national highways

Lower Thames Crossing

9.117 Applicant's Comments on IP submissions at Deadline 1 to 3

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1 Introduction

1.1 Applicant's response to Local Impact Report appendices

1.1.1 At Deadline 2 the Applicant submitted its comments on the Local Impact Reports (LIRs) submitted to the Examining Authority at Deadline 1. These were:

a. Comments on LIRs [**REP2-054**]

b. Comments on LIRs Appendix A: Brentwood Borough Council [**REP2-055**]

c. Comments on LIRs Appendix B: Dartford Borough Council [**REP2-056**]

d. Comments on LIRs Appendix C: Essex County Council [**REP2-057**]

e. Comments on LIRs Appendix D: Gravesham Borough Council [**REP2-058**]

f. Comments on LIRs Appendix E: Kent County Council [**REP2-059**]

g. Comments on LIRs Appendix F: London Borough of Havering [**REP2-060**]

h. Comments on LIRs Appendix G: Medway Council [**REP2-061**]

i. Comments on LIRs Appendix H: Thurrock Council (Part 1 to 5) [**REP2-062** to **REP2-066**]

j. Comments on LIRs Appendix I: Tonbridge and Malling Borough Council [**REP2-067**]

1.1.2 The Applicant reserved the right to comment, if necessary, on the LIR appendices submitted by the Local Authorities at a latter Deadline. The Applicant is therefore now responding to one or more appendices from the following:

a. Gravesham Borough Council

b. London Borough of Havering

c. Medway Council

d. Thurrock Council

1.1.3 These are responded to in turn in Section 2.

1.2 Applicant's comments on Interested Party submissions at Deadline 3

1.2.1 A number of Interested Parties provided comments on the Applicant's documents at Deadline 3.

1.2.2 In this document the Applicant has provided comments on the following Deadline 3 submissions by others:

a. Thurrock Council - Comments on Applicant's submissions at Deadline 1 and 2 (D1 and D2) [**REP3-211**] (which includes Appendices A to F [**REP3-212** to **REP3-206**])

b. Port of London Authority (PLA) - Comments on Applicant's submissions at Deadline 2 submitted on behalf of the Port of London Authority [**REP3-218**]

c. Natural England - Responses to comments on WRs [**REP3-193**]

d. Shorne Parish Council - Comments on Applicant's submissions at D2 [**REP3-199**]

e. Thurrock District Scout Council - Responses to comments on WRs [**REP3-213**]

1.2.3 These are responded to in turn in Section 3.

2 Applicant's response to LIR appendices

2.1 Applicant's response to Gravesham Borough Council's LIR appendices

2.1.1 Gravesham Borough Council submitted six appendices as part of its LIR [**REP1-228**].

2.1.2 The Applicant would like to make comment on the following three:

a. LIR Appendix 3: Local Road Traffic Impacts [**REP1-230**]

b. LIR Appendix 5: Air Quality Report [**REP1-231**]

c. LIR Appendix 7b: Lighting Report [**REP1-234**]

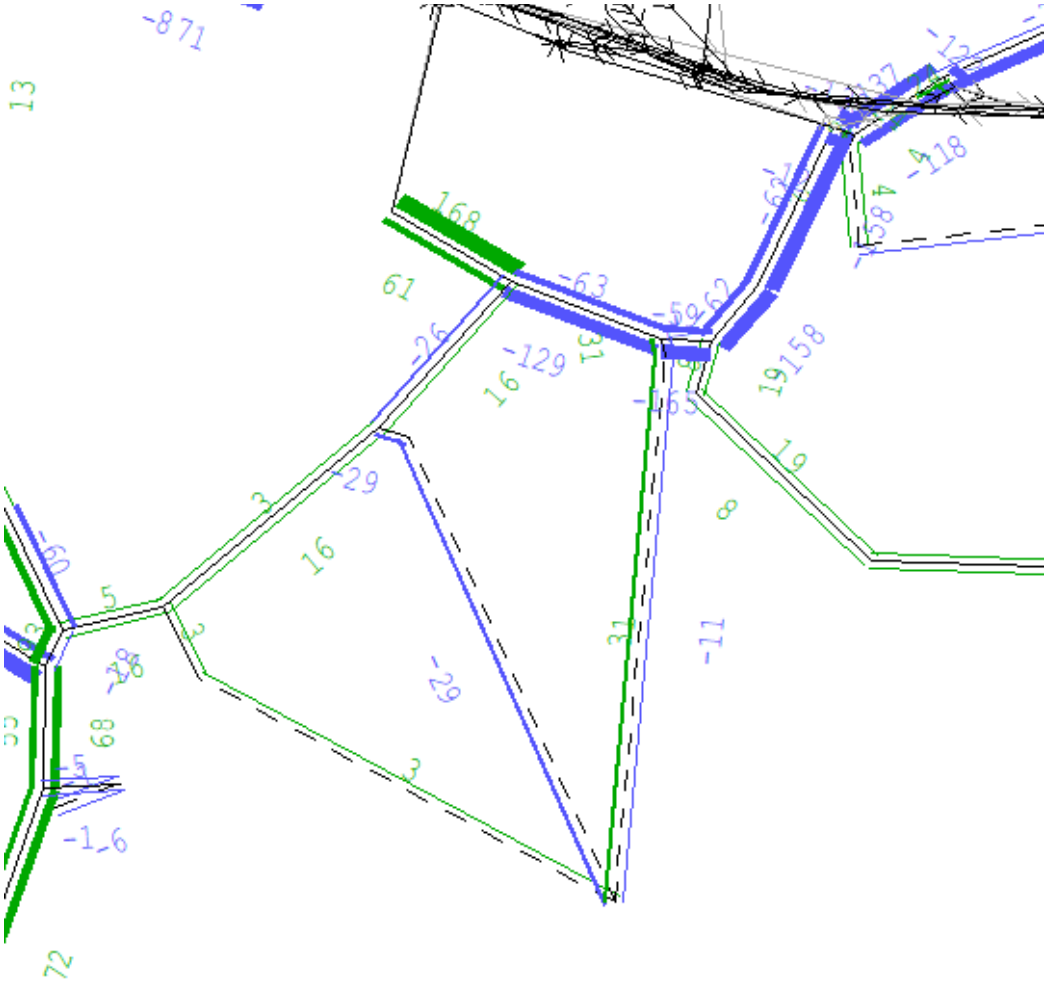
Applicant's comments on LIR Appendix 3: Local Traffic Impacts

2.1.3 Gravesham Borough Council provided a Local Road Traffic Impacts report [**REP1-230**] as part of its LIR. This document included the following comment (paragraph 19):

'Southbound LTC does not seem to make much difference, but northbound there is a decrease. It has not been explored in detail but at first sight the flow on Henhurst Road does not seem to sit well with the flows on Sole Street and The Street.'

2.1.4 In response to this comment, the Applicant has reviewed the Lower Thames Area Model (LTAM) SATURN cordon model that was provided to Gravesham Borough Council. It shows that the decrease on Sole Street and increase in Henhurst Road which '*does not seem to sit well*' is due to a small re-routing change in the centroid connectors used from the local traffic zone that loads local traffic from Sole Street and Cobham onto the network. This effect would not be apparent from the GIS shapefiles but is shown in the LTAM SATURN model. The number of vehicles involved in the re-routing is very low. As shown in the extract from LTAM in Plate 2.1 below, with the Project, 29 trips switch from loading onto the network at Sole Street to go northbound and instead are loaded onto the network on The Street and go northbound along Henhurst Road.

Plate 2.1 Extract from LTAM SATURN cordon model (2045 AM peak)



Applicant's comments on LIR Appendix 5: Air Quality Report

2.1.5 Appended to their LIR, Gravesham Borough Council provided at Appendix 5 an Air Quality Report [**REP1-231**]. This report contained one ask and two requests for further clarification. These were:

a. A request for monitoring at five locations (ask)

b. Further detail on the verification of receptor GR142 (clarification)

c. Assessment of total ammonia concentrations on sensitive habitats (clarification)

2.1.6 In response to the request for further monitoring the Applicant does not feel that additional monitoring is justified as no significant air quality effects have been identified. This is a matter under discussion in the Statement of Common Ground (SoCG) between the Applicant and Gravesham Borough Council [**REP1-100**] (item 2.1.61).

2.1.7 In relation to the clarification on the verification of receptor GR142, the Applicant has responded to this point in response to ExQ1_Q5.2.5 in its Responses to the Examining Authority's ExQ1 Appendix C: Air Quality [**REP4-190**].

2.1.8 For the third point, ammonia levels have been considered in relation to the total nitrogen deposition in the Environmental Statement (ES) on designated sites (ES Chapter 8: Terrestrial Biodiversity [**APP-146**]). This represents a reasonable worst case assessment of the impacts of nitrogen deposition (including ammonia) to be undertaken. The Applicant therefore does not believe it is appropriate to split out the proportions of nitrogen deposition into ammonia and NOx fractions.

Applicant's comments on LIR Appendix 7b: Lighting Report

2.1.9 Gravesham Borough Council provided a Lighting Report [**REP1-234**] as part of the LIR. This document included the following asks:

a. Use up to date British Standards in the design

b. Design of construction lighting should be clarified

c. A detailed lighting scheme should be provided for each phase of works prior to each phase of construction

d. Light levels within the Shorne Wood area of ancient woodland

e. Clarification on the location of bat roosts in relation to light levels on the M2 corridor

f. Confirmation that no sensitive species would be within 30m of construction compounds

2.1.10 Taking these points in turn, the Applicant has the following responses:

a. The draft Development Consent Order [**REP4-094**] (Requirement 5, clause 3) includes a clause to undertake landscape design in line with appropriate British Standards. Section 6.7 of the Code of Construction Practice (CoCP) covers site lighting [**REP4-138**].

b. A 12m maximum height for mobile tower lights has been used as a working assumption to inform assessments based on a reasonable worst case scenario. The Applicant acknowledges that a lot of standard mobile tower lights are 9m in height. The choice of tower lights depends on the construction site's needs, as per the risk assessment.

c. Section 4.6 of the Design Principles [**REP4-146**] sets out the principles for operational lighting. Section 6.7 of the CoCP covers site lighting [**REP4-138**] and provides the detail for the construction phase. The Applicant does not consider it is necessary to provide construction phase lighting plans but is committed to engaging with the community through the construction phase (as set out in the CoCP [**REP4-138**] Section 5: Communication and community engagement).

d. ES Appendix 8.15: Construction and Operational Light Spill Calculations [**APP-407**] is a factual report which informs the ecological impact

assessment in ES Chapter 8: Terrestrial Biodiversity [**APP-146**]. Paragraphs 8.6.452 to 8.6.454 of ES Chapter detail the potential effects from operational lighting on terrestrial invertebrates, concluding that with measures to minimise road lighting and light spill secured in the clauses LST.02 and LST.03 of the Design Principles [**REP4-146**], effects are considered to be neutral and not significant.

e. Surveys recorded long-eared bats which typically roost in roof voids so would be higher in buildings and therefore correspond with light levels of 0.5lux or below. Paragraphs 8.6.471 to 8.6.474 of ES Chapter 8 [**APP-146**] detail the potential effects from operational lighting (and noise) on bats. The disturbance effects of both lighting and noise were considered to be slight adverse and therefore not significant on the bat assemblage south of the River Thames.

f. Much of the habitat around these construction compounds would be cleared as a requirement of construction which would reduce the likelihood of sensitive species being within a 30m buffer of them. However, where more mobile species assemblages such as bats and terrestrial invertebrates, and key nocturnal species such as dormice and badgers, may be affected, these are included within the assessment in Section 8.6 of ES Chapter 8 [**APP-146**]. For each, the potential is considered to be slight adverse and not significant.

2.2 Applicant's response to London Borough of Havering's LIR appendices

2.2.1 London Borough of Havering submitted three appendices as part of its LIR [**REP1-254**, **REP1-247** **and** **REP1-248**].

2.2.2 The Applicant would like to make comment on Appendix 2: Local Junction Impact Assessment Modelling Report [**REP1-247**].

Applicant's comments LIR Appendix 2: Local Junction Impact Assessment Modelling Report

2.2.3 The executive summary of LIR Appendix 2 identifies, from the London Borough of Havering's own traffic modelling, five junctions which it is claimed operate over capacity, either as a result of the introduction of the Project, or regardless of it. The following three junctions operate over capacity in 2030 with or without the Project:

a. A12 Colchester Road/Gubbins Lane/Gooshays Drive

b. A12/North Street/B1275 Havering Road

c. A127/Southend Arterial Road/Ardleigh Green Road/Squirrels Heath Road

2.2.4 These claims are consistent with the Applicant's own junction modelling an LTAM.

2.2.5 The executive summary of LIR Appendix 2 also claims that the following junction is over capacity in the Do Something scenario only:

a. A127/Hall Lane

2.2.6 The Applicant's own junction modelling, and the LTAM, conclude that this junction is over capacity with the Project and close to capacity without the Project, i.e. Havering's own modelling says the junction is not over capacity in the scenario without the Project, whereas the Applicant's modelling says that it is very close to capacity. Specifically, in the Applicant's own modelling there is a ratio of volume to capacity of 0.99 for the movement from the A127 westbound off-slip to Hall Lane (North) in 2030 PM peak without the Project. This is then exacerbated with the Project. Table 4.23 of Localised Traffic Modelling Appendix L: LB Havering & TfL Junctions Forecasting Report [**REP3-131**] provides more detail on this.

2.2.7 Finally, the executive summary of LIR Appendix 2 claims that the following junction is also overcapacity in the Do Something scenario only:

a. A12 Eastern Avenue/Pettits Lane/Pettits Lane North

2.2.8 However, Table 4.6 and paragraph 4.14 of LIR Appendix 2 show that in the 2030 PM peak, without the Project, the junction has exceeded its practical reserve capacity. Therefore, the claim made by Havering in the executive summary of LIR Appendix 2 is contradicted by the detail of Table 4.6 and paragraph 4.14 of LIR Appendix 2. That is, the executive summary of the LIR is misreporting the junction modelling of the same LIR. The Applicant's own junction modelling, and the LTAM, is in agreement with Table 4.6 and

paragraph 4.14 of LIR Appendix 2 and not the executive summary – the Applicant agrees that the junction is over capacity both with and without the Project.

2.3 Applicant's response to Medway Council's LIR appendices

2.3.1 Medway Council submitted six appendices as part of its LIR [**REP1-258**].

2.3.2 The Applicant would like to make comment on LIR Appendix E: Technical Note 1 on behalf of Medway Council.

2.3.3 The Council note in paragraphs 4.3.3 and 4.3.6 of their LIR that an assessment on their behalf has identified negative operational impacts on M2 junctions 2, 3 and 4, the A289 corridor, the A228 through Cuxton and Halling and in Chatham and Strood town centres. This assessment, presented in Appendix E of their LIR, has been carried out using the Medway Aimsun Model (MAM).

2.3.4 The Applicant notes that paragraph 1.1.3 of LIR Appendix E [**REP1-258**] states that '*this report is an independent document that has been prepared by SYSTRA to provide support to the Council, and is not intended to directly inform or respond to the DCO application*'.

2.3.5 Four scenarios have been assessed in the MAM: two based on LTAM demand and two based on MAM demand. The LTAM demand has been adjusted to the MAM zoning system and the matrices aggregated into the seven different user classes used in MAM. The demand in the MAM has been interpolated linearly from 2026 to the modelled opening year of 2030.

2.3.6 The Council have presented the "level of service" at a number of junctions in these four scenarios. These indicate that a number of junctions that the level of service is forecast to worsen as a result of the Project, whilst at others the worsening is results from the introduction of the Medway local plan growth.

2.3.7 Given the differences between the modelling platforms and the assumptions that are inherent within them, the Applicant does not intend to comment on the results in detail, but notes that the Transport Assessment [**REP4-148**, **REP4-150**, **REP4-152**] presents locations where an adverse impact is forecast on the road network based on the forecasts produced from the LTAM.

2.3.8 The Council have presented results from a range of journey time routes. The Applicant has been unable to compare these directly with those from the LTAM, as the start and end points have not been provided.

2.3.9 The Council has also presented proposed mitigations at a number of the junctions that have been assessed. The Applicant does not seek to comment on these, and notes that the Applicant's approach to wider network impacts is set out in the Wider Network Impacts Management and Monitoring Plan [**APP-545**].

2.3.10 This technical note was also submitted by Tonbridge and Malling Borough Council as part of their LIR [**REP1-301**] and the same response applies.

2.4 Applicant's response to Thurrock Council's LIR appendices

2.4.1 Thurrock Council submitted 13 appendices as part of its LIR [**REP1-281**].

2.4.2 The Applicant would like to make comment on the following three:

a. LIR Appendix C: Transport and Modelling [**REP1-284**]

b. LIR Appendix E: Independent Review HEqIA Review Recommendations and Response (received 8 June 2023) [**REP1-286**]

c. LIR Appendix H: Land, Property and Compensation [**REP1-289**]

Applicant's response to LIR Appendix C: Transport and Modelling

Table 2.1 The Applicant's responses to Thurrock Council's LIR Appendix C [REP1-284]

LIR Appendix C: Transport and Modelling Section	Thurrock Council Comments	Applicant's Comments
Local Impacts		
C.1.2.17	To illustrate, the 2045 strategic LTAM model predicts that, with LTC in place, average delays on any of the approaches to Orsett Cock roundabout will not exceed 77 seconds on a typical Thurrock Council Local Impact Report Appendix C Annex 1 Operational Phase Modelling and Impacts Detail Commentary weekday morning between 0700 and 0800. However, the more detailed microsimulation assessment at this location during the same peak hour forecasts that average delays will reach 168 seconds on the A128 Brentwood Road (North) approach and 236 seconds on the A128 Brentwood Road (South) approach resulting in significant queuing predicted to reach a maximum of 357m and 534m correspondingly. Unlike the strategic model, the local microsimulation modelling reveals that the impact of LTC on Orsett Cock is severe on a typical weekday morning between 0700 and 0800 and will significantly worsen during the local network peak hour between 0800 and 0900, when the maximum queue length on the A128 Brentwood Road (North) is forecast to reach 794m.	Paragraph C1.2.17 identifies that the 2045 LTAM predicts that with the Project in place, average delay on any of the approaches to the Orsett Cock junction will not exceed 77 seconds. In fact, 77 seconds represents the largest turn delay to get on to the circulatory from any of the approach arms. However, using the turn delay only will lead to an underestimate of the total delay on the approach, because in reality an approach includes not just the turn onto the circulatory, but also the time to traverse links to reach the turn itself, so the total delay is greater than 77 seconds.
C1.2.20	The microsimulation modelling of Orsett Cock is based on actual rather than demand flows from LTAM. At Orsett Cock, demand flows can be 3% higher than actual flows. Therefore, the VISSIM modelling may be underestimating the impact of LTC on capacity of Orsett Cock and microsimulation modelling should be undertaken using demand flows as	Paragraph C1.2.20 states that demand flows at the Orsett Cock junction are 3% higher than actual flows, and that demand flows should be used instead of actual. The 3% figure is correct, but the difference in demand and actual flows may be as a result of congestion anywhere in the model area, and does not reflect a difference in the

LIR Appendix C: Transport and Modelling Section	Thurrock Council Comments	Applicant's Comments
	opposed to actual flows extracted from LTAM to reliably identify congestion hotspots and make informed decisions regarding mitigation.	number of trips that might be using the Orsett Cock junction solely as a result of any congestion at that particular point on the network. Demand flows are the total volume of traffic which would travel through the junction if it was not held up in a queue at some point before reaching the Orsett Cock junction. The difference between demand and actual flows at Orsett Cock could be the result of queues elsewhere in the network and not at the Orsett Cock junction itself. The amount of traffic that is able to reach the Orsett Cock junction and which wishes to route through Orsett Cock is measured by the actual flow. Using demand flows instead of actual flows effectively assumes that all trips are able to make their entire journeys and there are no capacity constraints anywhere in the network; this is unrealistic and therefore it is appropriate to use actual flows in this case.
C1.2.44	It should also be noted that the VISSIM model does not model the impact of emerging Local Plan growth or Freeport growth or the need to provide for WHR and so the Council's concerns about capacity are under-stated. The discrepancy between strategic modelling and local microsimulation modelling at Orsett Cock highlights that the LTAM model has inaccurately assessed the impact of LTC on the LRN and that these local impacts have not been adequately considered or consulted on. The result of this goes beyond concerns about the performance of the Orsett Cock junction within LTAM. The findings have a bearing on realism of traffic routing in LTAM in the 'with LTC' scenario. If high level delays at Orsett Cock were correctly reflected in LTAM, this would result in traffic avoiding LTC and rerouting to Thurrock's local roads. Furthermore, this example	The remainder of Section C1.2 describes the LTAM results for various junctions. The descriptions of the LTAM outputs are largely correct. It should be noted that in paragraph C1.2.44 the following is stated in relation to the A13 westbound on-slip merge at the Five Bells junction: • '*In the AM peak the 2045 DS flows are 2% higher than the 2045 DM flows and 8% higher in the PM peak*.' • '*The introduction of LTC substantially worsens the performance of the A13 westbound merge with maximum V/C increasing from 115% to 129% in the AM and from 92% to 103% in the PM*.' The Applicant would note that these claims are based on the combined flow of the slip road and the mainline, not

LIR Appendix C: Transport and Modelling Section	Thurrock Council Comments	Applicant's Comments
	demonstrates that there may be issues at other parts of the LRN that have not been identified or fully assessed. Results of strategic LTAM modelling have also been used to inform Air Quality and Noise assessments within the Environmental Statement and therefore the Council's concerns extend to the deficiency of these environmental impact assessments of the scheme.	just the flow of the slip road on its own or the mainline on its own. Similarly, the V/C values stated are based on the maximum of either the mainline or the slip road, rather than of the slip road alone or the mainline alone.
Impact of Traffic on Local Communities		
C1.3.1 and C1.3.2	C1.3.1 At the time of opening of LTC in 2030 NH is forecasting there will be a 6% increase in total vehicle trips in Thurrock…compared to the to the 2030 DM scenario. C1.3.2 states for 2045: By 2045 LTC is forecast to generate an additional 7% vehicle trips in Thurrock, which is around 5,000 trips both in the morning and evening peak hours.	These statements are incorrect, and derive from a misunderstanding of the model data. The claimed increase in total vehicles is based simply on the trip matrix totals of the cordoned models provided to Thurrock Council. These are summarised in Table 4-2 of Sub-annex 1.1 of LIR Appendix C. However, it should be noted that the trip matrix totals represent the total number of trips across the whole of the cordoned model. The cordoned model extends beyond the Thurrock Council local authority area, and includes areas of the London Borough of Havering and Essex County Council. Therefore, the trip matrix totals do not represent the total number of vehicle trips in Thurrock. Furthermore, the Do Something trip matrix totals includes traffic flows that stay entirely on the A122 throughout the length of its route through the Thurrock Council area, i.e. they do not travel on the local road network. These trips total 4,000 Passenger Car Units and should therefore be removed from the increase stated by Thurrock Council in its LIR. Furthermore, it should be noted from Section 7.5 of the Transport Assessment [**REP4-148** to **REP4-152**] that

LIR Appendix C: Transport and Modelling Section	Thurrock Council Comments	Applicant's Comments
		large parts of the road network in Thurrock experience a decrease in traffic flow due to the Project.
C1.3.3	A1089 is forecast to see 46% and 41% increases in northbound traffic in the morning and evening peak hours by 2045 as a result of LTC.	Whilst the statement is a correct interpretation of the LTAM outputs, there is important context to these increases which lead to substantial improvements elsewhere in the network. The A1089 provides direct access to the Project and thereby the wider strategic road network (SRN) which would otherwise have to access the SRN via other already congested locations. For example, traffic ultimately wishing to travel north on the M25 would be able to use the Project instead of the A13 and the heavily congested M25 junction 30. Delay time for accessing the A13 westbound reduces from 273 seconds to 11 seconds at the Stifford Interchange. The A13 westbound on-slip from the A1089 has reduction in delay from 179 seconds to 8 seconds (2045 AM peak). These reductions in delay would provide benefit to local communities.
Approach to Construction Modelling		
C3.1.2	…it is noted that traffic travelling to and from the compounds were included within existing model zones as opposed to being allocated to new compound-specific zones. The zones are large and it is unlikely that construction traffic would be loaded to specific network access points accurately. It is considered that this is likely to underestimate construction traffic and rerouted traffic impacts at access junctions and other LRN links.	The comment made by Thurrock Council that '*it is unlikely that construction traffic would be loaded to specific network access points accurately*' is not correct. Whilst it is true to say that compounds were included within existing zones rather than new compound-specific zones, the loading points for construction trips on to the network access points were an accurate reflection of the actual access points. The loading points are modelled using centroid connectors, and dedicated centroid connectors were provided for construction traffic. These connectors were accessible only to construction trips (which were

LIR Appendix C: Transport and Modelling Section	Thurrock Council Comments	Applicant's Comments
		separated out from other trips in the trip matrix), and construction trips were unable to access any other centroid connectors (which were reserved for general traffic). For some compounds, construction Heavy Goods Vehicles (HGVs) have separate access points to the construction workforce, and the modelling reflects this. Thurrock Council have been provided with a cordon of the LTAM for each of the 11 construction traffic model phases and so are able to interrogate this to corroborate the above.
C3.1.3	With the exception of Excavated Material HGVs (termed as 'earthworks' HGVs in the construction models), construction related HGV traffic and workforce traffic within the LTAM model is left to freely assign across the cordoned area (i.e. not fixed route), which allows the model to optimise the operation of the network. This is contrary to the commitments that NH has made in engagement with the Council.	This is only partially correct. Construction related HGV traffic in the model can assign freely but must also adhere to specific construction traffic HGV bans which have been identified through discussion with local authorities. These HGV bans are described in Table 4.4 of the outline Traffic Management Plan for Construction (oTMPfC) [**REP4-160**] and have been coded into the LTAM. HGVs in the LTAM also have specific designated access points to the compounds (via the centroid connectors previously discussed) which are consistent with the access points described in the oTMPfC. The imposition of HGV bans and specific access points ensures that, in practice, the routes chosen in the model are in accordance with the oTMPfC. This is because with those constraints applied, there is no route choice other than that which follows the oTMPfC route. There are some rare instances when the identified route is not chosen, but this is only because it would require a significantly longer route in order to adhere to the oTMPfC route. Where these examples do occur, the traffic volumes are very low in absolute terms and compared to other traffic on the network. Paragraph

LIR Appendix C: Transport and Modelling Section	Thurrock Council Comments	Applicant's Comments
		4.2.10 of the oTMPfC acknowledges that routes would be adhered to '*as far as reasonably practicable*'. It should also be noted that the oTMPfC does not commit to limiting workforce traffic to certain routes, and there is no commitment to do so. The modelling approach taken for workforce trips is therefore consistent with that.
C3.1.4	The phase scenarios set out by NH do not reflect the periods where LTC is being connected to the current network in Thurrock – such as the creation of the connection for A13 to Orsett Cock and LTC; and the realignment of Stanford Road (A1013). At those times significant local and strategic disruption will occur on the LRN when sections of the network are expected to be closed or temporarily diverted.	The Applicant emphasises that the construction traffic modelling phases cover the full period of construction as noted in Section 8.2 of the Transport Assessment [**REP4-150**]. The basis for inclusion of traffic management measures is given in Section 8.4 of the Transport Assessment. The instances '*where LTC is being connected to the current network in Thurrock*' are known as 'switchovers' which are also described in the Transport Assessment. Switchovers are planned to take place over a single weekend and as such do not meet the criteria for inclusion in the traffic model.
Paragraph C3.1.6 and Table C4.1	Table C4.1 below sets out the comparison between the FCTP predictions and the LTAM assignment. The figures do not align and indicates that quite different assumptions have been taken for the Northern Portal; Stanford Road; and Stifford Clays Road. The FCTP based its assumptions on inbound movements in the peak period where the LTAM modelling suggests a different shift pattern has been adopted for the Northern Portal. Furthermore, the FCTP predicts that 1,968 workers are to be employed at the Northern Portal at peak of which 70% would travel by single occupancy cars. That should approximate to 1,488 workers (allowing for 480 workers using the temporary on-site accommodation) of which 1,042 would arrive by car. The LTAM construction	The paragraph and table contain several errors of interpretation of data. These are listed below: • '*The FCTP based its assumptions on inbound movements in the peak period*'. This is not the case. Table 5.3 of the FCTP to which the above refers shows two-way movements, i.e. inbound AND outbound. The table is clearly labelled as such. • '*The figures do not align and indicates that quite different assumptions have been taken for the Northern Portal; Stanford Road; and Stifford Clays Road*'. This is not the case, and the errors made in reaching this conclusion are clear. These are:

<table>
<tr><th>LIR Appendix C: Transport and Modelling Section</th><th>Thurrock Council Comments</th><th>Applicant's Comments</th></tr>
<tr><td></td><td>
modelling has applied 474 car arrivals during the morning peak period, which significantly underestimates the effects on the network. The Council therefore questions the validity of the modelling exercise and its consistency with the wider evidence base.

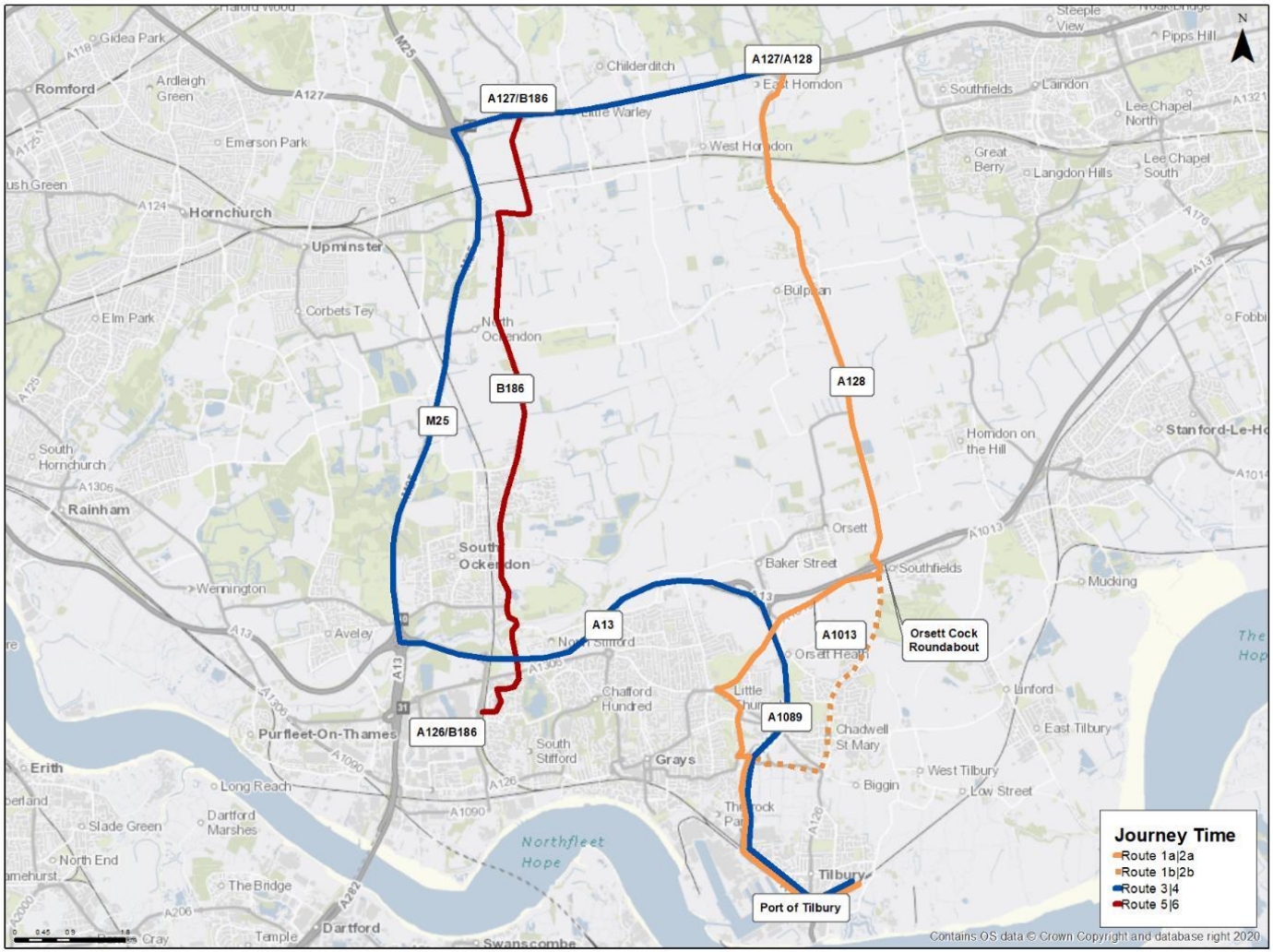
Table C4.1 Comparison of predicted worker arrivals at North Compounds
<table>
<tr><th rowspan="2">Compound</th><th rowspan="2">FCTP - Table 5.3 Arrivals</th><th colspan="2">LTAM AM Construction Phase 6 Car Movements</th></tr>
<tr><th>Departures</th><th>Arrivals</th></tr>
<tr><td>Northern Portal</td><td>820</td><td>313</td><td>474</td></tr>
<tr><td>Station Road</td><td>38</td><td>3</td><td>35</td></tr>
<tr><td>Brentwood Road</td><td>134</td><td>2</td><td>124</td></tr>
<tr><td>Stanford Road</td><td>46</td><td>4</td><td>9</td></tr>
<tr><td>Long Lane A and B</td><td>41</td><td>4</td><td>32</td></tr>
<tr><td>Stifford Clays Road West</td><td>60</td><td>3</td><td>48</td></tr>
<tr><td>Stifford Clays Road East</td><td>181</td><td>4</td><td>143</td></tr>
<tr><td>Mardyke</td><td>51</td><td>2</td><td>48</td></tr>
<tr><td>Medebridge</td><td>98</td><td>1</td><td>91</td></tr>
</table>
</td><td>
– As noted above, the FCTP figures are actually two-way movements, not one-way, as stated by Thurrock Council. The LTAM AM movements from columns 3 and 4 of Table C4.1 should be added together for each compound in order to make a comparison to the FCTP figures.
– Table C4.1 implies that the data from the FCTP is for phase 6. This is not the case. As FCTP paragraph 5.4.11 notes 'The number of workers and car trips represent the average across the identified construction phase that shows the highest number of workers forecast for each of the compounds', i.e. the FCTP shows the flows from the phase with the highest flow for each compound, and this is not always phase 6. For Stanford Road, the phase with the highest flow is phase 3. For Stifford Clays Road, the phase with the highest flow is phase 5. In this regard, Table C4.1 is not comparing like with like.
• 'Furthermore, the FCTP predicts that 1,968 workers are to be employed at the Northern Portal at peak of which 70% would travel by single occupancy cars. That should approximate to 1,488 workers (allowing for 480 workers using the temporary on-site accommodation) of which 1,042 would arrive by car'. This reflects an incomplete understanding of what the FCTP is describing. The FCTP does predict 1,968 workers at the northern tunnel entrance compound, 70% of whom arrive by car. However, paragraph 5.4.5 of the FCTP makes clear that there are three separate shift patterns at compounds which have tunnelling, of which the northern tunnel entrance compound is one. The shift
</td></tr>
</table>

LIR Appendix C: Transport and Modelling Section	Thurrock Council Comments	Applicant's Comments
		patterns mean that not all of the workers would arrive at the same time – their arrival would occur at different times of day based on what shift they are working. The FCTP shows the peak hourly flows, i.e. from the modelled hour which has the highest flows. There are other movements in addition to those shown in the FCTP table, but these occur at different times of the day. Paragraph 8.1.7(h)(ii) of the Transport Assessment [**REP4-150**] explains that '*Selected shift times have been aligned to sit on the morning and evening traffic peak, whereas the proposed shift times, as set out in the Code of Construction Practice* [**REP4-138**] *do not align with peak traffic flows*'. This demonstrates that the LTAM has been designed to capture the worst-case impacts as much as possible.
Local Impacts during Construction Phase		
C3.2.2	The analysis of junction flows and performance indicated that the junctions with significant flow increases and/or exhibiting performance concerns in terms of percentage of volume-to-capacity ratio and delays are: 1. The Manorway roundabout 2. Orsett Cock roundabout 3. ASDA roundabout 4. Daneholes roundabout 5. Marshfoot Road/ A1089 junction 6. Five Bells westbound merge with A13. 7. A1012/Arterial Road North Stifford/Lodge Lane/ Long Lane roundabout	Paragraph C3.2.2 identifies a list of junctions for which it is claimed there are significant increases in flow or, volume capacity ratios or delays. It is understood that the basis for these claims are the tables in Section 8 of Sub-Annex 3.1 of LIR Appendix C. With respect to the junctions listed, the Applicant is largely in agreement with the list, with the following exceptions: • Daneholes roundabout: the largest increase in delay is six seconds, as confirmed in Section 8.5 of Sub-Annex 3.1. This is not considered indicative of an issue warranting concern.

LIR Appendix C: Transport and Modelling Section	Thurrock Council Comments	Applicant's Comments
	8. A1013/ Rectory Road junction 9. A128 Brentwood Road/ Prince Charles Avenue 10. A13 northbound on-slip road at Five Bells 11. A13/A1012 Gyratory in North Stifford, Grays 12. B149/ Chadwell Hill/ St Chads Road/ Marshfoot Road roundabout 13. Brentwood Road/ Heath Road 14. Muckingford Road/ Construction Haul Road 15. Southend Road/ Lampits Hill 16. Station Road/ Love Lane 17. Stifford Road approach to B1335 Stifford Road	• A13 northbound on-slip at the Five Bells junction: Table 8-12 of Sub-Annex 3.1 states that delays increase in the PM peak of phases 3, 4, and 7, by 44 to 60 seconds. However, the LTAM for those phases show only a slight delay on that link or for turns from that link. The delay on this link is six seconds in phases 3, 4, and 7. There is also a delay of six seconds in the Do Minimum – so in fact the delays are identical in each scenario and there is no increase in delay. • A13/A1012 North Stifford junction: The LTAM shows there would be no delay increases at the gyratory. The only delay which occurs in this area is at the junction of Stifford Clays Road and High Road. The delay occurs because of a traffic signal introduced at this location in the construction scenario (in all phases) to facilitate access to construction compounds. The junction remains within capacity and the delays are transitory.
C3.2.6	The analysis of journey times predicts increases of up to four minutes dependent on route and time period. It is evident that the construction activities are predicted to result in significant journey time increases on key routes in Thurrock including those routes leading to Port of Tilbury. Given that the LTAM strategic model, represents average conditions in the modelled hour, journey time increases for some vehicles are likely to be significantly higher than those suggested by the strategic model.	Paragraph C3.2.6 highlights journey time '*increases of up to four minutes*' for routes leading to the Port of Tilbury during the construction period. This is a correct interpretation of the LTAM, but it is also true to say that for most routes analysed the increase is less than two minutes, and for some it is less than 30 seconds or a journey time decrease. The data upon which this paragraph relies is in Table 9-1 and Table 9-2 of Sub-Annex 3.1 of LIR Appendix C. For ease of reference, the map of journey time routes from Figure 9-1 of Sub-Annex 3.1 of LIR Appendix C have been reproduced below. The PM peak does not have any forecast increases above three minutes, and in the AM peak there would be

LIR Appendix C: Transport and Modelling Section	Thurrock Council Comments	Applicant's Comments
		only two routes out of the eight assessed where the journey time increases by the four minutes stated by Thurrock Council. These are: route 1a, which is southbound via the A128 and A1013; and route 3, which is southbound via the A127, M25, A13, and A1089. The stated four minute increase for route 1a only occurs during a single construction phase (phase 5, which is five months long). The increase for route 3 occurs across phases 5, 4, and 6 (a total period of 15 months). It is again emphasised from paragraph 8.1.7 of the Transport Assessment [**REP4-150**] that the LTAM has been designed to capture the worst-case impacts as much as possible.

Figure 2.1 Extract from Thurrock Council's LIR Appendix C: Transport and Modelling [REP1-284], Figure 9-1 Analysed Thurrock Model Journey Time Routes



Applicant's response to LIR Appendix E: Independent Review HEqIA Review Recommendations and Response

2.4.3 The Applicant continues to engage with Thurrock Council on HEqIA matters and a meeting took place on 28 September to review matters under discussion in the SoCG, a number of which relate to actions arising from the Independent Review, mirroring comments made by Thurrock Council in LIR Appendix E. A series of actions have been identified to move issues forward.

Applicant's response to LIR Appendix H: Land, Property and Compensation

2.4.4 The Applicant continues to engage with Thurrock Council on Land, Property and Compensation matters. The spreadsheet that makes up Annex 2 of Appendix H details those plots which are within the freehold ownership of the Council. The potential early acquisition/option agreement to acquire will be discussed a workshop with Thurrock Council taking place on 5 October 2023.

3 Applicant's response to submissions of others at Deadline 3

3.1 Applicant's response to Thurrock Council's Comments on Applicant's Submissions at Deadline 1 and 2

3.1.1 At Deadline 3, Thurrock Council submitted a suite of documents called Thurrock Council Comments on Applicant's Submissions at Deadline 1 and 2 (D1 and D2) [**REP3-206 to REP3-212**].

3.1.2 The Applicant is mindful that, given the scale and complexity of the Project, there is a need for information submitted into the Examination to be provided in a manner which is proportionate and accessible for all Interested Parties, the Examining Authority (ExA) and the Secretary of State (SoS) to allow for appropriate consideration.

3.1.3 In that spirit, the Applicant has not sought to repeat the detailed responses which it has given previously in relation to many of the matters raised by the Council.

3.1.4 The tables below therefore only set out responses to new comments, or where a response goes beyond what has previously been addressed by the Applicant or to address factual inaccuracies:

a. Table 3.1: The Applicant's responses to Part 1, the Executive Summary

b. Table 3.2: The Applicant's responses Part 2, Section 18

c. The Applicant's responses to Part 2, Sections 19-23

d. The Applicant's responses to Thurrock Council's Appraisal of the applicant's response or resolution to the Council's MRC submission (Section 20)

Table 3.1 The Applicant's responses to Thurrock Council Comments on Applicant's Submissions at D1 and D2 [REP3-211], dealing with Part 1, the Executive Summary

Section Reference	Thurrock Council's comments on submissions at D1 and D2	Applicant's Response
Section 7 – Environmental Statement Addendum (Version 2)	24. **Landscape & Visual, Terrestrial Biodiversity and WCH**: various changes have been made by the applicant and further commentary is requested, e.g. changes to visual receptors and adjustments to Biodiversity Net Gain (BNG) calculation. 25. **Population and Human Health – Properties/Businesses at Risk of Demolition**: there are various changes which do not require further comment. The number of properties requiring demolition has been amended from 26 to 31 properties to the north of the River Thames (increasing the overall permanent adverse effects on private property and housing from 30 to 35 properties, when covering both north and south of the River Thames). Further information is though required on the Two Forts Way temporary closures and why the footpath closures do not affect journey lengths.	24. Five additional visual receptors were identified in the Applicant's submission at Deadline 1. Full details are included in the ES Addendum [REP3-124]. The changes made by the Applicant are considered likely to have a very minor impact on the metric calculations given their limited nature and extent. The changes include a reduction in the Order Limits of approximately 19ha (see MRC03 and EA05) and some minor changes in the designation of temporary and permanent acquisition. An initial qualitative assessment of the impacts of these change requests on the metric assessment suggests that a reduction in the Order Limits would likely improve the BNG forecast unit outcomes, primarily by reducing the baseline unit value of the Order Limits, but that this would not significantly alter the metric output. Changes in the temporary or permanent nature of acquisition would have no effect on the metric output. 25. The Two Forts Way temporary closure would not affect journey length. The diversion would take users via the realigned England Coast Path which is of a similar length to that affected by closure.
Section 8 – Draft Development Consent Order (DCO) (Version 2) and Schedule of Changes to the Draft DCO	28. The Council's position is that there much work still required to justify why the DCO allows such broad and flexible powers to the applicant. It is noted that a further version of the dDCO has been provided and this will be considered further in Part Two and Appendix D.	28. The Applicant fundamentally disagrees with the approach of Thurrock Council in relation to the extent of justification required. The Applicant considers the council is adopting positions which conflict with in-principle positions taken by the Secretary of State (and would have deleterious effects not just to the delivery of the Project, but, if replicated, set a damaging precedent for infrastructure delivery in the UK). The Applicant's position is that the provisions have been justified, and the explanation provided for the provisions far exceeds any other

Section Reference	Thurrock Council's comments on submissions at D1 and D2	Applicant's Response
		DCO project the Applicant is aware of. Insofar as the requests are specific and ungeneralised, the Applicant has responded in detail to each of the points and queries raised by the council in the Applicant's responses to IP comments made on the dDCO at Deadline 1 [**REP2-077**], Deadline 2 [**REP3-144**] and Deadline 3 [**REP4-212**].
Section 13 – Environmental Statement Appendix 2.2 – Code of Construction Practice, First Iteration of Environmental Management Plan – Annex C – Preliminary Works Environmental Management Plan (Version 2)	42. The Council's opinion on the PWEMP is documented in the Council's LIR (**REP1-281**) in Sections 15.1.4 and 15.6.54 briefly (as it was a new document that was not discussed with the Council prior to DCO submission) and remains unchanged, except the further comment set out below. There are a number of issues with the content of this document, in particular, there is no clarity yet as to when commencement will actually begin (assuming DCO grant), given the Secretary of State for Transport's announcement of a two-year delay to construction. Also, clarity is required as to if that includes preliminary works or just main works and the date of any such commencement. This is particularly relevant to 'advance compound works, for the two main compounds and 'vegetation clearance', which would have a significant impact on the local communities, roads, natural environment and social facilities.	42. Commencement is described in paragraph 1.1.1 of ES Appendix 2.2 Annex C: Preliminary Works Environmental Management Plan [**REP1-159**], '*Preliminary works are those that would be undertaken between the DCO coming into effect and commencement of construction as defined by the draft DCO*', and the works that can be undertaken during preliminary works and the location of that works are described in Table 1.1 of that document.
Section 14 – Localised Traffic Modelling Report and Appendices A – H	***Localised Traffic Modelling Report*** 43. The Council has pressed for some considerable time to have localised modelling of key impact locations published and submitted within the DCO and this was not accepted by the applicant.	43. The Applicant has submitted the following detailed traffic modelling data: • Localised Traffic Modelling [**REP3-126**] • Localised Traffic Modelling Appendix I: ASDA roundabout VISSIM LMVR [**REP3-128**]

Section Reference	Thurrock Council's comments on submissions at D1 and D2	Applicant's Response
	44. Some provisional modelling had been provided by the applicant shortly prior to DCO submission, but that has many critical errors and has not been signed off by the Council. 46. The Council is not in a position to undertake an informed response to the localised modelling outcomes until such time as the localised modelling has been signed off and is not able to provide a robust review of the recently submitted localised models in the time frame within the Examination period to enable the ExA to critically appraise such results and conclusions.	• Localised Traffic Modelling Appendix J: ASDA roundabout VISSIM Forecasting Report [**REP3-129**] • Localised Traffic Modelling Appendix K: Five Bells & Pitsea Hall Forecasting Report [**REP3-130**] • Localised Traffic Modelling Appendix L: Havering & TfL Junctions Forecasting Report [**REP3-131**] • Localised Traffic Modelling Appendix M: ASDA roundabout VISSIM Construction Assessment Report [**REP3-132**] • Localised Traffic Modelling Appendix B: Orsett Cock VISSIM Local Model Validation Report [**REP1-188**] • Localised Traffic Modelling Appendix C: Orsett Cock Forecasting Report [**REP1-189**] • Localised Traffic Modelling Appendix D: Manorway Forecasting Report [**REP1-190**] • Localised Traffic Modelling Appendix E: Thurrock East-West VISSIM Local Model Validation Report [**REP1-191**] • Localised Traffic Modelling Appendix F: Thurrock East-West Forecasting report [**REP1-192**] • Localised Traffic Modelling Appendix G: Traffic Operational Appraisal – VISSIM Local Model Validation Report [**REP1-193**] • Localised Traffic Modelling Appendix H: Traffic Operational Appraisal – VISSIM Forecasting Report [**REP1-194**] 44. The Applicant does not accept that the localised traffic models contain critical errors. 46. The Applicant does not consider it appropriate for the modelling to be contingent on any form of third party 'approval' of both the models and outputs.

Section Reference	Thurrock Council's comments on submissions at D1 and D2	Applicant's Response
Section 15 – Design and Operational Distinction Between an All-Purpose Trunk Road and Smart Motorway	54. The applicant should provide further clarification that its designs have made allowance for clear, safe and convenient signing on the approaches to LTC from all non-Special Roads to highlight to drivers that they could inadvertently be entering a Special Route, with the consequential safety concerns and enforcement action.	The issue of signing was discussed during ISH1 (refer to the Transcript of Issue Specific 1 (ISH1) [**EV-023**]). Further detail would be developed at the detailed design stage and informed by Road Safety Audits to identify any safety issues within the design. This will ensure that adequate signing, informing road users of all the restrictions on each and every access point to the A122 road, is installed at appropriate locations so that all road users have clear and understandable signing to prevent them entering a part of road that was restricted or inappropriate for them to enter.

Table 3.2 The Applicant's responses to Thurrock Council Comments on Applicant's Submissions at D1 and D2 [REP3-211], dealing with Section 18

Section/Ref	Thurrock Council's comments on submissions at D1 and D2	Applicant's response
Section 18.9 – Assessment of Environmental and Health Impacts **Air Quality**	18.9.1 The applicant's response (REP2-064) does not provide any additional information beyond that already presented in the ES Chapter 5 (APP-143) and associated appendices. This lack of engagement is disappointing and is illustrated by the response to the request within Section 10.2 of the Councils' LIR (REP1-281) for a simple figure (which the applicant will already have within their modelling) to understand the verification factors applied within the operational modelling assessment. As these factors range from 0.41 to >4 they will have a material impact upon the reported impacts at each receptor and could easily be clarified by the applicant to resolve a simple and key request. 18.9.2 The Council therefore maintains the position that a Figure should be provided which shows where each zone has been applied and therefore which receptors are in each verification zone to better understand the reported predicted changes in air quality within the Borough (and indeed across the Study Area).	The Applicant has considered Thurrock Council's request in paragraphs 18.9.1 and 18.9.2 and has produced a receptors and model verification zones figure. This figure is presented in Appendix A.
	18.9.4 The applicant's response to Sections 10.2.8 – 10.2.16 of the LIR (REP1-281) fails to provide an response to Sections 10.2.8 and 10.2.9 of the LIR (REP1-281) which use the results of the applicant's modelling to understand the balance of impacts on residents of Thurrock which identified 'despite the sparsity of modelled receptors in residential areas in proximity to the Scheme, there are more receptors within Thurrock that experience an increase (81 No.) in concentrations compared to those that experience a reduction (56 No).'	The air quality assessment has been completed in accordance with Design Manual for Roads and Bridges (DMRB) LA 105 (Highways England, 2019). As such, worst-case receptors have been included in the air quality assessment to provide stakeholders (such as Thurrock Council) with the requisite information relating to how the change in traffic flows impact on pollutant concentrations. This means that often there are a greater number of receptors which experience a worsening of air quality.

Section/Ref	Thurrock Council's comments on submissions at D1 and D2	Applicant's response
	18.9.5 Despite reservations as to the modelling methodology applied by the applicant (such as unclear verification factors and traffic data reliability), the applicant's agreement or comment on this key finding of their own assessment would be welcomed.	The overall number of receptors where there are improvements or deteriorations are irrelevant in relation to the determination of whether there is a significant effect and whether mitigation is required. It should be noted that the Applicant does not consider the borough-wide air quality modelling undertaken by Thurrock Council to be in accordance with the appropriate guidance, and in addition Thurrock Council has compared modelled concentrations against air pollutant thresholds (such as WHO guidelines) which are not relevant in the context of UK legislation. Additionally, the Applicant has undertaken an Air Quality Quantitative Health Impact Assessment (AQQHIA) [**REP3-141**] which is considerate of the change in pollutant concentrations below legal thresholds, has no screening out of imperceptible changes, and considers the relevant population exposed within the air quality study area (rather than worst-case receptors solely). This assessment provides additional confidence in relation to the conclusion of non-significance reported in the Environmental Impact Assessment within ES Chapter 5: Air Quality [**APP-143**].
Section 18.9 – Assessment of Environmental and Health Impacts **Noise and Vibration**	18.9.22 An assessment of other vibration generating plant, such as a vibratory roller, have not been assessed. An indication of impact of these should be provided now.	The plant/equipment considered in the noise assessment is set out in Tables 2.2 to 2.4 of ES Appendix 12.4: Construction Noise and Vibration Assessment [**REP1-169**], which includes a vibrating roller where needed for specific construction activities.
Section 18.9 – Assessment of Environmental	18.9.44 Regarding Section 10.8.16, in answer to the question about temporary works that may be required prior /during the construction of the North Portal Junction; the	The Applicant agrees that ensuring that drainage infrastructure to serve construction works areas (including access roads) is aligned to, phased and delivered in

Section/Ref	Thurrock Council's comments on submissions at D1 and D2	Applicant's response
and Health Impacts **North Portal Junction**	applicant refers to the Code of Construction Practise (**REP1-157**), which requires the Contractor to manage Surface Water relating to Temporary works. The Council accepts this response in relation to Temporary works during Construction, provided the applicant confirms that the drainage infrastructure serving the construction roads is aligned, phased and delivered with the construction works – the applicant should also provide signposting to relevant DCO documents. Any discrepancies where construction roads are commissioned /operational early must be aligned with the drainage infrastructure and the applicant to confirm within its REAC. For example, the Transport Assessment (**APP-529**) shows that a section of road (part of Work No. 6A) near the Muckingford Road junction, will be in operation during Phase 5. The Drainage Plans (**APP-049**) indicate the drainage infrastructure that serves this section includes ditches and an Attenuation Basin (Work No. 6E). The catchment for Work No. 6E extends beyond the section of road that will become operational during phase 5. The Council would like clarification that the drainage in this area (and other areas, if applicable) has been aligned with proposed Transport Management phasing strategy.	accordance with construction programmes is essential to ensuring that off-site effects on drainage and flood risk are prevented during construction. The construction phase drainage plan that will be developed by the Contractor (secured by commitment RDWE006 in ES Appendix 2.2: Code of Construction Practice [**REP4-138**]) would be expected to address phasing of drainage provision and the details of the plan would be subject to SoS approval following consultation with the relevant planning authorities, including Thurrock Council.
Section 18.9 – Assessment of Environmental and Health Impacts **Geology and Soils**	18.9.48 In its response to Section 10.9.6 of the Council's LIR (**REP1-281**), the applicant has stated (page 56, first bullet) that the method statements would include the scope of works. The method statement required by GS001 are 'to reduce the risk of creating pollutant pathways'. This does not address the LIR comment. The Council is asking that the wording of GS001 be amended to clearly commit to the provision of sufficient detail regarding all the intrusive works to be undertaken on the identified medium and high risk sites which should include schedules of exploratory	**18.9.48** The Applicant clarifies that the method statements relate to the '*supplementary ground investigations…as detailed in the Remediation Options Appraisal and Outline Remediation Strategy…*'. The method statements are not limited to the those '*to reduce the risk of creating pollutant pathways*' as seems to have been inferred by the Council. No change to the wording of commitment GS001 is therefore considered necessary.

Section/Ref	Thurrock Council's comments on submissions at D1 and D2	Applicant's response
	holes with depths and testing, not a method of pollution management.	
	18.9.49 In its response to Section 10.9.6 of the Council's LIR (**REP1-281**), the applicant has stated (fourth bullet page 57) that the suggested additional wording is already covered by GS027. It is not covered as claimed by the applicant. The Council have asked that the wording be amended to require the risk assessment (the process that leads to the identification, or not, of unacceptable risks) to be agreed not just the remedial strategy for only those sources that the contractor deems unacceptable.	**18.9.49** With regards to commitment GS027 (in ES Appendix 2.2: Code of Construction Practice [**REP4-138**]), the Applicant can confirm that the supplementary investigation assessment reports can be shared with the relevant local authorities. The Applicant confirms that revised wording to commitment GS027 will be submitted at Deadline 5.
	18.9.51 In its response to Section 10.9.9 of the Council's LIR (**REP1-281**), the applicant has provided an explanation on the process adopted regarding the data search (**REP2-064**, page 59). Regarding the walkovers there is repetition of the previously provided statements, which does not provide confidence that site description accurately reflects the current conditions, particularly the river frontage at the northern portal.	**18.9.51** As previously stated, walkover surveys were conducted between July 2017 and October 2017, September 2018, August 2020 and May 2022, which the Applicant considers to be sufficient for the identified sources of potential contamination. With regards to the river frontage at the northern portal, the 2017 site walkover supporting ES Appendix 10.3: Site Walkover Factual Report [**APP-424**] visited the areas of Goshems Farm with no notable geohazard observations made along the area where the Project has a river frontage.
	18.9.53 The applicant has not provided any additional information regarding the risk ratings (**REP2-064**, page 60) and the Council remain unconvinced that the amalgamation approach in the PRA (**APP-427**) is appropriate given that the applicant is only committing to ground investigation for Medium and High risk sites. For	**18.9.53** As stated in ES Appendix 10.6: Preliminary Risk Assessment Report [**APP-427**], ES Appendix 10.9: Generic Quantitative Risk Assessments (GQRA) [**APP-430**, **APP-431** **and** **APP-432**] and ES Appendix 10.11: Remediation Options Appraisal and Outline Remediation

Section/Ref	Thurrock Council's comments on submissions at D1 and D2	Applicant's response
	example, HLU0516 and HLU819 are both potentially infilled pits, both with asbestos as a potential contaminant and both with residential receptors identified. However, the former is identified as Low risk and the later Medium. The concern is increased when it is noted (ES Appendix 10.9: Generic Quantitative Risk Assessments (**APP-431**) Annex B-A page 4 of 6) that revised risk rating for HLU0537 has been reduced from Medium to Low; whilst, Figure B: Phase 2 Ground Investigation - Package B Exploratory Hole Locations and Credible Contaminant Sources (Drawing No. HE540039- CJV-GEN-GEN-MAP-GEO-00204 of the same document) shows that there has been no ground investigation undertaken. Disturbance is identified as likely to occur with asbestos as a potential contaminant and residential as a potential receptor.	Strategy [**REP1-165**], the risk assessments completed adopt the identification of complete pollutant linkages, in accordance with Land Contamination Risk Management (Environment Agency, 2020). Where a low-risk rating has been determined following the GQRA, these are further divided: those where no further action is considered necessary when taking into consideration the proposed works in their proximity, and those that can be managed through standard construction processes. The commitment for these requirements is made in ES Appendix 2.2: CoCP [**REP4-138**], including the specific requirements of commitments GS028, GS006 and GS018.
	18.9.54 The Council note the reply (**REP2-064**, page 60) to betterment of the river frontage and assume that the proposed works will address the concern regarding potential erosion and exposure of waste as the park extends to the shore of the River Thames.	**18.9.54** The Applicant clarifies that the proposed Tilbury Fields does not extend to the shore of the River Thames refer to sheet 16 of the General Arrangement Plans Volume B (sheets 1 to 20) [**REP4-031**]. Therefore, there is no change to the existing access that members of the public currently have to the foreshore, nor is the Project promoting such access onto the foreshore. The current condition of the river foreshore at Goshems Farm will not worsen as a result of the construction or operation of the Project over and above the naturally occurring erosion processes.

Section/Ref	Thurrock Council's comments on submissions at D1 and D2	Applicant's response
	18.9.56 The reply to bullet point 9 (**REP2-064**, page 66) regarding whether processing and re-use will be undertaken under an Environmental Permit is potentially only relevant to the materials excavated from the northern portal (Consents and Agreements Positions Statement (**REP1-047**) Appendix A Permits and consents that may be required page 17). If processing is not undertaken in accordance with an Environmental Permit the potential impacts cannot be assumed to be adequately mitigated and should be assessed in the ES.	**18.9.56** This is not the case. The Applicant confirms that processing for reuse purposes under the remediation strategy, if required, will be undertaken in accordance with the required permitting arrangements. Section 6.7 of ES Appendix 10.11: Remediation Options Appraisal and Outline Remediation Strategy [**REP1-165**] states '*Any licences and permits required for remediation and earthworks activities, such as screening soils and abstracting groundwater, shall be obtained in advance of the remedial works*.'
	18.9.58 Regarding the condition of the river frontage and destabilisation (Sections 10.9.16 and 10.9.17) the applicant has responded (**REP2-064**, page 69) that the frontage was inspected and that there were no notable geohazard observations. However, the applicant does not deem that an amendment to the ES Appendix 10.2 – Stability Report [**APP-423**] is warranted and the Council remain concerned that by not explicitly identifying landfill as a manmade geohazard, then such adverse ground conditions will not be transferred to the geotechnical risk register.	**18.9.58** The Applicant has identified the possible geotechnical risks posed by the presence of the Goshems Farm landfill materials. The presence of historical landfills, in particular Goshems Farm landfill, and the risk associated with these comprising or overlying material of variable nature and poor geotechnical characteristics, are identified clearly in ES Appendix 10.2: Stability Report [**APP-423**], for example paragraph 4.1.14 and paragraph 6.2.15.
	18.9.59 Regarding the reply to Section 10.9.18, this does not address the question as to whether the development will result in exposure to waste materials in the frontage.	**18.9.59** The Applicant re-iterates its response to paragraph 18.9.54. The proposed Tilbury Fields does not extend to the shore of the River Thames.

Section/Ref	Thurrock Council's comments on submissions at D1 and D2	Applicant's response
	18.9.60 Regarding Sections 10.9.19 and 10.9.20 relating to insufficient ground investigation data to characterise significant sources of contamination, the applicant has not sought to provide any additional commentary to support the conclusion that the proposed remedial measures can address the unknown ground conditions.	**18.9.60** ES Appendix 10.11: Remediation Options Appraisal and Outline Remediation Strategy [**REP1-165**] presents the feasible remediation options taking into account the multiple lines of evidence gathered, of which ground investigation forms a part, for the identified medium and high risk sites. It is therefore not solely reliant on ground investigation. Based on the knowledge and characterisation of the sites, the Applicant considers that the identified medium and high risk sites can be managed via the identified feasible remediation options.
	18.9.61 Regarding the reply to Section 10.9.21 relating to processing of waste (**REP2-064**, page 70) the direction to Appendix 10.11 - Remediation Options Appraisal and Outline Remediation Strategy (updated at Deadline 1 to **REP1-165**), paragraph 7.11.11, which states '*some form of ex-situ biological, chemical or physical treatment method would be most appropriate* does not address the request for '*further information on the nature and location of the processing operations*'.	**18.9.61** Paragraph 7.11.11 of ES Appendix 10.11: Remediation Options Appraisal and Outline Remediation Strategy [**REP1-165**] relates to the management of unexpected contamination. The Applicant re-iterates the response provided in its Comments on LIRs Appendix H: Thurrock Council [**REP2-064**]. An outline remediation options appraisal and outline remediation strategy has been presented and the exact treatment options will be selected by the Contractor during the detailed design phase of the Project.
	18.9.66 The response to Section 10.9.28 (**REP2-064**, page 74) regarding the frontage of the river states that this is '*a pre-existing condition which is not considered to be adversely impacted by the Project*', which is contrary to the reply to Section 10.9.17, which identifies that geotechnical	**18.9.66** The erosional face of the River Thames to the existing landfill is recognised as a pre-existing condition which is not considered to be adversely impacted by the Project. Notwithstanding this, the Contractor would still have to manage risks associated with the construction of works in

Section/Ref	Thurrock Council's comments on submissions at D1 and D2	Applicant's response
	risks including those associated with the river frontage are to be addressed in accordance with REAC GS003.	accordance with commitment GS003 for geotechnical risks. This is standard design development practice, and the two responses provided at paragraphs 10.9.17 and 10.9.28 of the Applicant's Comments on LIRs Appendix H: Thurrock Council [**REP2-064**] are not contradictory.
Section 18.9 – Assessment of Environmental and Health Impacts **Materials and Waste**	18.9.69 The lack of phasing information on the works still presents concerns for the Council regarding the rate of export of material from the site. Whilst accepting that the applicant may not be able to precisely identify the works programme, a reasonable assumption of the works phasing to provide evidence that the quantities arising will not create environmental issues. Whilst the applicant identifies that if '…*all surplus excavated materials were generated and removed from the Order Limits in a single year this would represent 2.7% of the capacity to the North of the River Thames*.' If material is to be recycled or recovered in line with the targets then annual processing capacities are relevant compared to total remaining landfill/remediation capacities.	**18.9.69** To assist the Council, the Applicant has provided further context of the Project's forecast construction and demolition (C&D) waste quantities against the annual permitted tonnage for regional and local recycling and recovery facilities. In the unlikely scenario that all the Project's forecast inert and non-hazardous C&D waste destined for recycling and recovery facilities (2,149,000 tonnes) were generated in a single year, this would only represent 3.3% of the permitted annual tonnage (as of 2022) for those regional and local facilities (65,462,890 tonnes). This demonstrates that, even in this unlikely scenario (i.e. all the inert and non-hazardous C&D waste being generated in a single year), the Project, in insolation, would not have an adverse effect on the capacity of existing waste management facilities to deal with other waste arisings in the area. It is acknowledged that the construction period for the Project is approximately five and a half years and that C&D waste will not all be generated in one year, but there is likely to be a peak in waste generation during periods of high-intensity activities as shown in indicative Project construction programmes provided in Section 2.6 of ES Chapter 2: Project Description [**APP-140**]. However, this peak waste generation would not exceed the tonnage if all inert and non-hazardous C&D waste was generated in one year and thus would be below 3.3%.

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		ES Appendix 11.1: Excavated Materials Assessment [**APP-435**] submitted as part of the DCO submission shows a significant capacity of reuse and recovery operations within 20km of the Project for the surplus excavated materials. The Applicant is confident that any impact due to a change in volume or programme could be covered by the significant capacity available as demonstrated by the Excavated Materials Assessment detailed assessment list of sites.
	18.9.70 As the applicant has not provided any details on the spatial or temporal phasing of the waste arisings within the Order Limits and the lack of specific statement that the storage areas will be covered by environmental permits, it is not possible for the Council to discount the potential for exemptions being sought. The Council does not consider that the applicant has demonstrated within the outline Site Waste Management Plan [**APP-337**] that it does have '*… the necessary management plans in place to control and mitigate releases to the environment…'* during the processing and storage of wastes on site.	**18.9.70** The Applicant has developed and submitted various control documents that are secured through the DCO to ensure that any environmental issues arising from excavated material and waste management are reduced, mitigated or negated. These include the following: • ES Appendix 2.2: CoCP [**REP4-138**], the outline Materials Handling Plan (oMHP) and the outline Site Waste Management Plan (oSWMP) provide a robust framework and principles that the Contractors must adhere to when developing their detailed Materials Handling Plan (Second Iteration) and Site Waste Management Plans. These would be required as part of the second iteration of the Environmental Management Plan (EMP2). • ES Appendix 2.2 Annex A: Outline Site Waste Management Plan (oSWMP) [**APP-337**] sets out the overarching principles and procedures that would be applied for the management of waste, including surplus excavated material identified through the earthwork quantities, during the construction phase of the Project. The detailed design has not been completed yet, so the Applicant is not in a position to provide the exact

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		detail on how or when the approaches to the management of the wastes will be delivered. As set out in Chapter 6 of the oSWMP [**APP-337**], the Contractor will be required to provide the detailed Construction Site Waste Management Plan (CSWMP) and report monthly predictions, actual waste arisings and waste management routes for the Project. It would not be appropriate to provide a detailed CSWMP when the Project is still at planning stage. • ES Appendix 2.2 Annex B: Outline Materials Handling Plan (oMHP) [**REP4-136**] sets out the approach and high-level principles for handling construction materials and waste for the Project, both inside and outside the Order Limits. • The Register of Environmental Actions and Commitments (REAC), which is presented as Chapter 7 of the CoCP [**REP4-138**], identifies the good practice and essential mitigation commitments that underpin the environmental assessments including those for material assets and waste. • ES Appendix 11.1: Excavated Materials Assessment [**APP-435**] demonstrates that there is sufficient capacity to manage surplus excavated materials at suitable potential sites. This includes identifying third-party potential receiver sites based on Project-defined criteria, as well as validating available fill capacity. The Excavated Materials Assessment also provides a mechanism for assessing any additional suitable potential sites for the treatment, handling or use of excavated material. This is secured REAC commitment MW012. • The outline Traffic Management Plan for Construction (oTMPfC) [**REP4-160**] provides the traffic measure

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		controls and an outline of the approach that will be followed when undertaking temporary traffic management for the safe construction of the Project. Provision has been established within the compound to store materials and effectively manage excavated material. Section 1.3 of ES Appendix 2.1: Construction Supporting Information [**AS-049**] shows the indicative layouts of the Project construction compounds. The specifics of this stockpiling arrangement, including the criteria to which the selection of stockpile sites and their subsequent management, are outlined in Section 7.3 of the oMHP [**REP4-136**]. Environmental permit discussions with the Environment Agency have been ongoing through the pre-Examination and Examination phases, with collaborative workshops undertaken between the Applicant and the Environment Agency. The Applicant is discussing a permitting strategy with the Environment Agency as documented in their SoCG [**REP1-058**]. An updated SoCG is targeted for submission at Deadline 5. As detailed in the Consents and Agreements Position Statement [**REP4-098**], the permits are subject to detailed design and the chosen Contractor will further develop the permit options with the Environment Agency during the pre-application phase. The draft Development Consent Order (dDCO) [**REP4-094**] contains article 68 which deals with mitigating the implications of extant third-party environmental permit operators within the Order Limits. The justification for this provision is contained in the Explanatory Memorandum [**REP4-096**]. In short, it deals with the interfaces between the Order and permits, ensuring there is a 'written scheme'

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		in place which ensures appropriate monitoring, and ensures appropriate management of pollution risks.
Section 18.9 – Assessment of Environmental and Health Impacts **Climate and Decarbonisation**	**REP2-062 – Comments on LIRs Appendix H – Thurrock Council (Part 1 of 5) page 46 applicants' response to: LIR Reference page 62-67 Table 6.1 Lack of Evidence or Missing from DCO 10 Carbon Emissions** 18.9.94 The applicant is refusing to present their completed model for review. It is not possible to accept the modelled output without access to actual model that derives them. **REP2-063 – Comments on LIRs Appendix H – Thurrock Council (Part 2 of 5) page 22-25 applicants' response to: LIR Reference page 100-101, paragraphs 8.8.1 to 8.8.12** 18.9.97 The applicant has not provided any further consideration to the Council's points referred to in Sections 8.8.1 to 8.8.12 of the Council's LIR. The applicant has not addressed the local and regional power utility impact and risks and subsequent traffic impacts of not providing electric vehicle charging infrastructure within LTC. **REP2-064 – Comments on LIRs Appendix H – Thurrock Council (Part 3 of 5) page 125- 128 applicants' response to: LIR Reference page 177-179, Table 10.11** 18.9.98 The applicant states that matters within Table 10.11 have been addressed in detail in their responses between pages 128-136. The following issues were excluded from being addressed by the Applicant:	**18.9.94** The Applicant has reiterated that the model cannot be shared. However, the Carbon Valuation Toolkit was provided at Deadline 4 within Responses to the Examining Authority's ExQ1 Appx A Annex A: National Highways Carbon Valuation Toolkit v1.4.2 [**REP4-187**]. **18.9.97** Reference is made to the Applicant's response to a similar comment in the LIR on pages 24 and 25 of its Comments on LIRs Appendix H: Thurrock Council (Part 2 of 5) [**REP2-063**].

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	a. There is no consistency between claims of the benefits from the reduction in traffic from DfT's future transport scenarios taken into consideration in the carbon emissions calculations and the subsequent economic disbenefit to the project with the same reduced road transport numbers;	**18.9.98a**: Although ES Chapter 15 [**APP-153**] presents the Transport Decarbonisation Plan sensitivity test, the assessment of the significance of the effects of the Project's greenhouse gas (GHG) emissions doesn't rely on the delivery of the Transport Decarbonisation Plan. The Applicant notes that, to date, no guidance has been published by the DfT setting out how to consider the Transport Decarbonisation Plan in traffic models.
	b. Chapter 15 of the ES has not considered the impacts on Thurrock meeting its own net zero transition;	**18.9.98b**: A response was provided on page 129 of Comments on LIRs Appendix H: Thurrock Council (Part 3 of 5) [**REP2-064**].
	c. No carbon mitigations targets have been set that will allow verification of progress in decarbonisation during construction;	**18.9.98c**: A response was provided on page 131 of Comments on LIRs Appendix H: Thurrock Council (Part 3 of 5) [**REP2-064**]: '*The Applicant has achieved PAS2080 certification which commits the Project to ongoing verification of performance*'.
	d. ES Chapter 15 states (paragraph 15.6.5, page 67) states the project is compatible with the budgeted science-based 1.5oC trajectory. There is no scientific explanation or justification for this statement;	**18.9.98d**: The statement is based on a qualitative assessment of the innovative character of the Project, as described in the first paragraph on page 131 of Comments on LIRs Appendix H: Thurrock Council (Part 3 of 5) [**REP2-064**], to be read in conjunction with the following phrases from the Institute of Environmental Management & Assessment (IEMA) guidance: '*A project that is compatible with the budgeted science-based 1.5°C trajectory (in terms of rate of emissions reduction) and which complies with up-to-date policy and 'good practice' reduction measures to achieve that has a minor adverse effect that is not significant.* [Such a project] *may have residual emissions*

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		but it is doing enough to align with and contribute to the relevant transition scenario to keep the UK on track towards net zero by 2050 with at least a 78% reduction by 2035 and thereby potentially avoiding significant adverse effects.' (page 25) and '*Minor adverse: the project's GHG impacts would be fully consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. A project with minor adverse effects is fully in line with measures necessary to achieve the UK's trajectory towards net zero.*' (box 3, page 38).
	e. The detailed calculation workbooks have not been submitted with the DCO application. It is therefore not possible to audit verify the emission calculations undertaken. The raw data has been subject to numerous requests since December 2022 and forms part of the unresolved issues within the SoCG between the Council and the applicant; and,	**18.9.98e**: The Carbon Valuation Toolkit has been submitted as part of the Deadline 4 submissions within Responses to the Examining Authority's ExQ1 Appx A Annex A: National Highways Carbon Valuation Toolkit v1.4.2 [**REP4-187**]. The Applicant has reiterated that the model cannot be shared due to the commercial sensitivity of much of the information it contains.
	f. No consideration of the local power capacity impact from LTC power demand on the host communities uptake of electric led decarbonisation technology, e.g. heat pumps, EV's, solar, etc.	**18.9.98f**: Refer to page 462 / 463 of [**REP3-092**] for a response to a similar comment.
REP2-064 – Comments on LIRs Appendix H – Thurrock Council (Part 3 of 5) page 128-	18.9.99 The applicant has not provided any further response to the Council's points referred to in Sections 10.14.8 to 10.14.10 of the Council's LIR. This includes the following:	

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132 applicants' response to: LIR Reference page 179, paragraphs 10.14.8 to 10.14.10	a. Not assessing the parameters for infrastructure for zero emission fuels within the ES and therefore not securing infrastructure to deliver it within the ES;	**18.9.99a** This issue was addressed on page 130 of Comments on LIRs Appendix H: Thurrock Council (Part 3 of 5) [**REP2-064**].
	b. Not setting carbon reduction targets through the delivery of the project for compliance;	**18.9.99b** This comment could not be found in the sections referred to (Sections 10.14.8 to 10.14.10). However, a response was provided based on another comment on page 131 of Comments on LIRs Appendix H: Thurrock Council (Part 3 of 5) [**REP2-064**]: '*The Applicant has achieved PAS2080 certification which commits the Project to ongoing verification of performance*'.
	c. Not addressing the low bar set for verification of BREEAM and the Carbon Literacy Project, considering the pathfinder status;	**18.9.99c** A response was provided on page 131 of Comments on LIRs Appendix H: Thurrock Council (Part 3 of 5) [**REP2-064**] with regards to BREEAM. A similar expectation applies to the Carbon Literacy Project.
	d. Not addressing the transparency issues when comparing LTC GHG emission boundaries to the National GHG budget;	**18.9.99d** The Applicant has reviewed its emissions against UK national carbon budgets in line with the latest policy. The Applicant has quantified the Project's emissions in line with PAS2080, as described in Section C.2 in Appendix C of the Carbon and Energy Management Plan [**APP-552**], using the best available data as described in Section C.3 of the Carbon and Energy Management Plan. The calculation is comprehensive and also considered embodied carbon from possibly imported materials that would not appear in the carbon budgets. In that context, the assessment of the

Section/Ref	Thurrock Council's comments on submissions at D1 and D2	Applicant's response
		significance of the impact of the Project's GHG emissions is based on a conservative quantification of the emissions.
	e. Not providing suitable context of emissions following the reference IEMA 2022 guidance; and,	**18.9.99e** A response was provided on page 130 of Comments on LIRs Appendix H: Thurrock Council (Part 3 of 5) [**REP2-064**].
	f. Not addressed all the opportunities for supporting host community's climate vulnerability.	**18.9.99f** A response was provided on page 132 of Comments on LIRs Appendix H: Thurrock Council (Part 3 of 5) [**REP2-064**].
REP2-064 – Comments on LIRs Appendix H – Thurrock Council (Part 3 of 5) page 132-136 applicants' response to: LIR Reference page 180-181, paragraphs 10.14.11 to 10.14.23	18.9.103 The applicant has not addressed the disconnect of the GHG assessment boundaries and calculation methodology used in ES Chapter 15 [**APP-153**] and the boundaries and methodology used for National Carbon Budgets, when forming the judgement that the GHG emissions are not significant in the UK meeting its net zero targets by 2050.	**18.9.103** The Applicant has quantified the Project's emissions in line with PAS2080, as described in Section C.2 in Appendix C of the Carbon and Energy Management Plan [**APP-552**], using the best available data as described in Section C.3 of Carbon and Energy Management Plan. The calculation is comprehensive and also considered embodied carbon from possibly imported materials that would not appear in the carbon budgets. In that context, the assessment of the significance of the impact of the Project's GHG emissions is based on a conservative quantification of the emissions.
	18.9.104 The comparison of LTC project level emissions against all national emissions is not very meaningful, given	**18.9.104** The Applicant notes that there is meaning in the finding that an infrastructure project of this considerable size

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	the size of the project both physically and economically in a national context.	contributes with maximum 0.058% to the national carbon budgets. This is in alignment with Table 1 of the IEMA guidance Assessing Greenhouse Gas Emissions and Evaluating their Significance (IEMA, 2022). In addition to the assessment against the national carbon budgets, which is a requirement of the National Policy Statement for National Networks (DfT, 2014), the Applicant has also provided, in Section 15.6 of ES Chapter 15: Climate [**APP-153**], a contextualisation in terms of alignment with the net zero trajectory as per the IEMA (2022) guidance.
Section 18.11 – Utilities **Applicant's Response to Council's LIR Submission** **Pages 191-192 of the Applicant's Response**	18.11.5 In response to Section 12.1.9 in the Council's LIR, the applicant has referenced Section 5.1 and Table B.1 of the outline Traffic Management Plan for Construction (oTMPfC) (**REP1-174**). The Council notes that Section 5.1 provides general information on route diversions but does not specifically reference Table B.1 – it would be useful to reference this. Within Table B.1 further information is provided on the referenced diverted routes, which are due to utilities works G8, OH7, OHT8, and MU62 – MU64. Clarification is sought regarding route references FP136, BR58 and FP61, where the nature of effect is 'permanent closure' or 'permanent closure and diversion', but the mitigation measures begin by stating 'route may be closed temporarily for safety reasons' before explaining 'Open the permanent diversion route'. Clarification is needed to whether the route will be temporarily closed during the construction of the permanent diversion route and if an temporary diversion route will be in place during that time, or whether the note on temporary closure is a written error and will be closed permanently. Regarding route reference BR219, this has been identified as a 'temporary closure', but also mentions in Mitigation Measures to 'open the permanent diversion route'. Clarification is required as to	**18.11.5** The Applicant would like to bring to the attention of the Council the Supplementary Walking, Cycling and Horse Riding (WCH) Maps (Volume C) [**REP2-074**] and to clarify the following: Parts of the existing footpath and bridleway will be closed temporarily during the completion of utility works ('Route may be closed temporarily for safety reasons'), however those parts that are not affected by other works will be returned to their current use and alignment once those utility works have been completed. Parts of those same footpaths and bridleways will be permanently diverted onto a new alignment which requires constructing by the Applicant owing to the fact that the existing route will be severed by the A122 alignment. This may or may not be in the same location or at the same time as the utility related closures are proposed. They may be reliant on the completion of the utility works before those other works can commence. The impact will be assessed and mitigated accordingly relevant to each instance. To mitigate the impacts for users of those routes relative to the permanent works (new bridge alignments, severed

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	whether this route will be a temporary closure or permanent closure. With regards to Plates B.3 and B.6 it would be useful to include the utilities diversion route and, where possible, the existing route in relation to the rights of way diversions, so as to be able to properly review the diversions.	routes etc), mitigation would be to build the new footpath and bridleways and divert users onto that route prior to severing the existing one, hence the mitigation being stated as '*open the permanent diversion route between* [X and Y] *as shown on the Rights of Way and Access Plans Sheet* [X] *at the earliest practicable opportunity following completion of these works*'. Owing to the fact that the routes will require works to ensure they are connected (edging, surfacing, landscaping), it is envisaged that a short term local diversion would be in place. Therefore, it is possible for a route promoted by the Applicant to be both 'temporary closed' and 'permanently closed' owing to different phases within the construction programme. To ensure there is flexibility for the detailed design and construction planning to consider all scenarios, whilst ensuring the local authority is consulted on the proposals, the Applicant has stated that '*Alternative routes or sequence may be proposed but these must be agreed with the relevant Local Authority*.' This is detailed in Section 5.1 of the outline Traffic Management Plan for Construction [**REP4-160**]. With regards to BR219, the Applicant would like to clarify that there is a proposed section of the existing bridleway to be diverted (33/5 and 33/6 as shown on Sheets 35 and 38 of the Rights of Way and Access Plans [**REP3-045**]) which relates to the term 'permanent closure' for that bridleway. However, the impacts would be temporary in nature for the users of that bridleway for the reasons given within Table B.1 of the oTMPfC [**REP4-160**] while carrying out the construction of the Project, including the connecting of the diverted bridleway

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Section 18.12 – Skills, Employment and Legacy **Worker Accommodation Provision and Impact**	18.12.8 Notwithstanding this, the applicant's response to Section 13.5.7 point b with the explanation that it is based on 'professional judgement and experience of construction schemes' is incomplete. The applicant has agreed at a SoCG meeting on WAR matters on 9 August 2023 (covering SoCG Items 2.1.233, 2.1.234 and 2.1.235) to provide a Technical Note setting out their explanation in more detail and the Council awaits this information at D3.	**18.12.8** The Applicant has undertaken to produce a Technical Note setting out the overall approach to assessment of effects, and monitoring, governance and interventions to be taken to manage the workforce, share information with local authorities and avoid the potential for adverse effects proactively should there be concern raised. This Technical Note will be shared with Thurrock Council imminently, and includes reference to updated commitments within the FCTP relating to workforce accommodation submitted to the Examination at Deadline 4.
	18.12.9 The applicant's response to Section 13.5.7 points d and f is not adequately addressed, and no updated evidence is provided as required by the Council. In addition, point h should be dealt with in an updated to the WAR at a future deadline.	**18.12.9** The Applicant considers that it has adequately responded to points 13.5.7 (d) and (f), but would add that the proposed figures for future housing delivery would not include a figure for rented accommodation specifically, as this is not captured within local authorities' approach to planning for housing growth. With regard to point 13.5.7 (h), the Applicant has acknowledged in its response that it used the most up-to-date published workforce accommodation subsidy rate but acknowledges that this is regularly changing and will change several times again, as will other variables, before the start of construction. This does not change the conclusion that workers are likely to be able to afford almost all rented accommodation within the market.

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	18.12.10 The applicant has agreed at a SoCG meeting on WAR matters on 9 August 2023 (covering SoCG Items 2.1.233, 2.1.234 and 2.1.235) to provide further details of the Worker Accommodation Working Group (WAWG) in terms of terms of reference and particularly governance in how the Council can influence actions/decisions by the applicant or their contractor and the Council awaits this information at D3. In addition, the Council requires the operation, membership, terms of reference and governance of the WAWG and the Worker Accommodation Helpdesk to be a secured commitment within the REAC (beyond that presented to the Council in meetings in July/August 2022).	**18.12.10** The Applicant will also share Terms of Reference of the WAWG which support and underpin this approach. The Applicant agrees that it is important that these terms of reference are secured in order to ensure the group's effectiveness and is considering the wider approach to Terms of Reference across all similar groups secured by the consent. The measures within the FCTP such as the Helpdesk, Monitoring and WAWG are all secured by the FCTP, which is a control document.
Section 18.13 – Proposed Order Limits, Land Interests and Compensation **LIR Section 14.3 (Thurrock-Owned Land Interests Impacts)**	18.13.2 The applicant's response fails to adequately address the points raised In its Planning Statement, Appendix D (**APP-499**) in the following sections: b. **Paragraph D.7.31 (Ron Evans Memorial Field) that:** i. The applicant notes *'Thurrock Council is satisfied with the replacement land in principle*' and this is correct with the exception set out below; ii. At sub paragraph a. '….*the replacement land is anticipated to become available for public use five years after the existing Ron Evans Memorial Field is impacted by the Project*…'. The Council was previously unaware that there was to be a gap (and which might be longer than 5 years) in the provision of replacement POS. The applicant notes in Table 7.4 of its Statement of Reasons that the provision of a greater area offsets the gap. There is no evidence to support this assertion and it is not considered that the Acquisition of Land Act anticipated any gap in	**(b)(i)**: The Applicant welcomes confirmation Thurrock is satisfied with the replacement land in principle, subject to the timing of it. The Applicant notes Thurrock's comments at Compulsory Acquisition Hearing 2 with regard to Ron Evans Memorial Field, confirming the Council '*does not have any concerns about the quantum of the replacement or the potential quality of the replacement land*' (paragraphs 32-33 of Compulsory Acquisition Hearing 2 (CAH2) - Transcript - 15 September 2023 [**EV-049d**]) subject to the same concerns. The Applicant will endeavour to reflect this position in the next update to the SoCG between the Applicant and Thurrock Council [**REP3-092**]. **(b)(ii)**: The Applicant notes Thurrock Council's concern with regard to the timing of replacement land. The Applicant has provided a response on this at pages 74 and 75 of its Comments on LIRs Appendix H: Thurrock Council (Part 4 of 5) [**REP2-065**]. The Applicant explains at paragraph D.5.46(a) of Planning Statement Appendix D: Open Space [**REP3-108**] and in further detail at paragraphs 3.1.11 to

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	provision of POS – this gap of replacement provision is unacceptable to the Council; and, iii. At sub para c. – the applicant says that the re-provided land will (when it is eventually re-provided) will be more useful, because it will serve a dual purpose of being POS and Open Mosaic Habitat. It is unclear the extent to which either purpose may compromise the other. c. **Paragraph D.7.32 (Ron Evans Memorial Field)** – the applicant states that '...*the replacement land would be larger in quantity, equally or more accessible, useful and attractive, and its overall quality would be better, and therefore it would be no less advantageous to the persons, if any, entitled to rights, and to the public*.'. Issues arising from this statement are: i. In order to state that the replacement land is '*equally*' or '*more*' accessible, useful and attractive the applicant must have made a quantitative or qualitative assessment. It is unclear what metrics it relies on, however, given this assessment it must be possible for the applicant to say, in relation to each of accessibility, usefulness and attractiveness, whether it is '*equally*' or '*more*'; ii. The applicant states '...*overall quality would be better*' without stating what metric is relied on to allow it to make this statement; and, iii. In relation to the Ron Evans Memorial land it is unclear how, when POS is eventually re-provided, it can be said to be more advantageous when the re-provided land is on 2 sites which are separated.	3.1.13 of the Post-event submissions, including written submission of oral comments, for CAH2 [**REP4-178**]. In light of Thurrock Council's comments at CAH2 (submitted at Deadline 4) why the proposed replacement land is anticipated to become available for public use five years after the existing Ron Evans Memorial Field is impacted by the Project. In light of Thurrock Council's comments, the Applicant will investigate the feasibility of bringing replacement land into public use earlier than anticipated in the DCO Application, taking account of construction constraints and public safety among other things, in consultation with Thurrock council. As indicated in the Post-event submissions, including written submission of oral comments, for CAH2 [**REP4-178**] (submitted at Deadline 4), the Applicant will feedback to the Examining Authority on this matter at Deadline 6. **(b)(iii)**: The replacement public open space and proposed Open Mosaic Habitat are compatible and complementary in this context. **(c)(i), (ii) and (iii)**: The Applicant has undertaken both a quantitative and qualitative assessment of replacement land based on industry best practice and professional judgement, in accordance with the relevant legal and policy tests, in order to reach the conclusions set out in Planning Statement Appendix D: Open Space [**REP3-108**]. The Applicant correctly notes the replacement land for Ron Evans Memorial Field is split between two land parcels north and south of the existing open space. These, in combination with the existing area of open space to be returned to Thurrock Council (Area C shown on page 32 of Planning Statement Appendix D: Open Space [**REP3-108**]) following construction, and the area of open space subject

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	d. The applicant's response confirms that it does not know when temporary possession might be required, if at all, and if so how many times and for how long. This uncertainty goes to the core of the Council's concerns over occupation of land currently used as Public Open Space. e. The applicant emailed the Council on 23 August 2023 and it relates to all open space in Thurrock, rather than just that which the Council owns. The applicant has: i. Provided details of the exemptions that the applicant has relied upon where no replacement land is required in exchange for the temporary possession of and/or acquisition of permanent rights over Special Category Land; ii. The applicant has '…*re-set out the reasons for not providing replacement land for the sub-areas below for your review*' providing a greater level of detail as to: • why land is required temporarily (but still fails to identify when it might be required, how often it might be required and for how long); and, • rationale for the permanent rights being acquired and the implications arising. iii. Noted that temporary possession does not engage Sections 131 and 132 of the Planning Act (2008). The outcome is not satisfactory – the residents of the Borough will be denied access to POS for an unknown period of time. The applicant asserts that following possession the land '*would be reinstated to its original condition following the completion of works and remain as open space*'.	to temporary possession only that the Applicant is not legally required to replace (Area D shown on page 32 of Planning Statement Appendix D: Open Space [**REP3-108**]), would form a cohesive new open space larger in area than the existing that benefits from a new bridleway connecting both areas of replacement land through the retained areas of the existing open space. **(d)**: Thurrock Council's concerns are noted. The Project is currently at the preliminary design stage, and a detailed construction programme nor methodology have been finalised. The Applicant is therefore unable to confirm at this stage the exact duration of any temporary land take, or whether the land will be taken and returned more than once. **(e)(i) and (ii)**: Thurrock Council has correctly noted that the Applicant provided additional information to them about the Planning Act 2008 s131 and s132 exemptions relied upon where no replacement land is proposed in relation to special category land affected by the Project in Thurrock, with a view to reflecting this in an updated version of the SoCG between the Applicant and Thurrock Council [**REP3-092**], for the benefit of the ExA. In light of Thurrock Council's comments, and as indicated in the Post-event submissions, including written submission of oral comments, for CAH2 [**REP4-178**] (submitted at Deadline 4), the Applicant will investigate the feasibility of bringing replacement land for Ron Evans Memorial Field into public use earlier than anticipated in the DCO Application, taking account of construction constraints and public safety among other things, and feedback to the Examining Authority on this matter at Deadline 6.

Section/Ref	Thurrock Council's comments on submissions at D1 and D2	Applicant's response
	Without the certainty afforded by a legal agreement the Council has no certainty of this position.	**(e)(iii)**: The impacts during construction of the temporary possession needed for the Project, including the temporary possession of open space, has been considered in ES Chapter 13 [**APP-151**], as well as in the Health and Equalities Impact Assessment (HEqIA) [**REP3-118**], and in Appendices D and G of the Planning Statement [**REP3-108** and **APP-502**]. In relation to the duration of temporary possession, this is controlled by article 35(4) of the draft DCO [**REP4-094**] which provides that the undertaker may not remain in possession of the land for any more than one year after completion of the relevant part of the authorised development. The Applicant would refer Thurrock back to pages 74 and 75 of its Comments on LIRs Appendix H: Thurrock Council (Part 4 of 5) [**REP2-065**] for their response on the temporary possession of open space.

Table 3.3 The Applicant's responses to Thurrock Council Comments on Applicant's Submissions at D1 and D2 [REP3-211], dealing with Part 2,Sections 19-23

Section/Ref	Thurrock Council's comments on submissions at D1 and D2	Applicant's Response
Section 6.2 – Statement of Commonality (Version 2) / **Section 19 – Statement of Commonality**	6.2.2 The Council has no comments on the amendments within this document, except Table 4.2, which sets out '……*to assist the Examining Authority in understanding the headings which remain under discussion or not agreed, particularly such headings where the position is shared across more than one stakeholder. Therefore, the categorisation and colour coding in the matrix is intended to represent the broad position per heading (it is not absolute). In addition, footnotes have been used to indicate exceptions*.' 6.2.3 The Council does not accept that the row relating to Thurrock Council is accurate and has not been discussed with the Council. Some items are listed as 'broadly under discussion' or 'no matters raised at this point' and these are incorrect or not agreed and it misrepresents the status of matters with the Council. This is considered serious and requiring explanation, although it may be updated further by the applicant once it has reviewed the Council's LIR, which makes serious points on all matters colour-coded 'grey' in Table 4.2. 6.2.4 Furthermore, Section 4.2 that sets out broad progress on a range of topics is, in the Council's view, too broad to be valuable and is so broad as to be potentially misleading. This is because many points listed as 'agreed' may be minor and some points listed as 'not agreed' may be major and yet this generalisation does not distinguish and it is just a number count, which is of very little value. The Council	**6.2.2:** The Applicant notes comments from Thurrock Council regarding the content and colour coding of Table 4.2 in the Statement of Commonality (SoC) [REP4-104]. The Applicant used guidance provided on the Planning Inspectorate's website to create the Project's SoC. Planning Inspectorate guidance includes examples of historic SoCs that met the purpose and provided the content required by the ExA. The SoC is a live document, updated at each Examination Deadline. Among other requirements, the SoC contains a table, highlighting specific points of commonality between the Statements of Common Ground. The SoC should be updated during Examination to show the revised position of these points at any given deadline. **6.2.3 and 19.1.1:** The Applicant has reviewed submitted Thurrock Council SoCG iterations against the SoC iterations referenced by Thurrock Council and finds that they align. The Applicant has made no changes to the colour coding scheme used within the SoC for Thurrock Council since Application. A green cell indicates that matters are broadly agreed, orange broadly under discussion and red broadly not agreed. A grey cell indicates that there are no matters in the SoCG assigned to that heading. The content of some matters may be linked to multiple headings. For practicality, and to avoid duplication, the Applicant has worked with Interested Parties to determine under which heading a matter most appropriately sits with the SoCG. **6.2.4:** The SoC [REP4-104] does not designate a scale of importance to specific matters and uses; it is neither the purpose of the SoC nor the place of the Applicant to provide suppositions as to the importance Interested Parties place onto individual

Section/Ref	Thurrock Council's comments on submissions at D1 and D2	Applicant's Response
	has serious concerns about most of the topics covered in this section. 19.1.1 It is noted that the colour coding for Thurrock Council in Table 4.2 for D2 has changed from that submitted within D1. It is not understood why such changes have taken place and the Council can confirm that no discussions on this have been held with the applicant.	matters. The Applicant points to the PADS Document as the appropriate vehicle for Interested Parties to highlight matters of greatest importance to them. The SoC is a supplementary document that does not provide detailed information, as such it contains terms such as 'broadly agreed', 'broadly not agreed', and 'broadly under discussion'. The purpose of the document is to direct the audience toward individual SoCGs, not to replicate content in an alternative format.

Table 3.4 The Applicant's responses to Thurrock Council's Appraisal of the applicant's response or resolution to the Council's MRC submission

The Council's response to the MRC	The Council's opinion on the applicant's evidence at REP2-041	Matter addressed at Deadline 2? (Thurrock Council's position)	Applicant's response at Deadline 5
Proposal Definition			
The applicant to confirm how, under the revised tunnelling strategy, the TBM will be removed from the northern main compound following completion of tunnelling and if nearby ports would be used to transport the TBMs to and from the site?	The applicant has committed via REAC MW009 that the TBM would be removed via the North Portal compound, however, the applicant does not commit to maximising the use of marine or rail- transport for that operation. The contractor will be able to use the most economically viable option. The applicant should adjust its REAC item MW009 to require the contractor to use marine transport to deliver and remove the TBM and associated components by marine transport unless justified by the contractor and agreed with the Council and the PoTL and DPWLG. The Council seeks the increased clarity and commitments to be secured through the DCO irrespective of the TBM option.	No	The Applicant does not believe that this requires an additional response. The Applicant's position has been provided in Annex E to the Post-event submissions, including written submissions of oral comments, for ISH5 [REP4-181] submitted at Examination Deadline 4. The Applicant's position is also included under SoCG item 2.1.115 [REP3-092].
Excavated and Construction Material			
a. Calculations and evidence are required to demonstrate the claim that there will be a reduction in material use and a requirement for less machinery. The likely materials would	At Table C.1 the applicant has asserted that the change will be a reprofiling of material extraction rate and the need for tunnel construction material and there would be a reduction of one TBM and marginally fewer staff across a flatter profile. A minor reduction in the launch site could be feasible and the tunnel fit out is stated as being reschedules, albeit not specified. All of the	No – with reference to the need to enhance commitments to the use of marine or rail transport.	The Applicant's position remains unchanged from the response provided in the SoCG under items 2.1.110 and 2.1.115 [REP3-092]. Please also refer to the Applicant's position which has been provided in Annex E to the Post-event submissions, including written

The Council's response to the MRC	The Council's opinion on the applicant's evidence at REP2-041	Matter addressed at Deadline 2? (Thurrock Council's position)	Applicant's response at Deadline 5
seem to include pre-cast segments, pre- cast road slabs, ready mix, grout, pipework and rails and sundries and there may be further craneage, additional pumps and MEICA equipment required – where will these plant and materials be stored or used?	material and equipment will still come from the north. The applicant does inadvertently suggest that a two TBM option could involve removal of the TBMs by marine vessel movements as it suggest the one TBM would reduce marine removals. The Council accepts that there should be a very marginal reduction in materials and equipment use under the one TBM option. The Council continues to press the applicant to enhance its commitments to use marine or rail transport for bulk materials and equipment. The Council notes the applicant's statements and that the one TBM option is neutral on this aspect.		submissions of oral comments, for ISH5 [REP4-181] submitted at Examination Deadline 4. To provide further response to the Council's comments: There will be a reduction in material use and a requirement for less machinery if, through applying the Limits of Deviation, there is a reduction in cut and cover structure replaced by an increase in bored tunnel. If the length of the bored tunnel is increased this will be offset by a reduction in the length of cut and cover tunnel which will result in a net balance change. While there will be an increase in tunnel segments, there will also be a reduction in cut and cover construction which produces more concrete relative to bored tunnelling as well as more excavated arisings (i.e. D-walls, base slab, cover slabs, open excavation and reinforced concrete structure). The net balance, which is likely to reduce based on the above will depend on the final detailed design position of the headwall, which is

The Council's response to the MRC	The Council's opinion on the applicant's evidence at REP2-041	Matter addressed at Deadline 2? (Thurrock Council's position)	Applicant's response at Deadline 5
			subject to change within the limits of deviation.
b. Calculations and evidence are required to demonstrate the claim that there will be a reduction in approximately 38,000 tonnes of carbon (CO2e) by using less machinery, reduced hardstanding and smaller slurry treatment and segment production facilities, as stated on pages 30 and 33 of the MRC booklet?	The applicant reasserts its opinion that the one TBM would save approximately 38,000 tonnes of Carbon Dioxide equivalent but does not provide details of how that figure is derived. The Council notes the applicant's statements that the one TBM option could have a CO2e saving, but this is not justified in the documentation.	No	This reduction is simply the of sum of the CO_2e associated with the provision of a tunnel boring machine. This figure is supported in the baseline carbon calculation for the Project's Carbon and Energy Management Plan [APP-552].
c. The applicant should provide greater clarity and detail regarding the treated tunnel material and segments, their use together with information setting out the timing of that use (given it is likely to be slower)? This should reflect how that material will be stored and deposited within the Order Limits.	The applicant has stated that the excavated material would continue to be used as assessed and the segments would be supplied to the tunnel from the North Portal. The applicant does not commit that the segments would be cast within the North Portal compound or detail the method of storage or reprofiling. The applicant should add a commitment that the segments will be cast within the North Portal compound and stored within that compound to be supplied direct to the tunnelling operation.	No	Please note that the that the Applicant has provided a new REAC commitment (MW009 - Servicing the tunnel boring machinery) which is reflected in the latest version of the CoCP [REP4-138] and which was added to the version submitted at Examination Deadline 2. This commitment is applicable whether one or two TBMs are used. To provide further response to the Council's comments: The storage of tunnel excavated arisings will remain unchanged. As material is

The Council's response to the MRC	The Council's opinion on the applicant's evidence at REP2-041	Matter addressed at Deadline 2? (Thurrock Council's position)	Applicant's response at Deadline 5
	The Council seeks the increased clarity and commitments to be secured through the DCO irrespective of the TBM option.		produced by the Slurry Treatment Plant it will be incorporated into the Tilbury Fields Landscape design. An amount of buffer storage will be utilised but this is not a change. Segment storage will be unchanged in that a minimum three-month buffer of segment production will be stored. However, as a result of using a single TBM, there will be a reduction in the number of segments stored as well as a reduction in the material volume.
e. Where are the segments stored and then delivered to the northbound TBM when they are due to be cast in Tilbury? Is the segment production and delivery the same as for the option with two TBMs? It is noted that following initial reviews of the DCO application documents, which is the evidence before the ExA, it seems to be silent on the production location of the tunnel segments.	The applicant has stated that segments would be supplied to the tunnel from the North Portal. The applicant does not commit that the segments would be cast within the North Portal compound or detail the method of storage. The applicant has suggested that the creation of a segment factory is included within the North Portal compound but does not commit that the segments will be cast within the North Portal compound and stored within that compound to be supplied direct to the tunnelling operation. There is nothing secured in the DCO that would stop a contractor from using its own facility outside the Order Limits. The Council seeks the increased clarity and commitments to be secured through the DCO irrespective of the TBM option.	No	Please note that the that the Applicant has provided a new REAC commitment (MW009 - Servicing the tunnel boring machinery) which is reflected in the latest version of the CoCP [REP4-138] and which was added to the version submitted at Examination Deadline 2. This commitment is applicable whether one or two TBMs are used. To provide further response to the Council's comments: The segments will be stored with a three-month buffer in a segment yard adjacent to the casting facility within the northern tunnel entrance compound.

The Council's response to the MRC	The Council's opinion on the applicant's evidence at REP2-041	Matter addressed at Deadline 2? (Thurrock Council's position)	Applicant's response at Deadline 5
			This remains the same as the previous position.
Construction Method and Transport			
d. Please explain with evidence what changes in arrangements for staff vehicles and deliveries would occur at each compound and how these will be accounted for in any revised Transport Assessment? In particular, greater detail is required of '….an increase in journeys related to construction in the second year of building LTC' (as stated on page 30) and how this will be accounted for in any revised Transport Assessment?	The applicant proposes that a revised TA doesn't need to be provided as the current assessment represents a 'worst case' scenario. The changes noted in workforce profiles should be reflected in localised sensitivity modelling of the Asda Roundabout. The Council continues to require evidence of the operation of the Asda Roundabout and adjoining network during construction phase.	No	The Applicant issued ASDA Roundabout VISSIM operations and construction model files to Thurrock Council on 1 September 2023.
Worker Operation			
a. Page 30 of the MRC booklet sets out that staffing patterns would change at the northern and southern	The Applicant has provided at Tables C.1, C.3 and C.4 an indication of the changes in workforce quanta – with particular note to an increase in Phase 2 of the construction scenarios.	No	Section B.2 of Post-event submissions for ISH5 [REP4-181] has quantified the effect on ASDA roundabout of the revised workforce numbers. Paragraph B.2.11

The Council's response to the MRC	The Council's opinion on the applicant's evidence at REP2-041	Matter addressed at Deadline 2? (Thurrock Council's position)	Applicant's response at Deadline 5
compounds, so the applicant must set out these changes, any differences in staffing numbers between the use of one or two TBMs (and at what stage) and any consequential effects on the surrounding areas?	The different workforce profiles should be reflected within localised sensitivity modelling of the Asda Roundabout. The Council remains concerned about the operation of that junction and the assumptions made over workforce assignment to the network.		provides the Applicant's conclusion on the implications for the roundabout.
DCO Commitment and Control			
a. There is currently no mechanism within the DCO to control the main contractor's proposals on the use of two or one TBM(s) and their consequential effects/impacts. In the Council's view controls need to be in place to protect residents and businesses from potential impacts of changed construction methodology, even if no significant environmental effects are predicted. The Council needs to understand how will such	The Applicant is silent on further control mechanism within the explanation of the one TBM option. The Council continues to press for clarity and strength in the control documents and procedures. It would use the ES as a mechanisms for this and commitments in the CoCP / EMP2 and REAC.	No	This matter was considered at Issue Specific Hearing 5 (ISH5) – Item 4(a)(i)(b). The Applicant's position on this is set out in paragraphs 4.1.13 to 4.1.24 of the Post-event submissions, including written submission of oral comments, for ISH5 [REP4-181]. Additionally at Deadline 3, in response to comments made by Gravesham Borough Council, the Applicant provided a new REAC commitment MW009 which would ensure TMB will be serviced from the North Portal. This is reflected in the latest version of the CoCP [REP4-138]. This commitment is applicable whether one or two TBMs are used.

The Council's response to the MRC	The Council's opinion on the applicant's evidence at REP2-041	Matter addressed at Deadline 2? (Thurrock Council's position)	Applicant's response at Deadline 5
decisions and methods be controlled, so that different boring methods or spoil disposal are controlled by DCO commitments.			
b. The DCO application document that sets out the method for constructing the tunnel, i.e. primary lining via segments cast in a factory in Tilbury needs to be clear and defined.	The Council seeks the increased clarity and commitments to the mechanism of construction to be secured through the DCO irrespective of the TBM option.	No	As stated above, this matter was considered at Issue Specific Hearing 5 (ISH5) – Item 4(a)(i)(b). The Applicant's position on this is set out in paragraphs 4.1.13 to 4.1.24 of the Post-event submissions, including written submission of oral comments, for ISH5 [REP4-181].
c. Will there be controls within the DCO application 'control documents' to restrict the main contractor from making any deliveries, extractions or worker transport via the southern compound and portal? Are there opportunities that the TBM could be removed from the northern compound by river via a nearby port? This should be an additional DCO	The Applicant has committed through the REAC MW009 to move all material via the North Portal but there is no commitment for the use of river for transport. The Applicant should adjust its REAC item MW009 to require the contractor to use marine transport to deliver and remove the TBM and associated components by marine transport unless justified by the contractor and agreed with the Council and the PoTL and DPWLG. The Council seeks the increased clarity and commitments to be secured through the DCO irrespective of the TBM option.	No	As stated above, this matter was considered at Issue Specific Hearing 5 (ISH5) – Item 4(a)(i)(b). The Applicant's position on this is set out in paragraphs 4.1.13 to 4.1.24 of the Post-event submissions, including written submission of oral comments, for ISH5 [REP4-181].

The Council's response to the MRC	The Council's opinion on the applicant's evidence at REP2-041	Matter addressed at Deadline 2? (Thurrock Council's position)	Applicant's response at Deadline 5
commitment to reduce both 'abnormal indivisible loads (AIL) and materials transport and commit to not using local roads for such transport.			
d. The Council considers that the applicant should take this opportunity to improve significantly its commitments to using non-road transport to move materials, equipment and plant to and from the project compounds	The Council seeks the increased clarity and commitments to use marine or rail transport to be secured through the DCO irrespective of the TBM option.	No	As stated above, please refer to the Applicant's position which has been provided in Annex E to the Post-event submissions, including written submissions of oral comments, for ISH5 [REP4-181] submitted at Examination Deadline 4.
Emergency and Incident Provision			
a. The applicant must set out what provisions it will make if there is an incident or emergency in either tunnel bore during construction at either end of the tunnels? This should be a further DCO commitment that would require the involvement and approval of the emergency services	The Applicant has made no provisions or explained its strategy. The Council retains its position on this point irrespective of the TBM option.	No	Section 6.9 of ES Appendix 2.2: CoCP [REP4-138] sets out details of Emergency Preparedness, including that Environmental Management Plan 2 (EMP2), which is secured by Requirement 4 of the draft DCO [REP4-094], will require that Contractors will ensure that emergency preparedness procedures for each worksite are developed.

The Council's response to the MRC	The Council's opinion on the applicant's evidence at REP2-041	Matter addressed at Deadline 2? (Thurrock Council's position)	Applicant's response at Deadline 5
			In an emergency incident it is general practice that it will be the Contractor's responsibility to rescue/ recover any effected parties to a place of safety adjacent to but outside of the tunnel portals (either North or South as appropriate) during tunnel construction. The location will be determined following engagement with the Emergency Services as part of the development of Emergency Preparedness planning and development of Incident Management Plan as set out in Section 6.9 of ES Appendix 2.2: CoCP [REP4-138]. The emergency services will not generally enter into a tunnel under a construction environment. As such it is common practice to consult with the emergency services during the design stage (after appointment of the Contractor) to agree working methods and protocols for incident management as set out in Section 6.9 of ES Appendix 2.2: CoCP [REP4-138]. It is also common practice to test such methods and protocols with an incident management drill early in the tunnel construction period as set out in

The Council's response to the MRC	The Council's opinion on the applicant's evidence at REP2-041	Matter addressed at Deadline 2? (Thurrock Council's position)	Applicant's response at Deadline 5
			Section 6.9 of the CoCP [REP4-138]. The Applicant is continuing to engage with the Emergency Services & Safety Partners Steering Group, as well as individually with the Kent and Essex rescue services.

3.2 Applicant's response to Port of London Authority's Deadline 3 submissions

3.2.1 At Issue Specific Hearing 5 (ISH5) on 7 September 2023, an oral commitment was made by the Applicant to provide a response to the Port of London Authority's (PLA's) written submissions provided at Examination Deadline 3:

a. Comments on Applicant's submissions at Deadline 2 submitted on behalf of the PLA [**REP3-218**] – the Applicant provided a response to this at Deadline 4 in Applicant's responses to IP's comments on the dDCO at Deadline 3 [**REP4-212**].

b. Responses to comments on Written Representations submitted on behalf of the PLA [**REP3-217**] – the Applicant has provided a response below.

3.2.2 The Applicant is mindful that, given the scale and complexity of the Project, there is a need for information submitted into the Examination to be provided in a manner which is proportionate and accessible for all Interested Parties (IPs), the Examining Authority (ExA) and the Secretary of State (SoS) to allow for appropriate consideration.

3.2.3 In that spirit, the Applicant has not sought to repeat the detailed responses which it has given previously in relation to many of the matters raised by the PLA.

3.2.4 Table 3.5 below therefore sets out responses to new comments, or where a response goes beyond what has previously been addressed by the Applicant.

Table 3.5 The Applicant's responses to PLA's Deadline 3 Responses to comments on Written Representations [REP3-217]

Paragraph reference from REP3-217	PLA's comments on REP2-046	Applicant's response
Paragraph 4: National Highways Comments on Written Representations (WRs) Appendix A - Statutory Environmental	4.1 At page 31 of Applicant's Comments – SEB, points from the PLA's WR (**REP1-269**) are addressed. In respect of port development and tunnelling considerations, the Applicant states: "The concerns by the PLA [about the achievability of agreed dredge levels] are therefore unfounded as the limits of deviation take effect subject to the agreed dredging depths". The PLA takes issue with this assertion, and	The Applicant provided an update at Deadline 3 through the Tunnel Depth Report [**REP3-146**]. The Applicant has scheduled a meeting with the PLA for 6 October 2023 to further discuss these issues and related concerns on face pressure and theoretical scour protection allowances.

Paragraph reference from REP3-217	PLA's comments on REP2-046	Applicant's response
Bodies (Applicant's Comments – SEB)	in light of the numerous submissions it has made previously as to its concerns about the compatibility of the flexibility of the tunnel design and the agreed dredge depths, maintains its concerns in this respect which it does not consider to be unfounded.	
	4.3 In terms of tunnel depth, the PLA has engaged with the Applicant extensively over the years with regard to this matter and has since 2020 set out its requirements in relation to channel depth and width. Previous submissions by the PLA set out how the documents submitted by the Applicant have contained contradictory information which has not allowed the PLA to be able to conclude that its requirements would be met. The PLA's WR (**REP1-269**) set out how the Flotation Sensitivity Check that was produced by the Applicant needs to be updated and it should be submitted to the examination to allow full scrutiny of the document	The Applicant provided an update at Deadline 3 through the Tunnel Depth Report [**REP3-146**]. The Applicant has scheduled a meeting with the PLA for 6 October 2023 to further discuss these issues and related concerns on face pressure and theoretical scour protection allowances.
	4.4 The PLA needs to be satisfied that any updated Flotation Sensitivity Check and the details before the PLA and the ExA are consistent in terms of the works for which authorisation is sought under the dDCO and across all the documents in order that the PLA can have certainty that its requirements will be met. The PLA has been clear to the Applicant that it needs to consider all the information together in the round and consequently it has not agreed to the amendments to paragraph 99 of Schedule 14 in the latest version of the dDCO submitted at Deadline 2 (**REP2-005**).	The Applicant is working with the PLA to refine and address these concerns in the context of its negotiations on the Protective Provisions. The Applicant considers that the Flotation Sensitivity Check provided in the Tunnel Depth Report [**REP3-146**] is robust, and the Tunnel Depth Report provides an explanation of the level of cover across the documents. The Applicant's position on the robustness of the controls in place in the context of the depth of the tunnel, and paragraph 99(1) in particular, are provided in the Applicant's response to IP comments made on the draft DCO at Deadline 1 [**REP2-077**].
	4.5 Page 33 of Applicant's Comments – SEB includes that "the contractors TBM proposal is part of the procurement process and not something that would be	This matter will be discussed at a meeting with the PLA on 6 October 2023.

Paragraph reference from REP3-217	PLA's comments on REP2-046	Applicant's response
	included within the DCO" and also that the "application assesses the use of the most likely form of TBM". The PLA suggests that this is the wrong approach to assessment. There are different risks associated with different types of TBM and a reasonable worst case assessment needs to be undertaken if the Applicant is not willing to rule out certain types of TBM at this stage.	
	4.6 The Applicant's comments regarding scour protection (page 33) do not address the PLA's point – it is not that the PLA wishes to use scour protection, rather the PLA seeks confirmation or evidence from the Applicant that it has considered the potential for scour and if scour was to occur at what level would intervention be required and what would that intervention look like. The Applicant has assumed 0.5m scour protection but has not provided the details that lead to this assumption.	The Applicant is working with the PLA to resolve this issue. A meeting is scheduled for 6 October 2023 where the Applicant will provide the PLA with more detail, including the thickness of any scour protection should it be required in the future, along with its sizing to ensure stability.
	4.7 In respect of points made by the Applicant on anchor penetration at pages 33 to 34, the assessment referred to appears to have been based on a non-dredged scenario. The PLA considers that if it utilises its agreed dredge level, it would take the river bed to the top of the first protection zone, which presumably would be an issue for the Applicant, and not one which is addressed here. In addition, the Applicant appears to misunderstand the point on jack up barges (JUB), as it is the Applicant's JUBs which would be used in connection with ground investigation work which are of concern, not necessarily those of any third parties which would be controlled through Article 48.	The Applicant does not believe that with the geology (Chalk) at the level of the agreed dredge line that anchor penetrations are an issue to the stability of the tunnel. With regards to the Applicant's use of JUB above the tunnel, any ground investigation would be done prior to tunnel boring and a sound assessment conducted to ensure that the resulting penetrations do not pose a risk to the PLA's future dredging or the construction of the tunnel. The Applicant has conducted numerous boreholes in the River Thames along the tunnel alignment with the JUB sitting on/in the currently softer overlying strata with minimal to no adverse effects.

Paragraph reference from REP3-217	PLA's comments on REP2-046	Applicant's response
	4.8 The PLA notes that if UXO is found during construction, the Applicant must alert the emergency services (see page 34). However, the PLA would like to understand the Applicants UXO risk mitigation strategy and be reassured that if UXO is found some distance from the tunnel in the river, and which may not necessarily require bomb disposal for the construction of the tunnel, it could be left in situ in the river and not affect the PLA's ability to dredge.	The Applicant submitted modified Protective Provisions at Deadline 4 for the benefit of the PLA [REP4-094] that provide consideration of these issues.
	4.9 In terms of use of the river for the transport of people, the Applicant's response at page 35 does not address the PLA's point that it is not developing plans for the movement of construction workers in a way that facilitates use of the river. The Gravesend-Tilbury ferry is the most obvious example of this, but it remains no part of the Applicant's scheme to provide transport – e.g. a shuttle bus – from the ferry to the construction sites.	Following discussions with the PLA, the Applicant has clarified in an update to the Framework Construction Travel Plan [**Document Reference 7.13 (3)**], submitted at this deadline (Deadline 5), that a shuttle bus service from the Gravesend hub would call at the Gravesend ferry pier, and a shuttle bus service from the Grays hub would call at the Tilbury ferry pier.
	4.10 Other interested parties, including Gravesham Borough Council, Kent County Council and Thurrock Council have raised the importance of cross-river transport (see the Applicant's responses to LIRS at REP2-058, REP2-059 and REP2-062-REP2-066 respectively), and that simple measures now, such as shuttle buses from Tilbury, could facilitate sustainable transport of people to worksites.	Following discussions with the PLA, the Applicant has clarified in an update to the Framework Construction Travel Plan [**Document Reference 7.13 (3)**], submitted at this deadline (Deadline 5), that a shuttle bus service from the Gravesend hub would call at the Gravesend ferry pier, and a shuttle bus service from the Grays hub would call at the Tilbury ferry pier.
	4.15. It is unclear why materials cannot be sourced from these wharves and transported by HGV via the strategic road network. Clearly any proposal to source materials from wharves on the south side of the river would need to be acceptable to Gravesham Council -	It is noted that Gravesham Borough Council, Kent County Council and the Applicant agree on the principle that, at face value, importing and exporting materials via the river could reduce the number of trips on some of the network. However, the Applicant considers (and Kent County Council agrees) that, in this case, to

Paragraph reference from REP3-217	PLA's comments on REP2-046	Applicant's response
	it is considered that the PLA, Gravesham and the Applicant should work together to establish what might be possible (and the Applicant can then make appropriate commitments accordingly).	import materials to the construction compounds south of the River Thames via existing ports is not favourable, due to the reliance on the local road network and no direct access to construction compounds. The construction of direct access between the river to construction compounds is constrained by the Thames Estuary and Marshes Ramsar. While Gravesham Borough Council have previously requested that the Applicant investigate better ways to remove spoil and to reduce HGV movements on the network (by using the river), the Council notes that enhancing access to the Denton area (Wharf Road) would need to be considered. The Applicant considered this but notes that the Project's earthwork balance estimate indicates little demand to transport excavated material offsite south of the river, negating the need to provide disruptive works to enhance local roads that would be used temporarily and to only a limited extent. This is set out within the oMHP [REP4-136].
	4.17 The issue of transport of materials by water was also raised by Medway Council in the context of utilising wharves at Cliffe. In its response to that (Comments on LIRs Appendix G – REP2-061, page 21), the applicant appears to consider that new or upgraded facilities are required in order for river transport to occur rather than sourcing material through the supply chain by utilising existing facilities such as those at Cliffe. It is unclear why the Applicant thinks that the journey that an HGV makes from the wharf to a construction compound would be different to that made by an HGV from a land based site. Once the HGV has left the wharf it is unclear what the impediment would be to it supplying materials for the Southern Tunnel Entrance compound. Whilst the use of facilities such as those at Cliffe would not	The Applicant has taken a proportionate approach in determining the river use commitment, taking into consideration the proximity to the compounds to the river, to protect the wider network of suppliers, the suitability of these suppliers to supply the Project, the road connectivity and the impact they would have on the local road network and National Highways' obligations to consider Value for Money as a public sector body. When considering the wharf at Cliffe in particular, it becomes clear that the route HGVs would have to take to arrive at any of the Project compounds to the south of the river would result in the use of narrow secondary single carriageways which would not be ideal for large volume of HGV movements. Therefore, although it might be in close proximity to the compounds, it is situated in a location that necessitates HGV movements via the local road network through the villages of Cliffe Woods and/or Higham where HGV restrictions has been committed to in order to combat

Paragraph reference from REP3-217	PLA's comments on REP2-046	Applicant's response
	completely eliminate HGV movements it could make a substantial contribution to reducing the number of miles that materials do have to be transported by road.	rat running and use of unsuitable roads. One of the key objectives of the Project to minimise local road network use is contradicted by a commitment to use this wharf, which would result in considerable movements through such villages. Project compounds are situated so that delivery via the strategic road network is easily facilitated. When assessing the final mile of a delivery, the use of a land-based supplier that has better access to the strategic road network could therefore have less of an impact on the local road network compared to the wharf at Cliffe. It is also worth noting that the wharves at Cliffe, and any other wharves in proximity to the Project, have not been excluded from use by the Project. Instead, the Project has encouraged through the outline principles required to develop the Material Handling Plan for Contractors to reduce impact on the road network by reducing road vehicle miles (paragraph 3.4.13 of the oMHP [REP4-136]) by maximising multi-modal transport. The MHP will detail the Contractor's strategy to material handling and transportation before construction begins. The PLA, which is a named consultee for Environmental Management Plan 2, to which the MHP belongs, can hold discussions about the prospective use of Cliffe Pools as part of a broader multimodal transportation strategy.
	4.18 At page 37 of the Applicant's Comments – SEB, it draws attention to Table 3.1 of the outline Materials Handling Plan (**oMHP**) and states that this lists information which will be required in each MHP; it does not include any reference to maximising river use or sharing investigations on why any material or facility has been discounted. The PLA notes that paragraph 6.2.14 of the oMHP requires the contractor to explain in EMP2 how the Baseline Commitment and	Section 3.4 of the oMHP [REP4-136] provides the principles that the MHP has to consider when optimising material logistics. Among these is the use of multimodal transport, and paragraph 3.4.13 of the oMHP quite clearly requires the Contractor to 'reduce road vehicle miles travelled using a combination of modes of transport' which includes river use as well as other non-road based movement. The Better than Baseline Commitment requires the Contractor to proactively maximise the use of the river for aggregate

Paragraph reference from REP3-217	PLA's comments on REP2-046	Applicant's response
	Better than Baseline Commitment are "addressed". However, there is no clear requirement for the contractor to meet the Better than Baseline Commitment and therefore little weight should be given to the Better than Baseline Commitment. In addition, so many exemptions have been written into the oMHP that it is questionable whether even the Baseline Commitment needs to be met, let alone the Better than Baseline Commitment.	transportation, beyond the baseline commitment. Under the review of the MHP, if the PLA or any other relevant stakeholder is not satisfied with the Contractor's approach, a challenge can be made with the avenues provided at the Traffic Management Forum (TMF), and escalated via the dispute resolution process, with the SoS being the final arbitrator if an agreement cannot be reached at the TMF or Joint Operations Form. For matters associated with the monitoring of the river use commitment, a subgroup that forms part of the TMF has been specified to which the PLA would form part of. The purpose of this group is to monitor the river use commitment and manage any derogations should they arise. This is set out in the TMF Terms of Reference, which is included in the updated oTMPfC [**Document Reference 7.14 (5)**] submitted at Deadline 5. In addition, the Applicant has provided further detail on the monitoring and derogation process that would be carried out in relation to the river use commitment. This is set out in the updated oMHP [**Document Reference 6.3 ES Appendix 2.2 Annex B (3)**] submitted at Deadline 5. The exemptions to the Baseline Commitment are reasonable and proportionate, but the PLA's comment is noted.
	4.19.1 The Applicant has discounted the use of the river for the transport of materials, stating that south of the river the use of the river would result in 'unacceptable biodiversity impacts' (REP2-061, page 21), without providing any assessment for this assumption.	Due to lack of proximity to the major worksites/compounds, there are few marine facilities located on the south side of the river that are suitable for use by the Project, hence it is not considered appropriate to commit to their use. The A2/M2 corridor is far more proximate. Creation of a temporary facility would potentially require access/hauls roads to be constructed through the Thames Estuary and Marshes and Ramsar. The '*unacceptable biodiversity impacts*' referred to relate to the need for construction of direct access through the Thames Estuary and Marshes Ramsar. It is obvious that building access roads through a

Paragraph reference from REP3-217	PLA's comments on REP2-046	Applicant's response
		Ramsar site would be an adverse effect on integrity and therefore unacceptable. In addition, other obstacles such as the canal, railway line and police firing range would potentially have to be crossed.
	4.19.2 The Applicant has stated that the PLA raised potential issues relating to 'increased nitrogen deposition on designated habitats', whereas the PLA actually referred to intertidal habitats, which are different. This is specifically in relation to saltmarsh as nitrogen sensitive habitats.	The Applicant does not state that the PLA raised potential issues relating to '*increased nitrogen deposition on designated habitats*' but does respond to the PLA written representation on '*The effects of nitrogen deposition on sensitive intertidal habitats*' by stating that an assessment has been carried out on '*increased nitrogen deposition on designated habitats*'. This is relevant as the representation by the PLA about intertidal habitats includes their role in supporting features of designated sites. The Applicant's response goes on to explain that there are no intertidal habitats within 200m of the Affected Road Network, and therefore there would be no effects on them.
	4.19.3 The Applicant claims that underwater noise has been considered, however, the specific issue raised relates to underwater noise from tunnelling activities on waterfowl who feed underwater. These species are features of the Thames Estuary and Marshes SPA.	The issue of underwater noise and its impact on SPA birds that feed underwater has been addressed by the Applicant in the Habitats Regulation Assessment [**APP-487**]. This concludes that there is no Likely Significant Effect.
	4.19.4 The lighting plan and its approval only relates to navigational safety and not environmental effects on the river	The environmental effects of lighting on the river are assessed by the Applicant in ES Chapter 9: Marine Biodiversity [**APP-147**]. This concludes that any adverse effects as a result of disturbance on marine species due to lighting would not be significant.

3.3 Applicant's response to Natural England's responses at Deadline 3

3.3.1 At Deadline 3, Natural England submitted responses to comments on Written Representations [REP3-193].

3.3.2 The Applicant is mindful that, given the scale and complexity of the Project, there is a need for information submitted into the Examination to be provided in a manner which is proportionate and accessible for all Interested Parties (IPs), the Examining Authority (ExA) and the Secretary of State (SoS) to allow for appropriate consideration.

3.3.3 In In that spirit, the Applicant has not sought to repeat the detailed responses which it has given previously in relation to many of the matters raised by Natural England. The Applicant is happy to address the ExA's questions on these matters should they find it appropriate or necessary.

3.3.4 Table 3.6 below therefore sets out responses to new comments, or where a response goes beyond what has previously been addressed by the Applicant.

Table 3.6 The Applicant's responses to Natural England's submission at Deadline 3 [REP3-193]

Reference from REP3-193	Natural England's comments	Applicant's response
Section 1.5: Nationally Designated Sites	**NE comment on Applicant submission REP2-046:** Shorne and Ashenbank Woods SSSI 1.5.1 Natural England welcomes the Applicant's consideration of the boundary mapping errors recently identified for the Shorne and Ashenbank Woods Site of Special Scientific Interest (SSSI) and the updated habitat loss figures. These now show 6.97 hectares of direct loss from the SSSI resulting from the project (up from 5.85 previously reported). Given the increase in habitat loss from the SSSI, we consider that the plan we sought detailing the areas of habitat being created for the SSSI loss (paragraph 5.1.12 of our Written Representation) which is included within Annex C.9 of our Statement of Common Ground should also include this additional area impacted. We would also support this plan being submitted as a formal Examination Document.	Further to the Applicant's consideration of the mapping errors in the publicly available dataset for Shorne and Ashenbank Woods SSSI in its Comments on WRs [REP2-046], the Applicant issued an updated plan to Natural England on 20 September 2023. This plan is appended to the updated SoCG between the Applicant and Natural England [**Document Reference 5.4.1.6 (3)**] submitted at Deadline 5.
Section 1.6: Nationally	**NE comment on Applicant submission REP2-046:** 1.6.2 Natural England is pleased to confirm that the locations of the additional photomontages were agreed with us during a site visit with the	The Applicant will provide a new photomontage for Representative Viewpoint for S-03 at Deadline 5 and

Reference from REP3-193	Natural England's comments	Applicant's response
Protected Landscapes	Applicant's consultants on the 19 June 2019 (in reference to paragraph 6.1.5 of our Written Representation). However, the location of the various visualisations that were to be provided within the Environmental Statement were not explicitly agreed with Natural England. Our understanding (based upon the email from the Applicant on the 11 April 2019) was that for each of the agreed viewpoints baseline visualisations which were to be composited with a digital computer-rendered image of the proposals would be provided for opening and design year. However, as detailed in our Written Representations, such composited visualisations have not been provided for all the agreed viewpoint locations such as S-03, for example.	intends to provide a new photomontage for Representative Viewpoint S-11 at Deadline 6.
	NE comment on Applicant submission REP2-046: 1.6.4. Natural England notes the Applicant's response in relation to the status of the changes proposed through the Minor Refinements Consultation; it would be helpful if the Applicant were to provide an update on the status of the Consultation and the likely timeframe for any amendments to the Environmental Statement required as a result.	The changes proposed in the Minor Refinements Consultation were submitted to the Examining Authority in the Change Application (August 2023) [**CR1-002**] and were accepted in the Procedural Decision addressing proposed changes to the Application [**PD-031**]. Updates to relevant documents were submitted at Deadline 4, including the ES Addendum [**REP4-175**]
	NE comment on Applicant submission REP2-046: 1.6.14 Natural England notes the Applicant's response regarding the mitigation measures detailed in paragraph 6.1.50 of our Written Representation. We welcome the confirmation that only native species will be used within the Kent Downs AONB and clarity that the reference to non-native species within pages 34 and 35 of the Project Design Report: Part D General Design South of the River (Application document **APP-509**) is an error. We would support this being formally corrected through an errata.	The Applicant intends to formally correct this error in the Errata Report Version 5.0 [**Document Reference 1.6 (5)**] to be submitted at Deadline 6.

Reference from REP3-193	Natural England's comments	Applicant's response
Section 1.7: Natural England's work considering a potential SSSI notification in the Tilbury area	**NE comment on Applicant submission REP2-046:** **Breeding bird assemblages** 1.7.4 The Applicant refers to Natural England's confidential appendix and suggests that a response may be separately available, however we are not aware of any response to this but will be happy to review this when provided to us / the Examining Authority.	The Applicant intends to discuss this matter at a meeting with Natural England on 4 October 2023, and will provide a formal response to this confidential appendix at Deadline 6.
	Breeding bird assemblages 1.7.5 With respect to Annex C.15 of our Statement of Common Ground with the Applicant, Natural England has now reviewed this and can advise as follows. The Technical Note sets out the current Public Right of Way (PRoW) situation, results of user surveys and estimates of use and argues that there will be no significant impact. It states at paragraph 1.5.11 that there is not much additional use expected of the proposed bridleway over and above existing levels which begs the question whether the upgrade has a justified need.	Paragraph 1.5.11 relates specifically to equestrian use of Footpath 200 and states that '*significant levels of additional usage*' would not be expected to be generated from the two nearby riding schools as a principal source of equestrian users. Footpath 200 would also be used by walkers and cyclists. Paragraph 1.5.10 highlights that the improvements to Footpath 200 are related to a variety of factors, including potential improvements that can be made to user experience, provision of opportunities for new users as well as simple changes in usage levels. Although usage is predicted to increase, it is likely to remain low in terms of overall numbers, but wider benefits for users such as connectivity to the PRoW network are noted.
	NE comment on Applicant submission REP2-008: **Breeding bird assemblages** 1.7.6 The overall increase in scrub habitat is described, however there is nothing which quantifies the expected loss in area, nor a recognition of its high-density mature character and how this would look spatially, or an indication of the area proposed to be planted in mitigation. There is also no	The Applicant intends to discuss this matter at a meeting with Natural England on 4 October 2023, and will provide a formal response to this confidential appendix at Deadline 6.

Reference from REP3-193	Natural England's comments	Applicant's response
	acknowledgement of the time lag to reach optimal condition, which we have advised is approximately 15 years.	
	NE comment on Applicant submission REP2-008: **Breeding bird assemblages** 1.7.7 Natural England is also uncertain around the confidence of the projected future use figures, which appear to be unevidenced estimates only. We are concerned that once this area is opened up, resurfaced and promoted as part of a circular loop from the convenient car park at Coalhouse Fort that a greater than anticipated level of use will arise.). We therefore recommend that the Applicant provides greater clarity on the nature of the proposed impacts and the effectiveness of the mitigation measures they are suggesting.	Projected future use figures are based on professional judgement and assumptions. The Applicant notes the concerns raised by Natural England in relation to the Coalhouse Fort area specifically and will continue to engage with Natural England on this matter.
Section 1.8: Habitats of conservation importance	**NE comment on Applicant submission REP2-046:** **Acid grassland** 1.8.2 The applicant maintains that the matters raised by Natural England are best addressed through detailed design. We agree with this to a point, but we advise that the wording of the control documents should be sufficiently open so as not to constrain the methodology for creation of acid grassland habitats but allow the most ecologically optimal solution to be achieved. As currently drafted, we are not aware that the control documents make specific mention of the need to address high soil nutrient loading, and in our view, this should be a specific objective within the 'Outline Prescriptions' section of the oLEMP at paragraph 8.27.5 of the Acid Grassland section. We are happy to work with the applicant on a form of words to achieve necessary assurances.	The Applicant welcomes the opportunity to work with Natural England on this issue and will discuss it with them during a meeting scheduled for 4 October 2023. Any subsequent update of control document(s) would be submitted at an appropriate deadline.

Reference from REP3-193	Natural England's comments	Applicant's response
Section 1.11: King Charles III England Coast Path	**NE comment on Applicant submission REP2-046:** 1.11.1 Natural England welcomes the clarity provided by the Applicant in relation to the King Charles III England Coast Path. Natural England is now satisfied that the Applicant has addressed our concerns and we have no further comments to make. We will work with the Applicant to ensure that this additional area of agreement is fully reflected in the next iteration of our Statement of Common Ground.	This matter is now agreed between the Applicant and Natural England and is reflected in their updated SoCG submitted at Deadline 5 [**Document Reference 5.4.1.6 (3)**].
Section 3.3: Enhanced Cross Sections	**NE comment on Applicant submissions REP2-069 and REP2-071:** 3.3.1 Natural England welcomes the submission of the enhanced cross sections provided by the Applicant. We would be grateful if the Applicant could include details of the year which the vegetation growth shown is based upon so that we can cross reference them with them with the visualisations provided within the landscape chapter which we hope will help us progress matters.	The Enhanced Cross Sections provided by the Applicant [**REP2-069 and REP2-071**] include vegetation growth at year 15.
Section 3.5: Updated Environmental Management Plans	**NE comment on Applicant submissions REP2-014 to REP2-031:** 3.5.1 Natural England notes the amended plans to show the locations of the proposed retaining walls. It is unclear from the amended plans whether these are considered within the submitted Landscape and Visual Impact Assessment (Chapter 7 of the Environmental Statement) as they do not appear to be shown within the visualisations. We would therefore welcome clarity from the Applicant in this regard.	The Applicant assumes that Natural England is referring to the Environmental Masterplan, rather than Environmental Management Plans. Nevertheless, the Applicant confirms that omission of the proposed retaining walls was a graphic oversight on the Environmental Masterplan and that the Landscape and Visual Impact Assessment in ES Chapter 7: Landscape and Visual [**APP-145**] takes into consideration the proposed retaining walls. This is evident from the commentaries on visual effects provided in ES Appendix 7.10: Schedule of Visual Effects [**APP-385**].

3.4 Applicant's response to Shorne Parish Council's Comments on Applicant's Submissions at D2

3.4.1 At Deadline 3, Shorne Parish Council responded to the Applicant's Deadline 2 submissions [REP3-199].

3.4.2 The Applicant is mindful that, given the scale and complexity of the Project, there is a need for information submitted into the Examination to be provided in a manner which is proportionate and accessible for all Interested Parties, the Examining Authority (ExA) and the Secretary of State (SoS) to allow for appropriate consideration.

3.4.3 Table 3.7 below therefore only set out responses to new comments, or where a response goes beyond what has previously been addressed by the Applicant or to address factual inaccuracies.

Table 3.7 Response to Shorne Parish Council's Comments on Applicant's Submissions at D2 [REP3-199]

Section/Ref	Shorne Parish Council's comments	Applicant's response
REP2-014 6.2 Environmental Statement Figure 2.4 - Environmental Masterplan Section 1 & 1A **NOx mitigation land**	Apologies that we have only just realised that a large area of land for NOx mitigation at Gads Hill Farm, as was proposed in the Local Refinement Consultation in May 2022, does not in fact feature in the plans submitted for the DCO in November 2022, so we apologise for our confusion on this matter. However, the total amount of NOx land required, where it is to be provided and how the area required is calculated does still need clarification.	The Applicant's position on the extent of nitrogen deposition compensation areas is set out and justified in Annex F of Post-event submissions, including written submission of oral comments, for ISH1 [REP1-183]. The Applicant's position to this is set out in ES Appendix 5.6: Project Air Quality Action Plan [APP-350]. Nitrogen deposition was also discussed under Mitigate design and delivery at ISH1 and was set out and justified at that hearing. It is documented in Annex F of Post-event submissions, including written submission of oral comments, for ISH1 [REP1-183].
	We were unable to ascertain the meaning of this roadside symbol so would be grateful for it to be explained. 	It is a maintenance hardstanding to allow for maintenance and inspection of the gantries/signs and would be a hardstanding.

Section/Ref	Shorne Parish Council's comments	Applicant's response
REP2-014 6.2 Environmental Statement Figure 2.4 - Environmental Masterplan Section 1 & 1A **Sheet 2**	West of the road drainage pond on Park Pale, we continue to question why an area of farmland purchased by NH as part of a much larger plot has been left out of the mitigation etc plans and the red line boundary. Planting here would be beneficial in hiding the new access road and the drainage pond from some views. West of Park Pale bridge we have previously suggested that there needs to be a fence that blocks headlights as drivers on the northern connector road could have a problem with headlights of vehicles leaving the bridge approach and on Park Pale heading westwards.	The land to the west of the drainage pond, outside of the Order Limits, has not been purchased by the Applicant. The drainage pond has been positioned to the east of the field following engagement with landowners, to mitigate the impacts on their land. Such provision would be considered part of the detailed design stage. There would also be road safety audits carried out following road opening, which would identify any safety concerns around glare.
REP2-014 6.2 Environmental Statement Figure 2.4 - Environmental Masterplan Section 1 & 1A **Sheet 3**	The entrance to The Nook is not shown in the correct location (this has been pointed out to NH previously), it opens from Brewers Road but is not shown crossing the verge. North side of Brewers Road bridge, as raised previously to NH, there needs to be a new WCH crossing point (Pegasus?) across Brewers Road so as to enter the Country Park. Additionally, there may need to be a footpath extension on the eastern side verge along to the new traffic lights at the slip-roads junction.	The entrance to the Nook is in the correct location in the Environmental Masterplan, but there is retained vegetation covering the entrance which is shown by the light green in the plan. This shows that the existing closed tree canopy over the entrance is retained. The entrance to the Nook is shown clearly on Sheet 4 of the General Arrangement Plans Volume B [**REP3-029**]. The Applicant has proposed a Pegasus crossing at Brewers Road and this is shown in the Supplementary Walking, Cycling and Horse Riding (WCH) Maps (Volume A) [**REP2-072**].
REP2-014 6.2 Environmental Statement Figure 2.4 - Environmental Masterplan Section 1 & 1A **Sheet 6 and 8**	Existing north-south footpath NS156 is not shown.	The Applicant signposts Shorne Parish Council to Supplementary Walking, Cycling and Horse Riding (WCH) Maps (Volume A) [**REP2-072**] which shows existing and proposed WCH routes, including NS156.

Section/Ref	Shorne Parish Council's comments	Applicant's response
REP2-069 to REP2-061 9.58 Engineering Cross Sections	These show that there will be considerable, unmitigated visual and noise impact on local residents from the multi-level LTC:A2 junction.	The Applicant has set out its position and justified the mitigation design at ISH3; this is documented in Post-event submissions, including written submission of oral comments, for ISH3 [**REP4-179**].
REP2-072 9.60 Supplementary Walking, Cycling and Horse Riding (WCH) Maps (Volume A)	These are helpful, however do not yet show additional links that have been requested.	These drawings show all formal routes and all known routes where the Applicant knows that the landowner has given permission.

3.5 Applicant's response to Thurrock District Scout Council's Responses to the Applicant's Comments on their Written Representation

3.5.1 At Deadline 3, Thurrock District Scout Council (TDSC) submitted a response to the Applicant's comments on their written representation [**REP3-213**].

3.5.2 The Applicant is mindful that, given the scale and complexity of the Project, there is a need for information submitted into the Examination to be provided in a manner which is proportionate and accessible for all Interested Parties (IPs), the Examining Authority (ExA) and the Secretary of State (SoS) to allow for appropriate consideration.

3.5.3 Table 3.8 below therefore only set out responses to new comments, or where a response goes beyond what has previously been addressed by the Applicant or to address factual inaccuracies.

Table 3.8 Response to TDSC's Responses to the Applicant's Comments on their Written Representation [REP3-213]

Topic	Applicant's response to the Written Representation	TDSC's further response to the Applicant's response at Deadline 3	Applicant's response at Deadline 5
Travel time	Chapter 8 of the Transport Assessment [**APP-529**] sets out the forecast impacts on journey times during the construction period on routes including Station Road/Fort Road/A1089, which would be relevant for people travelling to the Condovers Scout Activity Centre. The Transport Assessment identifies negative impacts on journey time only during the AM peak, for six out of the 11 phases of construction; no change in journey time has been assessed as being greater than 2.3 minutes (this is during Phase 3, for all other phases, increase in journey time is likely to be less than two minutes). The Traffic Management Forum, established and secured under the outline Traffic Management Plan for Construction	You state that "Assumptions about the amount of traffic likely to use the construction access routes proposed are set out in Chapter 8 of the Transport Assessment [**APP-529**]. These would be refined as contractors are appointed and the detailed design for the Project is developed". Plate 8.7 on page 219 clearly states that other planned haul roads are not included in the model. Does this include the secondary routes?	Secondary access routes are included in the model, to the extent that they affect the public highway. The Applicant has modelled the compound access point appropriately to ensure that construction traffic enters and leaves the local road network at the correct points.

Topic	Applicant's response to the Written Representation	TDSC's further response to the Applicant's response at Deadline 3	Applicant's response at Deadline 5
	(oTMPfC), will ensure ongoing monitoring and engagement on these impacts during the construction period [**REP1-174**].		
Walking, cycling and horse-riding routes (Local Public Rights of Way (PRoW) and Permissive access)	PRoWs within the immediate vicinity of the Condovers Scout Camp would not be affected by construction activities and would remain open during the construction period. Section 4.3 of Project Design Report Part E: Design for Walkers, Cyclists and Horse Riders [**APP-512**] shows the WCH proposals close to the Condovers site. The effects on PRoWs are identified in Table 13.66 of ES Chapter 13: Population and Human Health [**APP-151**]. Regarding the permanent closure and diversion of BR58 and FP61, the Project includes provision for two temporary diversions of these routes, one along the proposed Muckingford Road (temp diversion 1) and one under the proposed Tilbury viaduct (temporary diversion 2). These are described at Table B.1 of the oTMPfC [**REP1-174**] and illustrated on Plate B.6 of the same document. Temporary diversion 1 is subject to Muckingford road being built and temporary diversion 2 is subject to construction and utility works in the Tilbury Viaduct area to ensure a safe access across the works. In the event that the works both temporary diversions are subject to occur concurrently, the existing route	Paragraph 4.3.18 of Project Design Report Part E: Design for Walkers, Cyclists and Horse Riders [**APP-512**] this document doesn't show the latest positioning of the proposed Low Street Lane and Muckingford Road Utility hubs consulted in May/June 2023. With the co-location of these 2 utility hubs, will there be safe WCH access between these PRoW,s in the vicinity of Utility hubs, and Station road? This picture was taken on 15th August 2023. It was taken at the proposed junction, where the haul road from Church Road joins the local access road at Low Street Lane, looking north towards the new proposed location of Utility hubs. Are you planning to use this local access road, which is mainly used by WCH, if so, how do you plan to segregate construction vehicles and WCH?	The Project Design Report Part E [**APP-512**] provides illustrative proposals of one possible design outcome of the Project (its permanent form) and not those temporary elements required to construct the Project, which the Utility Logistic Hubs (ULHs) are. FP61 and BR58 will be closed temporarily in instances that the use of the PRoW would be unsafe, which will be assessed during the detailed design period. The narrative regarding FP61 and BR58, communicated within Table B.1 of the oTMPfC [**REP4-160**] suffices, even with the relocation of the ULHs, owing to the fact the ULHs are intended for the delivery of, and are in proximity to, Works Nos. OH4 and OHT2. As communicated in Table 4.1 (Illustrative construction compound access routes (HGV Traffic)) of the oTMPfC [**REP4-160**], access to the ULHs will be primarily from Muckingford Road. In those instances where

Topic	Applicant's response to the Written Representation	TDSC's further response to the Applicant's response at Deadline 3	Applicant's response at Deadline 5
	could be severed, with no diversion available, for up to 2.5 years. Temporary diversion routes are subject to the detailed construction phasing developed by the Contractor. In developing those plans the Contractor will develop temporary diversion routes, where required, seeking to reduce the period of time existing WCH routes are severed where no diversion is available. Temporary diversion routes will be subject to engagement with the relevant highway authority during development of the TMP, which is secured under Schedule 2 Requirement 10 of the draft DCO [**REP1-042**]. A summary of the Project's effects on BR58 and FP61 once operational is provided at paragraph 13.6.173 of ES Chapter 13: Population and Human Health [**APP-151**], which concludes the Project would have a moderate beneficial and significant impact on BR58 and FP61. With respect to the WCH route along Low Street Lane, paragraph 4.3.18 of Project Design Report Part E: Design for Walkers, Cyclists and Horse Riders [**APP-512**] states that '…to provide safe WCH access between these PRoWs there will be a WCH route behind the existing hedgerow on the northern side of Station Road'. This would avoid any potential conflict between WCH		an HGV would need to use the part of Low Street Lane shown, this length of highway would be temporarily closed, altered, diverted or restricted from point 16/E on sheet 23 to point 16/A on sheet 24 of the Streets Subject to Temporary Restrictions of Use Plans [**REP3-049**] to omit an interface between the WCH users and the Project's vehicles.

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	and construction traffic using the secondary access route along Station Road.		
Construction access route (Haul Road north of Church Road and south of Muckingford Road)	A secondary construction access route is proposed north off Church Road to join Low Street Lane (shown on Plate 4.2 of the oTMPfC [**REP1-174**]) for access to the Low Street Lane ULH and Muckingford Road ULH. Assumptions about the amount of traffic likely to use the construction access routes proposed are set out in Chapter 8 of the Transport Assessment [**APP-529**]. These would be refined as contractors are appointed and the detailed design for the Project is developed. 'Secondary' construction access routes would be used by HGV traffic throughout construction but would be used far less frequently than the other routes. Given this secondary access route is principally intended for vehicles transiting between nearby worksites, the type of vehicles using it are envisaged to be limited to vans, minibuses and pickup trucks. It is anticipated that HGVs and other plant would be transported via the other routes promoted as shown on Plate 1.16 of Transport Assessment Appendix E: Construction Traffic Assessment Supporting Information [**APP-534**]. The secondary access route would remain in place for the entire construction period.	This picture was taken on 15th August 2023. It was taken on Church Road, looking west towards Condovers and West Tilbury village. Is it safe to build a new junction on the north side of this stretch of the road for a minor haul road? oTMPfC [**REP1-174**] – this document doesn't show the latest positioning of the proposed Low Street Lane and Muckingford Road Utility hubs consulted in May/June 2023. With the co-location of these 2 utility hubs, north of the position on Plate 4.6, surely there must be a safer option for a secondary access route, principally intended for vehicles transiting between nearby worksites, the type of vehicles using it are envisaged to be limited to vans, minibuses and pickup trucks. Have you considered other options for the secondary access route, if so, what were they and why were they dismissed? You state that "Assumptions about the amount of traffic likely to use the construction access routes proposed are set out in Chapter 8 of the Transport Assessment [**APP-529**].	The Applicant's proposal is to build a suitable access from Church Road, heading north to provide access to the location of the ULHs. The proposed route avoids the need to use the southern end of Low Street Lane, to avoid impacts on the existing homes and businesses in this area. All new entrances will be designed in conjunction with the relevant design standards and in consultation with the local road authority. The new entrance will be designed to facilitate ease of access from Church Road for all vehicles, as well as allowing for any vehicles leaving the temporary access route to safely exit onto Church Road. Following the Examining Authority's approval of the revisions to the ULH locations, the Applicant has modified Plates 4.6 and 4.7 of the oTMPfC [**REP4-161**] to reflect the new ULH locations. The proposed temporary haul road north of Church Road and south of Muckingford Road will be used

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	1.1.3 The hours of operation for the route would be in accordance with Table 6.1 of ES Appendix 2.2: Code of Construction Practice (CoCP) [**REP1-157**], with works outside of the standard working hours limited to the operations associated with the erection and removal of the overhead power lines (Work No OH3, OH4 and OHT2) and the trenchless installation of electricity networks (Work No MU28) as listed in Table 6.4. 1.1.4 A full preliminary list of traffic management measures (excluding hard shoulder closures and associated localised traffic management for highway gantries) that may be required to construct the Project can be found in Appendix A of the oTMPfC. Table 2.3 of the oTMPfC [**REP1-174**] identifies stakeholder considerations that would be addressed as a minimum by the TMP, which is secured under Schedule 2 Requirement 10 'Traffic Management' of the draft DCO [**REP1-042**]. This includes impacts on community facilities such as the Condovers site, and states that activities such as advance warning/particular sensitivity around significant events, particularly evenings and weekends would be incorporated into the TMP and engagement with relevant stakeholders would take place as appropriate.	These would be refined as contractors are appointed and the detailed design for the Project is developed". Plate 8.7 on page 219 clearly states that other planned haul roads are not included in the model.	as a secondary access route, meaning that this route will be used far less frequently than the other routes, refer to Section 4.1 and Plate 4.7 within the oTMPfC [**REP4-160**]. It would mainly facilitate movements for the purposes of utility works; there are not anticipated to be a high volume of vehicles using this route. The TMP for works in this area would therefore have to ensure that this is proposed to be used as a secondary route and nothing more. The location of the ULHs, which is governed by the location of the works that they support (Works Nos. OH4 and OHT2), the location of existing site constraints such as utility networks and other Project proposals, are limited in their siting and therefore are limited in established routes from which to provide alternative access classified as secondary access. The secondary access also proposes the shortest comparable route to the works south of the railway line utilising existing railway crossings. Therefore, it is the Applicant's

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			opinion that no reasonable alternatives exist. Please refer to answer above on secondary access assessments within the transport model.
Noise (Construction and Operation)	Noise monitoring was carried out by the Applicant for the Project 200m east of the Condovers site south of Station Road at ST-NML 04. The monitoring location is show in ES Figure 12.5: Baseline Noise Monitoring Locations [**APP-313**]. The results are presented in ES Appendix 12.5: Baseline Noise Survey Information (Section 2.4) [**APP-445**]. While construction phase noise impacts were not modelled at the Condovers site specifically, two sensitive receptors at nearby properties off Coopers Shaw Road (CN 46) and Church Road (CN 50) were assessed. This is presented in ES Figure 12.1: Construction Noise and Vibration Study Area [**APP-309**] and ES Chapter 12: Noise and Vibration [**APP-150**]. With the inclusion of the mitigation measures in the CoCP and Register of Environmental Actions and Commitments (REAC) [**REP1-157**], construction noise impacts on the site (when considered in accordance with the guidance contained within the Design Manual for Roads and Bridges (DMRB) LA 111 (Highways England, 2020) and BS 5228-1:2009 Code of practice for noise and	1. Will the proposed mitigation measure, stated for properties, be suitable for a campsite where young people sleep in tents? 2. Are there any maximum noise levels that young people should be exposed to overnight, when sleeping in tents?	1. The Applicant's response remains unchanged from that set out above. The proposed mitigation measures during construction would apply, and although these are not specific to campsites, the Applicant will continue to engage with TDSC. 2. The internal criteria in residential buildings would not be applicable to a campsite. The proposed mitigation measures during construction would apply, and although are not specific to campsites, the Applicant will continue to engage with TDSC.

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	vibration control on construction and open sites4) would not constitute a significant effect. Furthermore, the REAC, contained within the CoCP [**REP1-157**], presents good practice and essential mitigation commitments secured under Schedule 2 Requirement 4 of the draft Development Consent Order (DCO) [**REP1-042**]. Specific commitments with regard to construction noise include commitments NV001, NV002, NV004, NV006, NV007 and NV009. These would be implemented to actively control the impacts of the construction of the Project. NV008 'Community Engagement' specifically sets out a mechanism for the open and ongoing communication with the local community relating to the construction activities and programming, and the control of potential impacts. Following on from the consultation under NV008, with regard to the request for baseline to be established, commitment NV005 'Baseline noise levels' provides a mechanism for this to be considered prior to construction. During operation of the Project, the mitigated road traffic noise impacts (when considered in accordance with the guidance contained within DMRB LA 111) are predicted to be minor to moderate adverse across the Condovers site. Within ES	3. What further mitigations can be implemented for Condovers if, when operational, the noise levels are at an unacceptable level?	3. As indicated in the Applicant's previous response, during operation of the Project, the mitigated road traffic noise impacts (when considered in accordance with the guidance contained within DMRB LA 111) are predicted to be minor to moderate adverse across the Condovers site. The assessment completed for the ES, set out in ES Chapter 12: Noise and Vibration [**APP-150**], is based on calculated annual average road traffic noise levels with and without the Project to ensure a like-for-like comparison. Ambient

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	Chapter 12: Noise and Vibration [**APP-150**] the specifics of the mitigation options proposed are presented in section 12.5 which covers the provision of Low noise surfacing, earthworks measures and acoustic fencing in order to control road traffic noise. ES Figure 12.6: Operational Road Traffic Noise Mitigation [**APP-314**] presents the locations of mitigation provision. ES Appendix 2.2: CoCP [**REP1-157**] and within it, the REAC, sets out how these measures are secured under Schedule 2 Requirement 4 of the draft DCO [**REP1-042**]. As detailed on ES Figure 12.6: Operational Road Traffic Noise Mitigation [**APP-314**] there is provision for an acoustic barrier	4. It is noted that the Environmental Statement Ch 12 Table 12.29 gives	noise levels are not constant and vary on a day-to-day basis depending on the contributions to the noise climate from factors such as traffic, railways, agriculture, industry, human activity, as well as weather conditions. To account for the varying nature of environmental noise, any monitoring would need to be over a very long period to gain average levels. Additionally, any noise measurement captured as part of the monitoring would likely be influenced by contributions from extraneous sources such as people, agriculture activities, and rail, etc. For these reasons, the comparison of a measured noise level with that predicted in a model space scenario is considered to provide an unreliable indication of scheme performance and cannot therefore be reasonably relied upon to base the conclusions of earlier surface replacement interventions. 4. ES Appendix 12.10: Road Traffic Noise Mitigation and Cost

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	over the Tilbury viaduct structure within the proposed design for the Project. This is secured under Schedule 2 Requirement 3 'Detailed design' of the draft DCO [**REP1-042**].	details of the proposed acoustic barrier dimensions and locations. At the Tilbury Viaduct it is noted that the acoustic barrier type is the concrete bridge parapet, primarily for safety reasons but with some acoustic properties. It is also noted that at all other locations where acoustic barriers are provided, apart from the Mardyke Viaduct, these are both greater in height and have a greater noise reduction effect. All those using Condovers use tents for sleeping accommodation and it is not possible to provide any noise mitigation at the site, it is only possible to provide it at source. What is proposed is effectively a consequence of the requirement to provide parapets for the viaduct. We need to understand what the consequences are for people using tents as sleeping accommodation at Condovers. The acoustic barrier location reference AB2 & AB3 states that the height of barrier is controlled by engineering constraints and to prevent the introduction of new landscape and visual impacts. Is this really an engineering constraint or a cost issue?	Benefit Analysis [**APP-450**] sets out the mitigation options that were considered and not taken forward in the Project design, which includes the consideration of potential landscape and visual and cultural heritage impacts.

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Tilbury Fields	On completion of construction in the opening year, the sculptural landscape mounding in Tilbury Fields would be just about discernible in mid-range views south-east from the Condovers site, filtered by existing vegetation. The proposed landforms at Tilbury Fields would be 24m AOD at their tallest point as set out in the Engineering Drawings at Sheet 4 of Engineering Drawings and Sections (Volume A) (A122 LTC Plan and Profiles) [**APP-030**]. This is repeated at Design Principle S9.02 [**APP-516**] which states 'The design of the new recreational site shall incorporate sculptural earthworks up to a maximum +24.0m AOD…'. This is secured under Schedule 2 Requirement 3 'Detailed design' of the draft DCO [**REP1-042**]. The Project provides for accessible permissive routes through Tilbury Fields, instead of Public Rights of Way, to retain some flexibility because the design of the landforms would be refined during the detailed design stage once a contractor is appointed within the constraints of the limits of deviation and relevant DCO controls.	1. I accept that some flexibility of routes through Tilbury Fields will be required during the design and construction of the public facility. I cannot see why, prior to opening of the facility, the public routes can't be registered as Public Rights of Ways. Please explain?	1. Permissive routes are proposed through Tilbury Fields to allow flexibility of design. Tilbury Fields would be subject to further detailed design once the full earthwork quantities are known; therefore, the geometry, height and shape of the earthworks could be subject to change. By having permissive routes, the location and alignment of the footpaths could change as the detailed design of Tilbury Fields is developed. The permissive footpaths also go through proposed open mosaic habitat and in proximity to the Thames Estuary and Marshes Ramsar site and other habitat designations on the coastline. The Applicant, therefore, considers the routes should be permissive to allow flexibility for any closures needed for maintenance, and to enable management of visitors (if required) to retain some control on the use of the footpaths, and have the ability to close, divert, or restrict use, for example restricting use by dog walkers during appropriate times of the

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			year to minimise disruption to breeding birds.
	The Applicant provided clarification about the proposed tunnel construction methodology for the Project in the Notification of Proposed Changes to the Planning Inspectorate [**AS-083**]. The Applicant has provided further information on the proposed tunnel construction methodology, including the flexibility sought with regard to the use of one or two TBMs alongside this document at Deadline 2, as Appendix C of Environmental Addendum [Document Reference 9.8 (2)]. Tilbury Fields would be open to the public at the earliest practicable time following the completion of the Project subject to construction requirements and the establishment of new habitats. This is independent of the TBM strategy.	2. We are keen to understand how many months/years will elapse, after the opening of the road, before Tilbury Fields will be open for the public. We are keen to understand the length of time, after the opening of the road, that there will be a potential Environmental impact on Condovers whilst Tilbury Fields will be created. Also, it would be good to know when we can include Tilbury Fields in our development programmes for young people.	2. Tilbury Fields will be created progressively as the excavated material arises from the tunnelling and in conjunction with the logistics of the construction of the North Portal and tunnel construction. At the earliest, the opening of Tilbury Fields would be at the road opening date, currently forecast around 2032; however, this is dependent on the scheme being awarded and DCO granted to current dates. The landscape proposals for Tilbury Fields will be implemented as soon as technically practicable; the logistics, timing and delivery will be developed at the detail design stage.

Glossary

Term	Abbreviation	Explanation
A122		The new A122 trunk road to be constructed as part of the Lower Thames Crossing project, including links, as defined in Part 2, Schedule 5 (Classification of Roads) in the draft DCO (Application Document 3.1)
A122 Lower Thames Crossing	**Project**	A proposed new crossing of the Thames Estuary linking the county of Kent with the county of Essex, at or east of the existing Dartford Crossing.
A122 Lower Thames Crossing/M25 junction		New junction with north-facing slip roads on the M25 between M25 junctions 29 and 30, near North Ockendon.
A13/A1089/A122 Lower Thames Crossing junction		Alteration of the existing junction between the A13 and the A1089, and construction of a new junction between the A122 Lower Thames Crossing and the A13 and A1089, comprising the following link roads: • Improved A13 westbound to A122 Lower Thames Crossing southbound • Improved A13 westbound to A122 Lower Thames Crossing northbound • Improved A13 westbound to A1089 southbound • A122 Lower Thames Crossing southbound to improved A13 eastbound and Orsett Cock roundabout • A122 Lower Thames Crossing northbound to improved A13 eastbound and Orsett Cock roundabout • Orsett Cock roundabout to the improved A13 westbound • Improved A13 eastbound to Orsett Cock roundabout • Improved A1089 northbound to A122 Lower Thames Crossing northbound • Improved A1089 northbound to A122 Lower Thames Crossing southbound
A2		A major road in south-east England, connecting London with the English Channel port of Dover in Kent.
Application Document		In the context of the Project, a document submitted to the Planning Inspectorate as part of the application for development consent.
Code of Construction Practice	**CoCP**	Contains control measures and standards to be implemented by the Project, including those to avoid or reduce environmental effects.
Construction		Activity on and/or offsite required to implement the Project. The construction phase is considered to commence with the first activity on site (e.g. creation of site access), and ends with demobilisation.
Department for Transport	**DfT**	The government department responsible for the English transport network and a limited number of transport matters in Scotland, Wales and Northern Ireland that have not been devolved.

Term	Abbreviation	Explanation
Design Manual for Roads and Bridges	**DMRB**	A comprehensive manual containing requirements, advice and other published documents relating to works on motorway and all-purpose trunk roads for which one of the Overseeing Organisations (National Highways, Transport Scotland, the Welsh Government or the Department for Regional Development (Northern Ireland)) is highway authority. For the A122 Lower Thames Crossing the Overseeing Organisation is National Highways.
Development Consent Order	**DCO**	Means of obtaining permission for developments categorised as Nationally Significant Infrastructure Projects (NSIP) under the Planning Act 2008.
Development Consent Order application	**DCO application**	The Project Application Documents, collectively known as the 'DCO application'.
Environmental Impact Assessment	**EIA**	A process by which information about environmental effects of a proposed development is collected, assessed and used to inform decision making. For certain projects, EIA is a statutory requirement, reported an Environmental Statement.
Environmental Statement	**ES**	A document produced to support an application for development consent that is subject to Environmental Impact Assessment (EIA), which sets out the likely impacts on the environment arising from the proposed development.
Examining Authority	**ExA**	The Examining Authority is appointed by the Secretary of State to examine an application for a Development Consent Order and make a recommendation.
Framework Construction Travel Plan	**FCTP**	A framework with regard to the implementation of travel planning for the movement of personnel to and from the construction worksites, compounds and ULHs during the construction phase of the Project.
Generic Quantitative Risk Assessment	**GQRA**	Tier 2 of the risk assessment process according to LCRM guidance on the assessment of land contamination. A GQRA uses generic assessment criteria and assumptions to estimate risk.
Greenhouse gas	**GHG**	Gases able to absorb infrared radiation emitted from Earth's surface and reradiate it back to Earth's surface, thus contributing to the greenhouse effect. Carbon dioxide, methane, and water vapour are the most important greenhouse gases.
Health and Equalities Impact Assessment	**HEqIA**	A systematic process used to identify the potential health and equalities impacts arising from policies, plans, programmes and projects, to identify the distribution of those effects amongst the population and to identify mitigation measures to address these effects, thereby minimising adverse effects on the local population
Heavy Goods Vehicle	**HGV**	A large, heavy motor vehicle used for transporting cargo.
Highways England		Former name of National Highways.
Institute of Environmental Management and Assessment	**IEMA**	A professional body for environmental and sustainability professionals.

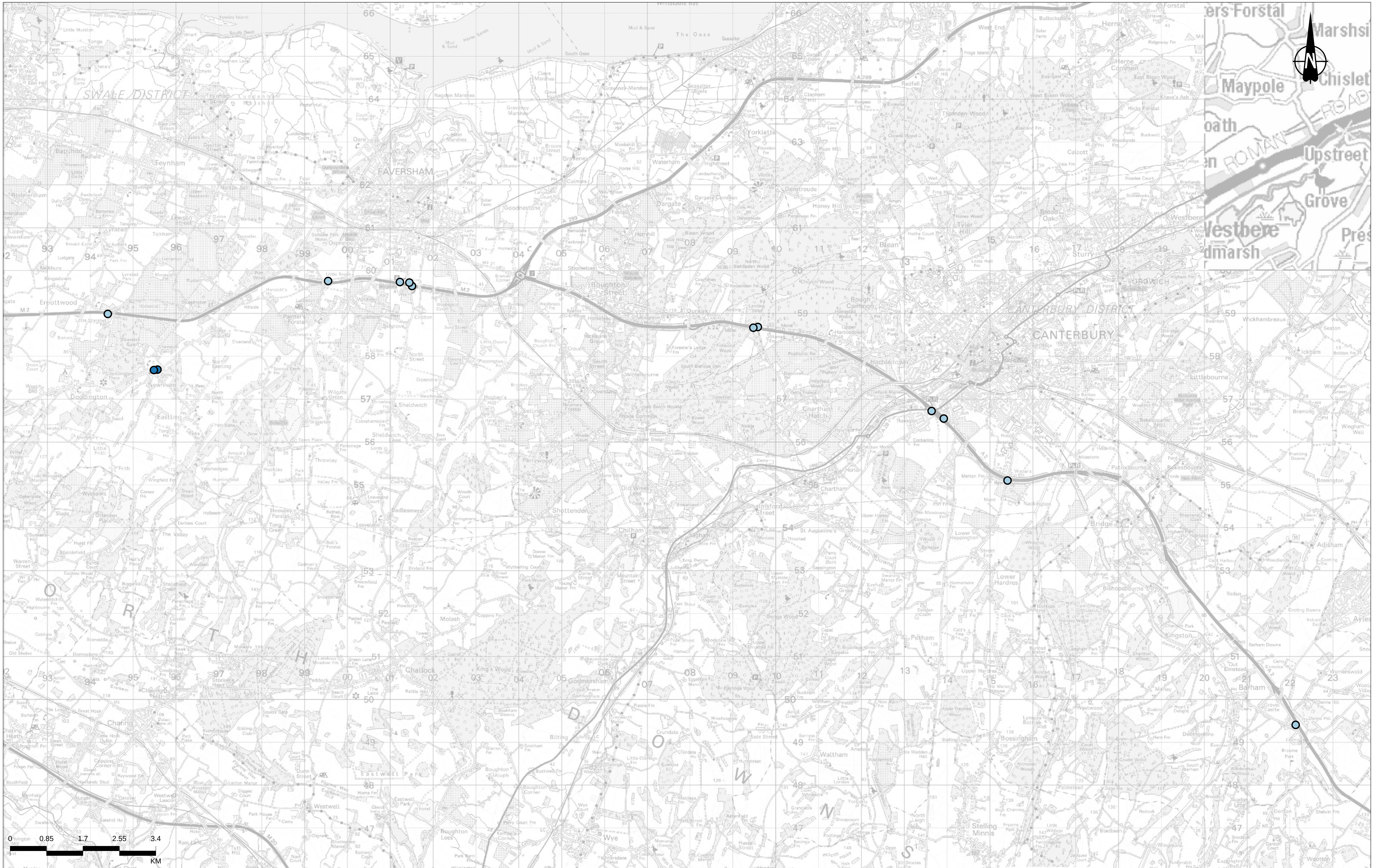
Term	Abbreviation	Explanation
Interested Party	**IP**	A person or persons with an interest in land affected by the application, or who has registered a relevant representation by the deadline set by the Planning Inspectorate after the application has been accepted.
Land Contamination Risk Management	**LCRM**	Guidance published by the Environment Agency used to identify and assess if there is an unacceptable risk, assess what remediation options are suitable to manage the risk, plan and carry out remediation, and verify that remediation has worked.
Local Impact Report	**LIR**	As set out in the Planning Inspectorate's Advice Note One, as part of the Planning Act 2008 process, the relevant local authorities are invited to submit a Local Impact Report (LIR) giving details of the likely impact of the proposed development on the authority's area.
Lower Thames Area Model	**LTAM**	Transport model designed to forecast impacts of providing additional road based capacity across the River Thames at locations at or east of the existing Dartford Crossing.
Lower Thames Crossing	**LTC**	A proposed new crossing of the Thames Estuary linking the county of Kent with the county of Essex, at or east of the existing Dartford Crossing.
M2 junction 1		The M2 will be widened from three lanes to four in both directions through M2 junction 1.
M2/A2/Lower Thames Crossing junction		New junction proposed as part of the Project to the east of Gravesend between the A2 and the new A122 Lower Thames Crossing with connections to the M2.
M25 junction 29		Improvement works to M25 junction 29 and to the M25 north of junction 29. The M25 through junction 29 will be widened from three lanes to four in both directions with hard shoulders.
National Highways		A UK government-owned company with responsibility for managing the motorways and major roads in England. Formerly known as Highways England.
National Policy Statement	**NPS**	Set out UK government policy on different types of national infrastructure development, including energy, transport, water and waste. There are 12 NPS, providing the framework within which Examining Authorities make their recommendations to the Secretary of State.
National Policy Statement for National Networks	**NPSNN**	Sets out the need for, and Government's policies to deliver, development of Nationally Significant Infrastructure Projects (NSIPs) on the national road and rail networks in England. It provides planning guidance for promoters of NSIPs on the road and rail networks, and the basis for the examination by the Examining Authority and decisions by the Secretary of State.
Nationally Significant Infrastructure Project	**NSIP**	Major infrastructure developments in England and Wales, such as proposals for power plants, large renewable energy projects, new airports and airport extensions, major road projects etc that require a development consent under the Planning Act 2008.
North Portal		The North Portal (northern tunnel entrance) would be located to the west of East Tilbury. Emergency access and vehicle turn-around facilities would be provided at the tunnel portal. The tunnel portal structures would accommodate service buildings for control operations, mechanical and electrical equipment, drainage and maintenance operations.

Term	Abbreviation	Explanation
Operation		Describes the operational phase of a completed development and is considered to commence at the end of the construction phase, after demobilisation.
Order Limits		The outermost extent of the Project, indicated on the Plans by a red line. This is the Limit of Land to be Acquired or Used (LLAU) by the Project. This is the area in which the DCO would apply.
Passenger Car Unit(s)	**PCU**	A metric to allow different vehicle types within traffic flows in a traffic model to be assessed in a consistent manner. PCU factors used within the Project's transport model are: 1 for a car or Light Goods Vehicle; 2 for a bus, 2.5 for a Heavy Goods Vehicle.
Planning Act 2008		The primary legislation that establishes the legal framework for applying for, examining and determining Development Consent Order applications for Nationally Significant Infrastructure Projects.
Port of London Authority	**PLA**	A self-funding public trust established by The Port of London Act 1908 to govern the Port of London. Its responsibility extends over the Tideway of the River Thames and its continuation (the Kent/Essex strait). It maintains and supervises navigation, and protects the river's environment.
Port of Tilbury London Limited	**PoTLL**	n/a
Project road		The new A122 trunk road, the improved A2 trunk road, and the improved M25 and M2 special roads, as defined in Parts 1 and 2, Schedule 5 (Classification of Roads) in the draft DCO (Application Document 3.1).
Project route		The horizontal and vertical alignment taken by the Project road.
Public Right of Way	**PRoW**	A right possessed by the public to pass along routes over land at all times. Although the land may be owned by a private individual, the public may still gain access across that land along a specific route. The mode of transport allowed differs according to the type of Public Right of Way, which can consist of footpaths, bridleways and open and restricted byways.
Register of Environmental Actions and Commitments	**REAC**	The REAC identifies the environmental commitments that would be implemented during the construction and operational phases of the Project if the Development Consent Order is granted, and forms part of the Code of Construction Practice (Application Document 6.3, ES Appendix 2.2).
Secretary of State	**SoS**	The Secretary of State has overall responsibility for the policies of the Department for Transport.
Simulation and Assignment of Traffic to Urban Road Networks	**SATURN**	Software used to build transport models.
Site of Special Scientific Interest	**SSSI**	A conservation designation denoting an area of particular ecological or geological importance.
Site Waste Management Plan	**SWMP**	A document which sets out how resources will be managed, and waste controlled during the Project. Plans usually involve recording the amount of waste that will be produced and details the proposed methods of waste disposal.

Term	Abbreviation	Explanation
Special Protection Area	**SPA**	A designation under EU Directive 2009/147/EC on the Conservation of Wild Birds.
South Portal		The South Portal of the Project (southern tunnel entrance) would be located to the south-east of the village of Chalk. Emergency access and vehicle turn-around facilities would be provided at the tunnel portal. The tunnel portal structures would accommodate service buildings for control operations, mechanical and electrical equipment, drainage and maintenance operations.
Statement of Common Ground	**SoCG**	A Statement of Common Ground is a written statement containing factual information about the proposal which is the subject of the appeal that the appellant reasonably considers will not be disputed by the local planning authority.
Strategic Road Network	**SRN**	The core road network in England managed by National Highways.
The tunnel		Proposed 4.25km (2.5 miles) road tunnel beneath the River Thames, comprising two bores, one for northbound traffic and one for southbound traffic. Cross-passages connecting each bore would be provided for emergency incident response and tunnel user evacuation. Tunnel portal structures would accommodate service buildings for control operations, mechanical and electrical equipment, drainage and maintenance operations. Emergency access and vehicle turn-around facilities would also be provided at the tunnel portals.
Traffic Management Plan for Construction	**TMP**	A plan setting out the strategy and measures to be adopted with respect to highway and transportation issues for the Project. The TMP supports the DCO application and would be embedded within the eventual construction contractor documentation and will form an overarching and comprehensive management procedure for the Contractor to adhere to.
Transport Decarbonisation Plan	**TDP**	A plan published by the Department for Transport in 2021 which sets out the government's commitments and the actions needed to decarbonise the entire transport system in the UK.
Tunnel Boring Machine	**TBM**	Machine used to excavate tunnels with a circular cross-section.
Utility Logistics Hub	**ULH**	Temporary compounds required for specific utility works. They would receive, store and distribute the plant machinery and materials for specific utility works. They may include offices, welfare facilities, refuelling stations, security hubs, vehicle/wheel washing sites and parking areas similar in size to the main works satellite compounds.
VISSIM	**-**	Micro-simulation traffic modelling software
Walkers, cyclists and horse riders	**WCH**	Walkers, cyclists and horse riders.
Workforce Accommodation Working Group	**WAWG**	n/a

Appendices

Appendix A Receptors and Model Verification Zones



Legend

Air Quality Receptors - Verification Zone

- 1
- 14

Rev	Status	Rev. Date	Purpose of revision	Drawn	Chck'd	Apprv'd
P01	S9	22/09/2023	Deadline 5	SW	SP	FM

Client: national highways

Project: LOWER THAMES CROSSING

Status: PINS SUBMISSION

Original Size: A3

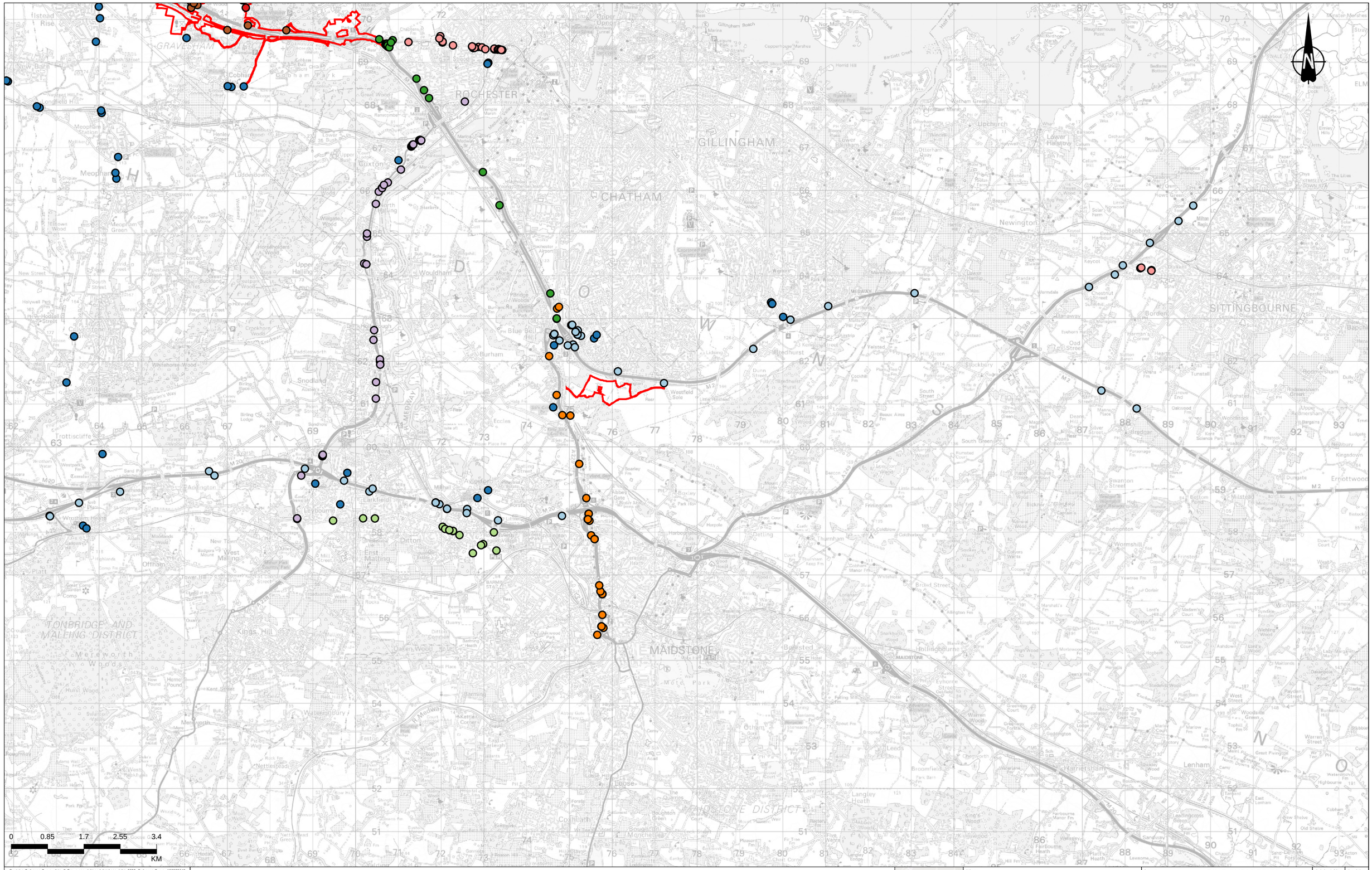
Revision: P01

Scale: 1:80,000

Application Document Number: TR010032/EXAM/9.117

Drawing Title: Receptors and Model Verification Zones

Drawing Number: HE540039-CJV-EAQ-SZP_EGNE00000000-DR-LE-00001



Legend

- Order Limits
- **Air Quality Receptors - Verification Zone**
  - 1
  - 5
  - 8
  - 9
  - 12
  - 14
  - 15
  - 16
  - 17
  - 18

Rev	Status	Rev. Date	Purpose of revision	Drawn	Chck'd	Apprv'd
P01	S9	22/09/2023	Deadline 5	SW	SP	FM

Client: national highways

Project: LOWER THAMES CROSSING

Status: PINS SUBMISSION

Original Size: A3

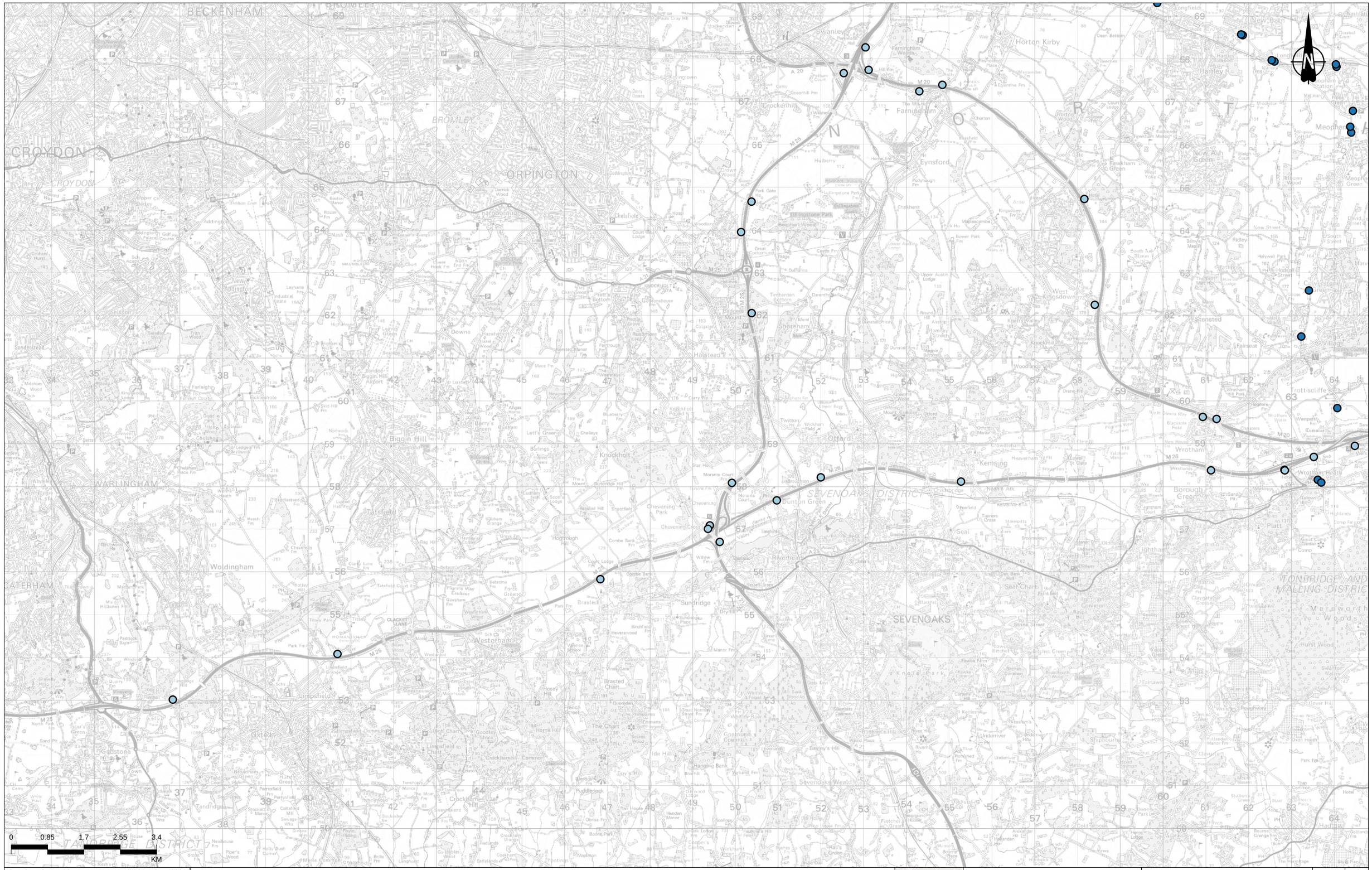
Revision: P01

Application Document Number: TR010032/EXAM/9.117

Scale: 1:80,000

Drawing Title: Receptors and Model Verification Zones

Drawing Number: HE540039-CJV-EAQ-SZP_EGNE00000000-DR-LE-00001



Legend

Air Quality Receptors - Verification Zone

- 1
- 14

Rev	Status	Rev. Date	Purpose of revision	Drawn	Chck'd	Apprv'd
P01	S9	22/09/2023	Deadline 5	SW	SP	FM

Client: national highways

Project: LOWER THAMES CROSSING

Status	PINS SUBMISSION	Original Size A3	Revision P01
Application Document Number	TR010032/EXAM/9.117	Scale 1:80,000	

Drawing Title

Receptors and Model Verification Zones

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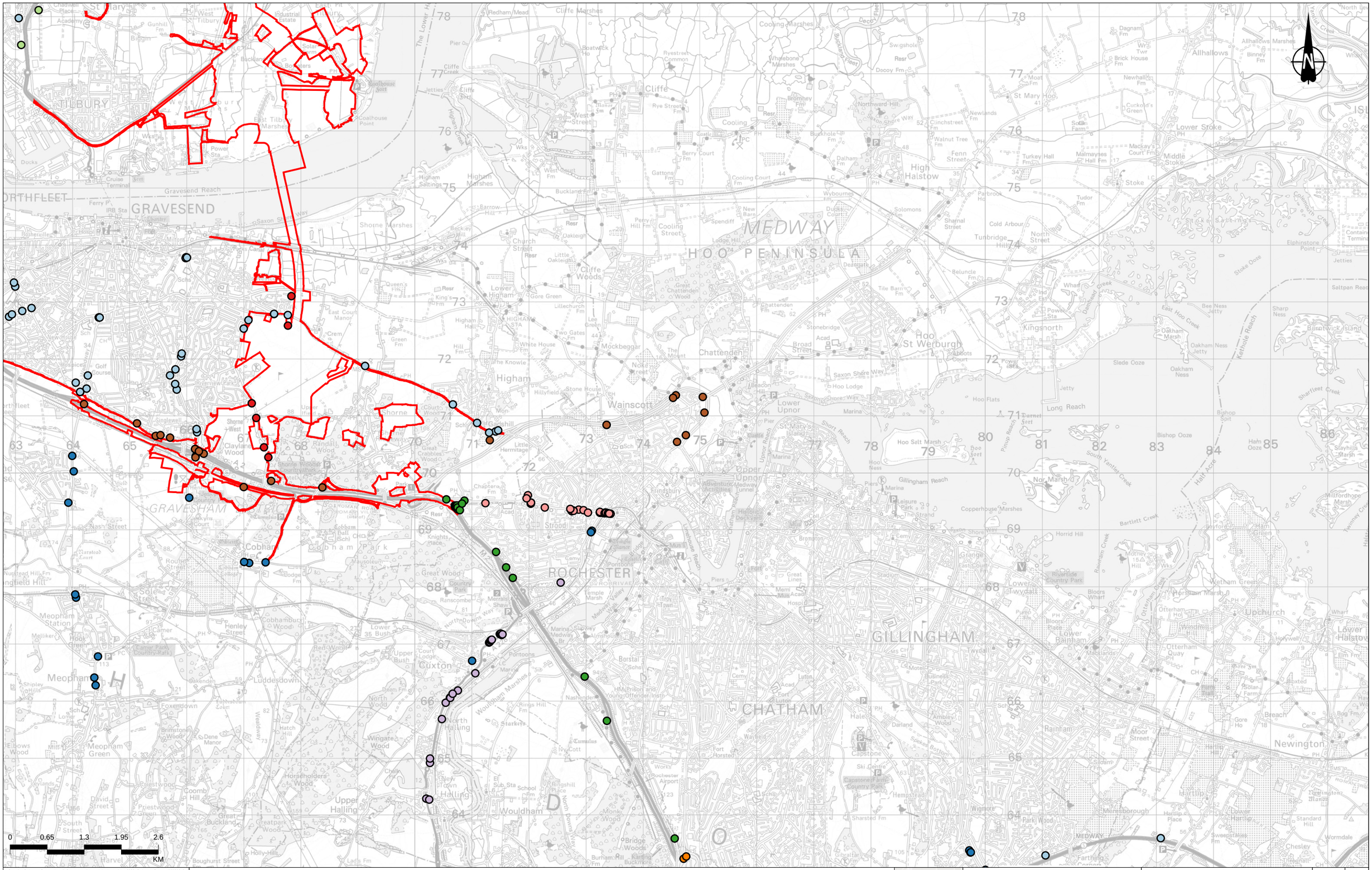
Drawing Number: HE540039-CJV-EAQ-SZP_EGNE00000000-DR-LE-00001



Legend

- Order Limits

Air Quality Receptors - Verification Zone

- 1
- 3
- 8
- 9
- 12
- 13
- 14
- 16
- 17
- 18

Rev	Status	Rev. Date	Purpose of revision	Drawn	Chck'd	Apprv'd
P01	S9	22/09/2023	Deadline 5	SW	SP	FM

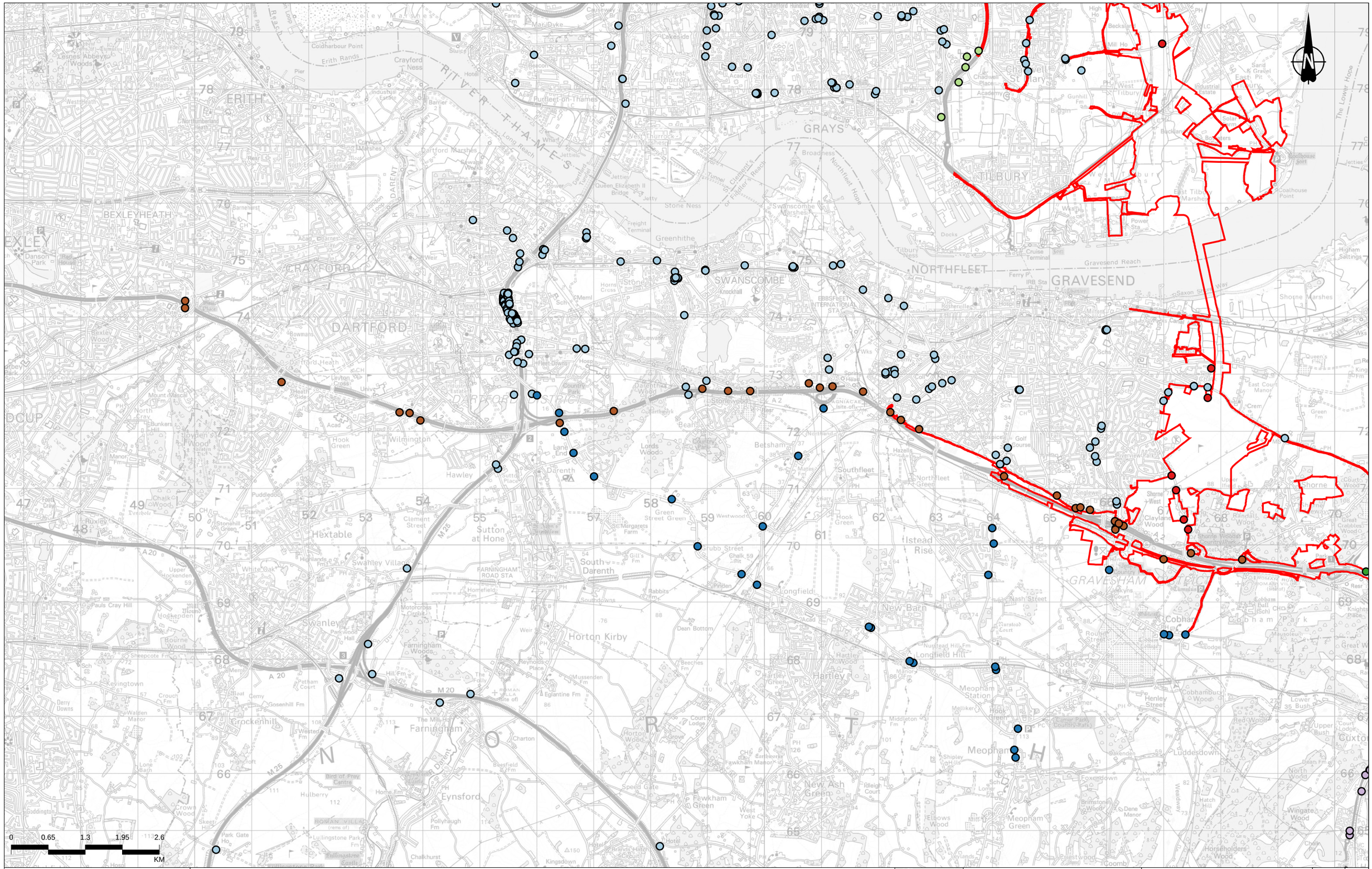
Client: national highways

Project: LOWER THAMES CROSSING

Status	PINS SUBMISSION
Original Size	A3
Revision	P01
Application Document Number	TR010032/EXAM/9.117
Scale	1:60,000

Drawing Title: Receptors and Model Verification Zones

Drawing Number: HE540039-CJV-EAQ-SZP_EGNE00000000-DR-LE-00001



Legend

▭ Order Limits

Air Quality Receptors - Verification Zone

●	1	●	12
●	3	●	13
●	9	●	14
		●	16
		●	18

Rev	Status	Rev. Date	Purpose of revision	Drawn	Chck'd	Apprv'd
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Client
national highways

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LOWER THAMES CROSSING

Status PINS SUBMISSION

Original Size A3

Revision P01

Application Document Number TR010032/EXAM/9.117

Scale 1:60,000

Drawing Title
Receptors and Model Verification Zones
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Drawing Number
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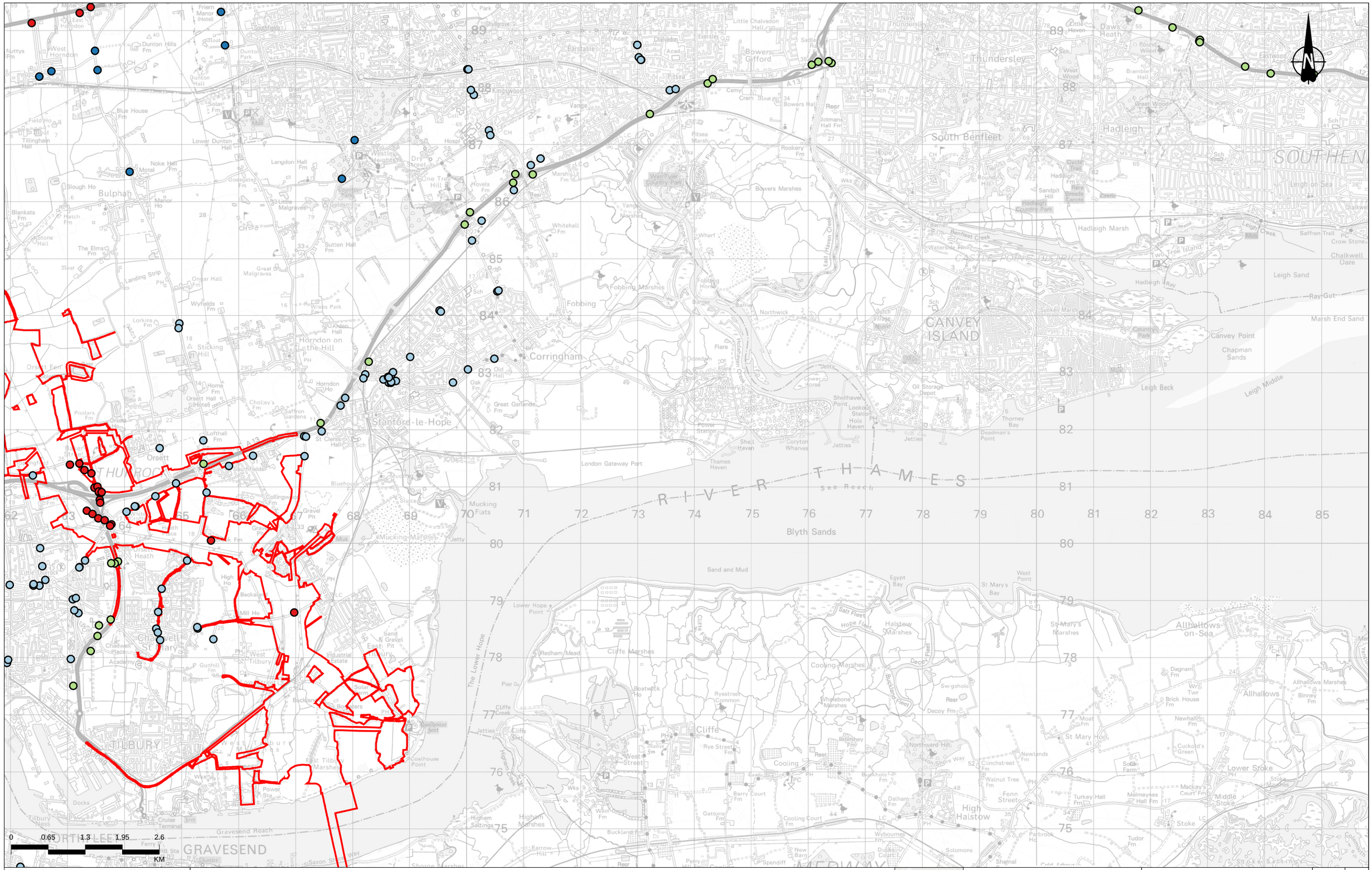

Legend

Order Limits

Air Quality Receptors - Verification Zone

- 3
- 6
- 13
- 14
- 18

Rev	Status	Rev. Date	Purpose of revision	Drawn	Chck'd	Apprv'd
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Client: national highways

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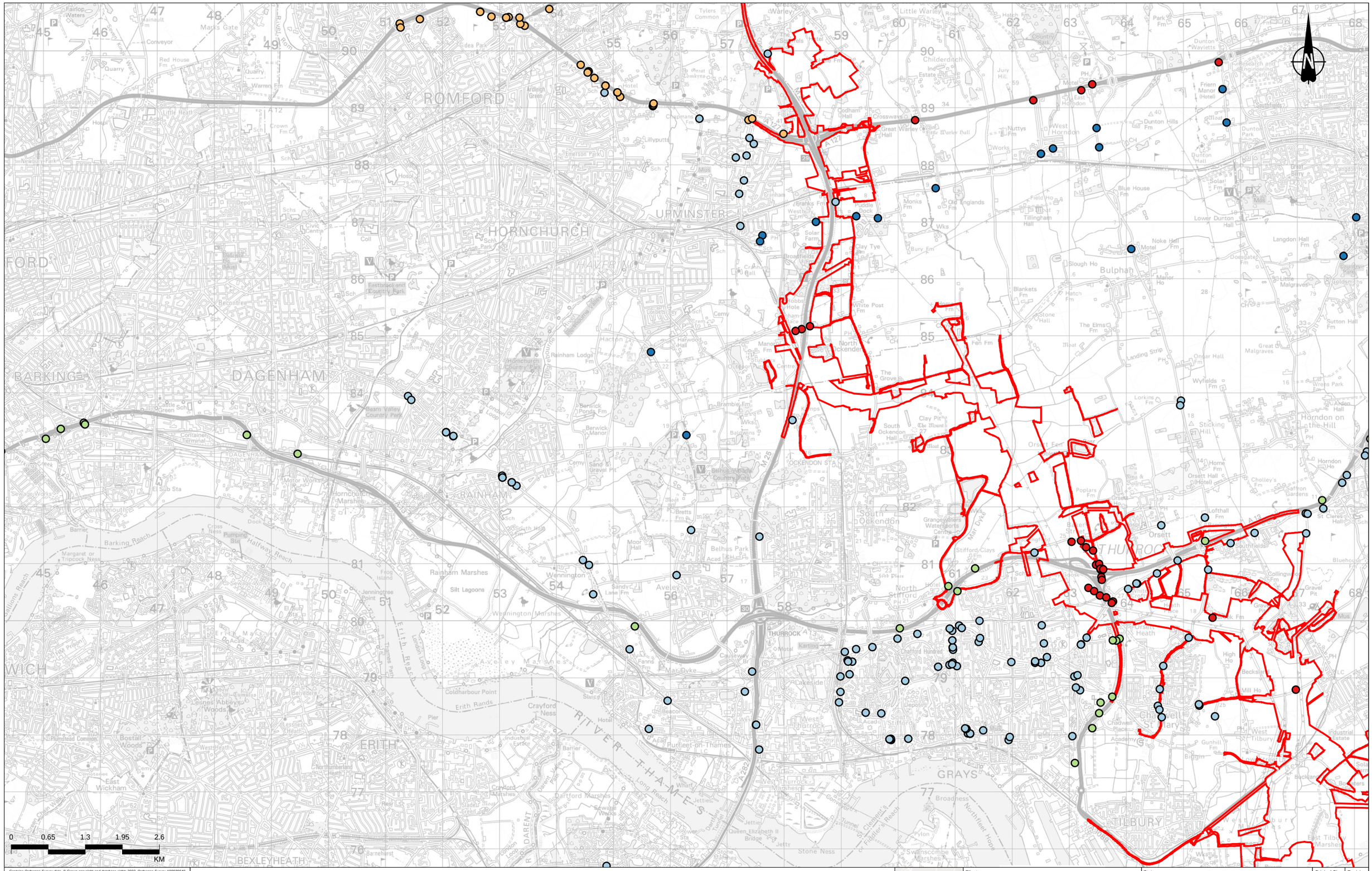
		Scale 1:60,000	

Drawing Title: Receptors and Model Verification Zones

Drawing Number: HE540039-CJV-EAQ-SZP_EGNE00000000-DR-LE-00001



Legend

- Order Limits
- **Air Quality Receptors - Verification Zone**
  - 1
  - 3
  - 6
  - 7
  - 13
  - 14
  - 18

Rev	Status	Rev. Date	Purpose of revision	Drawn	Chck'd	Apprv'd
P01	S9	22/09/2023	Deadline 5	SW	SP	FM

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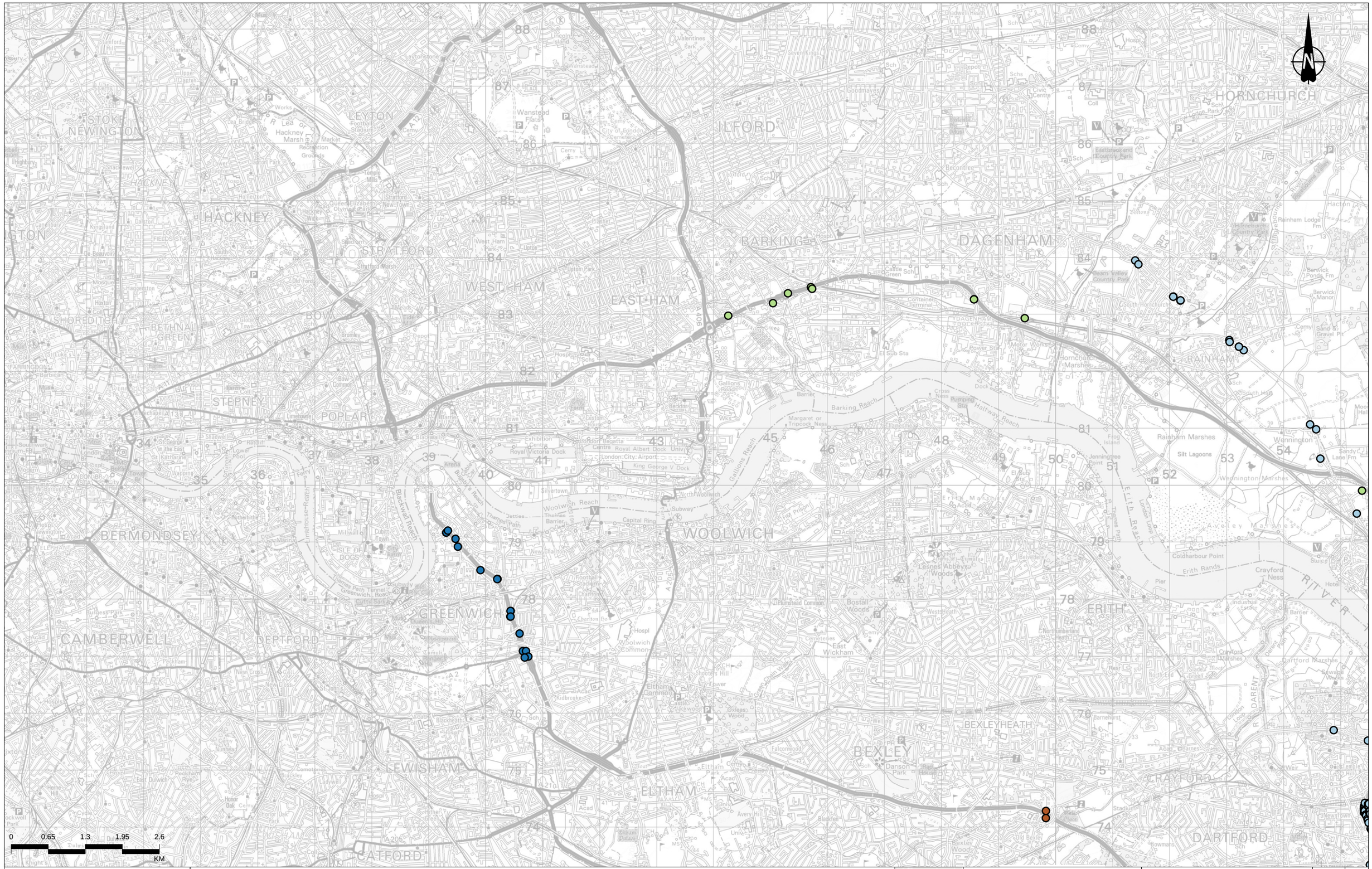

Legend

Air Quality Receptors - Verification Zone

- 1
- 2
- 3
- 12
- 13

Rev	Status	Rev. Date	Purpose of revision	Drawn	Chck'd	Apprv'd
P01	S9	22/09/2023	Deadline 5	SW	SP	FM

Client: national highways

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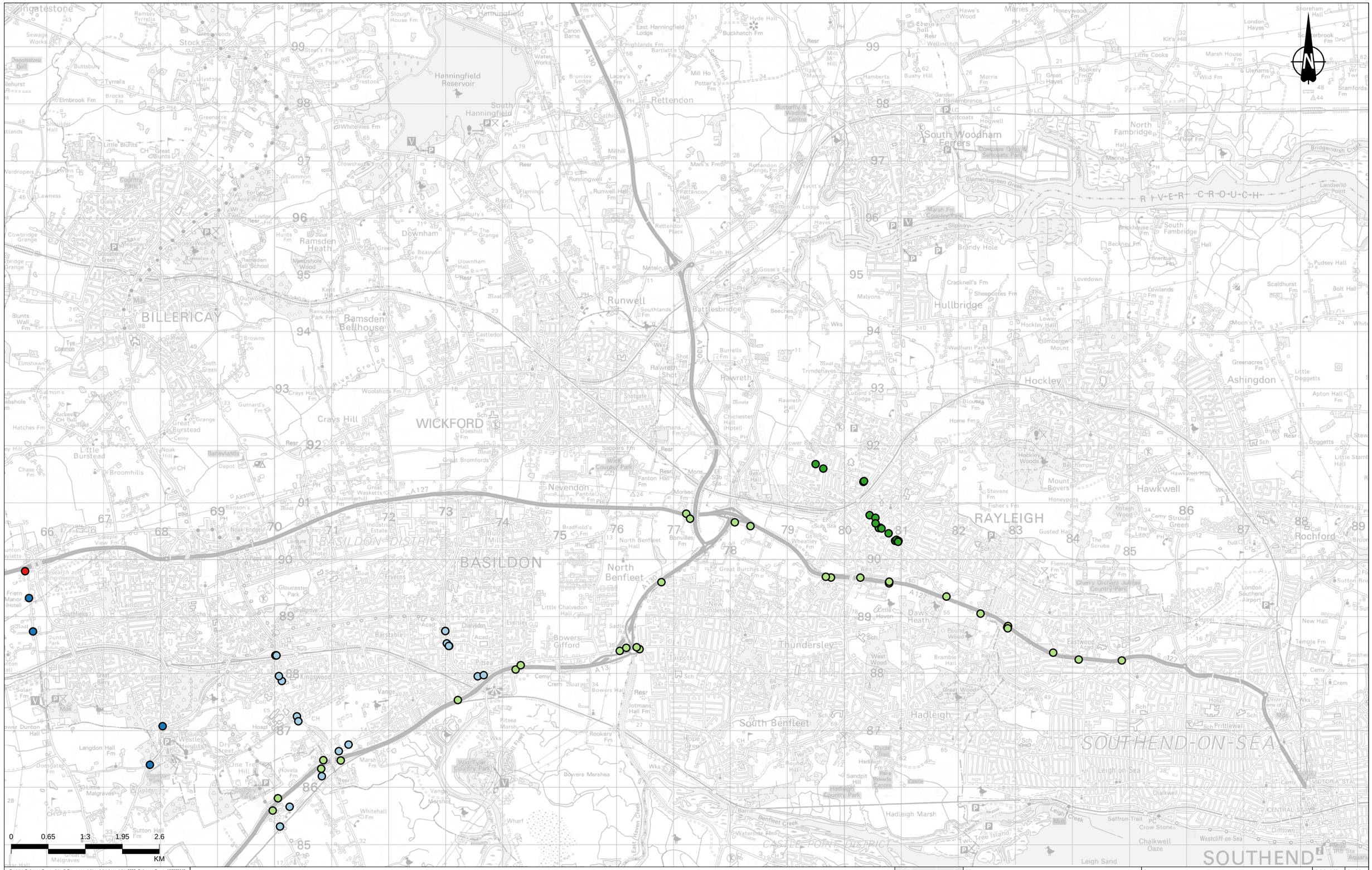

Rev	Status	Rev. Date	Purpose of revision	Drawn	Chck'd	Apprv'd
P01	S9	22/09/2023	Deadline 5	SW	SP	FM

Legend

Air Quality Receptors - Verification Zone

- ● 3
- ● 4
- ● 6
- ● 13
- ● 14

Client

national highways

Project

LOWER THAMES CROSSING

Status	PINS SUBMISSION
Application Document Number	TR010032/EXAM/9.117
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Scale	1:60,000

Drawing Title

Receptors and Model Verification Zones

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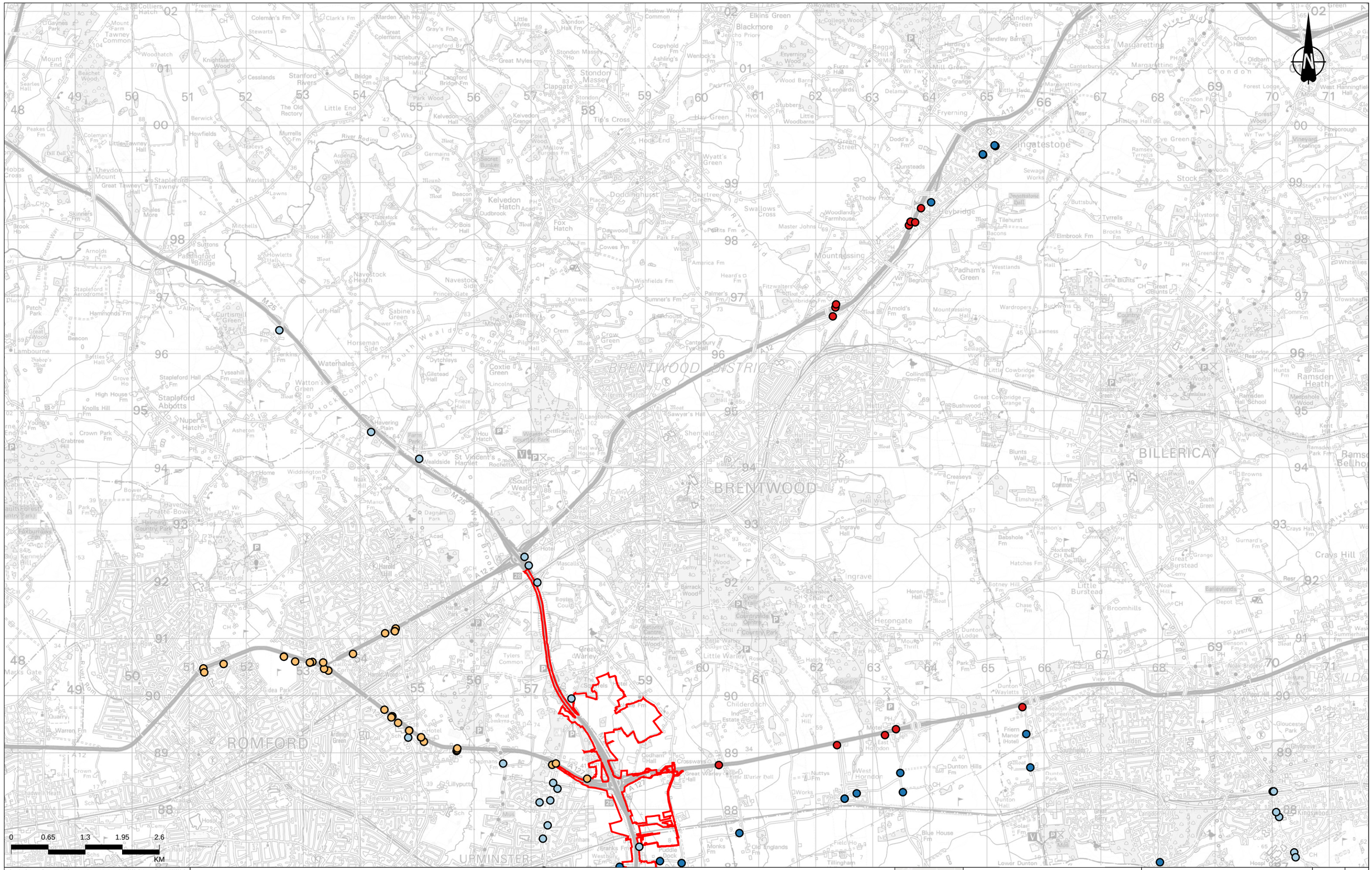

Legend

- Order Limits

Air Quality Receptors - Verification Zone

- 1
- 6
- 7
- 13
- 14

Rev	Status	Rev. Date	Purpose of revision	Drawn	Chck'd	Apprv'd
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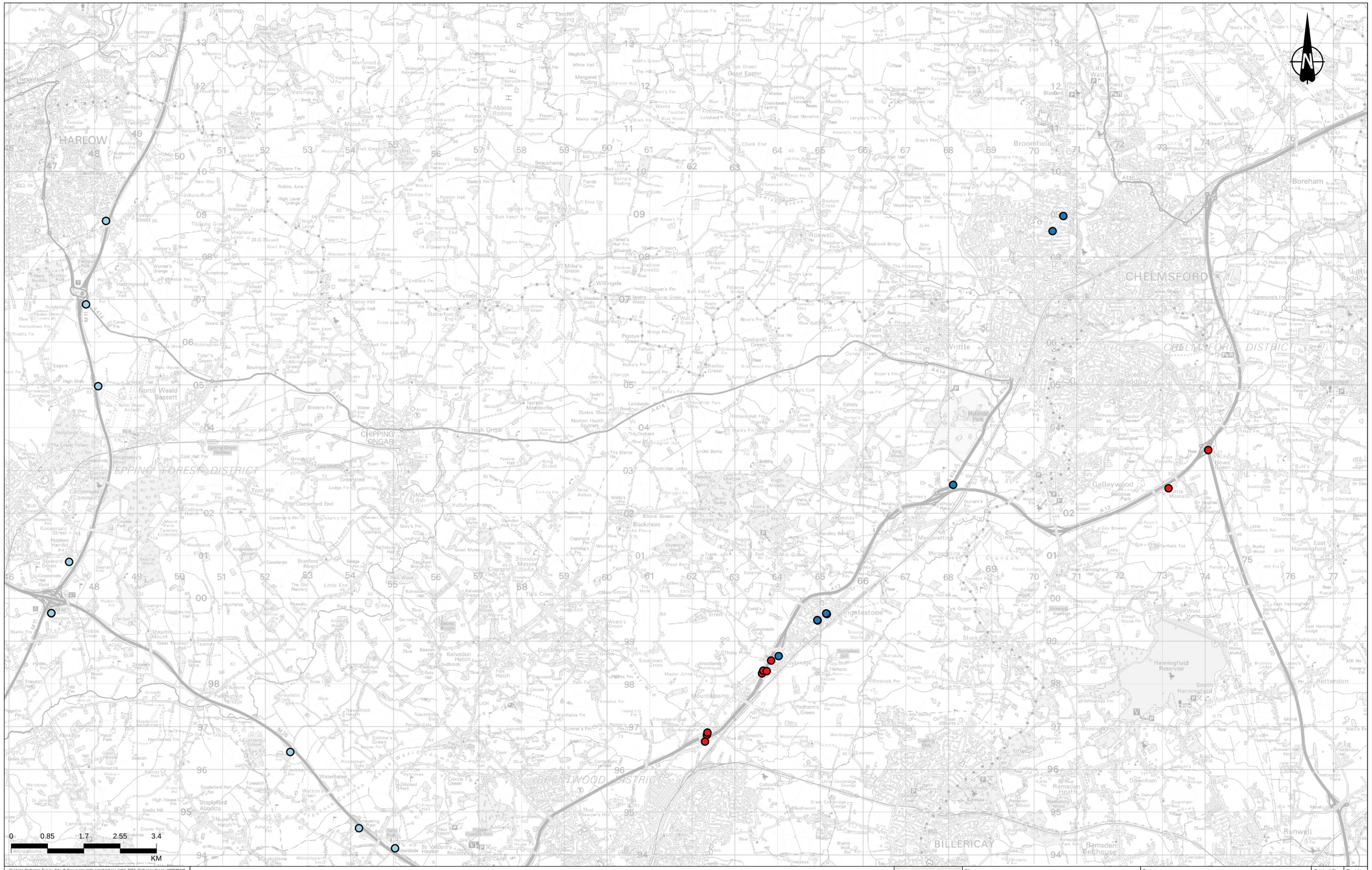

Legend

Air Quality Receptors - Verification Zone

- 1
- 6
- 14

Rev	Status	Rev. Date	Purpose of revision	Drawn	Chck'd	Apprv'd
P01	S9	22/09/2023	Deadline 5	SW	SP	FM

Client: national highways

Project: LOWER THAMES CROSSING

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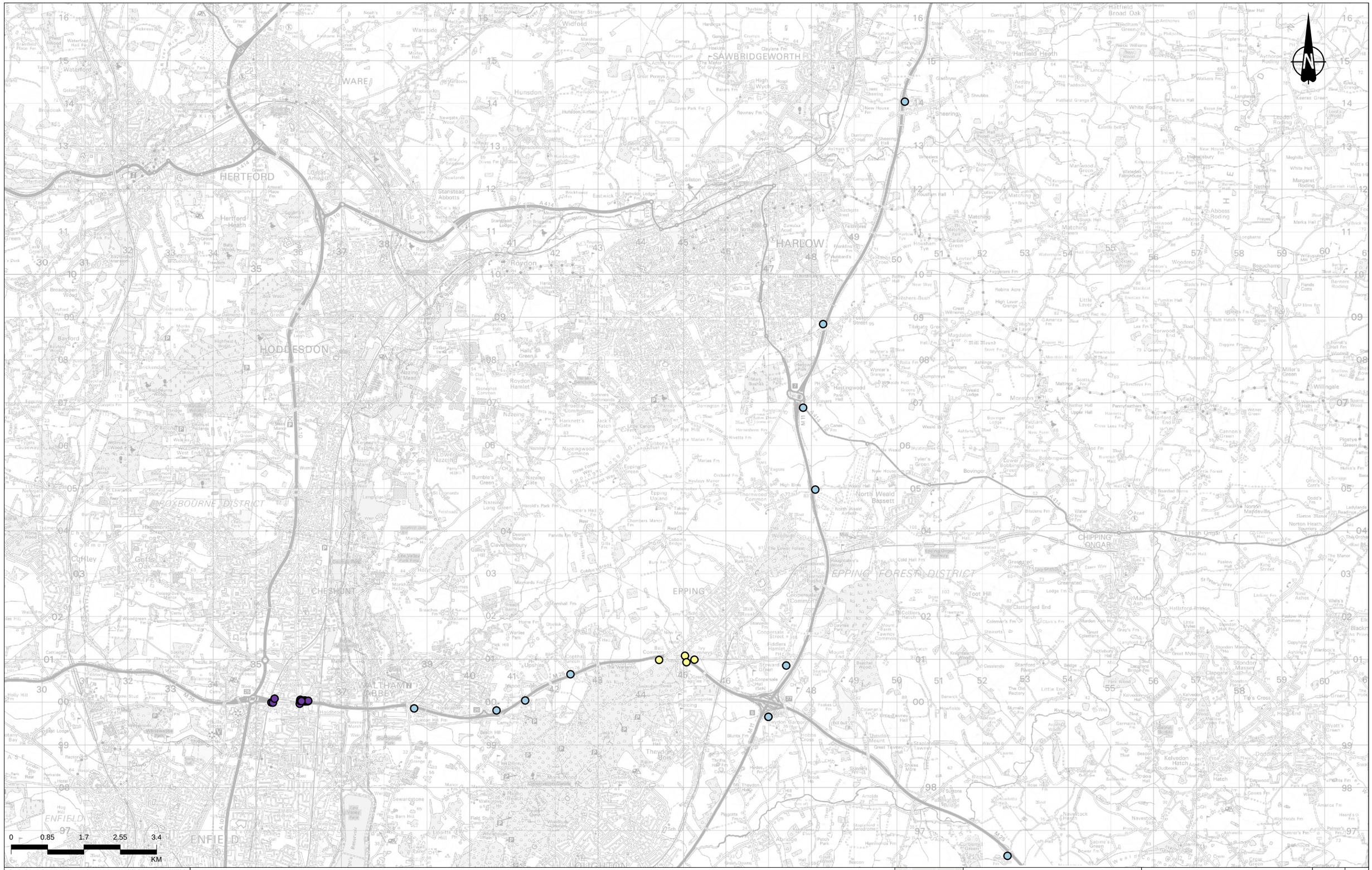
		Scale	1:80,000

Drawing Title: Receptors and Model Verification Zones

Drawing Number: HE540039-CJV-EAQ-SZP_EGNE00000000-DR-LE-00001



Legend

Air Quality Receptors - Verification Zone

- 1
- 10
- 11

Rev	Status	Rev. Date	Purpose of revision	Drawn	Chck'd	Appr'd
P01	S9	22/09/2023	Deadline 5	SW	SP	FM

Client: national highways

Project: LOWER THAMES CROSSING

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Drawing Title: Receptors and Model Verification Zones

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