risk to other areas further along the river that may not have been consulted or even aware of such a threat/risk.

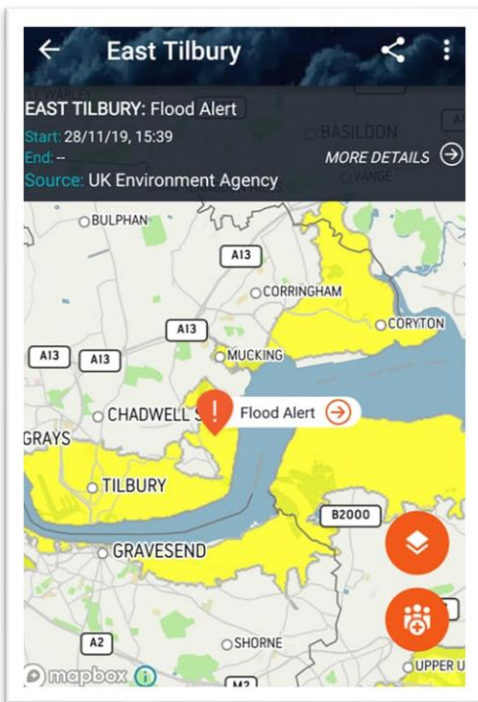
195. Plus there is concern over the adverse impact this would have on biodiversity in the area, since such a landform would significantly change the habitat and connectivity for wildlife.

196. For additional background, TCAG made a site visit to the ground investigation site in the vicinity of the northern portals on Friday 22nd December 2019. Below are a couple of photos taken on the day of the site visit.





197. A month prior to our site visit, on 28th November, the Environment Agency also issued a flood alert for the area



198. To reiterate, we questioned NH about the flood risk at the time, and their response was:
“We are obliged to complete a Flood Risk Assessment in line with the various planning frameworks and requirements that govern schemes of this nature. The findings from this assessment will be submitted as part of our Development Consent Order application.”

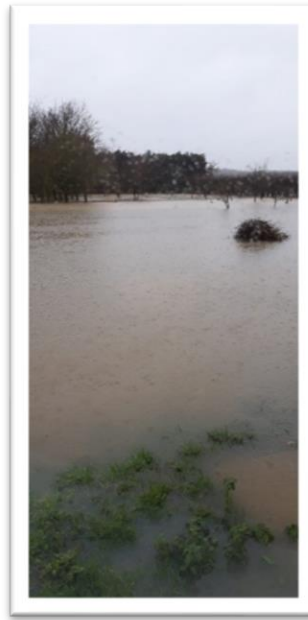
199. Thurrock is no stranger to flooding most notably during the 1953 floods, and also frequently the Mardyke.



200. From the evidence above, it seems to us that not only would there be a risk in the local vicinity of the proposed LTC, if it goes ahead, but also to those further along the River Thames.

201. Flooding in North Ockendon area

202. The photos below are from early 2021, and are an example of just one instance of flooding around one property in Clay Tye Road, North Ockendon. The photos have been shared with the owner's permission.



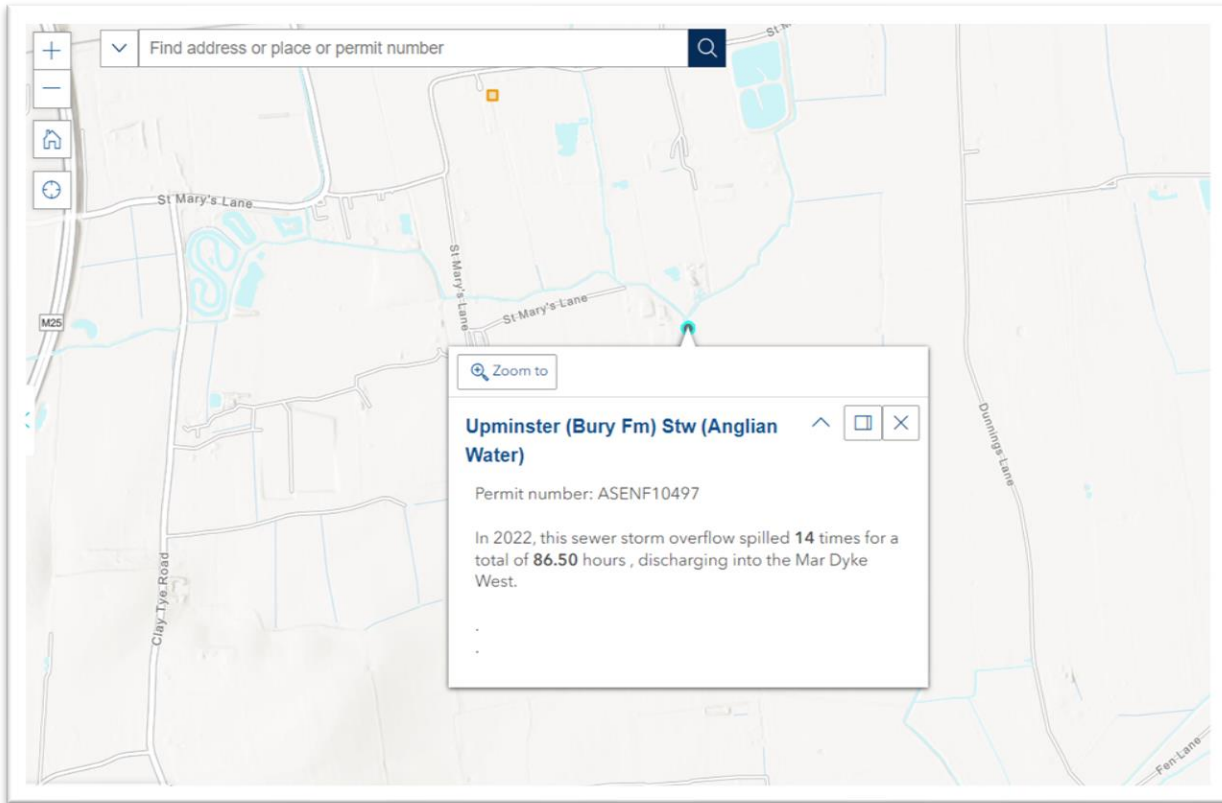
203. Flooding in this area has worsened and become more frequent, since the construction of the M25.

204. With roads like the M25 and LTC, if it goes ahead, it blocks and limits natural water/flood flow options and instead forces more water to find alternative routes, the end result being flooding like this.

205. Concerns are that if the proposed LTC goes ahead, this would worsen even more, with residents questioning if flood mitigation would be sufficient. Clearly from experience with the M25 construction worsening things, this concern is justified. This has been raised throughout consultation with NH. Map below shows one area of concern circled in yellow.



206. Not only is the flood risk to homes, but there also concern about the risk of increased discharge from nearby Bury Farm Sewage Works, which discharges into the Mardyke. The Rivers Trust sewerage discharge and overflow map shows this location spilled 14 times for a total of 86.50 hours in 2022. (see below)



Better and more sustainable alternatives

207. Here we detail some of the alternatives that we feel would not only be better, but also more sustainable, and would therefore also further minimise adverse impacts. We do not believe enough has been done to reduce and minimise the adverse impacts of the proposed LTC.

208. Government talk about encouraging modal shift. Yet the proposed LTC does nothing on this.

209. Active travel

210. There is no provision whatsoever for cross river active travel, the new crossing is designed purely for motorised vehicles.

211. We have asked about the option of having a free cycle transfer service, similar to the one currently at the Dartford Crossing. NH say it would not be possible, and also that the road would be restricted to those that can use motorways, since the LTC would join the M2 and the M25.

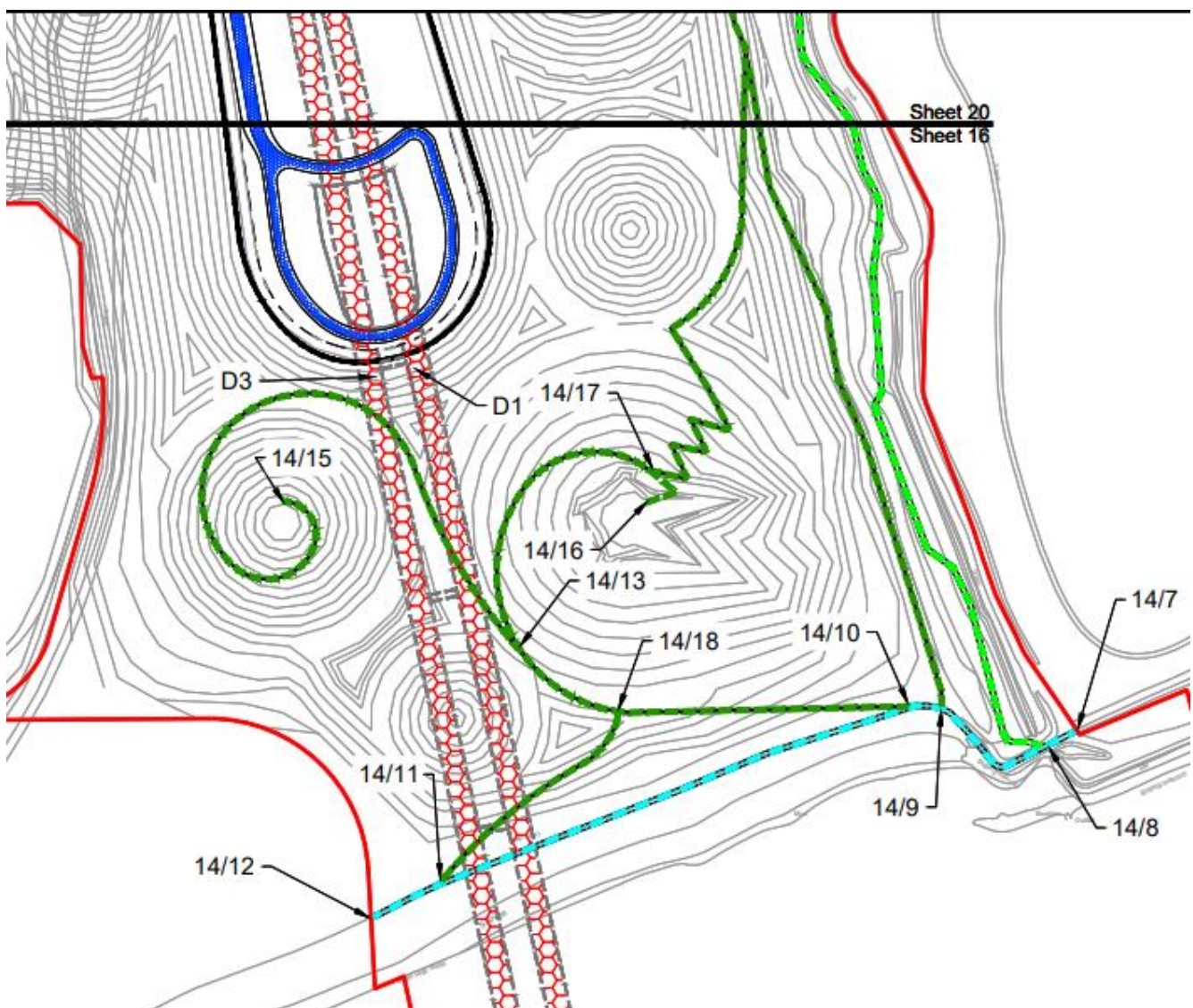
212. We add a side note that if they want to treat it like a motorway, then it should be designated a motorway – please obviously also refer to the ‘smart’ motorway by stealth section of this representation.

213. Back to it not being possible, with the proposed 'parks' and access points at either tunnel portal we fail to see how this cannot be incorporated.

214. A security gate between each park and the access road points. Riders phone to arrange collection, driver opens security gate to allow riders through, takes them through the tunnel, and ensures the security gate is closed behind them as they leave.

215. NH are also claiming that many of the proposed walking, cycling, horse riding routes are 'new'. However, when we took a closer look it seems some being claimed as 'new' are simply realignments of existing routes that would be needed because of the road alignment.

216. We also question the actual value of the proposed paths, since many are zigzags, spirals and running parallel alongside other paths, in Tilbury Fields for example. Below image from 2.7 Rights of Way and Access Plans (Volume B) (Sheets 1 to 20) [[APP-025](#)]



217. Public Transport

218. We have also learnt that due to the lack of adequate connections, particularly to the north of the river, the proposed LTC would not be viable for public transport bus routes.
219. Existing public transport would also be adversely impacted during construction, if the LTC goes ahead, due to road closures and diversions.

220. Alternatives

221. We believe that the proposed route is outdated, and if the options stage were revisited now a different option would be preferred. So much has changed since route selection, to the extent that the preferred solution to the problems at the Dartford Crossing would likely not even be a new road.

222. Road

223. Taking it back to Dec 2013 when 'Options for a New Lower Thames Crossing Consultation Response Summary'² was published it stated:

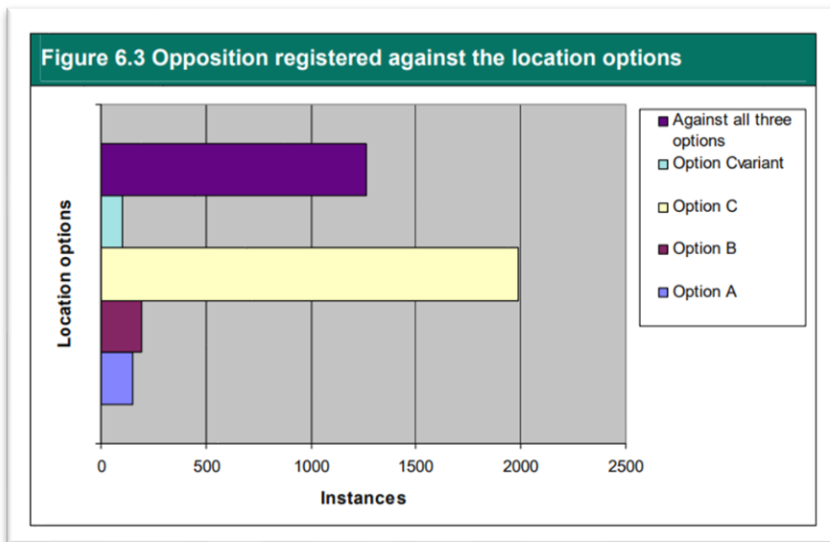
9.3 Again, we received a mixed reaction regarding the location options, with 20% of all respondents expressing a preference for a new crossing at location Option A, 5% preferring Option B, 17% preferring either Option C or C_{variant}, and 26% expressing a preference for another location. Option A was preferred by most individual respondents and Options C and C_{variant} were most popular with those responding on behalf of organisations.

224. Remember location Option A covered many variants around a similar location to the current Dartford Crossing, location Option C had many variants all in a similar location to where they have now chosen the preferred route Option C3. They clearly state that "*Option A was preferred by most individual respondents and Options C and C variant were most popular with those responding on behalf of organisations*" (most likely businesses).
225. So, this tells us that as far back as 2013 the most favoured location option overall was the residents choice of location Option A, and one of the least favoured was location Option C.

2

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/321116/consultation-response-summary.pdf

226. Figure 6.3 of the same report (below) shows again that the location option with the most opposition was Option C (the LTC is option C3).



227. We then jumped to 2016 when government has asked Highways England (as National Highways was known then) to consult on options at locations A and C. However, HE instead presented a very biased consultation in favour of Option C.

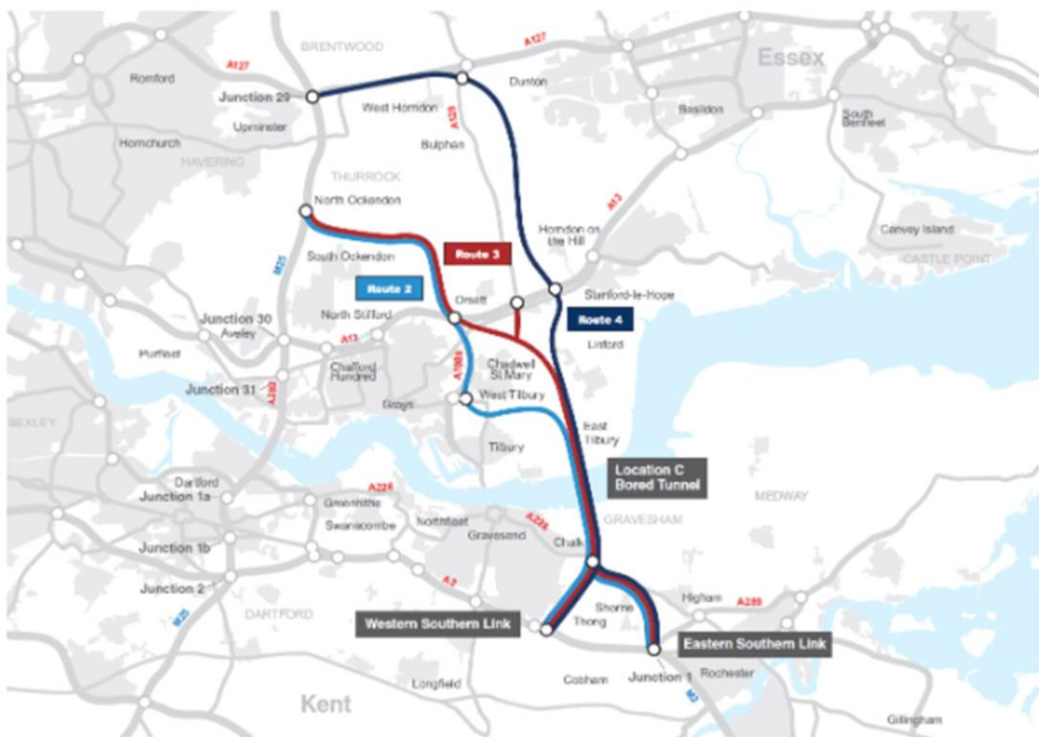
228. This bias is quite apparent when looking at the following from the consultation materials below, which can be found on the 2016 consultation pages, where the map doesn't even label Location A.³

³ <https://highwaysengland.citizenspace.com/ltc/lower-thames-crossing-consultation/>

A new crossing

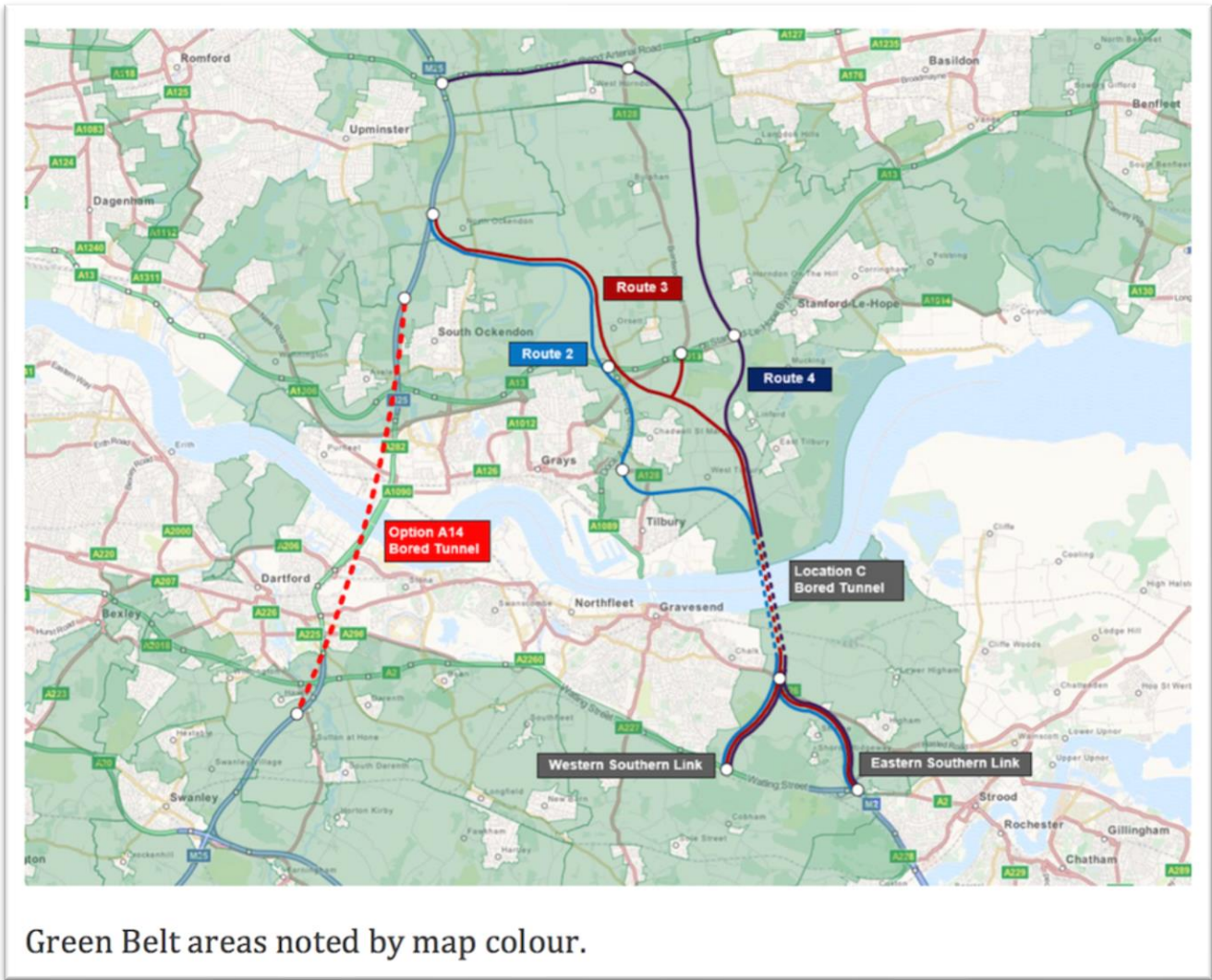
Following a series of studies and a public consultation in 2013, the Government commissioned Highways England, the operator of the country's motorways and major roads, to consider options at two locations. These are shown on the map overleaf, at the site of the current crossing, known as Location A, or a new crossing location further east, known as Location C.

At both locations we have developed engineering solutions and assessed them in terms of their economic, traffic, environmental and community impacts. The assessment has also taken into account the significant growth and development plans for the region. At Location C, three potential route options have been identified north of the river in Essex and two south of the river in Kent.



229. This was the start of the inadequate consultation process, and the start of the proposed LTC as it has now become.

230. One of the options at Location A, Option A14 was a long tunnel between around junction 2 of the M25 through to between junctions 30 and 29. (see image below)



231. It was predicted to take away around 40% of traffic from the Dartford Crossing. Being a tunnel means that air pollution from traffic could be filtered and cleansed. There would be no need for anybody to lose their homes. No green belt land would be destroyed. It would by-pass the hot spots of congestion with a long tunnel. It would complete the M25 as an orbital motorway, bypassing the current A282 crossings (ie the current M25 bottle neck).

232. Just one option or a similar variant that shows other road options were not given adequate consideration.

233. Rail

234. Rail options were never given adequate consideration either, as they only focused on cross river connectivity, and not rail improvements as an option to improve rail freight and reduce congestion on the roads.

235. Rail improvements between Ashford and Reading is such an example of a better and more sustainable option that should be considered. It would bypass the already over capacity rail network through London, and could also serve Gatwick.

236. Kent County Council's Rail Strategy 2021⁴ mentions such rail options.



237. Considering that 70% of goods in and out of the Port of Dover alone use the Dartford Crossing, and that around 42% of traffic using the current crossing is goods vehicles, we have to question why the Port of Dover is not connected by rail. Surely an option like this should be given due consideration, especially at a time of climate emergency.

⁴ https://www.kent.gov.uk/data/assets/pdf_file/0014/13811/Kent-Rail-Strategy.pdf

Would not support sustainable local development and regional economic growth in the medium to long term, nor be affordable to government and users, or achieve value for money

Huge, outdated, misleading, under estimated cost, poor value for money

238. As outlined in regard to environmental impacts, we do not consider there is anything sustainable about the proposed LTC, so it cannot be considered to support sustainable local development.
239. Host Local Authorities have voiced concerns about negative impacts to the local economy. Businesses have already been lost due to the threat of LTC, and more would be lost if it goes ahead.
240. We have heard in Hearings concerns from ports about negative impacts on their businesses if the LTC goes ahead.
241. The evidence shows that the economic benefits claimed by reduction of congestion would not be realised, due to poor design and induced demand.
242. It is also apparent that any development growth the project would unlock would just add to the serious issue of congestion, when congestion reduction is supposed to be one of the main scheme objectives.
243. This point was highlighted in Open Floor Hearing 3 regarding Dartford Borough Council’s plan for growth. It also stood out in a recent press release by NH regarding Hydrogen use for LTC, and how it would kick start a hydrogen industry within the Thames Estuary region.
244. The very point that such a project that is supposed to resolve congestion issues, yet at the same time promote growth is hypocritical and contradictory.
245. 4.3 Funding Statement [[APP-063](#)] details the estimated cost range between £5.2 to £9bn.

2 Project Cost

- 2.1.1 The estimated capital cost for the Project, including allowances for risk and inflation, is in the range of £5.2 billion to £9.0 billion. The estimate has been prepared in accordance with the Applicant’s capital cost estimating process for major projects and includes all costs to deliver the Project.

246. False economy

247. There are various aspects that we feel have not been included in the cost of the proposed LTC that should be. We believe that the inclusion of these extras would increase the cost of the LTC and thus further reduce an already sinking BCR.

248. We give some examples below, and would like to put on record that disclosing this information and opinion about the false economy aspect in no way is meant as support for any of these additional projects/works.

249. Rest and Service Area

250. The 2018 Statutory Consultation saw the addition of a large 24/7 Rest and Service Area in the East Tilbury vicinity. (as below)



Figure 5-22. Proposed rest and service area

251. We were told it had been included due to industry standards and guidelines in regard to road safety.

252. At the time we questioned why if this was a safety issue it had not been proposed sooner. It was explained it was to do with the distances between possible service areas for traffic using the SRN, and ensuring adequate services to allow drivers to stop on safety grounds.

253. We were told, under DfT Circular Guidance⁵ there should be no more than 28 miles between service areas. Pages 14/15 seems to cover guidelines regarding this.

254. When we questioned NH on distances between rest and service areas we were told, “*Rest and Service Areas (RaSA) perform an important road safety function by allowing road users to stop and take a break during their journey. The locations of the nearest services on the M2, M20, M25 and M11 mean that a service area should be provided along the route of the Lower Thames Crossing.*”

255. And provided the below detail:

Distances with no RASA on LTC

	<i>M2 Farthing Corner</i>	<i>M25 South Mimms</i>	<i>M20 Maidstone</i>	<i>M11 Birchanger</i>
<i>M2 Farthing Corner</i>		56		55
<i>M25 South Mimms</i>	56		64	32
<i>M20 Maidstone</i>		64		62
<i>M11 Birchanger</i>	55		62	

Distances with RASA at Tilbury Junction

	<i>M2 Farthing Corner</i>	<i>M25 South Mimms</i>	<i>M20 Maidstone</i>	<i>M11 Birchanger</i>
<i>LTC RASA Tilbury</i>	23	39	20	37

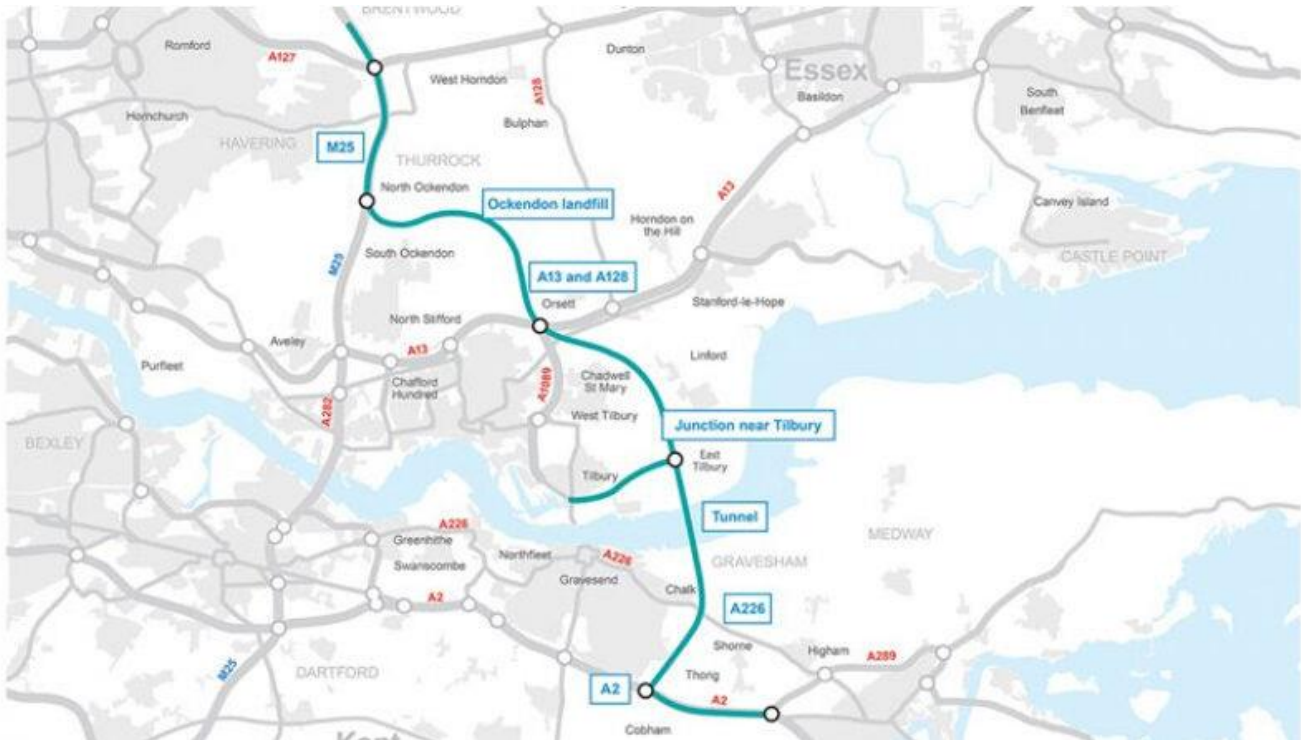
256. There was a great amount of concern and local objection to the inclusion of the rest and service area, and despite stating it was added for safety provisions, it was then removed from the project.

257. However, we have again been advised it is being progressed as a separate stand-alone project. We believe this not only reduces cost to the LTC project, but also reduces land take, need for further mitigation/compensation etc.

⁵ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/237412/dft-circular-strategic-road.pdf

258. Tilbury Link Road

259. The Port of Dover publicly stated in early April 2017 that they would only support the proposed route, if they got a direct connection/junction to it. Following this the Tilbury Link Road was added. (see below)



260. However, as things progressed and the preferred route was developed, the Tilbury Link Road was removed and is instead being progressed as a separate stand-alone project.

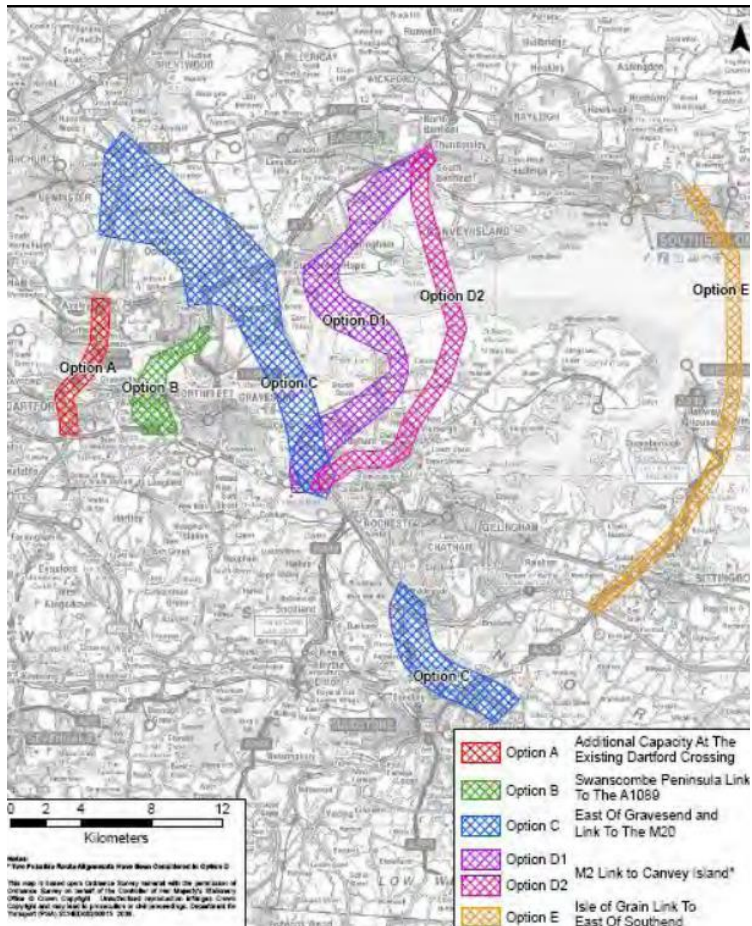
261. It is obvious that port connectivity would be impacted if the proposed LTC goes ahead. It is also obvious that the additional cost and impact of the proposed Tilbury Link Road would have an impact on the local communities as well as the project cost and BCR.

262. It also leads to questions regarding the potential of growth as a direct result of the LTC, a project which is supposed to be primarily reducing congestion.

263. Not only that but as previously mentioned, the Operations and Emergency Access point which appears to offer provision for the future connection of the Tilbury Link Road, is very close to the tunnel portals, with a junction design that would not be conducive to large port HGVs, or enabling good traffic flow, so would therefore add to congestion issues and impact the so called economic benefits.

264. Blue Bell Hill Improvements

265. As mentioned previously in this representation at route options stage, Option C Variant was one of many options being considered, this included a link between the A2/M2 and the M20 via Blue Bell Hill (A229), shown in blue on the map below.



266. This route was ruled out because it was deemed it would have limited economic benefits, high environmental impact, a high cost and would have little benefit in transferring traffic from Dartford onto Location C routes. It was not considered to be essential to the new crossing scheme. This was detailed in 2.5.2 of the 2016 Summary Business Case.⁶

267. 70% of the goods in and out of the Port of Dover alone use the Dartford Crossing, and 42% of traffic using the current crossing is goods vehicles. Considering the project is promoted by NH as a means to service the ports in the South East through to the Midlands and beyond, and such a lot

⁶ https://highwaysengland.citizenspace.com/ltc/lower-thames-crossing-consultation/user_uploads/lower-thames-crossing-consultation-summary-business-case.pdf

of that associated traffic uses the M20 we find it questionable, to say the least, that Variant C was ruled out on the basis it was.

268. It should also be noted that the increase in traffic in the Blue Bell Hill area, due to the proposed LTC if it goes ahead, has also resulted in the addition of nitrogen deposition compensation being needed.

269. The Blue Bell Hill Improvements are now being progressed as a separate stand-alone project by Kent County Council.

270. A2 dualling from Lydden to Dover

271. The Port of Dover have publicly stated the need to dual the A2 from Lydden to Dover to serve port traffic wanting to get to the LTC, if it goes ahead.

272. Extra associated costs to the above points

273. In regards to the above, we again draw attention to info mentioned elsewhere in this representation that we believe there are more sustainable options, like rail freight, that would better serve the ports and negate the need for the proposed LTC, at a lower cost, so again relevant to the cost and value for money aspect of the LTC.

274. Also, that at the time the Tilbury junction, that was proposed to serve the Tilbury Link Road and Rest and Service Area was removed, changes were also made to the height and length of the Tilbury Viaduct.

275. We question if the changes were viable due to the removal of the Tilbury Junction (Link Road and Services), whether adequate provision is still designed into the scheme to potentially add the originally proposed junction at a later date, or if this would incur additional cost and works.

276. In a similar way the addition of the Operations and Emergency Access Point, if this is to be considered provision for a possible future junction, how much of the proposed design would need to be redesigned and re-worked later again incurring additional cost and works.

277. Existing road network

278. As has already been voiced in Hearings that have taken place to date, there is concern from many that the proposed LTC would not have adequate connections, and would impact the existing road network, both SRN and local roads.

279. If it were to go ahead, all these issues/concerns would become a reality that would need to be addressed, and incur further cost for associated works that would be needed. Projects should not knowingly be approved knowing that they will result in the need for additional works in this way.

280. Outdated and misleading

281. However, page 24 (26/48 pdf numbering) of the National Audit Office ‘*Road enhancements: progress with the second road investment strategy (2020 to 2025)*’⁷ published 25th November 2022 also details the “Current estimated cost Between £5.3 billion and £9 billion”, with a foot note to clarify that “*Current estimates of cost are given as at August 2020. The current estimate of cost reflects National Highways’ estimate of total outturn*”

282. The same page of the report also details that the “Cost increase since March 2020 c.£1.9 billion”

283. Are we really supposed to believe that the cost rose by c£1.9bn between March 2020 and August 2020, yet there has been no further increase between August 2020 and now?

284. This report also highlights value for money issues of projects such as the proposed LTC.

285. Rising costs

286. And of course, this doesn’t also take into account the further two year delay of the start of construction of the proposed LTC, if permission is granted, as per the Government announcement on March 2023⁸.

287. As we know, and as was highlighted in the continuation sessions of Issue Specific Hearing 1 [EV-025] and can be viewed on Table 6.1 in 7.7 Combined Modelling and Appraisal Report - Appendix D [APP-526] the rate of inflation used appears to be very much an underestimate.

⁷ <https://www.nao.org.uk/wp-content/uploads/2022/11/Report-Progress-with-the-second-road-investment-strategy-2020-to-2025.pdf>

⁸ <https://questions-statements.parliament.uk/written-statements/detail/2023-03-09/hcws625>

Table 6.1 CAPEX inflation rates

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
2.92%	-0.10%	1.11%	3.30%	2.10%	2.61%	-2.38%	2.04%	5.93%	4.10%	4.18%
2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
3.46%	4.34%	2.08%	2.22%	2.26%	2.29%	2.35%	2.35%	2.38%	2.42%	2.51%

288. Neither do we believe the estimated cost takes into account any additional associated cost of making the proposed LTC ‘greener’.

289. Hydrogen and greener LTC costs

290. The project was labelled a ‘pathfinder’ project on 24th February 2022⁹. This clearly after August 2020 the point where the current estimated cost originates.

291. On 10th July 2023 NH announced¹⁰ that they were seeking to use hydrogen for construction machinery, if permission is granted, to reduce carbon emissions.

292. LTC Exec Director, Matt Palmer was quoted in the associated press release *“The proposed Lower Thames Crossing is designed to be the greenest road ever built in the UK, with the aim of being carbon neutral in construction.”*

293. When we questioned NH on their claim of the LTC being the ‘greenest road every built in the UK’, during the recent Minor Refinements Consultation, one of the things they told us was, *“There are a number of ways in which the Lower Thames Crossing will be the greenest road ever built in the UK. A Pathfinder scheme, the Lower Thames Crossing is exploring ways to achieve carbon neutral construction, and will pass on learnings to future major infrastructure projects. The amount of carbon expected from construction has been significantly reduced by optimising the design of the road, as well as the methods and materials used to construct it. For example, we are considering alternatives to carbon intensive materials such as concrete and steel; and exploring **removing diesel from our work sites by only using hydrogen and electric powered plant.**”*

294. Clearly this statement claims that they are exploring removing diesel from their work sites by **only using hydrogen** and electric power plant.

⁹ <https://nationalhighways.co.uk/our-roads/lower-thames-crossing/news-and-media/news/ltc-a-pathfinder-in-move-toward-carbon-neutral-construction/>

¹⁰ <https://nationalhighways.co.uk/article/national-highways-to-use-hydrogen-powered-construction-machinery/>

295. Yet in a recent official Prior Information Notification¹¹ to seek a supplier of low carbon hydrogen for a contract worth £50m, it is stated, “...*Making hydrogen easily available could displace over one third of the diesel forecast to be used during construction.*”

296. Removing all diesel and only using hydrogen and electric powered plant, is not the same as displacing around a third of diesel forecast to be used during construction.

297. NH made further comment on our response to the press release to industry publication New Civil Engineer. There was a standout comment in the article which was published on 13th July 2023:

However, National Highways has rejected the other claims, noting that the use of hydrogen has already been factored into its DCO application so the price will not increase.

298. The question has to be, if the use of hydrogen is part of making the LTC ‘the greenest road every built in the UK’ (a title that originated around Feb 2022) has indeed been factored into the DCO application as suggested, why is there no associated increase to the estimated cost which is as at August 2020?

299. Also, if it has been factored into the DCO application then we should also be safe to assume that the estimated carbon emissions stated in the DCO application is also taking the use of hydrogen into account, so the 6.6 million tonnes includes any reduction from using hydrogen.

300. When questioned about the cost of using hydrogen, Mr Palmer told ITV News Meridian that they don’t genuinely know what the incremental cost is. We therefore question how it can have been factored into the DCO application?!

301. Something doesn’t sit right, they can’t have it all ways!

302. The proposed LTC would be more expensive per mile than the highly controversial HS2.

303. User charges

304. In regard to being affordable for users, we highlight that the proposed LTC would be subject to user charges.

¹¹ <https://www.find-tender.service.gov.uk/Notice/016115-2023>

305. Whilst we acknowledge the role user charges can have in regard to helping reduce congestion, we can see some issues in this instance.

306. Firstly, NH have said that the LTC would be charged in a similar way to the current Dartford Crossing. Currently, local residents using the Dartford Crossing are entitled to Local Residents Discount if they register.

307. However, with the proposed LTC it has been said that whilst Thurrock residents would be eligible for the Local Residents Discount scheme; Dartford residents would only be eligible for it for using the Dartford Crossing, and Gravesham residents would only be eligible for it for using the LTC.

308. This means that when there is an incident at the alternate crossing residents who need to migrate to the other crossing would need to pay the full charge. With congestion predicted to remain high, and thus incidents also expected to remain high, this has cost implications for local residents. It also means that local residents would likely be making the decision on which crossing to use based on cost, rather than necessarily the best route.

309. Since the LTC is being proposed as a nationally significant infrastructure project, the cost implications to local residents, for the sake of infrastructure that offers them no benefits is unfair.

310. Other local areas, such as Havering and Medway have also voiced concerns about the lack of local resident discount, since they would be impacted by the proposed LTC, if it goes ahead, but would be expected to pay the full user charges.

311. Not forgetting, as already mentioned above, that the LTC (if it goes ahead) would run through the London Borough of Havering, which would fall within the ULEZ expansion area, but that any traffic using the LTC and M25 would be exempt from the ULEZ charge. So again, the LTC would have an adverse impact and disbenefit the local area.

312. Cost rising BCR dropping

313. The cost of the proposed LTC has risen from £4.1bn, as detailed in the 2016 Highways England consultation in Table 3.1 of the Summary Business Case¹²

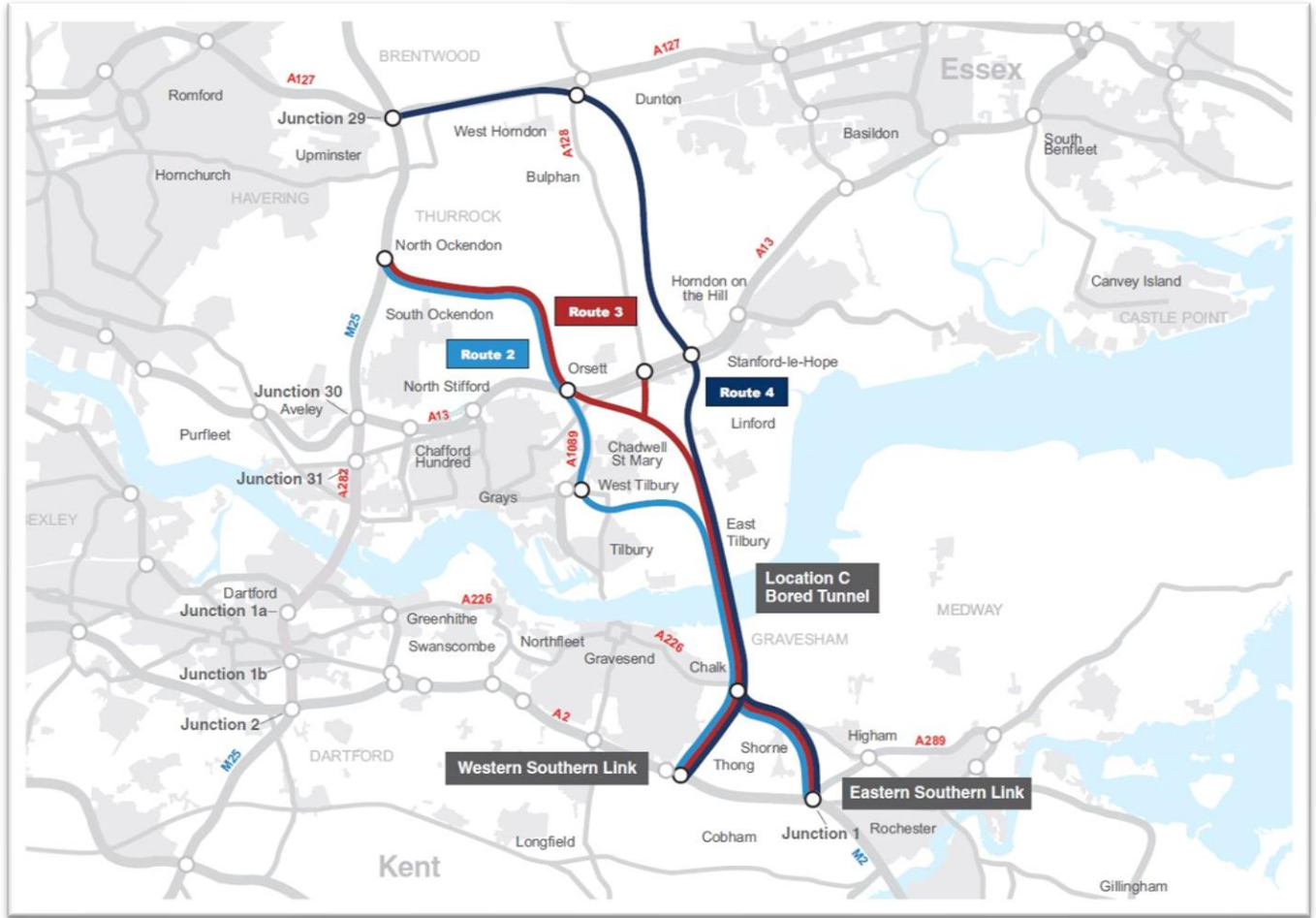
¹² https://highwaysengland.citizenspace.com/ltc/lower-thames-crossing-consultation/user_uploads/lower-thames-crossing-consultation-summary-business-case.pdf

TABLE 3.1 - SCHEME COSTS AND BCRS FOR ROUTES ASSESSED AS MEETING THE SCHEME OBJECTIVES (£BN AT OPENING DATE OF 2025)

	Route 2 ESL	Route 3 ESL	Route 4 ESL
Scheme Costs (Nominal) Most Likely – P90	£4.3bn- £6.0bn	£4.3bn - £5.9bn	£4.6bn - £6.4bn
Benefit Cost Ratio (adjusted) Most Likely – P90	3.3 – 2.4	3.4 – 2.5	3.1 – 2.2

	Route 2 WSL	Route 3 WSL	Route 4 WSL
Scheme Costs (Nominal) Most Likely – P90	£4.1bn- £5.8bn	£4.1bn - £5.7bn	£4.4bn - £6.2bn
Benefit Cost Ratio (adjusted) Most Likely – P90	3.1 – 2.2	3.1 – 2.2	2.9 -2.1

314. For clarity and ease of reference we also share (below) a copy of the map detailing the routes to clarify that the LTC was detailed as Route 3 WSL back then.



315. And the adjusted BCR back then was 3.1-2.2 (as above in Table 3.1), it is now 1.22 (as at August 2020).

316. This clearly shows that the estimated cost has risen dramatically, more than doubling since the Preferred Route was announced in April 2017. That too is based on the current cost as at August 2020, which clearly is not a realistic estimated cost.

Appendix B

Additional 'Smart' Motorway Evidence

1. Below we share a copy of the evidence we have sent to various officials within Government regarding our concerns about the proposed LTC being a 'smart' motorway by stealth, and calling for it to be paused in line with the pause which was placed on 'smart' motorways at the time of sending this correspondence.
2. Of course, since then new 'smart' motorways have been scrapped. We wanted to share this for background evidence in case it is helpful.

TCAG call for 'Smart' LTC to be paused

Introduction

3. Thames Crossing Action Group represent thousands of people who are strongly opposed to the proposed Lower Thames Crossing (LTC). The £8.2bn LTC would be hugely destructive and harmful; it would not meet the project objectives, and is not fit for purpose.
4. **This document contains evidence that proves our claims that we have been told by National Highways (or Highways England as they were formerly known)/LTC that the proposed Lower Thames Crossing is being designed to Smart Motorway standards, using Smart technology, and would only be able to be used by vehicles that can legally use motorways.**
5. **It not only highlights the info that we have received via email from HE/NH/LTC, but also references various consultation materials and other documents, all of which we believe provide evidence to back up our claims and the need for answers to the following:**
6. **Why is different information being shared with different parties in regard to the proposed LTC?
What standard is the proposed LTC being designed to?
Why are National Highways responsible for setting their own standards with the DMRB? Do they not have a vested interest in controlling the standards?
Why has the proposed LTC designation changed from a motorway to APTR?
In regards to safety how is the proposed LTC any different from the paused Smart Motorways?
Will the Government pause the proposed LTC in line with the pause of Smart Motorways?**

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Questions to be answered

Q1. Is the proposed LTC being designed as a smart motorway?

What TCAG have been told by National Highways/LTC?

7. TCAG as members of the public have been told that the proposed LTC would be an all-purpose trunk road, designed to Smart Motorway standards, using smart technology, and that only vehicles that can legally use a motorway would be able to use it. Also that the only difference the road user would notice between it being a motorway or all-purpose trunk road would be the colour of the signs, either blue for motorway or green for an all-purpose trunk road.
8. We have highlighted the relevant sections of the email here for ease of reference, but also attached the original emails and proof of evidence.

9. 10 March 2020 email titled - Outstanding questions

In this email it is clearly stated ***"It will however be designed to Smart Motorway standards including the provision of emergency refuge areas a minimum of 1.6km apart and lane detection technology. The design also provides Stopped Vehicle Detection systems, incident detection and automatic signals, in line with Government regulations"***.

LTC Smart Motorway/Hard Shoulder/Emergency Refuge Areas

We are designing the Lower Thames Crossing to the highest safety standards and in accordance with Government safety design regulations. The LTC is not currently designed as a motorway, but as an All Purpose Trunk Road such as an A Road. It will however be designed to Smart Motorway standards including the provision of emergency refuge areas a minimum of 1.6km apart and lane detection technology. The design also provides Stopped Vehicle Detection systems, incident detection and automatic signals, in line with Government regulations.

The route will not have a hard shoulder along the majority of the route. Should a vehicle need to stop before it reaches a refuge area, technology used along the route will detect the stopped vehicle and change the over-lane signals to indicate that the affected lane is closed to traffic.

10. 17th March 2020 email titled - Highways England response - Your enquiry about the Lower Thames Crossing - ref 01921-Z4R4Y5

In this email it is again stated ***"It will however be designed to Smart Motorway standards including the provision of emergency refuge areas and lane detection technology"***.

The designation of the road will be submitted as part of our Development Consent Order application. It is not currently designed as a motorway, but as an All-Purpose Trunk Road such as an A Road. It will however be designed to Smart Motorway standards including the provision of emergency refuge areas and lane detection technology.

11. 1 April 2020 email titled - Highways England response - Your enquiry about the Lower Thames Crossing

In this email it is stated that **there is no material change to the design between either motorway or A-road, other than the colour of the signs.**

Road Designation

The scheme is being designed to latest standards and the current design would be appropriate for motorway or A-Road designation. From a customer's point of view the key difference will be the sign colour of blue for motorway or green for A road and the vehicle types which can use the road. Although if the route is an A-Road, there would be vehicle prohibition on the tunnel section similar to motorways.

The designation of the road is currently under review and will be agreed with the Department for Transport and presented in the DCO submission documentation. There is no material change to the design between either motorway or A-Road, other than the signage. We are however also in the process of reviewing the government's 'Evidence Stocktake and Action Plan' for Smart Motorways published in March 2020.

12. 9 April 2020 email titled - Outstanding questions

This email states that safety measures for the LTC would include technology provision such as **"variable mandatory speed limits, stopped vehicle detection, message signs, advance motorway indicators, CCTV, enforcement cameras"**, which is all in keeping with **smart motorway technology.**

LTC Smart Motorway/Hard Shoulder/Emergency Refuge Areas

Had been hoping for more precise info the amount of ERAs (northbound and southbound), distances between ERAs, and distances of connecting roads, including locations of ERAs! Can one of you also please send me details of where I can find the most recent data on predictions of accidents for LTC and anything relating to safety of LTC. Also please can someone clarify what safety measures will be put in place specifically on stretches of viaduct on the LTC.

As regards safety measures for LTC these will include technology provision such as variable mandatory speed limits, stopped vehicle detection, message signs, advance motorway indicators, CCTV, enforcement cameras, increased traffic officer patrols, off-network access & limiting assets such as signs, gantries and lights within the verges.

What are the DfT being told by National Highways/LTC?

13. It appears that Baroness Vere of Norbiton and the DfT are being told something very different to what we as members of the public have been told as to how the proposed LTC is being designed.
14. In Baroness Vere of Norbiton's letter dated 1st Feb 2022 (see attached) it is stated:
15. *"National Highways has confirmed that the LTC is being designed as an All-Purpose Trunk Road in line with the principles set out in the Design Manual for Roads and Bridges (DMRB), specifically the 'Requirements for new and upgraded all-purpose trunk roads (expressways), GD300. As set out in the DMRB, an expressway is a high-speed dual carriageway that has at least two lanes in each direction, grade separated junctions, and uses technology to support operational regimes. The LTC has not been designed to the DRMB design requirements for smart motorways, GD301."*
16. In document *DMRB-GD300*¹³, smart motorways are referenced numerous times. For example: E/2.14 – E/2.16 Note states that the resource requirements, service level, procedures, work instructions and processes for traffic officers on APTR expressways are expected to be similar to those for **smart motorway** all lane running schemes.
17. E/4.8 Note states that **smart motorway** criteria and methodology would apply to expressways.
18. E/7.2 –E/7.3 Note states the measurement of emergency area set-back for expressways aligns with **smart motorway** requirements.
19. E/8.1 Note 1 states that requirements and advice for places of relative safety for **smart motorways** also applies to expressways.
20. E/9.9 – E/9.10 Note states that **smart motorway** requirements and advice for no hard shoulder info signs also applies to expressways.
21. E/9.11 Note states that **smart motorway** requirements and advice for emergency area surfacing, road marking and signing also applies to expressways.
22. E/9.12 Note states that **smart motorway** requirements and advice for variable speed limit and enforcement camera signing also applies to expressways.

¹³ DMRB – GD300 - <https://www.standardsforhighways.co.uk/prod/attachments/1223f3d1-5dd8-4afd-a2e8-0367f70b8652?inline=true>

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23. E/10.5 states that control signals and VMS shall be provided in accordance with smart motorway control signal requirements
 24. E/10.5 Note states that smart motorway requirements and advice for control signals and VMS also applies to expressways.
 25. E/10.7 Note states smart motorway requirements and advice for entry slip signals apply to expressways.
 26. E/D2 states that the approach being used for expressways is built upon experience gained through smart motorways.
 27. E/D2 also states that it should be clear to road users when they enter and exit expressways. How will LTC define that it is an expressway and that only vehicles that can use motorways can use it?
 28. E/D7.3 states that expressways are subject to the same requirements for calibration and ongoing optimisation as smart motorways.
 29. Table E/F.20 Clause E/2.17 again makes association between expressway and smart motorway agreements.
 30. Table E/F.63 Clause E/10.5 states that control signals and VMS shall be provided in accordance with smart motorway control signal requirements.

What standard do the Local Authorities think LTC is being designed to?

31. We actually approached Thurrock Council to ask if they could advise us which design level within GD300 they believed the proposed LTC fell into. We felt this would help us better understand GD300 since different parts are applicable to the different design levels.
32. However, Thurrock Council have advised us that their understanding is that the proposed LTC is being designed to CD109 (*Highway Link Design*)¹⁴ as an all-purpose trunk road, and not as an Expressway as Baroness Vere has been told.

¹⁴ DMRB CD109 - <https://www.standardsforhighways.co.uk/prod/attachments/c27c55b7-2dfc-4597-923a-4d1b4bd6c9fa?inline=true>

Q2. Why are NH responsible for setting their own standards with the DMRB?

33. In an October 2019 update ¹⁵ it is stated that Highways England (now obviously known as National Highways) are leading the transformation of the DMRB. It goes on to say that refreshing the DMRB by March 2020 was a requirement of Highways England's Licence and Protocol Agreement.
34. Surely it should be considered that they have a vested interest in setting the DMRB standards to suit their own wants/needs?
35. Especially in light of all the issues and serious concerns over road standards, particularly Smart Motorways.
36. The update also goes on to state *"The new documents have been written in a style that clearly states what shall be done, following drafting rules that have been developed from internationally leading research on excellence in standards development. They are much easier to read and understand, and vague or ambiguous phrasing is not permitted."*
37. We feel this is very relevant to the fact that clearly there is much vagueness and ambiguity over exactly what standards the proposed LTC is being designed to. Also the content of DMRB documents is vague and ambiguous.
38. Just one example of this would be 'GD300 - Requirements for new and upgraded all-purpose trunk roads (expressways)', where a document that refers to requirements for all-purpose trunk roads includes a level that covers all-purpose trunk roads that have motorway designation!
39. Please see from page 52/108 (*pdf numbering*) of GD300¹⁶ for outlines of the 4 delivery levels.
40. How can that be deemed anything other ambiguous? Is it an all-purpose trunk road, and expressway, or a motorway?
41. We understand these are considered technical documents. However, when sections of the DMRB are being referred to in response to public consultation questioning, things need to be a lot less ambiguous and technical and clear and informative materials shared with the public.

¹⁵ DMRB Oct 2019 Update - <https://nationalhighways.co.uk/industry/design-manual-for-roads-and-bridges-dmr/what-s-new/>

¹⁶ DMRB GD300 - <https://www.standardsforhighways.co.uk/prod/attachments/1223f3d1-5dd8-4afd-a2e8-0367f70b8652?inline=true>

42. We find it shocking that the very standards that National Highways have to work to with all their work is actually set by them. We would ask why this is deemed acceptable and whether it would be wiser that standards be set independently rather than those who are governed by them?

Q3. Why has the proposed LTC designation changed from a motorway to an APTR?

April 2017

43. In April 2017 at the time of the Preferred Route Announcement HE had assumed the LTC would be an All-Purpose Trunk Road (APTR) although it was acknowledged in the Post-Consultation SAR that the Project could be designed to emerging 'expressway' standards (introduced in the Road Investment Strategy). This is referenced in 10.1.7 and 12.1.1 in the *Approach to Design, Construction and Operation*¹⁷
44. Following on from the PRA three road standards were considered, APTR, Expressway, and Conventional/Smart Motorway. In Dec 2017 HE proposed that expressways could be classified as motorways, creating a new type of motorway standard for new motorways or upgraded A roads.

December 2017

45. In the Dec 2017 Highways England document *Strategic Road Network Initial Report Evidence*¹⁸, (page 82/108 pdf numbering) - 5.3.6 Developing Expressways closing statement clearly states that **expressway operational and safety standards would be consistent with smart and conventional motorways.**

2018

46. In 2018 at the time of the Statutory Consultation HE decided that the LTC should be designed to this new type of motorway standard, as per 12.1.4 of the *Approach to Design, Construction and Operation* document within the consultation materials.
47. It clarified "As an official standard has not yet been issued for this, it means that the Project will be designed to conventional motorway standards but with departures from standard for the **omission of the hard shoulder, the provision of emergency areas and the provision of traffic control technology like that used on smart motorways including lane signals and variable mandatory speed limits (VMSLs)**".
48. It was even stated in point C of 12.1.5 of the same document that **HE considered this to be a more appropriate solution than an APTR.**

¹⁷ *Approach to Design, Construction and Operation (2018)* - https://highwaysengland.citizenspace.com/ltc/consultation/supporting_documents/LTC%203%204%20Design%20Consultation%20and%20Operations.pdf

¹⁸ *Strategic Road Network Initial Report Evidence (2017)* - https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/666884/Highways_England_Strategic_Road_Network_Initial_Report_-_WEB.pdf

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49. Plus in the same document 21.4.1 states “*The provision of emergency areas will follow our latest design guidance (IAN 161/15) and be sited no more than 1,500m apart on the approach roads.*”
50. IAN 161/15¹⁹ was titled Smart Motorways, and whilst now withdrawn was superseded by GD301 - Smart Motorways. We note that we can find no evidence in LTC documentation that superseded the *Approach to Design, Construction and Operation* (including the 2021 *Operations Update*) that clarifies any change to the original statement that emergency areas will follow IAN 165/15. Since that document was superseded with GD301²⁰ then it must therefore be assumed, in the absence of any other update that LTC emergency areas are being designed to GD301 – *Smart Motorways*.
51. With that in mind we would also express concerns in light of reports of the risk relating to Smart Motorway emergency areas due to the slip risks associated with the orange painted emergency areas.
52. Also just to point out that there are various references to the LTC being a motorway in the *Approach to Design, Construction and Operations* document. For example 1.1.1 , 1.2.1, and 20.3.1.
53. It also highlights the timeline of the thought and decision process up that point.
54. Throughout the Statutory Consultation the LTC was referred to as a motorway. The *Consultation Guide*²¹ stated the **LTC would have no hard shoulders in common with smart motorways**. It also had an info point stating “*Did you know? A smart motorway uses technology to manage traffic flow*”.
55. Just a couple of examples of motorway references, there are more to be found throughout the Statutory Consultation materials. In the *Consultation Guide* on page 8/144 (pdf numbering) it states that the proposed **LTC would be a motorway**.
56. It is again stated on page 28/144 that the LTC would be a **motorway**. Furthermore it goes on to state that it will have **no hard shoulders in common with smart motorways**.

¹⁹ DMRB IAN 161/15 - <https://www.standardsforhighways.co.uk/dmr/search/3b8dd1ea-fa40-41ec-b53a-dc5136387aa6>

²⁰ DMRB GD301 - <https://www.standardsforhighways.co.uk/dmr/search/d908f9c2-cd47-4e96-b015-97b51e24c588>

²¹ LTC Statutory Consultation Guide - https://highwaysengland.citizenspace.com/ltc/consultation/supporting_documents/LTC%20%20Consultation%20Brochure.pdf

57. Page 5/38 pdf of the *Case for the Project*²² again states that the **LTC would be a motorway**.

58. Page 109/389 pdf *Traffic Forecasting Report*²³ states the LTC mainline is coded as a **3-lane motorway**.

Jan 2020

59. On Jan 27th 2020 *Panorama 'Britain's Killer Motorways'* first aired and coverage of the dangers of Smart Motorways escalated and become more prominent in the public domain.

60. In Jan 2020 at the LTC Supplementary Consultation²⁴ the references to Smart Motorways had all gone. The LTC was being referred to as a road in consultation materials. However, there was no clear and informative detail that the road was no longer a motorway, and neither was it detailed as an All-Purpose Trunk Road.

March 2020

61. In March 2020 the *Road Investment Strategy 2 – 2020-2025*²⁵ was released. In the Road Standards section on page 42/131 of the document it states *"There are two principal road standards operated by Highways England: motorway and all-purpose trunk road (APTR). It is important that drivers remain clear and confident about the rules that apply on the roads that they use. Consequently, we do not intend to create additional standards with separate branding, signs or rules that have the potential to confuse or overload drivers.*

62. *Within these two standards, Highways England has defined specific sub-products with their own technical definitions. These include smart motorways and expressways(GD300). Defining products in this way is helpful for decision-makers, procurers and suppliers, but it is not necessary for road users. As more roads are upgraded to improved standards more users will simply experience the benefits they bring in an easy and intuitive way."*

22

https://highwaysengland.citizenspace.com/ltc/consultation/supporting_documents/LTC%205%20The%20Case%20for%20the%20Project.pdf

23

https://highwaysengland.citizenspace.com/ltc/consultation/supporting_documents/Traffic%20Forecasting%20Report.pdf

²⁴ LTC Supplementary Consultation - https://highwaysengland.citizenspace.com/ltc/consultation-2020/supporting_documents/Guide%20to%20Consultation%20digital%20version.pdf

²⁵ Road Investment Strategy 2 – 2020-2025 -

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/951100/road-investment-strategy-2-2020-2025.pdf

63. There certainly seems to be a lot of confusion in regard to the standards of the proposed LTC. We are being told the LTC would be an All-Purpose Trunk Road designed to Smart Motorway standards, using smart technology, and that only those who can legally use a motorway would be able to use it. Along with Baroness Vere advising us National Highways have confirmed to her that it is being designed as an All-Purpose Trunk Road (Expressway), and we've seen that the design level on those in GD300 can include motorway designation.

March/April 2020 emails

64. Also see the 2020 emails TCAG received regarding there being no real difference to road users other than the colour of the road signs. What would there be to differentiate between say the A2 heading coast bound from the M25 that uses green signs going on to the LTC/A122 which would be green signs to alert non-motorway users that they would not be able to use the LTC? Similarly from the A13 onto the LTC if users wanted to use LTC to connect to the A2 westbound or A127 (via the new parallel road)?

July 2020

65. In July 2020 at the LTC Design Refinement Consultation the LTC is now referred to as an All-Purpose Trunk Road. But there would be a restriction **so only vehicles allowed on motorways would be able to use the LTC**. They said it was because it connects into existing roads on the strategic road network that can only be used by motorway traffic. However, that is not technically true as it could be accessed via the A2 in the south, the A13 is not restricted to motorway vehicles, and to the north access can be gained to the A127 via the new parallel road without the need to go on any motorways. How would it be identified to users that motorway restrictions apply on an A road? With yet more signs on routes/junctions that would already be overloaded with signs about directions, speeds, user charges etc?

66. In this consultation it was also stated that *"The route would be designed to the latest standards and use **smart technology** and signalling to help manage traffic"*.

July 2021

67. In July 2021 at the Community Impacts Consultation, the *Consultation Guide*²⁶ states "It would use technology for incident detection, lane control and variable speed limits" (page 58/96) This is 'smart' technology. In the description of the LTC it again refers to it as a road and tunnel the A122.

²⁶ Community Impacts Consultation Guide (July 2021) - https://highwaysengland.citizenspace.com/ltc/community-impacts-consultation-2021/supporting_documents/LTC%20Summary%20Guide_3.pdf

68. In the *Operations Update*²⁷ that is another document from the consultation materials, page 14/206 states:

- The LTC would not have a hard shoulder
- It would feature technology including stopped vehicle and incident detection, lane control, variable speed limits and electronic signage and signalling.
- The design includes emergency areas spaced at intervals between 800 metres and 1.6km (less than one mile).
- The Lower Thames Crossing would be defined as an ‘all-purpose trunk road’ with green signs.
- It would also have additional restrictions so only vehicles allowed on motorways would be able to use it.

All features that are associated with Smart Motorways, except the mention of APTR and green signs neither of which make the road any safer.

69. In the *You Said, We Did*²⁸ document that was also part of this consultation one of the key feedback themes identified from the previous consultation was concerns over safety and the use of smart motorway technology. This is a document where NH are supposed to provide feedback on their response to our concerns/feedback. Yet in response to the various mentions of smart motorway technology NH response in no way denied that smart motorway technology would be used.

70. It stated “*The new road’s safety features would include vehicle detection, emergency areas, variable mandatory speed limits and lane closure signals in the event of an incident, such as a vehicle breakdown or collision. Control measures across the route, including in the tunnel, would identify vehicles stopping in a live lane and allow for rapid changes of traffic management to avert danger. Vehicle recovery would also be provided in the tunnel for any stopped vehicles to escort them to a place of safety.*” So again confirming that smart technology would be used. You can find these references on pages 175/403, 197/403, and 245/403.

71. In addition and referring back to previous comments on RIS2 (March 2020) and the statement in it that NH “do not intend to create additional standards with separate branding, signs or rules that have the potential to confuse or overload drivers”. We draw attention to page 84/403 of the 2021 You Said, We Did document which states “As with motorways, the new road would include a restriction on HGVs using lane three.” We again question how this would not lead to further confusion and overload drivers with info and signs needed to alert road users to this fact. It also leads to the question on whether HGVs would be allowed to use the right hand lane on the long southbound

²⁷ LTC Operations Update (July 2021) - https://highwaysengland.citizenspace.com/ltc/community-impacts-consultation-2021/supporting_documents/Operations%20update.pdf

²⁸ You Said, We Did (July 2021) - https://highwaysengland.citizenspace.com/ltc/community-impacts-consultation-2021/supporting_documents/You%20said%20we%20did.pdf

section between the M25 until just past the A13 on the LTC that is only two lanes? Either way it would lead to congestion issues of all HGVs being stuck in lane 1, or HGVs trying to overtake using both lanes and causing general congestion. Congestion also leads to an increased likelihood of incidents occurring, and the associated safety risks especially with no hard shoulder meaning the LTC southbound on that 2 lane section could also easily be reduced to just one single lane if there is an incident resulting in lane closure.

72. Again we point out that it would be possible to use the LTC without having to use a motorway, and with the road identity being the A122 how would traffic know of the motorway restrictions on the LTC without additional signage on sections of road that would already have a considerable amount of road signage in regards the many various complex junctions, user charges info, speed limits etc.

Conclusion

73. As you can see from the above, we have gone from the proposed LTC being designed as and referred to as an All-Purpose Trunk Road, an Expressway, a Motorway, and back to an All-Purpose Trunk Road designed to Smart Motorway standards with smart technology and that can only be used by vehicles that can use motorways.

Why has the proposed LTC been changed so many times, and what reason is there for it now being considered an All-Purpose Trunk Road rather than being designated a Motorway?

Can someone please explain why the proposed LTC is now being referred to as an APTR? Why was this change made? Where is the data to back up the decision?

Q4. What is the difference safety wise between LTC and the paused Smart Motorways?

74. A smart motorway has no hard shoulder, neither would the proposed LTC

A smart motorway uses smart technology to identify stopped vehicles, close lanes, change speed limits etc, so would the proposed LTC.

A smart motorway has emergency refuge areas, so would the proposed LTC.

A smart motorway is designed to smart motorway standards, so would the proposed LTC.

A smart motorway can only be used by motorway traffic, so would the proposed LTC.

Road sign colour

75. The only difference we can see, and have been told of between a smart motorway and the proposed LTC is the colour of the road signs. Blue signs on Motorways, green signs on All-Purpose Trunk Roads.

(See attached 1 April email titled - Highways England response - Your enquiry about the Lower Thames Crossing or Evidence-1.3 below in the Supporting Evidence section of this document, or page 14/206 in the *Operations Update*²⁹ for references to colour of road signs on the LTC.)

Are we really supposed to believe that the signs being green rather than blue makes them safer for road users?

76. Can someone therefore please explain how the safety risks of the proposed LTC are any different from those of the smart motorways that have been paused whilst the 5 years of safety data is collected and analysed?

77. We again call for the proposed LTC to be paused in line with the pause of smart motorways.

²⁹ LTC Operations Update (July2021) - https://highwaysengland.citizenspace.com/lc/community-impacts-consultation-2021/supporting_documents/Operations%20update.pdf

Conclusion

78. The evidence in this document shows that different parties have been told different information and given different understanding as to which standards are being used in the design of the proposed Lower Thames Crossing.

79. Ultimately it is vital that National Highways shares adequate information with all parties in a clear and informative manner.

80. We all have the right to fully understand the design of the proposed Lower Thames Crossing to allow us to take part in the consultation and Development Consent Order (DCO) process in a meaningful way. As is apparent from the information provided in this document this clearly has not been the case, since all three parties have different understandings based on the information that National Highways has shared with them.

81. We therefore call on the Office of Rail & Road and Transport Select Committee and respectfully ask you to kindly investigate this matter please. Firstly, so answers can be obtained, and secondly to ensure that this misleading behaviour from National Highways is not allowed to continue.

82. We consider initial questions that need answering are:

Why is different information being shared with different parties in regard to the proposed LTC?

What standard is the proposed LTC being designed to?

Why are National Highways responsible for setting their own standards with the DMRB? Do they not have a vested interest in controlling the standards?

Why has the proposed LTC designation changed from a motorway to APTR?

In regards to safety how is the proposed LTC any different from the paused Smart Motorways?

Will the Government pause the proposed LTC in line with the pause of Smart Motorways?

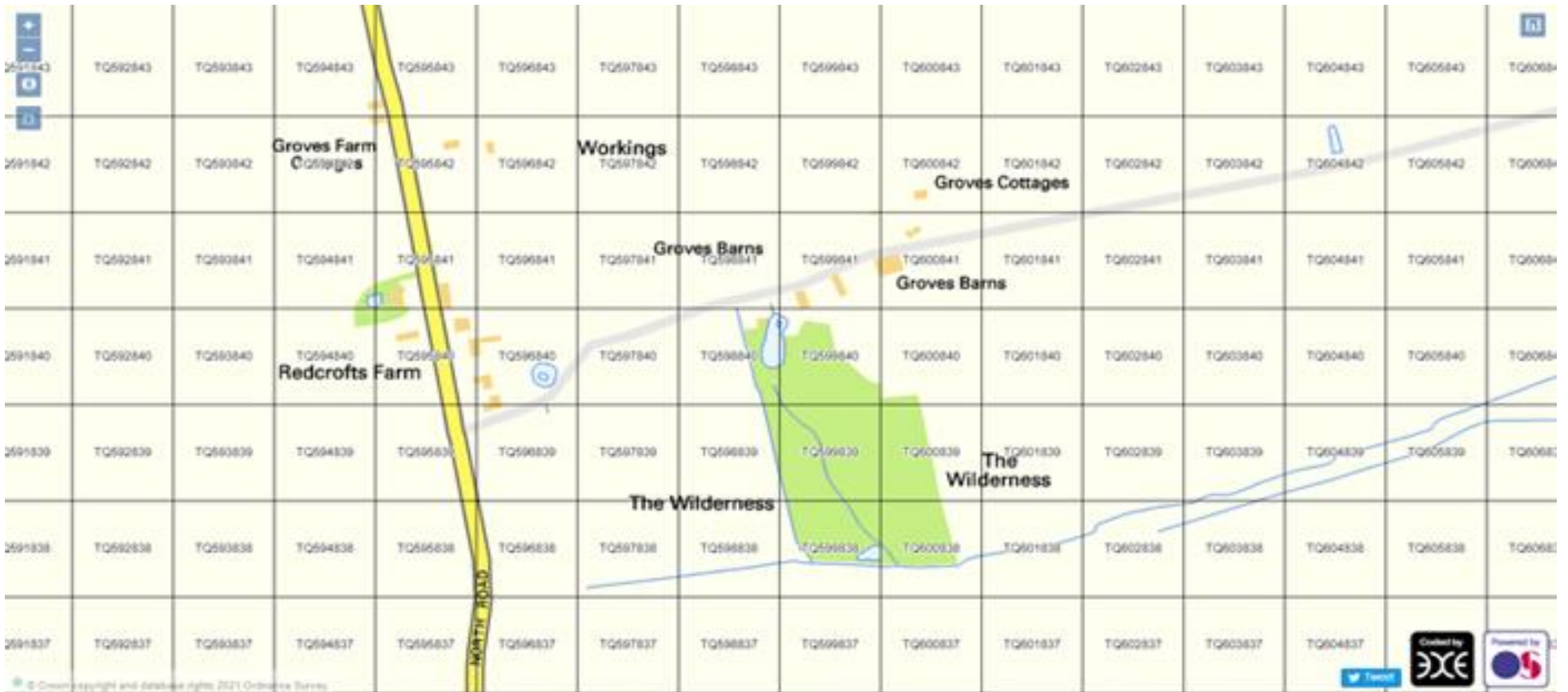
83. We thank you for your time and look forward to receiving your comments and answers to the points and questioned raised. Should you need any further clarification of the information in this document please do not hesitate to contact us.

Appendix C

Additional Supporting Evidence – The Wilderness

1. We have been communicating with both The Woodland Trust and Natural England regarding The Wilderness. The following is research and evidence we have shared with them on this matter.
2. **Please note some of the imagery in this section can only be shared for research purposes and not publicly, so we would ask for images that are indicated as such to be redacted please.**

3. **The Wilderness** is a beautiful woodland in **South Ockendon, Essex**.
4. We used [REDACTED] to locate the **Grid Reference - TQ599839** but as you will see in the image below it also covers the neighbouring grids too.



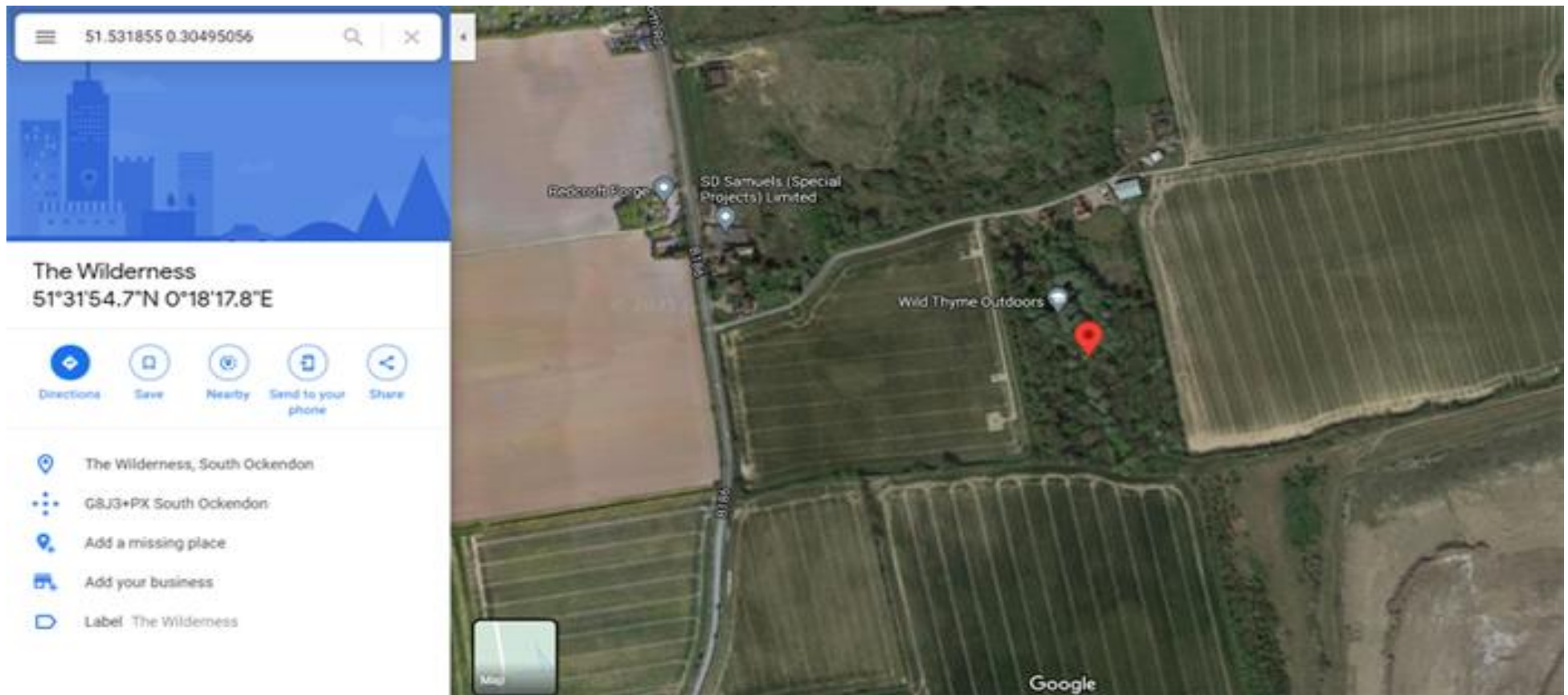
5. The Wilderness is present on Ordnance Survey map dated 1865 -



-
6. The Wilderness features on the current Map of Southend-on-Sea & Basildon - OS Explorer Map 175 (Brentwood & Billericay) Publication Date:
22/11/2018
 7. 51°31'55"N , 000°18'18"E / What 3 words - atomic.fumes.crown

 8. The Wilderness can be seen in aerial photos on Google Maps -





9. The Wilderness features on the South Ockendon Tithe Map 1839/40 - an extract from that map showing the wooded area clearly and an extract from “The Place-Names of South Ockendon” – an Essex Record Office e-book. [REDACTED] The Tithe apportionment records for South Ockendon can be found at the Essex Record Office ref. No. D/CT 261a.



10. [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

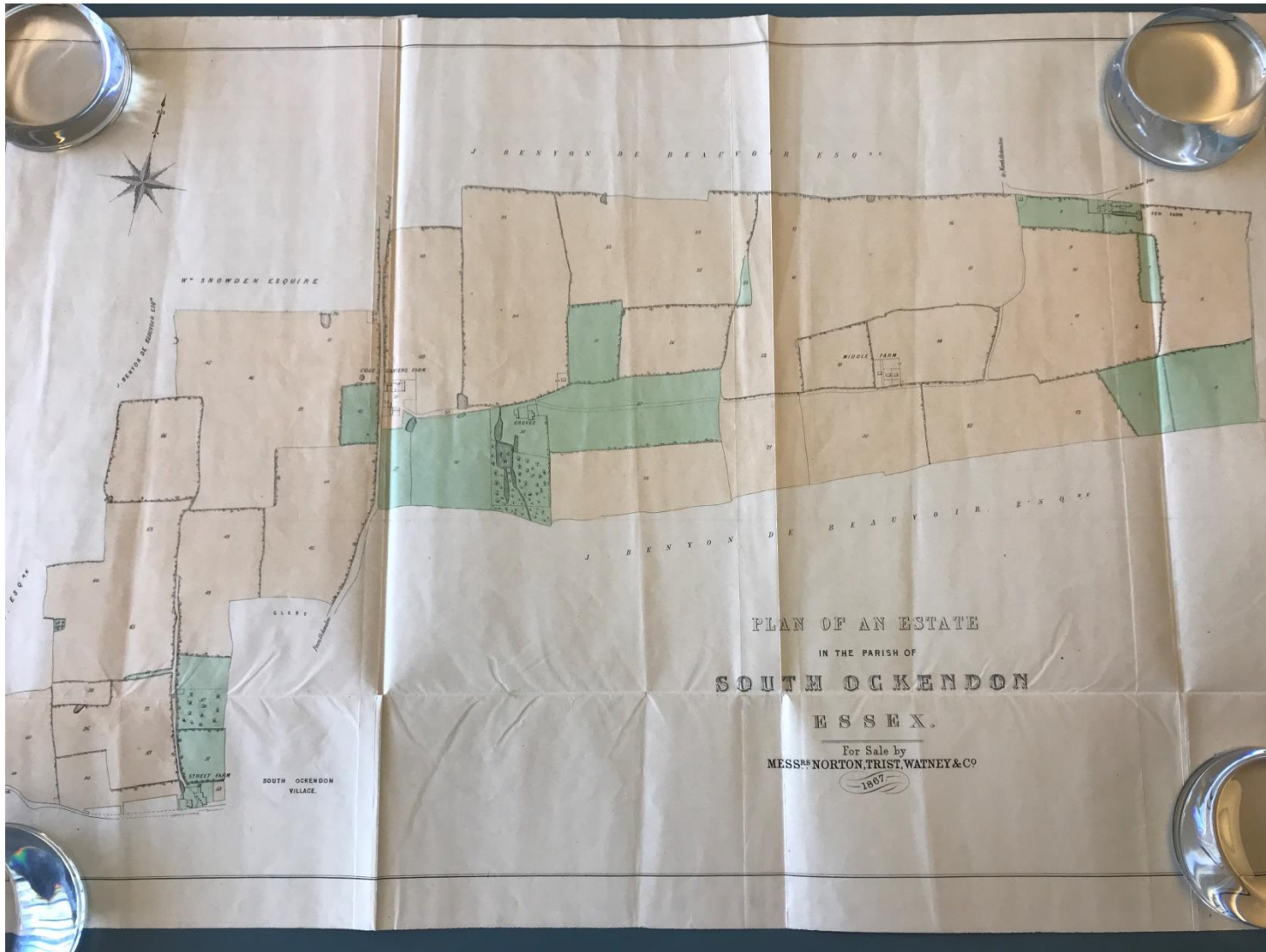
11. The Wilderness is also referenced and shown on the survey map of the estate of John Goodere dated 1767. The corresponding Essex Records Office Ref for this is D/DBE P13 - [REDACTED] This image is shared with the proviso that it is purely for research purposes, and cannot be published without permission from Essex Record Office. Thanks.



12. A point of interest and reference is that Phillipa Saltonstall married John Goodere in 1697 and the estate remained in the Goodere family until 1817 when it passed to John H. Stewart, (Listed as owner at the time of the 1839/40 Tithe Map), a nephew of the last John Goodere.

13. Phillipa Saltonstall was the granddaughter of Sir Richard Saltonstall, who was the Mayor of London, and who owned Groves Manor (Colecarters) from 1576. He was a notable in the parish, and is interred just down the road to The Wilderness at St Nicholas of Myra, South Ockendon [REDACTED] So the property including The Wilderness was in the Saltonstall family for many years dating back to 1576.

14. The Wilderness again features on the Sale Catalogue for Groves Manor (Cole Carters) in 1867. This image is shared with the proviso that it is purely for research purposes, and cannot be published without permission from Essex Record Office. Thanks.

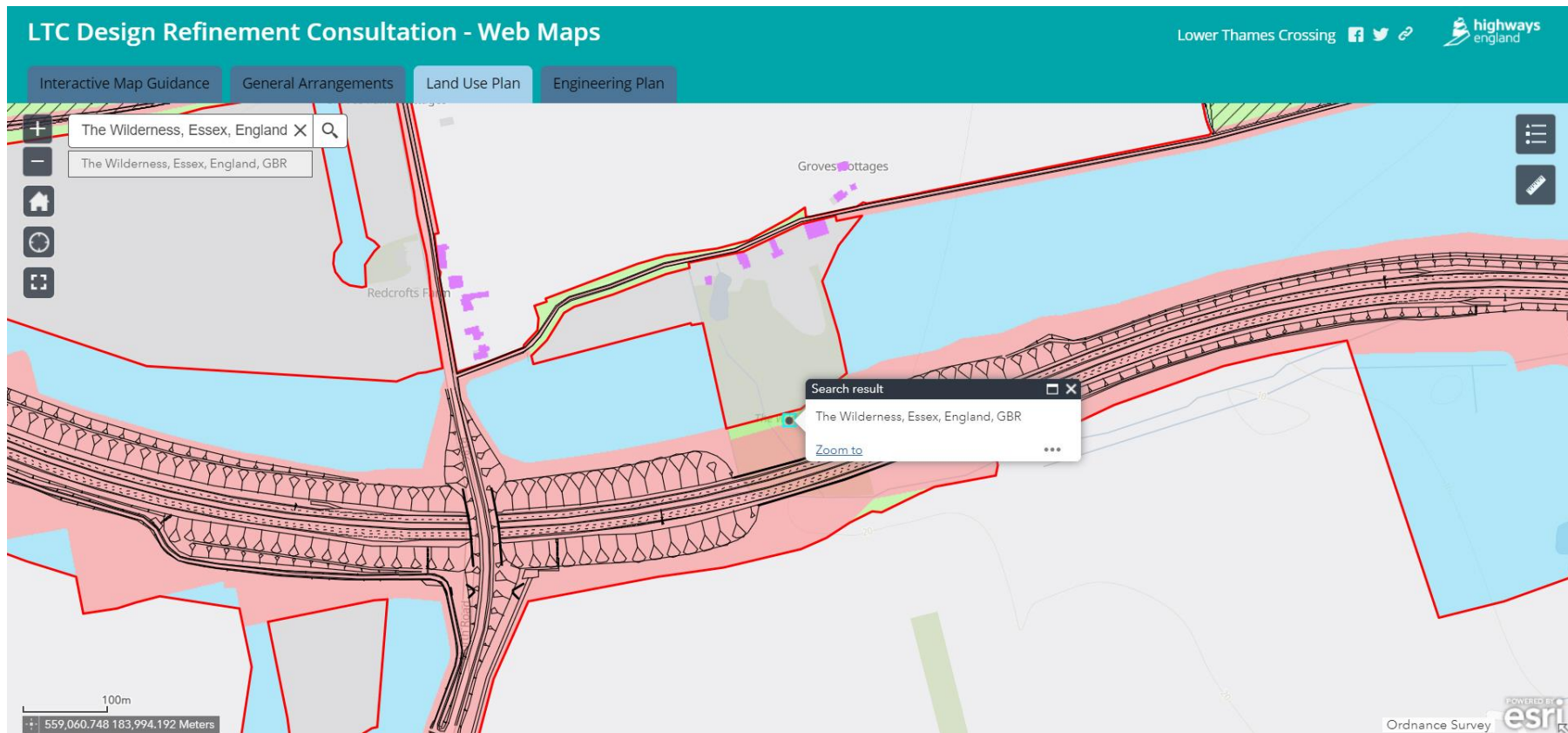


15. A few additional photos of The Wilderness and some video footage can be found on our website -

16. The reason for requesting your consideration of granting ancient woodland status to The Wilderness is because we realise that some smaller ancient woodlands may not be listed on the inventory and that it is being assessed and updated from time to time, and hope that this request will assist in consideration of The Wilderness.

17. In particular the necessity of our request on this matter to expedite consideration is due to the fact that the proposed Lower Thames Crossing would destroy The Wilderness if it goes ahead. For background, the proposed Lower Thames Crossing is an £8.2bn road project within the Road Investment Strategy2 programme.

18. Please see map below showing The Wilderness position in relation to the proposed Lower Thames Crossing on the project Land Use Map that can be found online at



19. At present Highways England are reported to be working on their DCO application for re-submission later this year, after they had to withdraw the first attempt to submit DCO application as the Planning Inspectorate were due to refuse it.

20. <https://infrastructure.planninginspectorate.gov.uk/projects/south-east/lower-thames-crossing/#> There is also expected to be a further round of consultation commencing in July.

21. We have made representations in previous emails stating our concerns over the threat to The Wilderness, and referenced the local knowledge of it being an ancient woodland, yet Highways England seem adamant to ignore this and the level of destruction the proposed LTC would cause to such a valuable woodland. Because of this we approached the Woodland Trust to share our concerns, and they kindly advised us to submit a request to yourselves.

22. We would point out that Highways England actually realigned the proposed LTC route to avoid a landfill site in the vicinity, which resulted in the proposed route being pushed further into The Wilderness.

23. We have done our best to gather as much evidence as poss, especially considering we are a group of local residents with no experience in this kind of thing, and also facing COVID-19 restrictions in regard to limitations of being able to physically access records etc. We would like to acknowledge the assistance given to us by Heather Hunter of Essex Gardens Trust in helping locate some of the provided evidence from Essex Records Office. As you most likely know it is not easy to locate the necessary evidence, but we've all done our best as quickly as we can to submit to you for consideration due to the nature of urgency of this request, in the hope it could assist in helping save/protect The Wilderness.

24. We thank you for your time and consideration, and hope that like us you will feel the vital need to add The Wilderness to the Ancient Woodland Inventory, and want to help try to save and protect it.

25. If we can be of further assistance please don't hesitate to contact us, and if any other information comes to light this end we will of course forward it to you.



26. Additional info emailed Jan 2022 - **Ref: 357412**

27. There are a number of Spindle trees located in The Wilderness, which become very apparent with the winter blooming! We understand from the Woodland Trust website that Spindle is an ancient woodland indicator, so we particularly thought this would be very relevant to our request of your consideration for ancient woodland status for The Wilderness, along with all the other evidence. We have attached a couple of photos of the Spindle. The general location of the Spindle trees is [REDACTED] or TQ599838

28. We have also recorded a coppiced Lime which measures 8.08m at a height of 0.88m at grid reference TQ6002083872 which we have recorded on the Woodland Trust Ancient Woodland Inventory and are awaiting verification for it to show publicly on the inventory. Again photos attached. We are not sure which variety it is, the leaves are the right shape but mixed in size and it is also very close to a watercourse so gets plenty of water which we understand could be relevant.

29. Please also see attached photos of various fungi taken at The Wilderness on 7th October 2021. I'm afraid we are not that knowledgeable about fungi, we believe one is a Wrinkled Peach, but not sure of the others so thought it may be helpful to send photos in case any are relevant.

30. We have also noted bat activity on site, including Pipistrelles, Noctule, and other species that we have yet to get confirmation of ID on, as we only managed to get bat detectors in there a couple of nights before they started going into hibernation! But we will continue to monitor that this year.

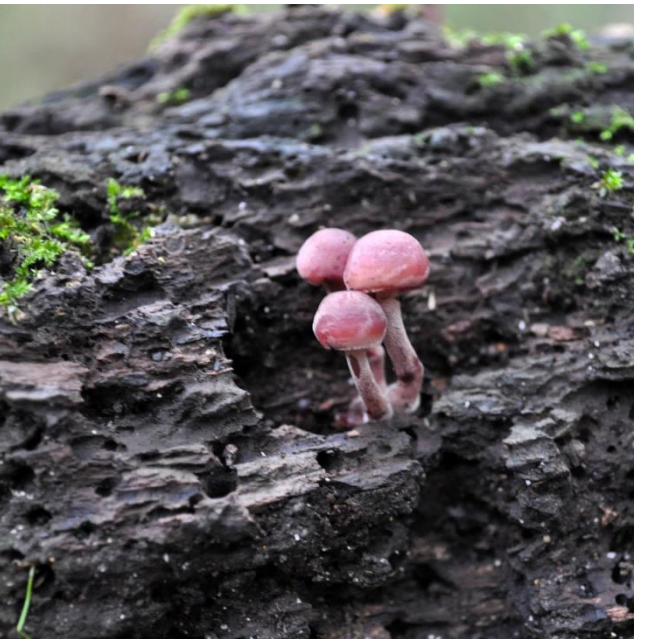
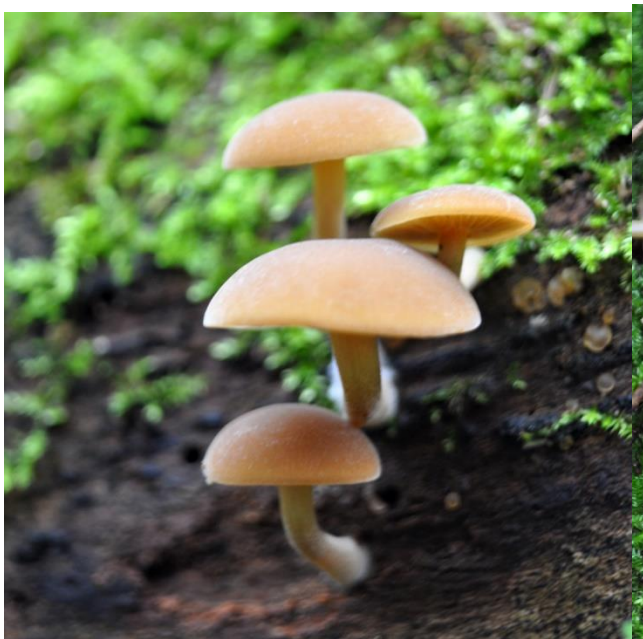


31. Spindle



32. Lime







33. Submitted via email 20th May 2022 - Ref: 357412

34. Red Campion – throughout the site



35. Bluebells – throughout the site



36. Response received from Natural England

37. Thank you also for the extensive and detailed evidence you have provided in support of your request. I am sorry for the unacceptably long delay in our concluding this case, and I thank you for your patience in this matter. We have now examined all of your evidence along with additional evidence available to Natural England, such as LIDAR data and OS historic maps.

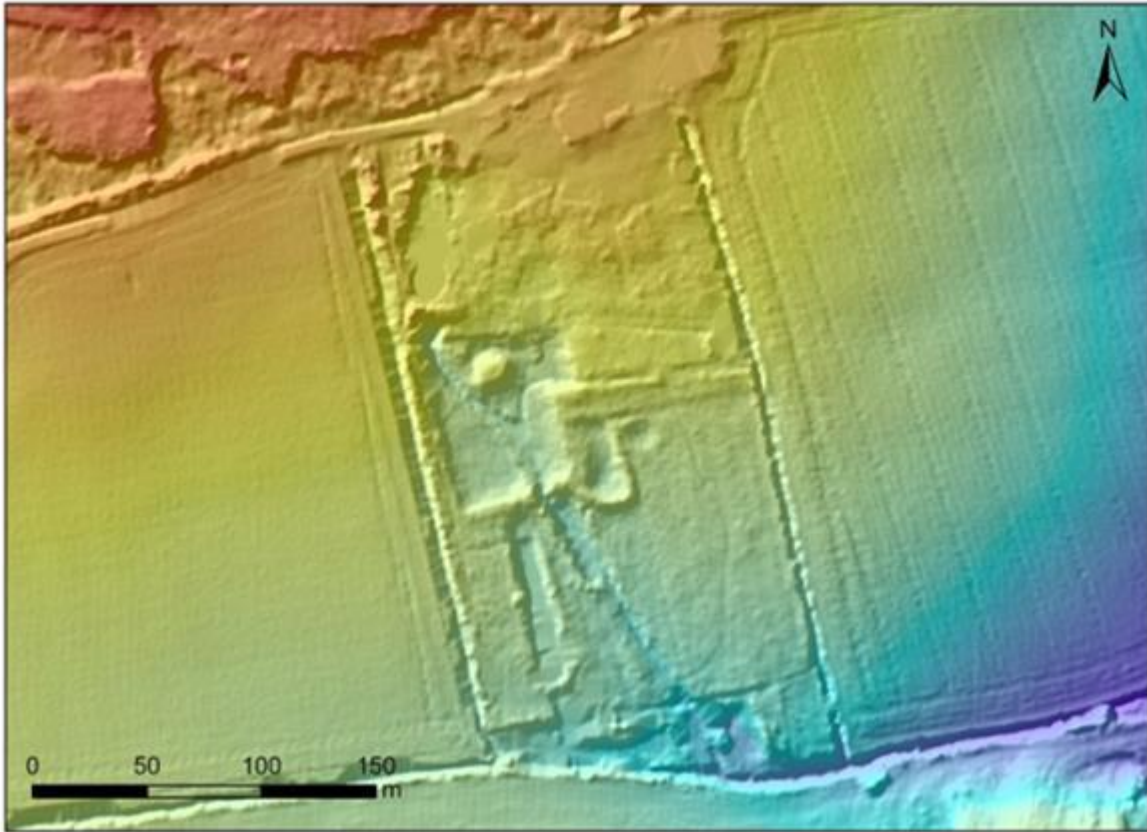
38. The area known today as “The Wilderness” appears to have been continuously wooded since 1839 (date of the Tithe Map).

39. The estate map of 1767 shows only the southern section of the area named as “The Wilderness” which is shown as wooded. A more designed landscape with trees and a series of ponds and linked ditches is shown to the north of this area.

40. The LiDAR data supports the mapped features present on the 1767 estate map and the tithe map from 1839. Please see LIDAR DTM image below: National LiDAR Programme – Digital Terrain Model. Based on the information provided only the southern portion of the area appears to have been continuously wooded from 1767. This equates to an area of 0.5 hectares.

41. The remaining 2.2 hectares of the northern section of the area appears to have been a designed landscape with trees and ponds in 1767 which appears to have become wooded by 1839. In conclusion the whole area comprises long established woodland. The southern section of the area which has longer wooded continuity than the northern section, is however, unlikely to be ancient woodland, in our view, because the LIDAR evidence indicates land disturbance of the same nature as that which correlates with the form of the ponds and ditches in the northern section of the area. This suggests that excavations across most of the southern area took place at a likely similar time to the creation of the ponds and ditches the northern section. This would suggest that had the area been previously wooded, the woodland soils would have been removed or highly disturbed by the excavations, thereby breaking any wooded continuity over the majority of the southern section of the site.

42. LIDAR DTM image of the area known as The Wilderness: National LiDAR Programme – Digital Terrain Model



43. In summary there is currently not enough evidence to add the Wilderness to the ancient woodland inventory, however, the entire site comprises Long established woodland, which is highly valuable in biodiversity and heritage terms.

44. Natural England is willing to consider further evidence which is new and substantively different from that already submitted.

45. TCAG Comment

46. The Natural England response says that the oldest part of The Wilderness, the part most under threat of destruction by the proposed LTC, has been continuously wooded since at least 1767 as per the map. Also that the entire site comprises Long Established Woodland. We understand that this new status is so new it is not yet being awarded, and are trying to learn how and when it can be applied for. It is also commented that The Wilderness is highly valuable in biodiversity and heritage terms.

47. We then responded with further evidence

48. Thank you so much for your email, and apologies for not replying sooner. I was holding back as we have recently made contact with some of the descendants of Sir Richard Saltonstall, who live in America, so was waiting to see if they came back with any new info re The Wilderness. Unfortunately the family member who has done most research into their family history is evidently away travelling.

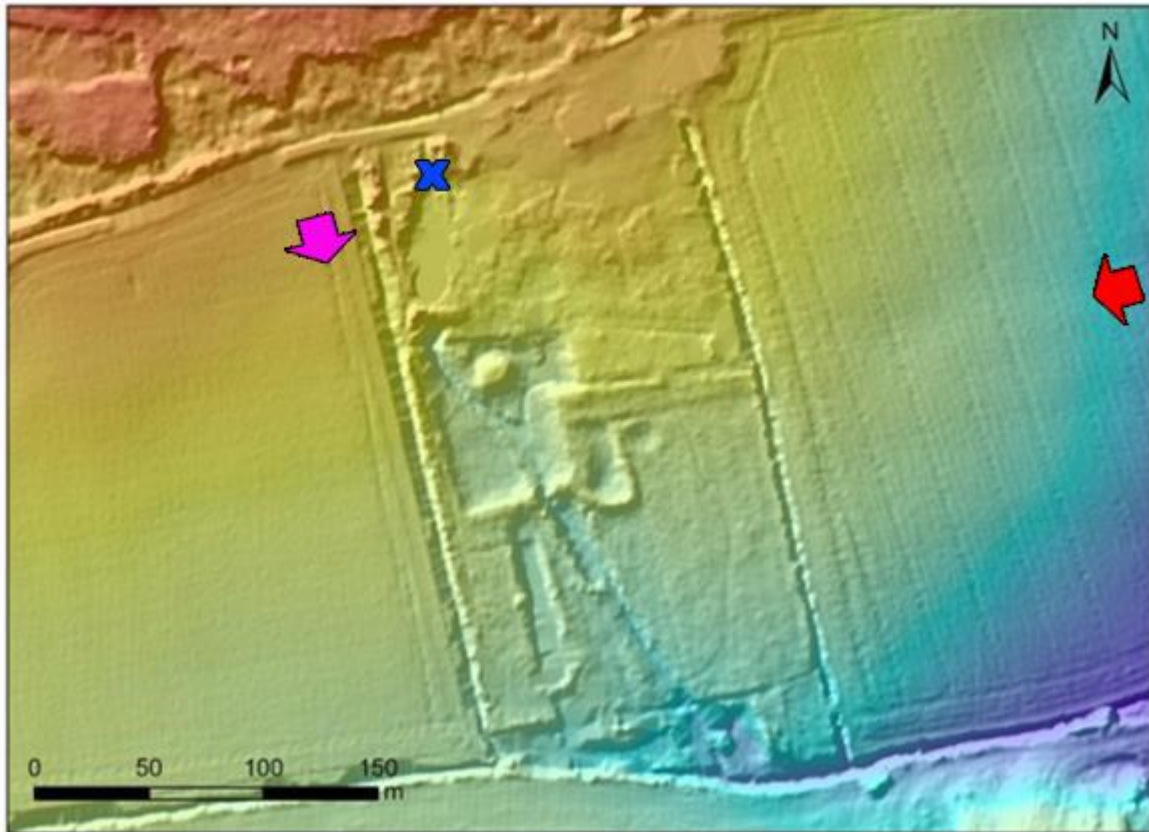
49. Obviously, we are a little disappointed as we had hoped for different news about The Wilderness, especially as we know how difficult it can be to gather map evidence as far back as we have managed. We had hoped the fact we had managed to get so far back was a good sign, but we appreciate the time and consideration you have given, thank you.

50. I wonder if I may ask a few questions please.

51. Firstly, is it ever possible to actually provide the necessary info to gain Ancient Woodland status, since maps were extremely rare in the 1600s? I ask purely to try and get an idea of how we might possibly get what is needed!

52. You question whether the southern part of the site may have been disturbed when the ornamental ponds in the northern section were created, and that the southern section could have been greatly disturbed. I wonder if it helps to explain that the ponds are naturally fed by an underground spring that comes from water sources further north of the site. The spring surfaces to the north of the site and naturally flows down to the southern end of the site. This likely explains why the pump house and ponds were likely introduced to direct and make use of the natural water flow from the natural spring.

53. I've marked roughly where the underground spring rises from and feed the natural water with a blue cross on the LIDAR map you sent in case it is helpful. I've also attached a couple of photos to show the natural lay of the land. Image 1 (direction marked with red arrow) is taken looking at The Wilderness from the east looking west back at the woodland. The barn in the right of the image is the northern end of the site, and you can see the land drops off to the south. The woodland is on naturally elevated land. Image 2 (direction marked with pink arrow) is taken looking from the north to the south alongside the west side of The Wilderness, so looking from the area at the top of your LIDAR image towards the bottom to the left/west of the woodland, and again shows how the land naturally drops off to the south.



54. With this in mind we are thinking that maybe what appears as possibly disturbance to the southern end of the site could have occurred naturally over the years of water flowing downhill to the south before dispersing into the surrounding fields. I hope I have explained this in a way that makes sense.

55. That southern part of the site is where all the Ancient Woodland indicators are present. So with all those indicators thriving would this not indicate that the ancient woodland/soils have not been disturbed to any great extent over the years?

56. Having spent time in the woods and knowing how the water flows naturally this makes sense to us. We would of course be happy to arrange for you/NE to visit the site if it would help to experience the site first hand.

57. Could it be that the southern part could be Ancient Woodland, and the northern section Long Established Woodland? Could it be that we could seek two different statuses for each section?

58. We understand that Long Established Woodland is a brand new category that has only been created very recently to try and ensure that the future Ancient Woodlands are given a chance to reach such maturity/status.

59. Please could you kindly send us more info on what protection such a status should suggest, and advise how we can request Long Established Woodland status for the site?

60. We are obviously keen to try and seek any and all protection we can for the site, as like you we realise it is a site that is highly valuable in biodiversity and heritage terms, and want to do all we can to try and protect it from the highly destructive and harmful £8.2bn Lower Thames Crossing road project.

61. It is particularly frustrating that National Highways are proposing going through such a site rather than them having to face the more complex and expensive option of going through a nearby landfill site. It is disgraceful that they consider this acceptable, and are choosing to ignore the value of The Wilderness.

62. We really do appreciate your time and help, and hope to hear from you soon.



63. Image 1



64. Image 2

65. TCAG Comment

66. As yet we are still waiting on a response from Natural England

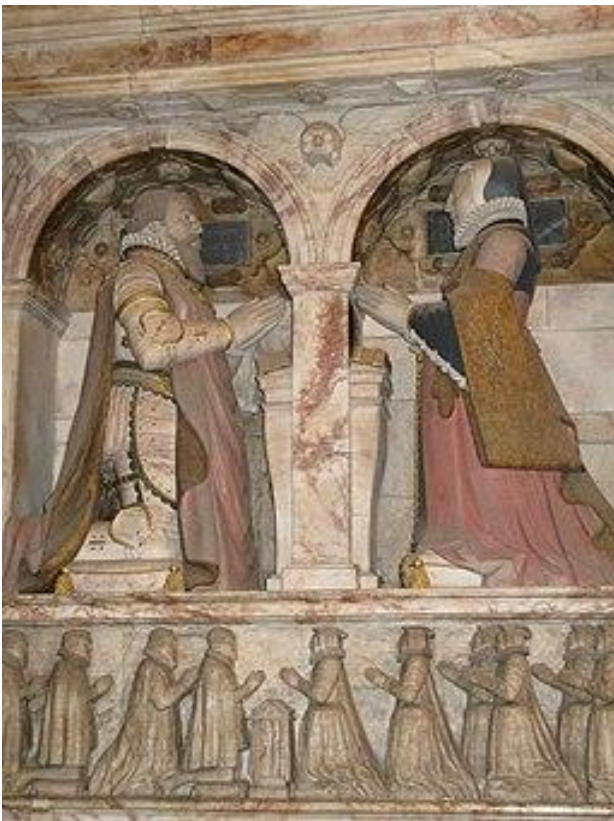
67. The Wilderness related history

68. The Wilderness falls within the old Groves Manor estate, which was lived in by Sir Richard Saltonstall and his family in the 1500s.

69. A former gateway of the estate can also be found nearby and is listed as a Grade 2 listed building dating back to the 16th century, so around the time that Sir Richard was alive and living there.

70. Sir Richard was Lord Mayor of London in 1597-98.

71. He died in South Ockendon in 1601, and is interred at St Nicholas of Myra, South Ockendon. There is a monument to Sir Richard by his wife Suzanna, located on the north wall of the chapel. The monument is built of variegated marble. Between the columns are two arches forming alcoves for the principal figures of Sir Richard and his wife. Sir Richard can be seen wearing the insignia of the Lord Mayor of London. In the plinth are the figures of their sixteen children. (see below)



72. What on earth would Sir Richard have made of the proposed LTC?