national highways

Lower Thames Crossing

9.28 Final Agreed Statement of Common Ground between (1) National Highways and (2) Emergency Services and Safety Partnership Steering Group (ESSP SG) (Clean version)

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1.0	18 July 2023	Deadline 1
2.0	31 October 2023	Deadline 6
3.0	15 December 2023	Deadline 9A

Status of the Statement of Common Ground

This is the Final Agreed Statement of Common Ground between (1) National Highways (the Applicant) and (2) Emergency Services and Safety Partnership Steering Group (ESSP SG).

Both parties have reached agreement on the position of the status of all 40 matters. Of the 40 matters contained within, 26 matters are agreed and 14 are not agreed, leaving no matters outstanding.

On behalf of the Applicant

Name	[redacted]
Position	
Organisation	National Highways
Signature	[redacted]

On behalf of Emergency Services and Safety Partnership Steering Group (ESSP SG)

Name	[redacted]
Position	
Organisation	**Essex Police**
Signature	[redacted]

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List of contents

Page number

List of tables

Page number

1 Introduction

1.1 Purpose of the Statement of Common Ground

1.1.1 This Statement of Common Ground (SoCG) has been prepared in respect of the Development Consent Order (DCO) application for the proposed A122 Lower Thames Crossing (the Project) made by National Highways Limited (the Applicant) to the Secretary of State for Transport (Secretary of State) under section 37 of the Planning Act 2008 on 31 October 2022.

1.1.2 The SoCG has been produced to confirm to the Examining Authority where agreement has been reached between the Applicant and Emergency Services and Safety Partnership Steering Group (ESSP SG) and where agreement has not been reached.

1.1.3 This final version of the SoCG has been submitted at Examination Deadline 9A.

1.2 Parties to this Statement of Common Ground

1.2.1 This SoCG has been prepared in respect of the Project by (1) the Applicant, and (2) Emergency Services and Safety Partnership Steering Group (ESSP SG).

1.2.2 For the purposes of the SoCG, the emergency services refers to:

a. Kent Police

b. Kent Fire and Rescue Service

c. Essex Police

d. East of England Ambulance Service NHS Trust

e. Essex County Fire and Rescue Service

f. Southeast Coast Ambulance Service NHS Foundation Trust

g. Metropolitan Police

1.2.3 The Project's engagement with the emergency services was previously through the Tunnel Design and Safety Consultation Group (TDSCG) from January 2018 to February 2021 when it was superseded by the ESSP SG which is a group comprising the emergency services members identified at paragraph 1.2.2 above plus the safety partners who are the local authorities affected by the Project.[1] The local authorities in question are:

a. Thurrock Council

b. Gravesham Council

c. Essex County Council

[1] The ESSP SG has also received input from the Samaritans on specific issues.

1.2.4 Engagement with the ESSP SG has been through the Applicant's attendance at relevant parts of the ESSP SG's monthly meetings, weekly catch-ups with a representative of the group, as well as issue-specific workshops and meetings.

1.3 Rule 6 Instruction

1.3.1 Following publication of the Rule 6 letter on the 25 April 2023 which requested new SoCGs, with three Police Services (Essex Police, Kent Police and Metropolitan Police) the Applicant engaged with the parties to work towards progressing these individual SoCGs.

1.3.2 Kent Police and Essex Police confirmed that they wished to pursue individual SoCGs and as such, the Applicant has produced these documents alongside this ESSP SG SoCG. Where matters are solely related to Kent Police and Essex Police they have not been incorporated into this SoCG. The Essex Police SoCG and Kent Police SoCG have also been submitted at Examination Deadline 9A.

1.3.3 The Metropolitan Police have previously confirmed that they do not consider it necessary to enter into a SoCG and have confirmed their position to the Planning Inspectorate.

1.4 Principal Areas of Disagreement

1.4.1 On 19 December 2022, the Examining Authority made some early procedural decisions to assist the Applicant, potential Interested Parties and themselves to prepare for the Examination of the DCO application.

1.4.2 One of these procedural decisions was to use a tracker recording Principal Areas of Disagreement in Summary (PADS). This tracker is known as the PADS Tracker.

1.4.3 The PADS Tracker provides a record of principal matters of disagreement emerging from the SoCG and will be updated alongside the SoCG as appropriate throughout the Examination with the expectation that a revised PADS Tracker should be submitted at every Examination deadline.

1.4.4 The ESSP SG do not have a PADS Tracker.

1.5 Terminology

1.5.1 In the final position on matters table in Section 2 of this SoCG, "Matter Not Agreed" indicates agreement on the matter could not be reached following significant engagement. "Matter Agreed" indicates where the issue has now been resolved.

2 Matters

2.1 Final position on matters

2.1.1 A summary of engagement undertaken between the Applicant and ESSP SG is summarised in Table A.1 in Appendix A.

2.1.2 In Table 2.1, relevant issues relating directly to the draft Development Consent Order (dDCO) articles and Requirements in Schedule 2 to the dDCO have been identified under the heading 'DCO and Consents'. Some of the subsequent matters also relate to the wording of the dDCO and Requirements by referring back to earlier matters. Where the ESSP SG has sought proposed amendments to the wording in the dDCO, the Applicant invited the ESSP SG to provide the proposed wording in the SoCG.

2.1.3 In the column 'Item No' in Table 2.1, 'RRN' indicates a matter entered into the SoCG as a result of content in the Relevant Representation.

2.1.4 At Deadline 6 there were 40 matters in total of which seven matters were agreed and 33 remained under discussion. There have been no new matters added since that submission. In this final SoCG there are 26 matters Agreed, and 14 matters Not Agreed.

2.1.5 For the final SoCG the following matters are Agreed:

a. 2.1.1a - Content of the draft DCO and control documents and supporting documents

b. 2.1.1b(c) - Content of the draft DCO and control documents and supporting documents

c. 2.1.1b(d) - Content of the draft DCO and control documents and supporting documents

d. 2.1.1b(e) - Content of the draft DCO and control documents and supporting documents

e. 2.1.1b(f) - Content of the draft DCO and control documents and supporting documents

f. 2.1.1c - Content of the draft DCO and control documents and supporting documents

g. 2.1.3 - Procedures and requirements for the development of Contractor emergency preparedness and response plans

h. 2.1.4 - Removeable barriers

i. 2.1.5 - Emergency area

j. 2.1.6 - Protest

k. 2.1.7 - Protest plan

l. 2.1.8 - British Automatic Fire Sprinkler Association (BASFA) consultation

m. 2.1.9 - Detailed tunnel design consultation

n. 2.1.11 - Designing for Safety and Security

o. 2.1.12 - Provision for helicopter landing

p. 2.1.14 - Tunnel cross-passages

q. 2.1.15 - Fixed fire fighting system

r. 2.1.21 - Emergency Incident Management/Response Plans

s. 2.1.22 - Emergency access roads provision

t. 2.1.23 - Emergency preparedness procedures – Communication equipment

u. 2.1.24 - Tunnel emergency access roadways

v. 2.1.26 - Emergency hubs

w. 2.1.29 - Emergency Response/ Incident Management Plan

x. 2.1.30 - Operational risk assessment

y. 2.1.32 - Modern slavery, human trafficking and other hidden vulnerability and harm

z. 2.1.34 – Suicide prevention

2.1.6 For the final SoCG the following matters are Matter Not Agreed:

a. 2.1.1 - Content of the draft DCO and control documents and supporting documents

b. 2.1.1b(a) - Content of the draft DCO and control documents and supporting documents

c. 2.1.1b(b) - Content of the draft DCO and control documents and supporting documents

d. 2.1.2 - Security during construction

e. 2.1.13 - Tunnel evacuation assembly areas

f. 2.1.16 - Review of the impacts of the Project on the emergency services

g. 2.1.17 - Funding for co-ordination officer, Steering Group member officer time and service staffing and vehicles

h. 2.1.20 - Reimburse local authorities and emergency services

i. 2.1.25 - Emergency service RVP

j. 2.1.27 - Impacts on safety partners, emergency services and response times

k. 2.1.28 - Mitigation measures

l. 2.1.31 - Cumulative effects with other developments

m. 2.1.33 - Partner of mates in mind

n. 2.1.35 - Workforce health and wellbeing

2.1.7 References in parentheses [ ] in the ESSP SG comment section are references to the ESSP SG's Recommendations document submitted in relation to the Lower Thames Crossing Community Impacts Consultation in September 2021, and are set out in Appendix C to this SoCG.

2.1.8 This is the final Statement of Common Ground between the Applicant and ESSP SG.

Table 2.1 Final Positions of Matters

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
DCO and Consents					
Content of the draft DCO and control documents and supporting documents	2.1.1 RRN	The draft DCO should set out clearly the procedures and processes for approval of the detailed design, including those for consultation, so that there is no doubt about how it will be carried out. This requires commitments in the DCO and control documents. There are links between the design process, and the 'mitigation route map' as one has a knock-on effect for the other. For instance, detailed design of the RVPs, emergency access roads, evacuation assembly areas and safe routes need to be carefully integrated with proposals for emergency preparedness and response plan/procedures. ESSP SG has set out its position on consultation and approval proposals for the detailed design and mitigation (including security and operational plans for the completed LTC) in its responses	The draft DCO sets out the procedures and processes for approvals in Schedule 2 Requirement 3. This covers the procedure and process for detailed design, which must comply with the Design Principles document, among other things. Schedule 2, Part 2 provides the procedure for the discharge of Requirements and consultation. The Applicant has given further consideration to relevant detailed design items for consultation and has updated the Design Principles accordingly. Further information can be found in 2.1.1b of this SoCG. Details of consultation are outlined in Requirement 22 of the draft DCO. The Applicant acknowledges that the ESSP SG has concerns about the drafting of Requirement 20. The Applicant can confirm that	Draft DCO [**Document Reference 3.1 (11)**] Design Principles [**Document Reference 7.5 (7)**]	Matter Not Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		to ExQ16.1.2 and ExQ16.1.4; and in sections A and B (paragraphs 6 – 10) its Written Representation to Deadline 7 [**REP7-273**]. Progress has been made towards agreeing these matters – including the production of draft Terms of Reference for the TDSCG. However, the ESSP SG remains concerned about the absence of fully independent mechanisms for dispute resolution in the event that consensus cannot be achieved. The ESSP SG position in respect of the TDSCG is set out more fully in matter 2.1.1b(a) [Rec 2.1 introduction]	it was updated at Deadline 3 to address the ESSP SG's concerns. The TDSCG will also be set up to ensure consultation takes place with the emergency services, TDSCGs have been used on numerous road tunnel projects over many years; the TDSCG is described in Design Manual for Roads and Bridges (DMRB) CD 352 Design of road tunnels (Highways England, 2020). The Applicant is confident that the TDSCG is the correct forum for future design consultation and are committed to working closely with the emergency services to ensure that the TDSCG works in a format that delivers value for all parties. For more information on the TDSCG please see the Applicants response in 2.1.1b(a)		
	2.1.1a RRN	ESSP SG have requested that a clear definition of the emergency services be included in the draft DCO, to encompass all Police, Fire and Rescue, and	Emergency services is defined in paragraph 2.3.2 of the Code of Construction Practice (CoCP).	Draft DCO [**Document Reference 3.1 (11)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		Ambulance services areas through which the Project will pass. The Emergency Services are now named consultees in a number of control documents, including for the production of EMP2s, EMP3s, and TMPs; as well as identified as consultees on several items in the Design Principles. ESSP SG continues to have concerns regarding consultation proposals for other plans . However, those concerns can be addressed without providing a definition of the Emergency Services within the DCO itself. [Rec 2.1 point 1]	Emergency Services refers to Kent Police, Kent Fire and Rescue, Essex Police, East of England Ambulance Service, Essex County Fire and Rescue, Southeast Coast Ambulance Service, Metropolitan Police, London Fire Brigade and London Ambulance Service. This is reaffirmed in the Design Principle S6.01. It is acknowledged by the Applicant that originally the outline Traffic Management Plan for Construction did not share the same definition as the documents listed above and as such this was addressed in the Deadline 5 submission of the oTMPfC. To confirm, emergency services is now defined in three documents; the Design Principles, the CoCP, and the outline Traffic Management Plan for Construction and as such the Applicant believes the issue of defining emergency services has been robustly addressed and that	Design Principles [**Document Reference 7.5 (7)**] CoCP [**Document Reference 6.3 ES Appendix 2.2 (9)**] Outline Traffic Management Plan for Construction [**Document Reference 7.14 (9)**]	

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			other matters in the SoCG cover the extent to which they are consulted. Furthermore, details of consultation are outlined in Requirement 20 of the draft DCO. The Applicant acknowledges that the ESSP SG has concerns about the drafting of Requirement 20. The Applicant can confirm that it has been updated at Deadline 3 to address the ESSP SG's concerns. The Applicant notes that the ESSP SG do have further concerns such as the Security Management Plan and that this is covered in sections of the SoCG below.		
	2.1.1b(a) RRN	The emergency services are named consultees on the preparation of and submission for approval of: The detailed design. ESSP SG welcomes changes to the Design Principles to specify the Emergency Services as consultees on specific issues.	Requirement 3 notes that the authorised development must be designed in detail and carried out in accordance with the design principles document. As noted in the roadmap issued to the Steering Group on 31 July 2023, the Design Principles submitted at Deadline 3	Design Principles [**Document Reference 7.5 (7)**] Stakeholder Actions and Commitments Register [**Document Reference 7.21 (7)**]	Matter Not Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		The ESSP SG remains concerned at the proposal to use the Tunnel Design and Safety Consultation Group (DMRB CD352) as the vehicle for consultation with the Emergency Services. ESSP SG welcomes both the Applicant's introduction of commitment SACR-017 to the Stakeholder Action and Commitments Register; and production of draft Terms of Reference for the TDSCG (see Appendix D to this SoCG). However, the ESSP SG remains concerned that the escalation process to deal with dispute resolution (section 7) involves Safety Control Groups which do not seem to be fully independent of the Applicant. Therefore the ESSP SG does not agree this matter. [Rec 2.1 point 2]	confirm the following for the emergency services: S9.21 – An Emergency Services Rendezvous Point (RVP) area shall be provided. The detailed design and layout of the RVP will be developed in consultation with the emergency services. S9.23 – An area suitable (flat, unobstructed, stable) for landing a helicopter (air ambulance or similar) shall be identified in the vicinity of the tunnel portal inside of the Order Limits. The location of the landing area will be determined in consultation with the emergency services. S9.24 – Points suitable for initial mustering of tunnel evacuees, including safe access routes, shall be identified in the vicinity of the tunnel portal inside of the Order Limits. The detailed design and layout of the muster points will be developed in consultation with the Emergency Services.		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			Since Deadline 3, further Design Principles have been added. These are referred to in other areas of this SoCG, but include tunnel cross-passages, Fixed Fire-Fighting System, emergency crossing points, emergency hubs, and access roadways. More generally, for detailed design, the consultation with the emergency services will be through the provisions of DMRB CD 352 (Highways England, 2020) TDSCG process. The Applicant notes that the ESSP SG has expressed concerns about the use of the TDSCG. While this is an established process, the Applicant has sought to provide further reassurance to ESSP SG. This has included reference to the TDSCG within the Stakeholder Action and Commitments Register with the following commitment: *SAC-017* - Key elements of the detailed design in relation to safety and operational		

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			effectiveness shall be subject to consultation through a Tunnel Design and Safety Consultation Group (TDSCG). Topics of consultation through the TDSCG shall include, but not be limited to, the matters identified in the agreed terms of reference (which reflect Appendix A2 of Design Manual for Roads and Bridges (DMRB) CD 352). Details of information presented to the TDSCG, along with any feedback and comments received (which shall be assessed and incorporated into the detailed design as far as reasonably practicable), shall be formally recorded into a finalised safety consultation document (as defined in DMRB CG 300). Furthermore, the Applicant has issued a detailed terms of reference to the group. The Applicant notes that while the ESSP SG broadly supports the ToR, they have concerns relating to how, in the event of not reaching a		

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			consensus on an issue within TDSCG, issues would be escalated and resolved. The Applicant believes that the most appropriate escalation mechanism would be in accordance with National Highways Health and Safety Arrangement HSA009 'Management Arrangement of Safety Risk for National Highways Activities', and DMRB GG104 'Requirements for safety risk assessment' as these process are in use for all projects undertaked by the Applicant. This process would involve the matter being considered through a Safety Control Review Group (SCRG). Decision making and attendance of the SCRG is suitably independent of the activity and can also invite external independent advice and recommendations.		
	2.1.1b(b)	The emergency services should be named consultees on the preparation of and submission for approval of:	The Applicant has made a commitment in the CoCP to consult with the emergency services in the preparation and	CoCP [**Document Reference 6.3 ES Appendix 2.2 (9)**]	Matter Not Agreed

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		The Environmental Management Plan (EMP, Second Iteration) The EMP Third Iteration Construction matters of importance to the ESSP SG – such as Security Management Plans, emergency access to construction areas, emergency preparedness procedures – will not be included in EMP2s, making consultation of limited purpose. Matters of importance to ESSP SG are all "EMP2 will require" items which will not be subject to scrutiny by the Secretary of State, but will be produced by contractors and approved by National Highways. ESSP SG welcomes the production of draft Terms of Reference for the proposed Security Partnership Working Group. Those terms of reference are largely agreed by the ESSP SG, including it terms of the scope of the SPWG remit. However, where consensus on issues cannot be achieved within the SPWG, the terms of	submission for approval of the following documents: EMP2: Once accepted by the Applicant, the Contractors' EMP2s and topic management plans will be submitted to the Secretary of State (SoS) for approval as per Schedule 2, Part 2 of the draft DCO after engagement with the bodies in Table 2.1 of the oTMPfC on matters related to their functions. EMP3: During the final stages of the construction phase, the Contractors will each prepare an EMP3 with engagement with relevant stakeholders (on matters relevant to their respective functions only) as listed in Table 2.1 in the CoCP, and subject to agreement by the Applicant. With regard to the SMP, the Applicant has recognised the concerns raised and as a result, at Deadline 4, the Applicant updated the paragraph 6.7.5 of the CoCP to ensure that Contractors will "*consult"* with		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		reference set out a dispute resolution mechanism which relies on the Joint Operations Forum. The ESSP SG is not represented on the JOF, which is made up of contractors and Applicant representatives. ESSP SG is concerned that this does not constitute an independent and impartial means of dispute resolution, such as would be offered by independent arbitration or approval by the Secretary of State. Therefore the ESSP SG does not agree this matter. **EMP3s** ESSP SG has not identified any matters specified in the CoCP which would require consultation with the Emergency Services on EMP3. There is nothing in CoCP section 6.13 or the REAC to deal with the concerns of the ESSP SG. This means that issues of concern to the Emergency Services during the operational phase – such as emergency preparedness procedures, plans for dealing with tunnel	the relevant emergency services on the production of the SMP. Furthermore, as noted in paragraph 6.7.5 of the Deadline 8 submission of the Code of Construction Practice, the Applicant has confirmed that this consultation will take place though the Security Partnership Working Group of which Police Services are members alongside the Applicant and its delivery partners.		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		evacuation etc – are not secured through the CoCP. The Applicant has stated that these matters will be developed through the Tunnel Design and Safety Consultation Group. Therefore reference should be made to the views of the ESSP SG in relation to TDSCG, as set out in matters 2.1.1 and 2.1.1b(a) of this Statement of Common Ground			
	2.1.1b(c)	The emergency services are named consultees on the preparation of and submission for approval of the Landscaping Scheme. ESSP SG welcomes the inclusion of the Emergency Services as consultees on the LEMP.	As noted in Requirement 5 Landscape and ecology of the Draft DCO, consultation will take place with those listed in Table 2.1 of the outline Landscape and Ecology Management Plan (LEMP) and this table includes the emergency services.	Draft DCO [**Document Reference 3.1 (11)**] **Outline Landscape and Ecology Management Plan** [**Document Reference 6.7 (7)**]	Matter Agreed
	2.1.1b(d)	The emergency services are named consultees on the preparation of and submission for approval of Traffic Management Plans (TMPs) for each part of the construction phase.	A requirement for consultation with emergency services in the development of the Traffic Management Plan is already secured through Requirement 10 of Schedule 2 of the draft DCO and the outline Traffic Management Plan for	oTMPfC [**Document Reference 7.14 (9)**]	Matter agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		The ESSP SG welcomes the inclusion of the Emergency Services as consultees on the Traffic Management Plans. ESSP SG also welcomes the statement in the oTMPfC that the emergency services would be members of the Traffic Management Forums (TMF). However, ESSP SG remains unclear about details of the TMF, including: exactly who would be included organisational structure decision taking processes how opposing views of members would be resolved which groups are relevant to each other, and how information will be transferred between them. If these items can be agreed and secured, possibly in a side agreement, then it is possible this matter can move to Agreed status. [Rec 8.4, 8.5]	Construction (oTMPfC) through reference to consultees in Table 2.1. Table 2.1 of the oTMPfC states that emergency services will be part of the Traffic Management Forum. Table 2.3 of the oTMPfC details elements to be addressed in the TMP as it relates to the Emergency Services. Plates 3.2 and 3.3 of the oTMPfC provide further information on the operation of the forum, as well as the escalation process.		
	2.1.1b(e)	The emergency services are named consultees on the preparation of and submission for approval of:	All of the Project's proposed temporary and permanent "means of enclosure" accords with the Department for	CoCP [**Document Reference 6.3 ES Appendix 2.2 (9)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		Means of enclosure' in accordance with Volume 1, Series 0300 of the Manual of Contract Documents for Highways Works. This recommendation relates to the scheme design. ESSP SG welcomes the specified standard, but maintains its request for the emergency services to be consulted on the means of enclosure, to ensure that any design changes and departures will still result in risk-commensurate measures. If this consultation can be secured by means other than the dDCO itself, that should be confirmed through further discussion. [Rec 2.1.2f)]	Transport's Volume 1, Series 0300 of the Manual Contract Documents for Highways Works. There is no requirement to consult any third parties. Series 0300 relates to temporary and permanent fencing requirements for the road corridor but does not address security fencing requirements. If the ESSP SG concerns relate to consultation on security fencing and hoarding, then the Applicant notes there are existing provisions in the CoCP relating to security management, which include requirements for consultation with emergency services. With regard to permanent security fencing, this matter will be considered within the TDSCG of which the emergency services will be members. The Applicant notes that the ESSP SG has expressed concerns about the use of the TDSCG and the Applicant has		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			provided a response to this in 2.1.1b(a).		
	2.1.1b(f)	The ESSP SG has reviewed its position and withdraws its request to be consulted on the preparation of and submission for approval of the traffic impact monitoring scheme (WNIMMP).	Table 2.1 of the WNIMMP provides a list of stakeholders to be consulted. The Applicant notes the withdrawal of the ESSP SG's request to be one of the consultees. For the traffic impact monitoring, the emergency services members of the ESSP SG will be involved through the Traffic Monitoring Forum (TMF) as set out in Table 2.2 of the outline Traffic Management Plan for Construction (oTMPfC) and their input into the Joint Operations Forum (JOF).	oTMPfC [**Document Reference 7.14 (9)**]	Matter Agreed
	2.1.1c RRN	The undertaker is required to take into account and report on the views of the emergency services prior to submission of details for approval by the SoS. The emergency services have previously requested 8 weeks in which to provide their views when consulted by the undertaker.	As per Schedule 2 Part 2 of the draft DCO 'Details of consultation', where an application is made to the SoS which requires the undertaker to consult with a named body (such as the emergency services), the Applicant must give due consideration of any representation made by the body and include with its	Draft DCO [**Document Reference 3.1 (11)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		The ESSP SG welcomes the changes to Requirement 22 (previously 20) ensuring that the views of the Emergency Services are taken into account and reported to the Secretary of State on matters related to certain of the control documents; and that the stated consultation periods would apply. In relation to those control documents, this matter can be moved to Agreed status. [Rec 2.1, point 3; and Rec 2.1 part 4]	application to the SoS copies of any representations made together with a written account of how such representations have been taken into account in the submitted application. Requirement 22 of Schedule 2 of the draft DCO sets out the requirements for how responses to consultation undertaken prior to Secretary of State approval of Schedule 2 management plans are to be addressed and documented. Where the Emergency Services have been identified as a consultee in Schedule 2, Requirement 22(1) requires: • Emergency Services to be provided with not less than 28 days to respond on any documents being consulted on • Due consideration of representations (responses) • Inclusion of representations made in the document submission and written details of how any		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			representations have been taken into account in the submitted application. At Deadline 3 the Applicant submitted an updated Draft DCO which amended Requirement 20 (Requirement 22 at Deadline 9) to include "person" to address the concerns raise by the group.		
Security during Construction	2.1.2 RRN	Previously, the ESSPSG requested that the CoCP should be amended to: • Set out a strategy for dealing with security issues • Include a security strategy for contractors to follow • Reference established standards to ensure consistency across all sites • Refer to security issues as part of the work of the JOF • Include a requirement for contractors to include security issues in their detailed contractor proposals The ESSP SG welcomes the Applicant's proposed Security Partnership Working Group	The CoCP has been updated to reflect many of the recommendations. Section 6.7 of the CoCP refers to the Centre for the Protection of National Infrastructure (CPNI) (now the National Protective Security Authority (NPSA)) guidelines and to the Project's Security Management Plan (SMP) and Physical Security Execution Plan (PSEP) which will be shared with the Contractors to clearly define the responsibilities and accountabilities of their security to the programme and how it is part of the overall	CoCP **[Document Reference 6.3 ES Appendix 2.2 (9)]**	Matter Not Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		(SPWG) to address these issues, and in large part accepts the draft terms of reference for the SPWG (29/11/23). However, consistent with its views expressed in relation to matter 2.1.1b(b) of this SoCG, the ESSP SG does not accept the proposed mechanism for resolution of disputes via the Joint Operations Forum. The ESSP SG is not represented on the JOF; nor is the JOF independent of the Project. For this reason the ESSP SG does not agree this matter. [Rec 4.2 and Rec 4.3, with cross reference to Rec 4.1]	security strategy by the Project. The JOF has been added to the CoCP at Section 4.3.3. CoCP paragraph 4.3.4, bullet point i) includes 'security' as a topic to be coordinated in the Joint Operations Forum (JOF). As noted in paragraph 4.3.5 of the Deadline 8 submission of the CoCP the JOF will also be the escalation body for any matters arising from the Security Partnership Working Group. With regard to the SMP, the Applicant has recognised the concerns raised and as a result, at Deadline 4, the Applicant updated paragraph 6.7.5 of the CoCP to ensure that Contractors will "*consult*" with the relevant emergency services on the production of the SMP. Furthermore, as noted in paragraph 6.7.5 of the Deadline 8 submission of the Code of Construction Practice, the Applicant has confirmed that this consultation will take		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			place though the Security Partnership Working Group of which Police Services are members alongside the Applicant and its delivery partners.		
Procedures and requirements for the development of Contractor emergency preparedness and response plans	2.1.3 RRN	The ESSP SG acknowledges the requirement in the CoCP for contractors to prepare emergency preparedness and response plans in consultation with the Emergency Services. ESSP SG has previously suggested that: • these response plans should be contained within EMP2s and subject to approval by the Secretary of State, rather than "will require" items.; • Consultation arrangements should be clarified; • Plans should contain specific measures to deal with fire incidents in the tunnels • Plans should include a minimum contents list for the tunnel plan, as per 10.33 and Appendix F of the ESSP SG recommendations (Dartford -	Section 6.9 of the CoCP addresses the scope and parameters of the Emergency Preparedness Procedures. The CoCP requires in para 6.9.1 the Contractors to prepare emergency preparedness procedures for each worksite. The CoCP (para 6.9.1) requires consultation with the emergency services in development of these procedures. The CoCP (para 6.9.2) also requires these procedures be reviewed quarterly, or where there is a change in procedure. As the requirement for emergency preparedness procedures are required by the CoCP, this requirement is secured under Requirement 4(2) of the DCO.	CoCP **[Document Reference 6.3 ES Appendix 2.2 (9)]** Draft DCO **[Document Reference 3.1 (11)]**	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		Thurrock Crossing Emergency Response Plan). The ESSP SG welcomes the Applicant's proposed Security Partnership Working Group (SPWG) to address these issues, and in large part accepts the draft terms of reference for the SPWG (29/11/23). Therefore this matter is agreed, despite the ESSP SG outstanding concerns regarding dispute resolution for the SPWG (see matters 2.1.1b(b) and 2.1.2 of this SoCG). [Rec 5.1, Rec 5.3 and Rec 10.1]	The CoCP requires in para 6.9.5 for internal haul roads which might be used by emergency services to be fit for that purpose. As noted in item 2.1.2, the relevant emergency services will also be consulted on the production of SMPs.		
Removeable barriers	2.1.4 RRN	Removeable barriers around the tunnel should be: • Clearly identified in the DCO Works in Schedule 1 and on approved plans • Justified in terms of their positioning and number, in relation to plans for responding to incidents, with consideration given to providing additional removeable barriers.	The tunnel removeable barriers are shown on the updated General Arrangement Plans submitted at Deadline 7. The works are described in Schedule 1 of the draft DCO in the relevant work numbers (Work No. 3C and 5A). The number and location of the removable barriers have been determined in conjunction with the anticipated operational scenarios and other facilities	General Arrangement Plans [**REP7-024 to REP7-028**] Design Principles [**Document Reference 7.5 (6)**] Draft DCO [**Document Reference 3.1 (11)**] Engineering Drawings and	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		• The ESSP SG notes that "central reserve crossing points" are shown on the General Arrangement drawings; and draft DCO text makes no reference to removeable barriers, including at Works 3C and 5A in schedule 1 of the dDCO; though they are shown on the Engineering Drawings and Sections. ESSP SG welcomes the inclusion of Design Principles STR18 and S3.23 requiring consultation with the Emergency Services on the detailed design of 'central reserve crossing points' and their identification on the General Arrangement drawings. The Applicant has also stated that the wording of Work No.3C and Work No. 5A of Schedule 1 in the draft DCO will be amended at Deadline 9 to include explicit reference to central reserve emergency crossing points. On that basis the ESSP SG can agree this matter. [Rec 5.9]	at the portals, e.g. portal road service facilities. Removable barriers at the South Portal and North Portal are labelled in the Engineering Drawings and Sections Volume A on Sheets 1 and 4 respectively. The provision of additional removable barriers would be dealt with through the detailed design process in accordance with existing National Highways standards which require consultation with emergency services on elements such as removable barriers within the TDSCG. To provide further reassurances to the ESSP SG on this matter, as requested by ESSP SG, the Applicant has provided the following new design principles are Deadline 8: STR.18: Central reserve emergency crossing points will be provided in accordance with DMRB GD 368 and CD 192. The location and detailed design of the central reserve	Sections Volume A [**Document Reference 2.9 Volume A (6)**]	

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			emergency crossing points will be developed in consultation with the emergency services. S3.23: A central reserve emergency crossing point shall be provided on the approach to the southern tunnel portal. The detailed design of the central reserve emergency crossing point will be in accordance with DMRB GD 368 and CD 192, and will be developed in consultation with the emergency services.		
Emergency area	2.1.5 RRN	Clarification on the identification of emergency rendezvous areas has been provided in the DCO submissions. For comments on the acceptability of the RVP proposals, please see item 2.1.25 of this Statement of Common Ground. [Rec 7.2]	Work No 5A (ix) in Schedule 1 of the dDCO describes a new rendezvous emergency area at the North Portal which is shown in Sheet 20 of the General Arrangement Plans – Volume B and Sheet 20 of the Works Plans – Volume B – Composite. The South Portal emergency rendezvous area is described as Work No. 3F and is shown on Sheet 13 of both the General Arrangement drawings – Volume B and the	General Arrangement Plans – Volume B [**Document Reference 2.5 Volume B (5)**] Works Plans Volume B – Composite [**Document Reference 2.6 Volume B Composite (6**] Draft DCO [**Document**	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			Works Plans – Volume B – Composite. The Applicant acknowledges that concerns remain around the RVPs and this is outlined in more detail in items 2.1.25.	**Reference 3.1 (11)**]	
Protest	2.1.6 RRN	The CoCP does not make any explicit provision to deal with protest during the preliminary, enabling works phase. This should be addressed. The ESSP SG welcomes the progress which has been made to develop the Security Protection Working Group, including discussions around the identification of a general protest area; and around liaison with community and protest groups . The ESSP SG does not accept the proposed mechanism for resolution of SPWG disputes via the Joint Operations Forum. (see matters 2.1.1b(b) and 2.1.2 of this SoCG). Nevertheless, with the exception of this reservation, the ESSP SG is prepared to agree this matter. [Rec 3.3]	The CoCP (Section 6.7) requires the Contractor to prepare a Security Management Plan (SMP) which will detail how they propose to manage protest action. CoCP paragraph 6.7.5 requires consultation with emergency services on the production of the SMP. With regard to designating an area for protest, this is not included in DCO, and provision for a general protest area is not proposed to be added. However, on 8 December 2023, the Applicant met with Essex and Kent Police to discuss possible designated sites. Moving forward consideration of provision of a general protest area would be addressed by the Contractor	CoCP [**Document Reference 6.3 ES Appendix 2.2 (8)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			through the development of the Security Management Plan. As paragraph 6.7.5 of the Code of Construction Practice, the emergency services will be consulted on the production of SMPs and this consultation will take place through the Security Partnership Working Group (SPWG). Terms of reference for the group has been issued and agree with Essex and Kent Police.		
Protest Plan	2.1.7 RRN	Preparation of a Protest Plan should be considered. The ESSP SG welcomes the measures and statements in section 6.7 of the CoCP related to trespass and protest. However, the ESSP SG has sought clarification on what the Physical Security Execution Plan contains; and how protest measures will be secured. The ESSP SG was not consulted on the PSEP, and therefore sought a clear commitment setting out acceptable proposals for the following:	The Contractors are required to develop a SMP, which addresses the key areas around protest. The SMP is informed by the Project's PSEP which has been provided to bidders. The Contractors, on appointment are required to submit their SMP to the Project for approval. The Contractors will be responsible for the implementation of the SMP to include managing protestor incidents. The Contractors will develop the	CoCP [**Document Reference 6.3 ES Appendix 2.2 (8)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		• how and when the Emergency Services will be consulted and on what details related to protest and • contractor SMPs should be required to include arrangements for suitable funding to Police Protest Removal Teams to ensure availability of staff, transport and equipment to effectively police protest activity. Some protest activity may require the need for specialist trained police resources which would not be covered by the contractors plans or protest removal provision. Any such activity would be an additional cost and burden to police resources. The ESSP SG welcomes the Applicant's proposed Security Partnership Working Group (SPWG), which will include measures to deal with protest; and in large part accepts the draft terms of reference for the SPWG (draft 29/11/23).	SMP in line with CPNI (now NPSA) guidance. Further information on consultation on SMPs can be found in row 2.1.6 above.		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		The ESSP SG does not accept the proposed mechanism for resolution of SPWG disputes via the Joint Operations Forum. (see matters 2.1.1b(b) and 2.1.2 of this SoCG). Nevertheless, with the exception of this reservation, the ESSP SG is prepared to agree this matter. [Rec 3.2]			
British Automatic Fire Sprinkler Association (BASFA) consultation	2.1.8 RRN	The ESSP SG has reviewed its position, and recommends the Applicant considers changing the wording of the last sentence of Design Principle S6.01 to read as follows: "There shall be consultation with both the emergency services and specialist tunnel fire engineering technical advisers on the type and specification of the FFFS"." The wording of Design Principle S6.01 addresses this point. [Rec 10.6]	The Applicant agrees in principle and will engage with the ESSP SG further regarding the anticipated scope, scale and timing of the consultation with the relevant emergency services where appropriate. As noted in 2.1.15, the Applicant at Deadline 8 has provided the following design principle which includes the words requested: *In the event that the detailed design has cross-passages at a maximum of 100m spacing and does not include a FFFS, then an increased flow of firefighting water to at least*	Design Principles [**Document Reference 7.5 (6)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			3,000l/min is required in the firefighting main. *There shall be consultation with both the emergency services and specialist tunnel fire engineering technical advisers on the type and specification of the tunnel firefighting systems.*		
Detailed tunnel design consultation	2.1.9 RRN	The detailed tunnel design should be subject to thorough consultation with the emergency services from the outset . ESSP SG welcomes changes to the Design Principles to specify the Emergency Services as consultees on specific issues. ESSP SG welcomes both the Applicant's introduction of commitment SACR-017 to the Stakeholder Action and Commitments Register; and production of draft Terms of Reference for the TDSCG (see Appendix D to this SoCG). ESSP SG agrees the majority of the content of the terms of reference, which sets out consultation on tunnel design from an early stage in the	It is a requirement of DMRB CD 352 (Highways England, 2020) that emergency services shall be consulted through the TDSCG on all key aspects of the tunnel detailed design. The TDSCG has been used on numerous road tunnel projects over many years. The Applicant is confident that the TDSCG is the correct forum for future design consultation and is committed to working closely with the emergency services to ensure that the TDSCG works in a format that delivers value for all parties. The Applicant has sought to provide further reassurance to ESSP SG on the use of the TDSCG. This has included	Stakeholder Actions and Commitments Register [**REP7-152**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		process. Therefore although ESSP SG remains concerned regarding the escalation process to deal with dispute resolution (see matter 2.1.1b(a) of this SoCG), it can nevertheless agree this matter. [Rec 10.7]	reference to the TDSCG within the Stakeholder Action and Commitments Register with the following commitment: *SAC-017 - Key elements of the detailed design in relation to safety and operational effectiveness shall be subject to consultation through a Tunnel Design and Safety Consultation Group (TDSCG).* *Topics of consultation through the TDSCG shall include, but not be limited to, the matters identified in the agreed terms of reference (which reflect Appendix A2 of Design Manual for Roads and Bridges (DMRB) CD 352).* *Details of information presented to the TDSCG, along with any feedback and comments received (which shall be assessed and incorporated into the detailed design as far as reasonably practicable), shall be formally recorded into a finalised safety consultation document (as defined in DMRB CG 300).*		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
Design – Road, Tunnels, Utilities					
Designing for Safety and Security	2.1.11 RRN	The security issues identified by ESSP SG should be addressed in detailed proposals for both the construction phase (including enabling works) and the detailed design of the Project, including the measures and recommendations set out in paragraphs 4.2 and 4.10 (of the ESSPSG consultation response of September 2021) being referenced.The ESSP SG welcomes proposals by the Applicant to address these concerns through the proposed Security Partnership Working Group, and the TDSCG, together with the associated design principles and commitment SACR-017 to the Stakeholder Action and Commitments Register draft terms of reference for both groups. ESSP SG is satisfied with the majority of content of both terms of reference, Therefore although ESSP SG remains concerned regarding the escalation processes to deal with dispute resolution (see	As set out in the DMRB CD 352 (Highways England, 2020), the emergency services will be consulted on security issues for the operational phase. For the construction phase, the Project will seek to rely on the CPNI (now NPSA) provisions as set out in section 6.7 of the Code of Construction Practice. The relevant emergency services will be consulted on the production of the Security Management Plan. Further information on the TDSCG can be found in item 2.1.1b(a). Agreement on this matter is subject to the ESSP SGs concerns of the use of the TDSCG as noted in 2.1.1b(a).	CoCP [**Document Reference 6.3 ES Appendix 2.2 (9)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		matters 2.1.1b(a), 2.1.1b(b) and 2.1.2 of this SoCG), it can nevertheless agree this matter. [Rec 4.4 Rec 4.5 and Appendix B]			
Provision for helicopter landing	2.1.12 RRN	The Project should provide helicopter landing points at appropriate locations for use during the construction phase and tunnel portals during the operational phase. These should be referenced in the drawings or other control documents. **For the operational phase**, ESSP SG welcomes the change to Design Principles S3.21 and S9.23 requiring consultation on the location of the helicopter landing areas; and is satisfied that the Applicant has demonstrated that suitable areas will be available. Design of these areas needs to be carefully integrated with the design of evacuation areas, emergency access, and response planning. Therefore although ESSP SG remains concerned regarding the proposed TDSCG escalation processes to deal with dispute	For the operational phase, the future identification of suitable areas in the vicinity of the tunnel portals for a helicopter landing area has been agreed and will be part of the detailed design process. Consultation has on this matter has been confirmed in the Design Principles: Design Principles S9.23– An area suitable (flat, unobstructed, stable) for landing a helicopter (air ambulance or similar) shall be identified in the vicinity of the tunnel portal inside of the Order Limits. The location of the landing area will be determined in consultation with the Emergency Services. The consultation on these areas will take place through the TDSCG. In addition, on 25 October the Applicant shared	CoCP [**Document Reference 6.3 ES Appendix 2.2 (9)**] Design Principles [**Document Reference 7.5 (7)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		resolution (see matter 2.1.1b(a) of this SoCG), it can nevertheless agree this matter. **For the construction phase,** CoCP 6.9.1 states that the emergency services will be consulted on contractor emergency preparedness procedures including the identification of helicopter landing areas. ESSP SG is satisfied that this issue can be dealt with via the proposed Security Partnership Working Group. Although ESSP SG remains concerned regarding the escalation processes for the SPWG to deal with dispute resolution (see matters 2.1.1b(b) and 2.1.2 of this SoCG), it can nevertheless agree this matter. [Rec 5.2 and Rec 5.10]	drawings with ESSP SG to reassure them about the extent of suitable areas within which consultation could focus. Agreement on this matter is subject to the ESSP SGs concerns of the use of the TDSCG as noted in 2.1.1b(a). With regard to construction, as noted in paragraph 6.9.1 of the CoCP, the EMP2 will require that Contractors will ensure emergency preparedness procedures for each worksite are developed prior to works commencing, including the identification of helicopter landing areas in proximity to worksites. As further noted in paragraph 6.9.1 these procedures will be produced in consultation with the emergency services.		
Tunnel evacuation assembly areas	2.1.13 RRN	The location of tunnel evacuation assembly areas should be: • Clearly identified in terms of their location on the preliminary scheme design	The provision of tunnel evacuation assembly points in the vicinity of the portals has been agreed and will be part of the detailed design process.	Design Principles [**Document Reference 7.5 (7)**]	Matter Not Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		• Included in the list of Works • Shown on the General Arrangement drawings • Include further written details to be required by the Design Principles and include safe access routes for tunnel evacuation. ESSP SG welcomes the changes to Design Principles S3.22 and S9.24 requiring consultation on the detailed design and layout of the emergency muster areas. However, the Applicant has not demonstrated (as has been the case for helicopter landing areas, matter 2.1.12 of this SoCG) that such areas are available in suitable locations. Therefore this matter is not agreed. [Rec 9.1]	Design Principle S3.22 which was updated at Deadline 3 states: *Points suitable for initial mustering of tunnel evacuees, including safe access routes, shall be identified in the vicinity of the tunnel portal inside of the Order Limits. The detailed design and layout of the muster point will be developed in consultation with the emergency services.* The emergency services shall be consulted through the TDSCG on their locations as set out in the DMRB CD 352 (Highways England, 2020).		
Tunnel cross-passages	2.1.14 RRN	ESSP SG maintains its position that the starting point with regard to tunnel cross-passage spacing in the preliminary design preliminary design should be a maximum of 100m; but accepts that this might be increased up	The locations of cross passages are indicatively shown in the General Arrangement Plans Volume B, Works Plans Volume B and the Engineering Drawings and Sections (Volume A).	Design Principles [**Document Reference 7.5 (6)**] General Arrangement Plans [**Document**	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		to a maximum of 150m if a Fixed Fire Fighting System is deployed to support fire fighting intervention. ESSP SG welcomes the revisions to Design Principle S6.01 submitted by the Applicant at Deadline 3,confirming consultation with ESSP SG on the risk assessment and determination of cross passage spacing as part of the detailed design. [Rec 10.2 and Rec 10.4]	The Applicant has had several email exchanges with ESSP SG regarding Design Principle S6.01. This has resulted in two design principles being included. The first relates to spacing and is worded as follows: The spacing between cross-passages in the detailed design will be developed in accordance with DMRB CD 352 Design of Road Tunnels (Highways England 2020c) and supported by risk assessment. The emergency services shall be consulted on the risk assessment and determination of cross-passage spacing. To support any cross-passage spacing greater than 100m, up to 105 meters between centre lines, a Fixed Fire-Fighting System (FFFS) will be deployed throughout the tunnel bore to support firefighting intervention. There shall be consultation with both the emergency services and specialist tunnel fire	**Reference 2.5 Volume B (5)**] Works Plans [**Document Reference 2.6 Volume B Composite (6), Volume B Utilities (5)**] Draft DCO [**Document Reference 3.1 (11)**] Tunnel Limits of Deviation Plans [**Document Reference 2.15 (4)**] Engineering Drawings and Sections Volume A [**Document Reference 2.9 Volume A (6)**]	

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			engineering technical advisers on the type and specification of the FFFS. The Applicant welcomes the agreement of ESSP SG on this design principle. The second matter is covered in 2.1.15 and relates to specific technical requirements of the FFFS.		
Fixed Fire Fighting System	2.1.15 RRN	ESSP SG welcomes the commitment in Design Principle S6.01 to provide a Fixed Fire Fighting System (FFFS) if cross passage spacing is increased above 100m. Design Principle S6.03 confirms that where cross passage spacing is 100m or less, and a FFFS is not provided, then firefighting water supply with increased flow rates will be required. Design Principle S6.03 also confirms that there will be consultation with the emergency services and other technical advisers on the tunnel firefighting systems. ESSP SG agrees this matter on the basis	As noted in 2.1.14, the Applicant welcomes the progress made generally regarding this matter. However, the Applicant is aware that the ESSP SG is seeking more specificity regarding the technical requirements of fire safety systems should a Fixed Fire Fighting System not be provided. The Applicant does not agree such detail is required at this stage, nor would it be appropriate for a design principle. Nevertheless, to provide some reassurance the Applicant has provided the following updated design principle:	Design Principles [**Document Reference 7.5 (6)**] Draft DCO [**Document Reference 3.1 (11)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		that such systems will fully support firefighter tenability and physiology during a firefighting intervention. [Rec 10.5]	In the event that the detailed design has cross-passages at a maximum of 100m spacing and does not include a FFFS, then an increased flow of firefighting water to at least 3,000l/min is required in the firefighting main. There shall be consultation with both the emergency services and specialist tunnel fire engineering technical advisers on the type and specification of the tunnel firefighting systems.		
Construction					
Review of the impacts of the Project on the emergency services	2.1.16 RRN	A five-yearly review of the impacts of the Project on the emergency services should be set up, to cover the construction phase and the first 30 years of the operational phase of the development. Any such review should be a commitment secured through the DCO documents, but ESSP SG is not aware of the pathway for any such commitment. The ESSP SG:	The Applicant will review the impacts of the Project at 1 and 5 years, which is considered 'business as usual' within a Post Opening Project Evaluation ('POPE') review.	N/A	Matter Not Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		• intends to input to monitoring of effects of the LTC during construction and operation • requests that a commitment is provided to engage with the emergency services during National Highways' POPE review process. ESSP SG has not been provided with clarification on where commitment to monitoring sits; nor that the Applicant commits to engaging with the emergency services for their input. Therefore this matter is not agreed. [Rec 12.3]			
Funding for co-ordination officer, Steering Group member officer time and service staffing and vehicles	2.1.17 RRN	Funding should be provided for: • A co-ordination officer post to support the ESSP Steering Group members in responding to emergency services consultations on the detailed design and construction phase document approval stages. • Funding for ESSP Steering Group member officer time to carry out detailed reviews of	Both the Applicant (i.e. the 'developer') and the majority of the emergency services' funding originates from the same source (central government). While the Project can and will support emergency services in determining operational impacts and service gaps to inform the Department of Transport and Home Office it is not within the remit of the	N/A	Matter Not Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		the documentation coming forward. • the creation of a Police Traffic Management Officer to cover the construction phase and the first five years of operation of the Project. The ESSP SG maintains its position regarding funding for these items. Such funding should be secured through a side agreement with relevant Emergency Services and safety partners. Particular and separate emphasis should be placed on the traffic management officer post, especially during construction. This position was agreed in principle, between Essex Police and the Applicant based on another NSIP project which has been agreed. It is the Steering Group's understanding that when the TMO position was created, This traffic management officer post is considered vital to maintain the safe and efficient operation of both the road network and emergency service activities.	Applicant to reallocate funding from one central government department to another. The Applicant therefore invited emergency services group members to submit an Impact Assessment Report which details the required funding and justification for further funding. The Applicant has received this report from Essex Police and has submitted this to the Department for Transport for their consideration. At Deadline 8, the Department for Transport provided a response to the report [**REP8-001**]. With regard to funding a traffic support officer during construction, Essex Police is engaging with the A12 Chelmsford to A120 proposed scheme on this matter. Once agreement has been made for that scheme the Applicant will consider if it is appropriate to replicate it for Lower Thames Crossing.		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		ESSP SG cannot locate a Deadline 8 submission by the Department for Transport in the Examination Library. [Rec 2.2, 8.6]			
Reimburse local authorities and emergency services	2.1.20 RRN	Response plans and contractual arrangements with the Project operators should include provisions to reimburse local authorities and emergency services for their costs in dealing with major incidents in appropriate circumstances. ESSP SG considers that these items are not all 'business as usual' and funding should be provided. ESSP SG cannot locate a Deadline 8 submission by the Department for Transport in the Examination Library. [9.3].	The 'Project Operator' is the Applicant and therefore the response in 2.1.17 above regarding funding, also applies.	N/A	Matter Not Agreed
Operation and Maintenance					
Emergency Incident Management/Response Plans	2.1.21 RRN	The draft DCO and Application Documents should provide a strategy or framework for providing and implementing Emergency Incident Management/Response Plans for the different stages and	The Applicant agrees that Emergency Incident Response Plans need to be prepared for all phases of the Project and the emergency services should be consulted on this.	CoCP [**Document Reference 6.3 ES Appendix 2.2 (9)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		elements of the Project – during both the construction (including enabling works) and operational phases. The ESSP SG welcomes the Applicant's proposals to address emergency preparedness through the Security Partnership Working Group, and the Tunnel Design Safety Consultation Group, together with their associated terms of reference, as well as comittment SACR-017 in the Stakeholder Actions and Commitments Register.. ESSP SG is satisfied with the majority of the content in those terms of reference . Therefore although ESSP SG remains concerned regarding the escalation processes to deal with dispute resolution (see matters 2.1.1b(a), 2.1.1b(b) and 2.1.2 of this SoCG), it can nevertheless agree this matter. [2.4 and 5.7]	As noted in paragraph 6.9.1 of the CoCP, the EMP2 will require that Contractors will ensure emergency preparedness procedures for each worksite are developed prior to works commencing. As further noted in paragraph 6.9.1 these procedures will be produced in consultation with the emergency services. . The CoCP (para 6.9.2) also requires these procedures be reviewed quarterly, or where there is a change in procedure. Requirement 4(5) of the dDCO Schedule 2 requires the development of an Environmental Management Plan (Third Iteration) which must set out matters relevant to the operation and maintenance of the Project. Paragraph 2.3.6 of the CoCP requires those relevant stakeholders (including emergency services) detailed in Table 2.1 of the CoCP to be consulted on matters relevant to their function.		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			For operation, DMRB CD 352 (Highways England, 2020) states that emergency services shall be consulted through TDSCG on emergency response and evacuation, including formation of Emergency Response Plans. Emergency Response Plans will be developed for the tunnel, and where applicable national plans/procedures will be used for the open road. Agreement on this matter is subject to the ESSP SGs concerns of the use of the TDSCG as noted in 2.1.1b(a).		
Emergency access roads provision	2.1.22 RRN	The arrangements for emergency services to enter the emergency access roads should be designed in accordance with the advice from ESSP SG. This should form part of an approved Emergency Response/ Management Plan for the Project. All of the emergency access road provisions in the scheme should be consistently referred	The Applicant has shown in the General Arrangement Plans and in the Works Plans the emergency access roads that form part of the Project. These are detailed in Schedule 1 of the draft DCO. The plan and profile for all roads are shown in the Engineering Drawings and Sections.	General Arrangement Plans – Volume C [**Document Reference 2.5 Volume C (6)**] Works Plans – Volume C – Composite [**Document Reference 2.6 Volume C (7)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		to in the DCO application, and labelled as such on the relevant Works, General Arrangement, Tunnel Area and other approved plans and drawings. ESSP SG welcomes the additional Design Principle STR.19, which includes provision for consultation with the emergency services on design, which would take place via the TDSCG. Therefore although ESSP SG remains concerned regarding the escalation processes to deal with dispute resolution contained within the draft terms of reference for the TDSCG (see matters 2.1.1b(a) and 2.1.1b(b) of this SoCG), it can nevertheless agree this matter. [Rec 5.5 and Rec 5.6]	Emergency services road provision has been taken into account in the preliminary design produced for the DCO application. The Contractors will further develop this in their detailed design and in accordance with the requirements within the DMRB CD 352 (Highways England, 2020) that the TDSCG, which includes the emergency services, will be consulted. This will be incorporated into the Emergency Response/Management Plan when produced during detailed design development. To provide further reassurances about this matter, the Applicant has provided at Deadline 8 the following additional design principle: [**REP8-082**] STR.19: Where access roads are provided, for emergency services use, they shall have a minimum paved carriageway width of 6.0m, gradients shall be in accordance with DMRB CD 122 and the design of the	Engineering Drawings and Sections [**Document Reference 2.9 Volume A (6), Volume B (6), Volume C (2), Volume D (2), Volume E (5), Volume F (3), Volume G (2), Volume H (2)**] Draft DCO [**Document Reference 3.1 (11)**] CoCP [**Document Reference 6.3 ES Appendix 2.2 (9)**]	

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			verge shall take into account the need for sufficient load bearing to accommodate operational vehicles in accordance with DMRB CD 127. The detailed design of the access roads will be developed in consultation with the emergency services. Agreement on this matter is subject to the ESSP SGs concerns of the use of the TDSCG as noted in 2.1.1b(a).		
Emergency preparedness procedures – Communication equipment	2.1.23 RRN	The DCO Application Documents and emergency preparedness procedures should ensure that communications provisions are compatible with those used across all of the emergency services and address the planned change from Airwave to a new Emergency Services Network and the continued requirement for the ability to use the mobile phone network along the entire route and in the tunnel in terms of mast protection and secure protection, cabling, RVPs and emergency service hubs.	It is a requirement of DMRB CD 352 (Highways England, 2020) that emergency services shall be consulted through the TDSCG on such issues as emergency services telecommunications equipment. The Applicant will continue to liaise with emergency services through the TDSCG to ensure communication requirements within the tunnel are compatible with the changing technology throughout the length of the Project, both during construction and operation.	CoCP [**Document Reference 6.3 ES Appendix 2.2 (9)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		In relation to the construction phase (Recommendation 5.4) ESSP SG welcomes the provisions at paragraph 6.9.3 of the CoCP. The ESSP SG welcomes the Applicant's proposals to address emergency preparedness through the Security Partnership Working Group (construction phase), and the Tunnel Design Safety Consultation Group (scheme desing and operation), together with their associated terms of reference, as well as comittment SACR-017 in the Stakeholder Actions and Commitments Register.. ESSP SG is satisfied with the majority of the content in those terms of reference . Therefore although ESSP SG remains concerned regarding the escalation processes to deal with dispute resolution (see matters 2.1.1b(a), 2.1.1b(b) and 2.1.2 of this SoCG), it can nevertheless agree this matter. [Rec 5.4 and Rec 12.1]	Agreement on this matter is subject to the ESSP SGs concerns of the use of the TDSCG as noted in 2.1.1b(a). The CoCP requires in para 6.9.3 for emergency radio channels to be reserved and compatible with those used by Emergency Services – Kent Police, Kent Fire and Rescue, Essex Police, East of England Ambulance Service, Essex County Fire and Rescue, Southeast Coast Ambulance Service, Metropolitan Police, London Fire Brigade and London Ambulance Service. As noted in paragraph 6.9.1of the CoCP, emergency procedures will be produced in consultation with the emergency services.		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
Tunnel emergency access roadways	2.1.24 RRN	The width of the tunnel emergency access roadways should be assessed in terms of their adequacy to accommodate the movement and passage of emergency vehicles (including a review of appliance turning circles) without conflict with members of the public evacuating the tunnel. ESSP SG welcomes the additional Design Principle STR.19, which includes provision for consultation with the emergency services on design of the emergency access roads, which would take place via the TDSCG. Therefore although ESSP SG remains concerned regarding the escalation processes to deal with dispute resolution contained within the draft terms of reference for the TDSCG (see matter 2.1.1b(a) of this SoCG), it can nevertheless agree this matter. [Rec 5.8]	The current design of the emergency access roadways facilitates two-way traffic. Design Principle S3.22 which was updated at Deadline 3 states: *Points suitable for initial mustering of tunnel evacuees, including safe access routes, shall be identified in the vicinity of the tunnel portal inside of the Order Limits. The detailed design and layout of the muster point will be developed in consultation with the emergency services.* The Applicant recognised that the emergency services requested further assurances on this matter and at Deadline 8 provided the following new Design Principle: STR.19: *Where access roads are provided, for emergency services use, they shall have a minimum paved carriageway width of 6.0m, gradients shall be in accordance with DMRB CD 122 and the design of the verge shall take into account the need for sufficient load*	Design Principles [**Document Reference 7.5 (6)**] Engineering Drawings and Sections Volume B [**Document Reference 2.9 Volume B (6)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			bearing to accommodate operational vehicles in accordance with DMRB CD 127. The detailed design of the access roads will be developed in consultation with the emergency services.		
Emergency Services RVP	2.1.25 RRN	The Project should identify and ensure suitable land for RVPs, and ensure that they are sited in appropriate locations in the vicinity of tunnel portals and elsewhere on the route (to be reviewed and then included on Emergency Response Plans) and of an appropriate size for their intended function; these should be identified in the control documents. The locations must account for road links, availability of land, integration with emergency access routes and emergency hubs. Whilst ESSP SG welcomes additions to the submission documents, including commitments in the Design Principle and the SACR, concerns remain in relation to the currently proposed location of the RVP on the north side,	The Applicant has identified potential RVP locations in consultation with the emergency services. The proposed RVP locations at both the North and South Portals have been discussed with the ESSP SG. The RVPs are shown in the General Arrangement Plans and in the Works Plans. These are also described in Schedule 1 of the draft DCO. The Applicant recognised that Essex Police in particular had concerns about the northern RVP location and access, and as such provided the following update to the Design Principles: *S3.20 – An Emergency Services Rendezvous Point (RVP) area shall be provided.*	General Arrangement Plans [**Document Reference 2.5 Volume A (5), Volume B (5), Volume C (6)**] Works Plans [**Document Reference 2.6 Volume A (5), Volume B Composite (6), Volume B Utilities (5), Volume C (7)**] Draft DCO [**Document Reference 3.1 (11)**]	Matter Not Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		which the ESSP SG considers is unacceptable. On 13 November 2023, following a number of meetings with the ESSP SG, the Applicant provided a design of an RVP on the south bound carriageway to the south of Muckingford Road. This would be a drive on, drive off facility with five lanes to secure the muster of emergency services vehicles. The provision is 150m in length and 25m in width and is exactly what the ESSP SG have been requesting for a number of years. However, despite the revised design and location of the RVP being agreeable to the ESSP SG, the Applicant has declined to change the preliminary design in order to a) remove the current RVP proposal near the north tunnel portal, and b) show the revised RVP to the south of Muckingford Road in the DCO and the drawings. It is not sufficient to rely on the outcome of a possible future planning application - which may or may not be granted - to	*The detailed design and layout of the RVP will be developed in consultation with the Emergency Services.* Due to ongoing concerns, despite the amendment to the Design Principles, on 18 August 2023, senior members of the Applicant's team attended a site visit at Stansted Airport with Essex Police. The Applicant also held a follow-up workshop with members of Essex Police and Essex Fire and Rescue on 23 August to discuss the northern RVP further. Further meetings also took place on 17 October 2023 and 20 November 2023. The conclusion of this engagement is the following: Updated Design Principles S.9.21 and S.10.16: *The detailed design and layout of any RVP area (whether in accordance with SACR-022) will be developed in consultation with the emergency services."* New SACR-022 commitment:	Design Principles [**Document Reference 7.5 (6)**] Stakeholder Actions and Commitments Register [**REP7-152**]	

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		deliver this important piece of emergency infrastructure at a later date, . The revised RVP must be secured through the DCO and shown on the approved drawings. Therefore this matter is not agreed.he . [Rec 6.1, Rec 6.2, Rec 6.3 and Rec 6.4]	*"National Highways will consult with the Emergency Services to identify a potential location for a northern RVP that is between 600m and 2500m from the northern tunnel portal, which has direct access to the southbound A122 carriageway. Provided the design and location of that proposed RVP complies with CD352, National Highways will use best endeavors to submit a planning application for an RVP in that location (provided that any steps are not inconsistent with the undertaker's licence granted under the Infrastructure Act 2015). In the event the alternative location has permission to be implemented prior to the construction of the proposed northern portal access track, the Applicant will implement that permission and not seek to acquire land or implement the proposed RVP proposed adjacent to the proposed northern portal access track unless otherwise agreed with the Emergency*		

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			Services (or, failing agreement, the Secretary of State). Clear reference to TDSCG in the Deadline 6 SACR-017 which will provide the forum for consultation with the emergency services on the RVP. With regard to the southern RVP, the Applicant met with Kent Police on 30 August 2023 to discuss proposals to use Gravesend East junction link road as a stacking location. A further meeting took place with the police and Kent Fire and Rescue on 22 November where the focus was on access from the marshalling area to the portal. On 30 November the Applicant held a further meeting where it provided clarity of the possible use of space in the verge for access in the event that the stacking location is in operation. As noted in Design Principle S3.20, listed below, the emergency services will be		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			consulted on the southern RVP. An Emergency Services Rendezvous Point (RVP) area shall be provided. The detailed design and layout of the RVP will be developed in consultation with the emergency services. This consultation will include access from the marshalling area to the portal as discussed with Kent Police and Kent Fire and Rescue on 30 November 2023. The Applicant proposes this consultation takes place through the TDSCG.		
Emergency Hubs	2.1.26 RRN	The Project design should provide Emergency Hubs at the tunnel portals, integrated with RVPs and Forward Control Points, with consequent changes to the list of authorised Works in Schedule 1 (and corresponding Works Plans) and the General Arrangement drawings if appropriate. Details of the Emergency Hubs should be the subject of consultation with the emergency services prior to	The North and South Portal Tunnel Services Buildings have been designed to provide emergency hub facilities including welfare, communications, and control capabilities for foreseeable operational scenarios. The internal arrangements of the emergency hubs buildings will form part of the detailed design and will be subject to liaison between the Project and emergency services. The	Design Principles [**Document Reference 7.5 (6)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		submission to the SoS for their approval. The ESSP SG welcomes the addition of Design Principles S3.24 and S9.26, which include provision for consultation with the emergency services on the detailed design of the emergency hubs. ESSP SG welcomes the additional Design Principle STR.19, which includes provision for consultation with the emergency services on design of the emergency access roads, which would take place via the TDSCG. Therefore although ESSP SG remains concerned regarding the escalation processes to deal with dispute resolution contained within the draft terms of reference for the TDSCG (see matter 2.1.1b(a) and of this SoCG), it can neverthless agree this matter. [Rec 7.1]	emergency services shall be consulted through the TDSCG on the layout of the Tunnel Services Buildings and access routes as set out in the DMRB CD 352 (Highways England, 2020). The Applicant notes from meetings held on both 23 and 30 August 2023 that there is broad support for the use of the Tunnel Services Buildings emergency hubs. To provide further reassurance, as requested, the Applicant at Deadline 8 provided the following design principle: *"An Emergency Hub area shall be provided within the Tunnel Service Building for the use of the emergency services. The Emergency Hub will provide control room, meeting room and welfare facilities for use by the emergency services. The layout of the emergency hubs will be developed in consultation with the emergency services."*		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			Agreement on this matter is subject to the ESSP SGs concerns of the use of the TDSCG as noted in 2.1.1b(a).		
Impacts on safety partners, emergency services and response times	2.1.27 RRN	Modelling and assessment of the impacts of the LTC on emergency service response times and targets should be undertaken. The ESSP SG welcomes the Applicant's heat map modelling of impacts on emergency service response times. The Applicant report provided on 5th December 2023 sets out the methodology used to produce the heat maps. However, the report does not contain any analysis of results, nor does it include the Applicant's conclusions on how emergency response times might be affected by the Project. ESSP SG is aware that local highway authorities have expressed significant concerns about the appropriateness and technical adequacy of the modelling which underpins the Applicant's assessment of the	The DCO Application contains an Environmental Statement (ES) which has been produced in accordance with the requirements of the EIA Regulations. The Transport Assessment has also been produced in accordance with the DfT's TAG. In addition, the Applicant considers that other documents which are required under the Planning Act 2008 have been prepared in the DCO Application. The draft DCO includes commitments to consultation with the emergency services on elements of the Project which relate to the emergency services scope of interest, such as traffic and security – refer to responses below relating to the CoCP and emergency response plans. The Applicant has consulted with the emergency services in relation to incident access and	ES Appendix 4.2: Major Accidents and Disasters Long List [APP-341] Transport Assessment [REP4-148 to REP4-152] Draft DCO [**Document Reference 3.1 (11)**]	Matter Not Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		traffic effects, including the emergency response time work which has been undertaken. ESSP SG remains concerned that it has not been adequately demonstrated that there will not be adverse effects on the ability of its member organisations to deliver their services in a timely fashion and meet their response targets to attend incidents – both during the construction phase and once the project is in operation. Therefore this matter is not agreed. [Rec, Rec 8.1 (part), Rec 8.2 and 8.3]	response times through the Project route and where appropriate, and following this consultation, the Project has added access and turnaround points to improve response times, e.g. turnaround facilities at the B186. The Applicant has identified and shared methodologies for assessment of the impacts on wider response times. In addition, the Applicant has completed traffic modelling of effects on response times during the operational phase and has shared the output of this with each of the emergency services. Traffic modelling for construction has also taken place and has been shared with the emergency services. The emergency services have recently asked for two locations for the ambulance service and the Applicant will provide this. As requested, the Applicant has undertaken to provide previously issued information		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			in a report format and this was sent to the emergency services on 5 December 2023.		
Mitigation measures	2.1.28 RRN	A document should be produced providing a comprehensive assessment of the effects of the LTC on the activities of the emergency services and safety partners. Mitigation measures should be proposed where necessary to ensure that emergency service delivery does not deteriorate as a result of impacts of the Project. There should be requirements on the scheme operators to commission private emergency service support such as ambulance cover with appropriate levels of staffing, training, hours of cover and working practices to be agreed and reviewed with the ESSP SG on an annual basis. ESSP SG is disappointed that National Highways has chosen not to take an overall view of the potential impacts on emergency service and safety partner activities. It is considered that this has led to a piecemeal	Assessments of the effects are touched on in item 2.1.27 above and cover various areas. Beyond 2.1.27, the Contractors will produce an Occupational Health & Wellbeing (OHW) plan as part of their undertaking. The REAC within the CoCP states that the Contractor will provide an appropriate range of medical and occupational healthcare services (including on-site facilities) to meet the physical and mental health needs of the construction workforce. The range of services will be agreed with the Applicant, following engagement with Integrated Care Partnerships. The Contractors will undertake their own risk-based assessment during the mobilisation and finalise their provision within the OHW plan.	CoCP [**Document Reference 6.3 ES Appendix 2.2 (9)**]	Matter Not Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		approach which does not clearly integrate design issues and mitigations across the full construction and operational phases of the scheme. Instead, mitigations for the effects on emergency provision seem spread across a number of documents, and often pushed back to later stages of the scheme development. [Rec 2.3, 9.3]	The emergency services will be consulted during this stage.		
Emergency Response/ Incident Management Plan	2.1.29 RRN	The ESSP SG considers that a tunnel Emergency Response/ Incident Management Plan I should be a clear requirement of the scheme, and developed alongside the preparation of the detailed design for the LTC. The tunnel Emergency Response/ Incident Management Plan must include an evacuation section, providing for the welfare of members of the public in a range of eventualities (long term and short term) showing how road users will be re-united with their vehicles and the means of transport away from the tunnels.	As per standard practice, the Applicant will develop a multi-agency Emergency Response Plan alongside the detailed design and construction ready for testing and implementation prior to opening. As a strategic highways company, the Applicant is required to maintain emergency plans and procedures under the Civil Contingencies Act 2004, and the Civil Contingencies Act 2004 (Contingency Planning) Regulations 2005. These plans and procedures will detail the roles and responsibilities of all Category	Draft DCO [**Document Reference 3.1 (11)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		Also see comments in relation to Recommendation 5.7, topic 2.1.21. ESSP SG welcomes the Applicant's clarification through the draft terms of reference for the TDSCG and comittment SACR-017 of the Stakeholder Actions and Comittments Register that tunnel Emergency Response/ Incident Management Plans that tunnel Emergency Response/ Incident Management Plans will be developed in consultation with the emergency services Although ESSP SG remains concerned regarding the escalation processes to deal with dispute resolution contained within the draft terms of reference for the TDSCG (see matters 2.1.1b(a) and 2.1.2 of this SoCG), it can neverthless agree this matter.~~:~~ [Rec 9.2 and Rec 10.8]	1 and Category 2 responders in relation to an emergency response. In addition to this, DMRB sets out specific requirements for tunnels, which include: • CD 352 - Design of Road Tunnels, requires operating and emergency procedures to be developed and consulted upon through the TDSCG. • CM 430 - Maintenance of Road Tunnels, requires emergency procedures as part of the Tunnel Documentation. • CS 452 - Inspection and Records for Road Tunnels, requires emergency drills, together with all relevant Emergency Services, to be undertaken For the Applicant's response to the ESSP SG's concerns about the TDSCG please see response to 2.1.1b(a).		
Operational Risk Assessment	2.1.30 RRN	The Applicant should require emergency planning for the tunnels toinclude a scenario	In relation to the concern of there being simultaneous fires in both tunnel bores, this was	N/A	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		where both tunnel bores are closed simultaneously, noting that this occurs at the existing Dartford Crossing from time to time; and takes into account experience of tunnel fires in similar circumstances such as the HS2 fire of May 2022. ESSP SG welcomes the Applicant's clarification that this can be revisited through the hazard identification process as part of the TDSCG and comittment SACR-017 of the Stakeholder Actions and Comittments Register, in consultation with the emergency services Although ESSP SG remains concerned regarding the escalation processes to deal with dispute resolution contained within the draft terms of reference for the TDSCG (see matter 2.1.1b(a) of this SoCG), it can neverthless agree this matter.~~:~~ [Rec 10.3]	considered by the Applicant and the assessment found that this is a remote probability and consequently any mitigation would be disproportionate. This matter is an item that the Applicant would expect to be included within the remit of the TDSCG through the hazard identification activities that will be undertaken. Agreement on this matter is subject to the ESSP SGs concerns of the use of the TDSCG as noted in 2.1.1b(a).		
Cumulative effects with other developments	2.1.31 RRN	A clear statement should be made regarding which major	The likelihood of significant effects as a consequence of	Combined Modelling and	Matter Not Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		developments have been taken into account when assessing the effects of the Project through the construction and operational phases. The cumulative effects with other developments could be widely monitored via the traffic management officer position (see matter 2.1.17 of this SoCG). ESSP SG anticipates that the effects on the wider strategic road network of the LTC project will be significant when considering other road network projects in the County and beyond. This matter is not agreed. [Rec 12.2]	the Project and 'other developments' within the study area has been considered within the inter-project effects assessment. The assessment identified 209 other developments that have the potential for moderate adverse (or above) inter-project effects when combined with the Project. An assessment was then undertaken of the effects on the receptors relevant to each topic in order to identify the likely significance of the effects, should all developments be progressed. These inter-project effects are summarised in ES Chapter 16: Cumulative Effects Assessment. Mitigation measures proposed in the relevant topic chapters would minimise cumulative impacts as far as practicable and therefore no additional mitigation has been proposed. No monitoring in addition to that already proposed within the relevant topic chapters has been identified. An Uncertainty Log forms part of the suite of	Appraisal Report Appendix C: Transport Forecasting Package [**APP-522**] ES Chapter 16: Cumulative Effects Assessment [**APP-154**] Interrelationship with other Nationally Significant Infrastructure Projects and Major Development Schemes [**APP-550**]	

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			the DCO Application Documents. The Uncertainty Log identifies what other major developments have been included in the traffic model and cumulative assessments. The DCO application includes a document titled Interrelationship with other Nationally Significant Infrastructure Projects and Major Development Schemes which details the interrelationship between the Project and other major developments.		
Population and human health					
Modern slavery, human trafficking and other hidden vulnerability and harm	2.1.32 RRN	The Project should consider the risk of modern slavery, human trafficking and other hidden vulnerabilities and harm exploiting the new route, and in the location and detailed design of the worker accommodation proposals. The ESSP SG seeks clarification in how National Highways' statements on best practice will be translated into actions and controls which deliver through	The Applicant is committed to prevent all forms of modern slavery in all parts of their business and supply chain and confirms that there is a contractual requirement for the Contractors to comply with the provisions of the Modern Slavery Act 2015.	N/A	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		the worker accommodation, the design and construction of the Lower Thames Crossing – i.e. where in the submission documents are these measures secured? ESSP SG has always made it clear that this matter could be dealt with outside of the public-facing documents. [Rec 4.6]			
Partner of Mates in Mind	2.1.33 RRN	The ESSP SG welcomes the inclusion of impacts on the mental health and wellbeing of the workforce in the ES Chapter 13, the HEqIA, and the measures outlined in PH002 of the REAC. The documents should be amended as follows: • PH002 should make specific reference to the measures, policies and strategies set out in paragraphs 7.12.19 – 7.12.20 of the HEqIA, so that they will include requirements for contractors to be members of organisations such as Mates in Mind.	The Contractors will provide an appropriate range of medical and occupational healthcare services (including on-site facilities) to meet the physical and mental health needs of the construction workforce. Originally, the Applicant proposed that the range of services will be agreed following engagement with Integrated Care Boards (ICB). This commitment was set out in the CoCP, Register of Environmental Actions and Commitments (REAC) reference number PH002. However, at the request of the	CoCP **[Document Reference 6.3 ES Appendix 2.2 (8)]** Health and Equalities Impact Assessment (HEqIA) [**REP7-144**] ES Chapter 13: Population and Human Health [**APP-151**]	Matter Not Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		• PH002 should be expanded to include assurances that the Environmental Manager and the QHSSW responsibilities are integrated • CoCP Table 3.2 should be amended to include PH002 as a commitment for the Preliminary works stage These items have not been addressed, notably the requirement that the HEqIA mitigation recommendations are secured in PH002. It is also recommended that commitment PH002 is amended to require consultation with the Integrated Care Boards, rather than 'engagement'. Therefore this matter remains not agreed. Please also see ESSP SG comments on topic 2.1.35 below [Rec 11.2]	ICBs the Applicant at Deadline 8 has updated the commitment to the following: The Contractor will provide an appropriate range of medical and occupational healthcare services (including on-site facilities) to meet the physical and mental health needs of the construction workforce. The range of services will be agreed with the Secretary of State, following engagement with and having regard for the views of the Integrated Care Boards. The Contractor will share information relating to uptake of services by the construction workforce and relevant incident data with ICBs on a six-monthly basis. It is envisaged that this will include membership and registration to a scheme such as Mates in Mind. The Health and Equalities Impact Assessment (HEqIA) and ES Chapter 13 both include the potential impacts on the mental health and wellbeing of the workforce. Within the		

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			latter, there is a specific sub-section around suicide risk and this highlights the various strategies and toolkits which will be used on the Project. Lastly, National Highways Contracts have a requirement for the Contractor to obtain membership and registration to a scheme such as Mates in Mind.		
Suicide prevention	2.1.34 RRN	The Project's design principles, and all aspects including detailed design of bridges, landscaping and means of enclosure, etc., should incorporate adequate measures to reduce the risk of suicide during the construction and operational phases. The ESSP SG welcomes the Applicant's introduction of Design Principle PRO.06 dealing with suicide prevention. [Rec 11.3 and 11.4]	Potential sites have been identified where there may be a suicide risk and mitigation measures will be considered at detailed design and construction planning stages. The focus is on eliminating and mitigating (delay and deter) risk through design, the Applicant's Suicide Prevention Strategy and the Suicide Prevention Toolkit which will be used on the Project. As noted in the Deadline 3 submission of the Design Principles, PRO.06 states: *'The detailed design process for the highways forming part of the strategic road network*	Design Principles [**Document Reference 7.5 (7)**]	Matter Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
			or local road network must consider the incorporation of measures, such as enhanced parapets on high-risk structures, so far as is reasonably practicable to reduce the risk of suicides in accordance with the National Highways (2022) Suicide Prevention Strategy (or any substituted version of that strategy published by National Highways). The emergency services will be consulted on the proposed measures as part of the detailed design process.'		
Workforce health and wellbeing	2.1.35 RRN	The ESSP SG welcomes the inclusion of impacts on the mental health and wellbeing of the workforce in the ES Chapter 13, the HEqIA, and the measures outlined in PH002 of the REAC. PH002 should be amended to make specific reference to the measures, policies and strategies set out in paragraphs 7.12.19 – 7.12.20 of the HEqIA, so that they will be addressed and included in the mitigating	The HEqIA and ES Chapter 13 both include the potential impacts on the mental health and wellbeing of the workforce. Within this, there is a specific sub-section around suicide risk and this highlights the various strategies and toolkits which will be used on the Project. The Applicant will engage with the ESSP SG further to address their request for mitigation to be linked to the	HEqIA [**REP7-144**] ES Chapter 13: Population and Human Health [**APP-151**] CoCP [**Document Reference 6.3 ES Appendix 2.2 (8)**]	Matter Not Agreed

Topic	Item No.	ESSP SG Comment	The Applicant's Response	Application Document Reference	Status
		services and facilities to be agreed between the Contractors and the Applicant. The requirement that the HEqIA mitigation recommendations are secured in PH002 has not been addressed. It is also recommended that commitment PH002 is amended to require consultation with the Integrated Care Boards, rather than 'engagement'. This matter remains not agreed. [Rec 11.1]	CoCP and to discuss their comment regarding the HEqIA. Details relating to workforce mental health are described in paragraphs 7.12.9 and 7.12.19 to 7.12.21 of the Health and Equalities Impact Assessment. The Register of Environmental Actions and Commitments (REAC) provided in the CoCP includes a commitment in REAC PH002 which as noted in 2.1.33 was updated at Deadline 8.		

Appendix A Engagement Activity

Table A.1 Engagement activities between the Applicant and ESSP SG

Date	Form of contact/ correspondence	Key topics discussed and key outcomes
15 January 2018	Meeting	Project introduction, agreement on the terms of reference for TDSCG, and presentation of the plan for subsequent meetings.
28 March 2018	Meeting	To discuss the methodology for the tunnel operational risk assessment (ORA) and process towards a preliminary design.
18 September 2018	Meeting	Update on the tunnel design and hazard identification
14 May 2019	Meeting	Update on Systems Engineering and Cross Passage design
10 October 2019	Meeting	Further Update on Systems Engineering, FFFS, Cross Passages, Future meetings
12 December 2019	Meeting	Overview of highway design changes since statutory consultation, fixed firefighting system solutions and desktop response exercises.
10 March 2020	Meeting	Further discussion on the desktop scenarios and incident response planning
8 May 2020	Meeting	Project update and incident response planning.
9 February 2021	Meeting	Project update, Tunnels Operational risk assessment and tunnel design.
17 June 2021	Meeting	First meeting of the new ESSP SG group to discuss project updates, consultation and TDSCG engagement
23 July 2021	Email	Email with Met Police to provide update on the Project and status of DCO
2 September 2021	Meeting	Update meeting of the ESSP SG
23 February 2022	Meeting	Lower Thames Crossing briefing Kent Police on air quality impacts on ecology that could be mitigated by both speed enforcement along the affected road network
28 March 2022	Meeting	Scoping group to identify need for separate groups for the construction phase.
5 April 2022	Meeting	Update on modelling undertaken and impact of Project on all emergency services.
12 July 2022	Meeting	Update meeting with the Emergency Services Representative regarding the Project and any outstanding actions from the ESSP SG

Date	Form of contact/ correspondence	Key topics discussed and key outcomes
18 August 2022	Meeting	Meeting with representative of the emergency services to discuss development of SoCG and sharing with members of ESSP SG.
12 January 2023	Meeting	ESSP SG Meeting with the representative of the emergency services to update on DCO submission, next steps and to request ESSP SG feedback on the current SoCG draft.
20 January 2023	Meeting	ESSP SG Catch-up meeting with ESSP SG Chair regarding engagement with emergency services stakeholders on an individual basis.
09 February 2023	Meeting	Meeting with the representative of the emergency services to request status of SoCG feedback, inform the group about registering as an Interest Party and submission of relevant representations.
16 March 2023	Meeting	Meeting with the representative of the emergency services to request status of SoCG feedback and update on National Highway's response times modelling work.
11 May 2023	Meeting	Meeting with the representative of the emergency services to update on the contents of the Rule 6 letter and the Applicant's intention to progress with police SoCGs as requested by the Examining Authority.
8 June 2023	Meeting	Meeting with the representative of the emergency services to update on SoCG progress in line with the Rule 6 letter instruction and Procedural Decision Notices.
29 June 2023	Meeting	Meeting with East of England Ambulance service to discuss items that specifically relate to them.
04 July 2023	Meeting	Meeting with Essex Police to discuss the items in the SoCG they are concerned with.
12 July 2023	Meeting	Kent Fire and Essex Fire Meeting to discuss fire safety in the tunnel construction phase.
10 August 2023	Meeting	The Applicant attended monthly LTC Steering Committee to provide an overview of the Roadmap provide to ESSPSG
14 August 2023	Meeting	Meeting with Designing Out Crime Officers to discuss Security and Partners Working Group
18 August 2023	Site visit	The Applicant attended a meeting with Essex Police at Stansted Airport to view its RVP
23 August 2023	Meeting	Workshop with Essex Police and Essex Fire and Rescue to discuss concerns related to the northern RVP
30 August 2023	Meeting	Meeting with Kent Police to discuss southern RVP

Date	Form of contact/ correspondence	Key topics discussed and key outcomes
14 September 2023	Meeting	Walkthrough of ESSP SG's written response to the Applicant's roadmap
2 October 2023	Meeting	Walkthrough of ESSP SG's written response to the Applicant's roadmap (part 2)
17 October 2023	Meeting	Meeting held at Essex Police HQ to discuss northern RVP and options to address concerns raised
17 October 2023	Meeting	Meeting held at Essex Police HQ to run through protestor matters captured in SoCG
9 November 2023	Meeting	The Applicant attended monthly LTC Steering Committee to provide an overview of updated design principles, SAC-R commitments, and ToR for TDSCG and SPWG.
20 November 2023	Meeting	Meeting with Essex Fire and Rescue, Essex Police and East of England Ambulance Service to discuss options for northern RVP
22 November 2023	Meeting	Meeting with Kent Police and Kent Fire and Rescue to discuss southern RVP and stacking point
30 November 2023	Meeting	Meeting with Kent Police and Kent Fire and Rescue to discuss southern RVP and stacking point
8 December 2023	Meeting	Meeting with Essex and Kent Police to run through potential designated protester sites

It is noted that catch-up meetings with the ESSP SG's consultant, Browne Jacobson occur on a weekly basis.

Appendix B Glossary

Term	Abbreviation	Explanation
Emergency Services and Safety Partnership Steering Group	**ESSP SG**	The group of emergency services and Local Councils that formed the regular engagement group
Fixed Fire Fighting System	**FFFS**	Fixed firefighting systems (FFFS) are an active way of combating fires in tunnels
Tunnel Design and Safety Consultation Group	**TDSCG**	The initial group of emergency services stakeholders that were engaged with, this group was superseded by the ESSP SG.
British Automatic Fire Sprinkler Association	**BASFA**	The British Automatic Fire Sprinkler Association is the trade body for the fire sprinkler industry in the United Kingdom
Code of Construction Practice	**CoCP**	Code of Construction Practice (CoCP) is a written code of standards and procedures that developers and contractors must adhere to.
Design Manual for Roads and Bridges	**DMRB**	The Design Manual for Roads and Bridges contains information about current standards, advice notes and other published documents relating to the design, assessment and operation of trunk roads, including motorways. The DMRB has been prepared for trunk roads and motorways.
Environmental Management Plan	**EMP**	For the Project, a plan setting out the conclusions and actions needed to manage environmental effects as defined by the Design Manual for Roads and Bridges standard LA 120. The CoCP is the equivalent of the first iteration of the EMP (EMP1). The Contractor's EMP would be EMP2 and the end of construction EMP would be EMP3.
Joint Operations Forum	**JOF**	The JOF is an executive level forum made up of National Highways and its Contractors. The Applicant will establish and chair a JOF, attended by senior representatives from the Contractors.
Rendezvous Point	**RVP**	Used at locations (e.g. stations or airports) that would typically require the attendance of several or more emergency services vehicles and personnel in the event of a significant incident.
Secretary of State	**SoS**	The Secretary of State has overall responsibility for the policies of the Department for Transport.
Traffic Management Forum	**TMF**	The TMF would review planned traffic management arrangements and receive comments as to their appropriateness. The TMF would also monitor, review, and provide updates to the TMPs when required.
Traffic Management Plan	**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.

Term	Abbreviation	Explanation
Security Management Plan	**SMP**	A plan to be developed by contractors to achieve both the security desired outcomes and appropriate impact mitigation procedures.
Security Partnership Working Group	**SPWG**	Working group to be attended by police services, LTC/National Highways and its delivery partners to consult/discuss issues related to security during construction

Appendix C ESSP SG Recommendations

brownejacobson LLP

LOWER THAMES CROSSING: EMERGENCY SERVICES AND SAFETY PARTNERS STEERING GROUP

RESPONSE TO COMMUNITY IMPACTS CONSULTATION

(INCLUDING COMMENTS ON DCO V1)

DRAFT SUBJECT TO GOVERNANCE

8 SEPTEMBER 2021

CONTENTS

APPENDICES

A **Initial Response to LTC 4-8-21**

B **Review of LTC proposals and supporting documents by Designing Out Crime Officers of Essex and Kent Police**

C **Rendezvous Points and Forward Control Points - Requirements**

D **Suggested possible locations for RVPs**

E **Summary of proposed Traffic Management Officer post responsibilities**

F **Dartford Crossing Multi-Agency Response Plan**

G **Kent and Medway Suicide Prevention Strategy 2015 - 2020, and the Southend Essex and Thurrock Suicide Prevention Strategy Update Report 2019**

H **Summary of key considerations in Preventing Suicide in Public Places, Public Health England**

Executive Summary

1. Introduction

ES1. The Emergency Services and Safety Partners (ESSP) for those areas which will be affected by the Lower Thames Crossing (LTC) proposals have been liaising with the project team over the past few years, mainly through the Tunnel Design Safety Consultation Group (TDSCG). The LTC proposal aims to provide a safe experience for road users, and the ESSP has an important role in helping to deliver that aim in the short and longer terms.

ES2. Despite recognising the work of the TDSCG, the ESSP identified a need for greater collaborative working, so that the full range of implications of the LTC project for the safety and security of the local community and road users is identified and addressed:

- as part of the preliminary design;
- through subsequent approvals of the detailed design;
- during construction (including enabling works);
- over the longer-term operational phase.

ES3. The ESSP has formed a Steering Group to oversee a programme of task groups where members have provided observations on the DCOv1 proposals, the documents published as part of the Community Impacts Consultation, as well as other material. This has led to the detailed response which follows this Executive Summary. Under section headings in the main document, the relevant issues are explained, leading to series of recommendations as to how the project design, draft DCO and control documents might be amended. Those recommendations are set out in a table at the end of this Executive Summary.

2. General Points

ES4. Despite recognising the need for flexibility, there is concern at the lack of detail in documents and drawings relating to provisions and assessments for safety, security and dealing with emergencies. This makes it difficult for the ESSP Steering Group to comment on the LTC proposals.

ES5. It is considered that some further detail should be provided in the preliminary design, either as authorised Works, or on the General Arrangement drawings. For those matters which would remain to be approved by the Secretary of State as part of the detailed design, or as Requirements under Schedule 2 of the DCO (including commitments within the identified control documents), two main changes to the DCO package are considered necessary:

a) the emergency services should be named as statutory consultees within a defined legal framework and timetable, in a similar manner to that for local planning authorities in Schedule 2 Part 2 of the DCO; and provided with resources to fulfil that role. This would ensure that the views of the emergency services and their safety partners (through liaison via the ESSP

Steering Group) would be taken into account and the scheme adapted where relevant.

b) the scope and detail of the assessment documents needs to be revised and extended to deal with the full range of issues relevant to ESSP Steering Group members.

ES6. In revising both the preliminary design and the assessment documents, the ESSP Steering Group sees merit in preparing a single document which deals comprehensively with effects on emergency provision and the issues of relevance to its members – currently coverage is patchy and dispersed among the documents. This should cover:

- impacts on the ability to respond to incidents on the LTC itself, but also impacts on the day-to-day operations and activities of the emergency services and partners in the local area.
- both the construction phase (including enabling works), and the operational phase; and
- offer specific mitigations for any identified adverse effects, translated into:
  - identifiable items in the preliminary design
  - commitments in the control documents (such as the Code of Construction Practice, CoCP)
  - include a strategy for the delivery of response plans
  - set out how resources (including staff funding) will be provided to the ESSP Steering Group members where necessary to fulfil their roles as consultees

ES7. In addition, the ESSP Steering Group considers it would be helpful to work towards a Statement of Common Ground; and to liaise with the project team over the development of a confidential Intelligence Plan & Requirements document to include, for instance, details of ANPR systems to be installed along the route.

3. Protest

ES8. It is anticipated that some will wish to exercise their right to protest against the LTC proposals, especially in advance of construction commencing; and during the construction phase (including any site clearance and enabling works).

ES9. In order to help facilitate safe and secure protest, the Emergency Services and Safety Partners would be happy to offer advice to both LTC and to community and protest groups. Preparation of a Protest Plan is recommended, along with identification of a general protest area which some may wish to make use of.

4. Security

ES10. The ESSP Steering Group members are concerned to see that the design, construction (including enabling works) and operation of the LTC takes opportunities to deliver a scheme which addresses issues related to criminality,

terrorism, modern slavery and human trafficking. Some of these issues may need to be addressed in the confidential Intelligence Plan and Requirements document referred to above.

ES11. However, there are many other issues which should be dealt with from the outset in the proposals, ranging from secure site compound and worker accommodation fencing; to carrying out adequate lighting impact assessments, so that the right balance of security and environmental/community impacts is achieved.

ES12. The informal Security Working Group is one means which can assist in steering the design in these respects. However, changes should be made to the CoCP to set out a strategy, including reference to procedures and recognised standards, to guide the proposed Joint Operations Forum and ensure consistency across all parts of the project.

ES13. Appendix B to the main response sets out the relevant issues and recommendations in detail, and which should be referenced in the Design Principles and other relevant control documents.

5. Emergency Access

ES14. Good access for the emergency services and safety partners is crucial in dealing with incidents related to the project. It is considered that emergency access during the construction phase should cover not just the entry points from the public highway, but also suitable routes within the construction sites, including internal haul roads; and provision for helicopter landing sites at locations away from the north tunnel portal. These and other contractor emergency procedures should be the subject of consultation with ESSP prior to approval.

ES15. Once the LTC is constructed, the preliminary design shows a number of emergency access roads along the route and at the tunnel portals, and the ESSP Steering Group welcomes the changes which have been made to enhance this provision. However, as substantial gaps between access points along the route remain, for the time being the ESSP Steering Group's default position is that a hard shoulder should be provided to ensure emergency service vehicle access to incidents in the event of traffic backing up.

ES16. At the tunnel portals, concern remains over some of the detailed arrangements, including width and the absence of laybys or passing places; the number and location of removable central reservation barriers; and the absence in the documents of commitments to helicopter landing areas. The detailed design will also need to clarify the entrance arrangements for the emergency access roads. For both the construction and operational phases, good communications coverage for the ESSP Steering Group members, integrated with contractors, needs to be secured.

ES17. All of these points should be the subject of consultation with the ESSP Steering Group members prior to their approval as part of the detailed design.

6. Rendez Vous Points (RVPs)

ES18. The identification of Rendez Vous Points for emergency service vehicles and staff is a key, established component in the effective management of incidents. The ESSP Steering Group considers that RVPs should be provided as a minimum to serve both ends of the tunnel; identified in the authorised Works and Requirements in the DCO; and ideally shown on the approved Works Plans, General Arrangement Drawings and Tunnel Area Plans. Appendices C and D of the main response offer general guidance, as well as more specific suggestions as to where RVPs might be located, with those in the vicinity of the tunnel portals seen as a particular priority.

7. Emergency Hubs

ES19. Emergency hub facilities close to the tunnel portals are seen as offering the following benefits to the safe and secure operation of the LTC:

- Silver Tactical Command / Forward Control Points for the management of major incidents
- joint emergency service / LTC control staging posts during normal operating conditions

ES20. The ESSP Steering Group recommends that a commitment is given to provide emergency hubs (possibly linked to the Tunnel Service Buildings) identifying them in the list of authorised Works, preliminary design and control documents. advice is offered in the main response regarding what facilities would need to be provided as part of each emergency hub.

8. Emergency Service Response Times

ES21. The emergency services are each set demanding national targets to meet in relation to attending and dealing with incidents promptly. The ESSP Steering Group is concerned that the LTC will adversely affect the ability of members to meet those target response times:

- during construction – when congestion and delays could occur, for instance due to goods vehicle traffic and road closures / diversions
- post construction – as some journey times will increase once the LTC is operational

ES22. Impacts could be on response times to attend incidents on the construction sites or the new route and tunnels; or affecting day to day responses to incidents in the wider community. All of these concerns are exacerbated by potential combined effects with other development which is planned for an already busy area, including London Resort and Bradwell B power station.

ES23. The ESSP Steering Group is grateful for the work which has already been undertaken by the project team, which recognises some of the issues and the varied nature of the different emergency services. However, concerns remain that some impacts have not been thoroughly assessed, particularly during the

construction phase; and although some emergency access points to the LTC have been added, further mitigation is likely to be needed.

ES24. Therefore, the ESSP Steering Group recommends that further assessment is carried out, possibly as part of the over-arching Emergency Services document, referred to in Section 2 of this response. Mitigation measures are also recommended, which could include funding:

a) additional staff and vehicles (private and/or public services) during the construction phase;
b) a Police Traffic Management Officer over the construction phase and the first five years of operation of the LTC

ES25. The DCO proposals should also provide a formal commitment for ESSP Steering Group members to be consulted on the production and approval of Traffic Management plans; and in the setting up and operation of a Traffic Management Forum.

9. Displacement from a tunnel incident / emergency

ES26. There is a need to make provision for members of the public to evacuate the tunnels safely in the event of a serious incident. This may include people with disabilities, as well as pets and assistance animals. Measures need to be in place to move people from the incident, through the cross-passages, out of the tunnels, and to a muster area, all without creating conflict with emergency services staff and vehicles arriving at the scene. This may involve identifying safe and accessible routes with steps up and out of the road cuttings; meeting people's needs in terms of shelter and welfare, possibly including building, resources and infrastructure such as toilets, power, food and blankets.

ES27. Plans need to be in place to deal with both short- and longer-term incidents. This may include access routes to get coaches to the muster area, so that people can be taken to a separate place of safety and for onward transport, if they cannot be reunited with their vehicles within a reasonable timescale. Measures need to cater for all times of day and a range of weather conditions.

ES28. The ESSP recommends that the LTC preliminary design and control documents identify evacuation assembly areas with safe access arrangements; and commit to the preparation of emergency response plans to how the scheme will provide for the welfare of members of the public during both short term and longer-term incidents. Response planning will need to take into account the cost of reimbursing ESSP Steering Group members to provide their services.

10. Fire Suppression and Management of Incidents Within the Tunnels

ES29. Whilst the design of the tunnels has been discussed at the TDSCG, members of the ESSP Steering Group remain concerned at both the lack of detail provided in the preliminary design and construction documents, and the lack of clear

commitments to important features needed to minimise risk and deal safely with incidents.

ES30. The ESSP Steering Group is reviewing the Operational Risk Assessment and Tunnel Operational Control Philosophy, and will respond separately in detail in due course. Initial comments are that some scenarios and assumptions may need revising – such as the possibility of both tunnel bores being closed at the same time; and the magnitude of the fire events which have been modelled.

ES31. A key outstanding concern is that of the cross-passage spacing and design, which is not specified or clearly set out within limits in the preliminary design or control documents. Similarly, there is no commitment to installing a Fixed Fire Fighting System, and no detail of what this might consist of. These points and other aspects of the detailed tunnel design require further clarification, binding commitments, and a requirement to consult with the emergency services prior to their approval by the Secretary of State.

ES32. The above points need to be linked to commitments in the DCO documents to produce emergency response plans, both from CoCP for contractors to produce emergency response plans working in the tunnel bores; and for the subsequent LTC operational stage.

11. Suicide prevention, mental health and wellbeing

ES33. Despite the welcome inclusion of a Health and Equalities Impact Assessment (HEqIA) and Chapter 13 of the Environmental Statement in the supporting documentation, there is concern that:

a) the HEqIA does not include the mental health and wellbeing of the substantial in-coming workforce and supply-chain workers who will form part of the local population for the 6 – 8 years of construction
b) the preliminary design does not appear to have addressed the potential for suicide and its prevention, for instance at bridges and through access controls.

ES34. The ESSP Steering Group urges early action to address both of these areas of concern. Mitigation is recommended, in particular through requirements for contractors to follow best practice; and for the scheme design and control documents to include appropriate suicide prevention measures.

12. Future threats

ES35. The ESSP Steering Group members are concerned that over time any adverse impacts of the LTC may be exacerbated in combination with the high level of other developments taking place in the area. It is not clear what other developments have been considered, and how they might affect the delivery of emergency services. It is therefore recommended that this is clarified, and appropriate mitigation proposed where necessary. Due to the scale and importance of the LTC, it is recommended that a commitment is made to carry out five yearly reviews of impacts over the anticipated life of the project. In

the first instance, this could be linked to the proposed Wider Network Impacts and Monitoring Plan proposals.

ES36. A concern also running through the different phases of the LTC is to ensure comprehensive provision of emergency services communications infrastructure, which is vital to ensuring incidents can be dealt with effectively. This needs to address changes to the systems which are likely to occur in the future.

TABLE OF RECOMMENDATIONS

Recommendation 2.1

The Order should set out clearly the procedures and processes for approval of the detailed design, including those for consultation, so that there is no doubt about how it will be carried out. Specifically, it is recommended that the draft DCO is amended as follows:

1. a clear definition of the Emergency Services is provided in the DCO, to encompass all Police, Fire and Rescue, and Ambulance services through which the LTC will pass

2. the Emergency Services are named consultees on the preparation of and submission for approval of:

   a) the detailed design
   b) the Environmental Management Plan (EMP, Second Iteration)
   c) the EMP Third Iteration
   d) the Landscaping Scheme
   e) traffic management plans for each part of the construction phase
   f) means of enclosure
   g) in accordance with Volume 1, Series 0300 of the Manual of Contract Documents for Highway Works
   h) the traffic impact monitoring scheme

3. the undertaker is required to take into account and report on the views of the Emergency Services prior to submission of details for approval by the Secretary of State

4. the Emergency Services are given 8 weeks in which to provide their views when consulted by the undertaker.

Recommendation 2.2

Funding should be provided for:

a) a co-ordination officer post to support the ESSP Steering Group members in responding to emergency services consultations on the detailed design and construction phase document approval stages;
b) funding for ESSP Steering Group member officer time to carry out detailed reviews of the documentation coming forward

Recommendation 2.3

A document should be produced providing a comprehensive assessment of the effects of the LTC on the activities of the emergency services and safety partners, with identified mitigation measures, and commitments in the proposals and control documents.

Recommendation 2.4

The DCO and scheme documents should provide a strategy or framework for providing and implementing Emergency Incident Management/Response Plans for the different stages and elements of the LTC –during both the construction (including enabling works) and operational phases.

Recommendation 2.5

The ESSP Steering Group and LTC should work together towards a Statement of Common Ground covering the issues and recommendations set out in this response.
Recommendation 2.6 The project team should consider preparing a confidential Intelligence Plan and Requirements document to include, for instance, details of ANPR systems to be installed along the route.
Recommendation 3.1 The ESSP Steering Group recommends that LTC liaises (or continues to liaise) with community and protest groups in advance of construction of the project. This should include discussing with those groups the potential value of identifying protest areas which might meet their needs in a safe way.
Recommendation 3.2 Preparation of a Protest Plan (or a protest section within an incident response or management plan) should be considered.
Recommendation 3.3 The ESSP Steering Group recommends that a general protest area is identified on the approved plans, within the Order Limits.
Recommendation 4.1 It is recommended that the future work of the Security Working Group is scoped and clarified, so that it is fully effective in influencing the scheme design and construction. This can take place outside the scope of the DCO and control documents.
Recommendation 4.2 The Construction Code of Practice should be amended to set out a strategy for dealing with security issues, with an overall procedure for all contractors to follow, and including reference to established standards, to ensure consistency across all sites.
Recommendation 4.3 Security issues should be included within the work of the Joint Operations Forum referred to in section 4.3 of the Construction Code of Practice, with a requirement to include security in detailed contractor proposals
Recommendation 4.4 The security issues identified in Appendix B to this response should be addressed in detailed proposals for both the construction phase (including enabling works) and the detailed design of the LTC. This should be referenced in the Design Principles.
Recommendation 4.5 The ESSP Steering Group recommends that the measures and requirements set out in paragraphs 4.2 and 4.10 above are identified in approved plans and/or control documents.
Recommendation 4.6 Clarification should be provided that the design has and will consider the risk of modern slavery, human trafficking and other hidden vulnerability and harm exploiting the new route, and in the location and detailed design of the worker accommodation proposals.
Recommendation 5.1

The procedures and requirements for the development of Contractor emergency plans should be formalised in the DCO, to include an explicit requirement for approval, and a commitment to consultation with relevant emergency services and safety partners. This could be combined with provisions in the Construction Code of Practice and the Construction Traffic Management Plan.

Recommendation 5.2

Provision should be made for helicopter landing during the construction phase at locations in addition to the hyperbaric facilities at the northern tunnel portal. Identification of helicopter landing facilities should be made a requirement prior to commencement of the development, and their location should be confirmed in approved plans.

Recommendation 5.3

Emergency access arrangements should be included within the emergency preparedness procedures to be developed in consultation with the emergency services and safety partners, as outlined in paragraph s 5.9.1 – 5.9.2 of the CoCP; and should be listed under paragraph 5.9.3, rather than as a separate item. This should include ensuring that any internal haul roads which might be used by the emergency services are fit for that purpose.

Recommendation 5.4

Emergency preparedness procedures should include ensuring that communications provisions are compatible with those used across all of the emergency services and other responding organisations, not just Fire and Rescue (bearing in mind the planned change from Airwave to a new Emergency Services Network), and the continued requirement for ability to use the mobile phone network.

Recommendation 5.5

All of the emergency access road provisions in the scheme should be consistently referred to in the DCO, and labelled as such on the relevant Works, General Arrangements, Tunnel Area and other approved plans and drawings.

Recommendation 5.6

The arrangements for emergency services to enter the emergency access roads should be designed in accordance with the advice provided in Appendix B to this response. This should form part of an approved Emergency Response / Management Plan for the road.

Recommendation 5.7

Emergency Response / Management Plans for the LTC should be required to address how prompt access to incidents is to be achieved, especially if traffic backs up, and given the absence of a hard shoulder. In the absence of these plans to deliver emergency service access to incidents, the ESSP Steering Group's default position is that a hard shoulder should be provided.

Recommendation 5.8

The width of the tunnel emergency access roadways should be assessed in terms of their adequacy to accommodate emergency vehicles (including a review of appliance turning circles), allow sufficient facility for vehicles to pass, and to avoid conflict with members of the public evacuating the tunnel.

Recommendation 5.9

As removeable barriers are an important element of emergency response around the tunnel:

a) they should be clearly identified as such in the DCO Works in Schedule 1

b) justification should be provided for their positioning and number, related to plans for responding to incidents, with consideration being given to the provision of additional removeable barriers.

Recommendation 5.10

Clear provision should be made in the preliminary design for designated emergency helicopter landing areas close to the north and south portals. These could be shown on the control drawings, and referenced in the list of authorised Works in the DCO.

Recommendation 6.1

The preliminary design should be amended to reflect the acknowledged need for Emergency Services Rendez Vous Points (RVP), both in the general vicinity of the tunnel portals, and elsewhere along the route. RVP should be included in the list of authorised Works in Schedule 1 of the DCO, and indicated on the approved Works Plans.

Recommendation 6.2

Consideration should be given to whether sufficient and suitable land has been secured for RVP, particularly in relation to the tunnel portals.

Recommendation 6.3

Consideration should be given to the location of RVPs at an early stage, so that the following can be taken into account in the preliminary proposals:

a) road links
b) availability of land
c) integration with emergency access routes and Emergency Hubs.
d) RVP should be identified in more detail on the General Arrangement Drawings if appropriate.

Recommendation 6.4

The preliminary scheme design should be reviewed to consider whether there are other locations on the proposed route, away from the tunnel portal areas, where RVP could be provided, and to include these in the development of Emergency Response Plans.

Recommendation 7.1

The preliminary design should be amended to provide Emergency Hubs at the tunnel portals, with consequent changes to the list of authorised Works in Schedule 1 (and corresponding Works Plans), the General Arrangement drawings if appropriate. The Emergency Hubs should be integrated with the provision of Rendez Vous Points and Forward Control Points, as discussed in the previous section of this response. Details of the Emergency Hubs should be the subject of consultation with the Emergency Services prior to submission to the Secretary of State for their approval.

Recommendation 7.2

What is intended by the new emergency area noted in Work No. 5A (ix) in Schedule 1 of the draft DCO (Works plans 13 and 17) should be clarified in the DCO documents, shown on the General Arrangement drawings and approved plans, and referred to in the description of the development (for instance in Chapter 2 of the Environmental Statement).

Recommendation 8.1

A review should be undertaken of the impacts of the LTC on emergency services.
Recommendation 8.2 Further modelling and assessment of the impacts of the LTC on emergency service response times and targets should be undertaken, including clarification on the points raised in paragraph 8.16 of this response.
Recommendation 8.3 Following the further assessment of response times, mitigation measures should be proposed where necessary to ensure that emergency service responses do not deteriorate as a result of the project. Mitigation may include: a) funding additional emergency service staffing and vehicles over the construction phase b) requirements on contractors to commission private emergency service support such as ambulance cover with appropriate levels of staffing, training, hours of cover and working practices to be agreed and reviewed with the ESSP Steering Group on an annual basis.
Recommendation 8.4 The Emergency Services should be formally consulted on the production and approval of the Traffic Management Plans as a requirement of the DCO.
Recommendation 8.5 The proposals and (if necessary the draft DCO) should make the setting up of the Traffic Management Forum a clear commitment of the project.
Recommendation 8.6 Funding should be provided for the creation of a Police Traffic Management Officer, as described in paragraphs 8.23 – 8.25 and Appendix E of this response, to cover the construction phase and the first five years of operation of the LTC.
Recommendation 9.1 The DCO list of authorised Works in Schedule 1 should include reference to the provision of tunnel evacuation assembly areas, and these should be indicated on the Works plans, shown on the General Arrangement drawings if appropriate, with further detail required be reference to the Design Principles. The proposals should include details of safe routes from the tunnel to the evacuation assembly areas. Such plans referenced in this recommendation should be approved plans.
Recommendation 9.2 Any Emergency Response/ Incident Management Plan prepared for the tunnel must include an evacuation section, and extend to show how the scheme will provide for the welfare of members of the public during both short term and longer term incidents; how road users will be reunited with their vehicles where possible; and the means of transport away from the tunnels where necessary. Any Emergency Response/Incident Management Plan should be a control document.
Recommendation 9.3 Response plans and contractual arrangements with the scheme operators should include provisions to reimburse local authorities and emergency services in for their costs in dealing with major incidents in appropriate circumstances.
Recommendation 10.1

The Construction Code of Practice should make a clear commitment for contractors to produce emergency response plans for dealing with fire incidents in the tunnel, in consultation with the emergency services. These should include any particular requirements related to access from the public highway via internal haul roads, and address the risks to both the workforce and emergency service personnel. The CoCP should also set out the minimum contents required to be included in the Emergency Response Plans as described at paragraph 10.33 above.
Recommendation 10.2 The draft DCO, the Works plans, General Arrangement drawings, Tunnel Area plans and the Tunnel Limits of Deviation should be amended to be clear on the location, number and spacing of tunnel cross-passages which are sought under the Order. If flexibility is required, the cross-passages could be shown on the drawings and expressed in the other documents as subject to confirmation within stated parameters, including the range of separation distances. The ESSP Steering Group considers that these parameters should be expressed in a way which is consistent with paragraph 3.26.1 of CD 352, i.e. 100m, up to a maximum of 150m subject to a quantitative risk analysis.
Recommendation 10.3 LTC should consider revising the Operational Risk Assessment to address a scenario where both tunnel bores are closed at the same time.
Recommendation 10.4 If flexibility is sought through the Order, the cross-passage design and spacing in detailed design must be subject to thorough consultation prior to approval by the Secretary of State, with the Emergency Services named as statutory consultees. This would be along the lines referred to in the recommendations made in the General Points section of this Response.
Recommendation 10.5 Given the potential advantages it offers, the ESSP Steering Group consider that a Fixed Fire Fighting System should be an unequivocal commitment in the preliminary design, DCO and control documents, to be approved in detail. This is especially important if cross-passage spacing may be increased from the benchmark 100m stated in CD 352.
Recommendation 10.6 The British Automatic Fire Sprinkler Association should be consulted at an early stage in the detailed design of the tunnel and the FFFS.
Recommendation 10.7 The detailed tunnel design should be subject to thorough consultation with the Emergency Services from the outset, and not just prior to submission to the Secretary of State for approval. LTC should consider whether details of the tunnel safety design should be specifically and separately identified in the DCO as a matter where a dispute mechanism is required, should there be a difference of opinion with the Emergency Services.
Recommendation 10.8 A multi-agency Emergency / Incident Response Plan for the tunnel should be a requirement of the DCO, for approval by the Secretary of State in consultation with the Emergency Services. The Emergency / Incident Response Plan should be a control document.
Recommendation 11.1

The HEqIA and ES Chapter 13 should be revised to cover potential impacts on the mental health and wellbeing of the workforce (and closely related elements of the supply chain) engaged in the construction phase of the LTC, including those who do not currently live in the area. Any requirements for mitigation of adverse impacts should be linked to the Construction Code of Practice. The review should take into account, among other guidance, the Kent and Medway Suicide Prevention Strategy, and the ESSP Steering Group, should be involved in this review.
Recommendation 11.2 Any contractor engaged in the in the construction of the LTC should be required to become a supporter partner of Mates in Mind, which would help to ensure that best practice is followed across the project, consistent with CoCP Table 4.1 and the Highways England Environmental Manager responsibilities to integrate with the Quality and Health, Safety, Security and Welfare (HSSW) team for "... a joint assurance focus." This approach should be pursued from the outset, including preparations for the enabling works stage.
Recommendation 11.3 The current scheme design should be reviewed in terms of whether it has incorporated adequate measures to reduce the risk of suicide during the construction and operational phases, in particular having regard to the Public Health England document Preventing Suicide in Public Places. Any deficiencies in this regard should be reflected in changes to the preliminary design where these would require changes to the description of the authorised Works, the General Arrangement Drawings, the CoCP or requires additional land.
Recommendation 11.4 In addition, further guidance for including suicide prevention measures through development of the detailed design should be included in the Design Principles. This would ensure that all aspects of the detailed design - such as bridges, landscape boundary enclosures, and fencing of public rights of way – address the need for suicide prevention measures.
Recommendation 12.1 The scheme documents should provide a commitment to ensuring emergency services communications coverage (including forthcoming transfer from Airwave to the new Emergency Services Network) along the entire route and in the tunnel in terms of mast provision and secure protection, cabling, RVPs and possible emergency service hubs.
Recommendation 12.2 A clear statement should be made regarding which of the major developments planned for the area of influence for the LTC have been taken into account when assessing the effects of the project through the construction and operational phases.
Recommendation 12.3 A five-yearly review of the impacts of the LTC on the emergency services should be set up, to cover the construction phase and the first 30 years of the operational phase of the development.

1. Introduction

1.1 This document provides the views of the Emergency Services and Safety Partners (ESSP) Steering Group on draft proposals for the Lower Thames Crossing Development Consent Order (DCO).

Background to the Emergency Services and Safety Partners (ESSP) Steering Group

1.2 The proposals for the new Lower Thames Crossing have evolved over a number of years, and there has been a series of consultation stages. As part of that project development process, engagement with the public has been carried out by the Lower Thames Crossing team. In accordance with guidance contained in document CD 352 "Design of road tunnels"[1], the Tunnel Design and Safety Consultation Group (TDSCG) was set up. This gave an opportunity for members of the following stakeholders to be made aware by Highways England of and comment on the project as it developed:

- Emergency Services – primarily Police, Fire and Rescue, and Ambulance
- Safety Partners – such as local authority emergency planning teams

1.3 The TDSCG is a recognition of the significant relationship between the Emergency Services and Safety Partners and this Nationally Significant Infrastructure Project. Clearly, the ESSP may have an important role in ensuring the safe and secure construction and operation of the LTC – including attending incidents and emergencies. However, the reverse is also true: a project of this scale and nature has the potential to have a range of impacts on the ability of the ESSP to carry out their functions within the local communities and across the region through which the LTC passes.

1.4 The TDSCG has met a number of times to discuss a range of issues, mostly focussed around the tunnel and its approaches, but also including issues related to other parts of the route, the surrounding environment and community.

1.5 Although the TDSCG has been helpful, there is concern among the Emergency Services and Safety Partners regarding the level of detail presented for the project; and a need has been identified for a more co-ordinated response. This was seen as an opportunity to collectively improve understanding of the full range of relevant issues; how these are being addressed in the proposals,

[1] forming part of the Design Manual for Roads and Bridges, published by Highways England, Transport Scotland, the Welsh Government, and the Department for Infrastructure in Northern Ireland

assessments and legal provisions contained in the suite of documents; and to clarify what changes to the proposals might be sought.

1.6 Therefore, the ESSP Steering Group was set up. Various representatives from the following bodies are invited to the Steering Group, which meets monthly:

Essex Police
East of England Ambulance Service Trust
Essex Fire and Rescue Service
Thurrock Council
Essex County Council
Kent County Council
Gravesham Borough Council
Kent Police
South East Coast Ambulance Service
Kent Fire and Rescue Service
Metropolitan Police Service

1.7 The member organisations are independent of each other, but collaborate closely together. The Steering Group has overseen a series of Task Groups where different topics have been discussed. This led to the submission of an informal "Initial Response" sent to Lower Thames Crossing on 4th August 2021 (see Appendix A).

The Structure of the Response

1.8 This document forms a response to the plans and documents published as part of the Community Impacts Consultation; but also draws on other documents. Those other documents include:

- the draft DCO proposals which were previously submitted to the Planning Inspectorate but withdrawn in December 2020, known as "DCO v1" - these include some documents not published as part of the Community Impacts Consultation

- other documents which have been as part of the development of the preliminary design for the Lower Thames Crossing, such as relevant safety and risk assessment documents.

1.9 DCO v1 includes versions of some documents which do not match those included in the Community Impacts Consultation. Where differences between the document versions have been noticed and may be significant, these are identified in this response. However, other differences may exist which have not been noticed to date.

1.10 Section 2 General Points of this response provides some overall comments on the LTC proposals and supporting documentation. The remainder of the response is set out under a number of topic headings in Sections 3 - 12. Those topics have emerged from the work of the Task Groups. At the end of each of the General and topic sections some recommendations are made.

2. General Points

Level of Detail in the Preliminary Scheme and Supporting Documents

2.1 As mentioned in the Introduction, the LTC project team have engaged with members of the ESSP Steering Group during development of the scheme. Primarily this has been through the Tunnel Design Safety Consultation Group, which has met on a number of occasions over the last few years. This has helped the ESSP Steering Group members gain some understanding of the project; and some progress has been made in addressing concerns.

2.2 However, there remains a general concern at the lack of detail in the documents and drawings relating to provisions for safety, security and dealing with emergencies. This makes it more difficult for the ESSP Steering Group to comment on the LTC proposals and their acceptability or otherwise.

2.3 The proposals would include the longest road tunnel in the UK. However, the documents contained in DCO v1 contain relatively little detail about the tunnel bores and the infrastructure to be provided around them. For instance, only schematic cross-sections of the tunnel have been provided (e.g. see Plate 2.4 at paragraph 2.4.87 of the Environmental Statement). Important features of the scheme – such as cross passage spacing – remain unclear.

2.4 Similarly, although some aspects of the scheme mitigations appear relatively clearly identified on the scheme plans – such as areas of land for biodiversity habitat creation – some of the features related to safety and security appear less well defined. For instance, the plans and drawings do not identify things like emergency service Rendez Vous Points, or helicopter landing areas. Other details are also not specified – such as communications strategies, response plans and entry controls for the emergency access roads.

2.5 At the same time, it is understood that for a project of this scale and complexity, some flexibility may be desirable to allow contractors and operators to come forward with their own schemes at a subsequent "detailed design stage[2]". It is acknowledged that an Order which is too rigid in its terms runs the risk of stifling innovation and preventing more cost-effective solutions being delivered.

2.6 It is also recognised that the primary concerns of the ESSP Steering Group overlap and inter-act with other important issues which need to be addressed, either now or at the detailed design stage. For instance, the details of boundary treatments can be important for achieving project security; but can also be important for biodiversity, visual appearance and landscape/townscape character.

[2] the detailed design stage refers to Requirements paragraph 3 in Schedule 2 to the draft DCO

2.7 The ESSP Steering Group welcomes the opportunity to comment on the pre-submission, preliminary scheme design; and looks forward to further engagement prior to submission of the DCO application to the Secretary of State (for examination by the Planning Inspectorate). Currently, the ESSP Steering Group considers that the project has yet to demonstrate that the optimal solution to deliver on the full range of sustainable development objectives – including safety and security - has been arrived at. Therefore, changes to the scheme and to the provisions in the DCO dealing with approval of the detailed design are requested, as discussed below.

2.8 In preparing this response, the ESSP Steering Group recognises the on-going engagement with the project team; and is grateful for their time in producing documents such at the Guide to the Development Consent Order for emergency services (23 July 2021, version P01). Section 4 of that document sets out the history of engagement with the emergency services as the project has evolved; and Table 4.1 lists a number of design changes to the scheme which have been made as a result. Some of those changes can be readily identified in the published scheme documents – such as the addition of emergency access roads to the north and south tunnel portals; and the recently added emergency access road connecting the LTC to the A1089 to improve response times.

2.9 However, some of the other design changes listed in Table 4.1 are more difficult to identify in the published scheme documents. These include things such as:

- addition of a Fixed Fire Fighting System (FFFS) to the tunnels
- location of fire hydrants at 75m intervals and provision of dry-risers in the tunnels at cross-passage
- identification of air ambulance landing sites at the tunnel portals

2.10 Whilst these statements are welcome, the ESSP Steering Group is unclear where the DCO, preliminary design drawings or draft control documents provide commitments to include these items of infrastructure in the detailed design. Therefore, this response covers the full range of issues and requirements which the ESSP Steering Group considers are important to include. It is possible that further engagement could lead to the production of a Statement of Common Ground, which might be helpful in communicating to the Examining Authority both agreed areas of emergency provision, and highlight where there are differences. This could include differences of opinion over the legal and procedural measures which are to be required to ensure emergency provisions are delivered.

The draft DCO

2.11 The Authorised Development is set out in Schedule 1, which lists a series of Works. Comments on the descriptions of the Works are provided where relevant in the later sections of this response.

2.12 In summary, the Schedule 2 Requirements in the draft DCO dictate that the Authorised Development must be designed in detail, in accordance with:

a) the Design Principles; and
b) the preliminary scheme design as shown on:

    i. the Engineering Drawings and Sections
    ii. General Arrangement Drawings

2.13 Also, in summary, the Authorised Development must be carried out in accordance with:

c) the approved detailed design (see above)
d) the Environmental Management Plan (EMP, Second Iteration) which has to be substantially in accordance with the Code of Construction Practice (CoCP) and written in accordance with ISO14001 to reflect the mitigation measures set out in the Register of Environmental Actions and Concerns (REAC)
e) for the operational phase, an EMP Third Iteration, prepared in accordance with the process set out in the CoCP
f) a Landscaping Scheme, reflecting the REAC, and prepared in accordance with the process set out in the CoCP
g) surface and foul water drainage details - (reflecting the REAC)
h) a scheme of archaeological investigation
i) traffic management plans for each part of the construction phase
j) means of enclosure in accordance with Volume 1, Series 0300 of the Manual of Contract Documents for Highway Works
k) a traffic impact monitoring scheme, substantially in accordance with the outline monitoring strategy

2.14 Part 2 of Schedule 2 sets out the procedures for discharge of requirements. These are, in the main, details and matters submitted to and for approval by the Secretary of State, with an initial 8-week period for determination (though longer periods may be agreed).

2.15 The ESSP Steering Group notes that relevant planning authorities are required consultees for some matters; and indeed are the approval authority in limited circumstances. It is also noted that there are provisions in paragraph 15(4) of Part 2 of Schedule 2 which require that where a local planning authority is required to be consulted, then the developer must:

- provide the local planning authority with all relevant information about the submission

- give due consideration to any representations made by the local planning authority
- send with the application to the Secretary of State a copy of the planning authority's representations, together with a report on how these representations have been taken into account in the submission.

2.16 In general terms, the ESSP Steering Group considers that for submissions of the detailed design, and for some of the subsequent approvals (as set out in items a) – k) above), the emergency services should be named as consultees, in a similar manner to that for local planning authorities in Schedule 2 Part 2. This would ensure that the views of the emergency services and their safety partners' (through liaison via the ESSP Steering Group) would be taken into account where relevant.

2.17 The draft DCO itself does not use the term "emergency services", though it has been used in some other DCOs. Certain of the emergency services are referred to for particular purposes – for instance Police, Fire and Rescue officers are named in article 2 of the draft DCO as "authorised persons" who may (among other things) remove a vehicle from the tunnel in appropriate circumstances, in accordance with article 49. However, this does not satisfy the need to consult with the emergency services, because it is not linked to consultation; and because the ambulance service is not named.

2.18 Genuine consultation does require both information and sufficient time allowed to consider that information and formulate a response. Reasonable timescales for consultation with the Emergency Services therefore need to be built into the DCO.

2.19 At the same time, the current consultation and the recent history of engagement confirms that the volume of information coming forward for a project of this size will be considerable; and that producing and submitting timely and comprehensive responses from the different emergency services and safety partners will be a challenge in itself. Therefore, it is suggested that funding should be provided for:

a) a co-ordination officer to assist individual emergency service and safety partner representatives through the consultation stages of the detailed design and construction plans;

b) funding for officer of ESSP Steering Group member organisations to carry out reviews of that documentation.

Documents

2.20 There appear to be a number of differences between the DCO v1 documents and certain of the equivalent documents published as part of the Community Impacts Consultation exercise. The ESSP Steering Group has not carried out an exhaustive cross-checking exercise, but in the main it is noted that the drawings and plans contain differences which primarily relate to labelling and detail. For example, in relation to the Tunnel Service Building:

DCO v1 drawing or document	Equivalent Community Impacts Consultation drawing or document
2.5 General Arrangement Drawing sheet 10 of 47	**Map Book 1 General Arrangement Plan sheet 10**
Shows a building relatively close to the A226 (not labelled)	Shows a "Primary substation and switchgear equipment" building close to the A226
No indication of location of a Tunnel Service Building	Also indicates a location for "Tunnel Service Building and permanent electric substation" above the southern tunnel portal
2.9 Engineering Drawings and Sections sheet 2 of 14	**Map book 3 Engineering Plans, sheet 6**
Shows a building close to A226 (not labelled) corresponding to the substation/switchgear building	No substation/switchgear building shown
No Tunnel Service Building shown/indicated	No Tunnel Service Building indicated
2.6 Works Plans sheet 10 of 47	**No equivalent drawing published**
Shows a building associated with Work No. MU13 corresponding to the substation/switchgear building	
General location of Work No. 3C (including (vi) a new tunnel service building) indicated	

2.21 Some of these kinds of differences are referred to later in this response. It is assumed that inconsistencies between the proposal drawings (and other documents) will as far as possible be ironed out prior to submission of the DCO application.

How the DCO Proposals Deal with Emergency Service Impacts

2.22 It is recognised that the LTC project has the potential to provide some significant benefits, not least in terms of improved road safety; and that some of these benefits could assist the emergency services in their work.

2.23 It is also recognised that the project team has liaised with the ESSP members to assess the potential effects of the scheme on their activities. This has already led to some mitigation measures being introduced into the scheme

design. For instance, the ability of the emergency services to respond to incidents on the new road has been improved by providing additional emergency access roadways to reach road traffic accidents along the route. Also, some work has been carried out on relevant issues beyond the documents which have to date formed the draft DCO v1 submissions – primarily through the TDSCG, but also through other discussions and the Security Working Group. Concerns expressed about the initial design for the Travellers site were recognised, and the project team has worked with stakeholders to find a suitable location.

2.24 Also, the LTC project team has provided a guide to the DCO documentation for the ESSP Steering Group members. This indicates where relevant information may be found, and recognises that the DCO documents are large in number and size, reflecting the complexity of the project. However, it also highlights the following:

- the formal assessments contain relatively few references to matters of safety, security, designing out crime, and emergency response;
- the relevant issues are somewhat dispersed across the documents, many of which have a different primary focus;
- there is relatively little detail on some of the ESSP related features in the scheme, such as tunnel cross passages; and
- there is little in the documents which clearly translates assurances discussed at the Tunnel Design Safety Consultation Group into clear commitments in the scheme design and control documents.

2.25 Looking at this situation as a whole, the ESSP Steering Group notes that there is no document which deals comprehensively with effects on emergency provision and the issues of relevance to its members. It is considered that there would be substantial merit in producing such a document.

2.26 The ESSP Steering Group does not wish to be prescriptive, but it is suggested that this could contain an assessment of effects on the range of issues considered in the remainder of this response. This should include impacts not just on the ability to respond to incidents on the LTC itself, but also impacts on the day-to-day operations and activities of the emergency services and partners in the local area. It should also encompass both the construction phase (including enabling works), and the operational phase; and offer specific mitigations for any identified adverse effects. Those mitigations should be translated into either identifiable items in the preliminary design, or to commitments in the control documents.

2.27 In the view of the ESSP Steering Group, preparing an overall emergency services document of this nature could serve a number of purposes. Firstly, it may highlight and clarify current gaps in assessment and mitigation. Secondly, it could help to ensure that contractors and the scheme operators are bound into the necessary mitigation measures.

2.28 The ESSP Steering Group's view is that the document should be a control document itself linked to the requirements in the CoCP and REAC. The ESSP Steering Group also considers that the document should form part of the formal DCO submissions.

2.29 It is recognised that for some issues of relevance to the ESSP Steering Group, there may need to be confidential discussions held and assessments made, outside of a public forum such as the current consultation exercise. These issues could include for instance those related to protest (section 3); some aspects of criminality, human trafficking and modern slavery, and security issues such as counter terrorism (see in particular section 4). This may also lead on to the need for confidential discussions on matters of detail such as design of Automatic Number Plate Recognition systems and coverage. The project team might consider liaising with the Police services to develop a Secret Intelligence Plan and Requirements document.

Response Plans

2.30 The CoCP sets out at paragraph 6.9.1 that for the construction phase contractors will have to produce procedures for dealing with emergencies; and that these will be developed in consultation with the emergency services and Resilience Forums from Kent and Essex. Paragraph 4.34 also refers to the Joint Operations Forum between Highways England and the contractors, which will help (among other things) with the co-ordination of emergency response plans, and holding meetings with the emergency services.

2.31 However, it is noted that whilst the CoCP itself must be approved by the Secretary of State in accordance with Requirement 1 in Schedule 2 of the draft DCO, there is no such clear requirement for the content and approval of the Contractor emergency procedures/plans; nor a defined pathway for consultation with relevant organisations and stakeholders. Emergency response plans are not requirements in the REAC at section 7 of the CoCP, and their contents are not set out as clearly as those for Environmental incident controls in section 6.10 of the REAC.

2.32 The complications of preparing and delivering construction emergency response plans across all of the activities and contractors involved are recognised. Also, until the tunnels connect both sides of the River Thames, any response plans may have to address differences in circumstances and emergency provision north and south of the river.

2.33 The DCO v1 and Community Impacts Consultation documents do not contain any form of Emergency Incident Management/Response Plan or requirements for these in relation to the operational phase of the development. It is appreciated that the range of incidents which this would have to cover over both the tunnels and the road is wide. It is also recognised that that until the

detailed design has been formulated, it is difficult to provide specific information and proposals in such a Response/Management Plan.

2.34 The ESSP Steering Group considers that if it has not already done so, the LTC should begin to develop overall frameworks for the production of Emergency Incident Management/Response Plan(s) for both the construction and operational phases. This could set out requirements for their relative timing of preparation and implementation across the project elements and areas. Beginning that work now is likely to pay dividends over time, and provide a consistent approach thereafter.

2.35 It is the view of the ESSP Steering Group that such a framework should be included as part of the aforementioned document covering the whole of the effects on emergency service and safety partner issues (see paragraphs 2.26 - 2.29 above). It should include identified means whereby preparation and implementation of response plans would be made commitments in the control documents, and this should be confirmed in the DCO itself so that contractors are committed to such content. It should also outline the areas of concern for each response plan; and how consultation with the emergency services and safety partners will be formalised.

2.36 For example, the following provisions are included in the Silvertown Tunnel Order 2018 (the "Silvertown DCO") and the Great Yarmouth Third River Crossing Development Consent Order 2020 (the "Third River Crossing DCO") which could be used to provide a framework for response plans to be prepared and implemented in these circumstances:

a. Under paragraph 5(2)(b) of Schedule 2 to the Silvertown DCO, the authorised development cannot commence until the Emergency Plan has been prepared in consultation with the local emergency services and the relevant planning authority. In addition, under paragraph 5(2)(c) of Schedule 2 of the same DCO, the authorised development cannot commence until the Fire Plan has been prepared in consultation with the London Fire and Emergency Planning Authority.

b. Under paragraph 10 of Schedule 2 to the Third River Crossing DCO, no part of the authorised development is to be opened to the public until an emergency preparedness and response plan has been submitted to and, following consultation with Great Yarmouth Borough Council, the lead local flood authority, Norfolk Fire and Rescue, Norfolk Constabulary and the Environment Agency, approved in writing by the county planning authority. This provisions also sets out what the emergency preparedness and response plan must include, and how the approved plan must be implemented.

2.37 One issue of general concern for the operational phase of the LTC is that of the absence of hard shoulders within the tunnels and along the route, with

just narrow areas of hard strip alongside. The project design and emergency response plans should address how prompt access by emergency service vehicles to an incident can be achieved within the confines of the road infrastructure, given that traffic may back up rapidly, and the likelihood of multiple smaller incidents occurring as a result. This needs to show how large emergency vehicles such as fire engines will be able to travel to the scene of an incident when most or all of the carriageway is occupied by other vehicles such as lorries. A number of measures to deal with this issue have been alluded to, but to date no details have been provided. Without those details and a commitment to deliver emergency service access to incidents, the ESSP Steering Group's default position is that a hard shoulder should be provided.

2.38 For both the construction and operational phases, there need to be measures put in place to ensure that information is updated and communicated to the emergency services dynamically as the project progresses.

General Recommendations

Recommendation 2.1

The Order should set out clearly the procedures and processes for approval of the detailed design, including those for consultation, so that there is no doubt about how it will be carried out. Specifically, it is recommended that the draft DCO is amended as follows:

5. a clear definition of the Emergency Services is provided in the DCO, to encompass all Police, Fire and Rescue, and Ambulance services through which the LTC will pass

6. the Emergency Services are named consultees on the preparation of and submission for approval of:

   i) the detailed design
   j) the Environmental Management Plan (EMP, Second Iteration)
   k) the EMP Third Iteration
   l) the Landscaping Scheme
   m) traffic management plans for each part of the construction phase
   n) means of enclosure
   o) in accordance with Volume 1, Series 0300 of the Manual of Contract Documents for Highway Works
   p) the traffic impact monitoring scheme

7. the undertaker is required to take into account and report on the views of the Emergency Services prior to submission of details for approval by the Secretary of State

8. the Emergency Services are given 8 weeks in which to provide their views when consulted by the undertaker.

Recommendation 2.2

Funding should be provided for:

c) a co-ordination officer post to support the ESSP Steering Group members in responding to emergency services consultations on the detailed design and construction phase document approval stages;
d) funding for ESSP Steering Group member officer time to carry out detailed reviews of the documentation coming forward

Recommendation 2.3

A document should be produced providing a comprehensive assessment of the effects of the LTC on the activities of the emergency services and safety partners, with identified mitigation measures, and commitments in the proposals and control documents.

Recommendation 2.4

The DCO and scheme documents should provide a strategy or framework for providing and implementing Emergency Incident Management/Response Plans for the different stages and elements of the LTC –during both the construction (including enabling works) and operational phases.

Recommendation 2.5

The ESSP Steering Group and LTC should work together towards a Statement of Common Ground covering the issues and recommendations set out in this response.

Recommendation 2.6

The project team should consider preparing a confidential Intelligence Plan and Requirements document to include, for instance, details of ANPR systems to be installed along the route.

3. Protest

3.1 The LTC, in common with many major development proposals, will not be welcomed by everyone, and some people will want to express their opposition in the form of protest. The ESSP Steering Group considers that there may be merit in identifying organised, designated protest areas for the LTC in advance of construction and site clearance works taking place. Whilst not all protestors will choose to use such areas, they may be welcomed by others. It is recognised that some work on this may already have been carried out by LTC.

3.2 Engagement with protest groups can help shared objectives to be achieved. These could include ensuring that protestors help to identify locations which would meet their needs – for instance being large enough, having good line of sight with the focus of their protest, and being visible to the media and the rest of the community. At the same time, LTC could help to ensure that protestors can get safe and easy access to these areas.

3.3 The Police and other public bodies have a duty to take reasonable steps to allow those who want to exercise their rights to express their views through peaceful assembly and protest to do so. This can include protecting protestors from those who may want to prevent them from protesting.

3.4 At the same time, restrictions can be placed on protests where these are in the interests of national security, public safety, the prevention of crime and disorder, or to protect the rights and freedoms of others. Any restrictions must be necessary and proportionate, supported by evidence of the risk of serious public disorder, damage to property or disruption to life in the community; or that any protest organisers intend will intimidate or compel others to do unlawful acts.

3.5 Advice can be given by the ESSP Steering Group to both LTC and to those wishing to protest. However, it is important that the identification of protest areas is not seen as seeking to impose conditions or restrictions on protest in advance, without due cause. The ESSP Steering Group does not offer any suggestions on potential protest areas at this stage; and does not consider that the draft Order or v1 documents need to be amended in these respects.

3.6 The ESSP Steering Group consider that measures should be put in place to ensure the safe passage of emergency services vehicles in order to access any protests.

Recommendations

Recommendation 3.1

The ESSP Steering Group recommends that LTC liaises (or continues to liaise) with community and protest groups in advance of construction of the project. This should include discussing with those groups the potential value of identifying protest areas which might meet their needs in a safe way.

The Emergency Services and Safety Partners would be happy to offer advice to both LTC and to community and protest groups, including on how to make protests safe for all.

Recommendation 3.2

Preparation of a Protest Plan (or a protest section within an incident response or management plan) should be considered.

Recommendation 3.3

The ESSP Steering Group recommends that a general protest area is identified on the approved plans, within the Order Limits.

4. Security: Criminality, Terrorism, Modern Slavery and Human Trafficking

4.1 The LTC project gives rise to a range of issues relating to security, both during the construction (including enabling works) and operational phases. Some of these in turn raise other, related issues which will need to be addressed. These security issues may be localised, such as that of smaller scale theft from site compounds, delivery vehicles and worker accommodation. Others are inherently more wide ranging, such as the potential use of the LTC as a conduit for organised criminals and human traffickers to move their activities, stolen goods and victims around the country. What is clear to the ESSP Steering Group is that the LTC will pose a significant security risk and an attractive development for criminality if it does not incorporate measures to limit those harmful activities. This needs to cover temporary works and buildings, as well as permanent infrastructure.

4.2 Some of the principle means of delivering security for the LTC could include the following kinds of measures throughout the design, construction and operational stages:

- Automatic Number Plate Recognition (ANPR) – ensuring that the movement of vehicles including those of deliveries and criminals alike can be tracked, and static ANPR infrastructure plays a significant part in disrupting criminality
- monitored Closed Circuit Television (CCTV) – which can play an important role in deterring, observing and recording criminality
- Appropriate and risk-commensurate means of enclosure – such as fencing and gates
- Lighting – which plays a pivotal role in public and privates spaces by deterring and detecting criminal activity (for instance in supporting effective CCTV), but also promotes a feeling of safety within that space. (see also the points set out at item 2b) of Appendix A to this response).
- Access control – including gates and doors

4.3 It is recognised that these security measures do not exist in isolation from other important issues. For instance, in addition to helping record crime, CCTV will be employed to maintain safety on the project, including through spotting stationary vehicle; as well as help to maintain traffic flows. More widely, security measures need to address issues such as their environmental impact – for instance the effects of CCTV masts on the landscape character of the area, or the visual effects of security fencing on the amenity of adjacent

residential neighbourhoods. It is important that the details represent the best balance between sometimes competing interests, so that the optimum form of sustainable solution is arrived at. The preparation of a Lighting Impact Assessment is an important step in this.

4.4 The draft DCO itself only expressly mentions security in terms of identifying security fencing as one of the Ancillary Works authorised. Fencing is mentioned at paragraph 11 of Schedule 2 to the draft order, in terms of requiring adherence to a specified standard for all fencing other than that for "non-highway works" fencing.

4.5 Document 7.11 Construction Code of Practice (CoCP) has more information on worksite security, notably in sections 6.6 and 6.7 where it mentions construction accommodation, site compound and worksite security; and also in Table 6.1 of CoCP section 6.4, working hours – which includes for 24-hour site security. Security lighting for construction sites is also mentioned at paragraph 6.8.1. However, this is seen as providing baseline information only.

4.6 The Design Principles mention the range of functions of CCTV including crime detection at paragraphs 1.2.14; and that security structures including fencing around publicly accessible areas near the north tunnel portal will be integrated into the wider landscape (Table 4.5). Appendix B to this response contains recommendations and a request to broaden some of the security measures for sites, as set out in the "Code of Construction Observations."

4.7 The CoCP mentions in section 5 that a Communications and Community Engagement Strategy (CES) will be developed by Highways England; and that a Communications and Engagement Plan (CEP) will be provided to Highways England by the contractor for review and final approval. Whilst these references are welcome, they do not provide firm commitments to the security measures which will be needed, nor to robust procedures for the scrutiny of plans and proposals prior to their adoption and implementation. It seems likely that these documents are not the intended focus for security issues.

4.8 Similarly, the setting up of the Security Working Group is welcomed by the ESSP Steering Group, but its work, membership and outputs do not appear to have been clearly defined or identified within the other LTC project activities. The scope of work for the Joint Operations Forum (JOF), referred to in section 4.3 of the CoCP, does not appear to include site security – but could perhaps be adapted to do so. The material in CoCP section 7.6 does identify some of the most relevant issues to be considered.

4.9 Relatively little information has been provided on many of the security issues for the operational phase. Whilst the ESSP Steering Group recognises that

flexibility in the design is needed, there is concern that the key standards and overall requirements regarding security do not seem to have been included and set out in the preliminary design documents.

4.10 Appendix B to this response contains a detailed review of the DCO v1 and Community Consultation documents, from the perspective of Designing Out Crime Officers of Essex and Kent Police. By way of summary, the following areas are covered:

- **Risk Management and the inclusion of mitigation of crime:** covering various components of construction site specific assessments, such as risk and security, parameters and terminology, and the need for ongoing review at each stage of the development (pre-enabling, construction and post construction.

- **Access Control**: observations regarding access proposals such as access to site compounds, worker accommodation. (Proposals for entry to emergency access roads are relevant to section 5 of this response).

- **PROW and public realm areas:** Observations regarding the proposed PROW and public realm areas will be most relevant at the later, detailed design stage. The need for liaison with the ESSP (especially the Designing Out Crime Officers) will span across various public realm areas such as proposals for the green bridges, to the proposed Tilbury Fields.

- **Lighting:** This includes temporary lighting, the use of motion sensor lighting and impact of lighting on CCTV. Due to the significance of lighting, within this section further clarity and a firm commitment to Lighting Impact Assessments for certain areas of the design are sought.

- **CCTV:** Within the documentation it is evident that CCTV is proposed across the whole site. The ESSP Steering Group can provide a generic statement of its requirements and specification, extending to monitoring. It is important that the evidential quality of the CCTV images is sufficient for prosecutions, with coverage to ensure there are no blind spots.

- **Use of industry approved Security Standards:** the use of various security standards e.g. for doors, security hardware – are recommended. It is also advised that that the Design Principles should include reference to use of the most up to date guidance set out by the Secured by Design initiative.

- **Compound Security:** covering concerns and observations regarding security topics such as fencing, lighting, and the importance of utilising security standards and alarms.

- **Worker Accommodation:** commenting on the absence of detail relating to the worker accommodation, extending to any proposed staff welfare facilities on site and appropriate secure ancillary infrastructure, such as secure bicycle facilities.

- **Management and Maintenance**: This section refers the requirements for plans and policies to support proposals. This can include aligning the delivery booking system, and the need for ongoing proposals for anti-climb / anti-graffiti measures.

- **Further Liaison**: requesting further liaison with LTC regarding various components of the detailed design such as (but not limited to) the design of the tunnel services building, design of the travellers site and Tilbury Fields including the potential parking facilities.

4.11 The Steering Group is appreciative that the documentation contains a strategic vision for the proposal, but further clarity is sought (at the relevant and appropriate time) regarding the evidence required. Ongoing liaison and a formal requirement for consultation with the ESSP are seen as minimum requirements.

4.12 In addition, the ESSP Steering Group seeks clarification that the design has and will consider the risk of modern slavery and human trafficking exploiting the new route, and in the location and detailed design of the worker accommodation proposals.

4.13 The ESSP Steering Group will ensure that the project team are provided with a detailed assessment of ANPR requirements to ensure that the system is effective, with full coverage and no blind spots.

Recommendations

Recommendation 4.1

It is recommended that the future work of the Security Working Group is scoped and clarified, so that it is fully effective in influencing the scheme design and construction. This can take place outside the scope of the DCO and control documents.

Recommendation 4.2

The Construction Code of Practice should be amended to set out a strategy for dealing with security issues, with an overall procedure for all contractors to follow, and including reference to established standards, to ensure consistency across all sites.

Recommendation 4.3

Security issues should be included within the work of the Joint Operations Forum referred to in section 4.3 of the Construction Code of Practice, with a requirement to include security in detailed contractor proposals

Recommendation 4.4

The security issues identified in Appendix B to this response should be addressed in detailed proposals for both the construction phase (including enabling works) and the detailed design of the LTC. This should be referenced in the Design Principles.

Recommendation 4.5

The ESSP Steering Group recommends that the measures and requirements set out in paragraphs 4.2 and 4.10 above are identified in approved plans and/or control documents.

Recommendation 4.6

Clarification should be provided that the design has and will consider the risk of modern slavery, human trafficking and other hidden vulnerability and harm exploiting the new route, and in the location and detailed design of the worker accommodation proposals.

5. Emergency Access

5.1 It is important to ensure that good access for emergency services is maintained at all times through the construction phase (including enabling works) and the operational phase of the LTC.

Construction Phase

5.2 Within the DCOv1, document 6.1 Environmental Statement refers at paragraph 2.5.24 to the Construction Traffic Management Plan, in particular to emergency access for utilities providers, but not for emergency services.

5.3 The draft DCO refers in Schedule 8 to temporary possession of land to allow for emergency access zones in association with various Works. DCO v1 document 7.11 Code of Construction Practice (CoCP) refers at paragraph 6.9.5 to contractors ensuring that the requirements of the emergency services will be followed for the provision of site access points, which will vary over time.

5.4 It is noted that the CoCP includes reference at paragraphs 5.9.4 and 6.9.5 to Contractors ensuring that emergency site access points will be provided to meet the requirements of the emergency services; and more specifically at paragraph 6.9.3 to the requirements of the relevant fire authority. These may change over the course of the construction programme.

5.5 In general terms these statements are welcome, and the need for flexibility during the construction phase is recognised. However, whilst the CoCP must be approved by the Secretary of State in accordance with Requirement 1 in Schedule 2 of the draft DCO, there is no such clear requirement for the approval of the Contractor emergency procedures; nor a defined requirement and process for consultation with the emergency services.

5.6 It is also noted that within the CoCP specific reference is made at paragraph 6.9.5 to helicopter landing provision at the North Portal, close to hyperbaric facilities – but not elsewhere along the route, including the southern portal.

5.7 The emergency access arrangements should cover not just the access points from the public highway, but also routes within the construction site, which could include internal haul roads, which need to be suitable for emergency vehicles to travel along.

5.8 Similarly, emergency communications need to be compatible with those used across all of the emergency services, not just Fire and Rescue. In that respect, Contractors need to be aware of planned future change over from Airwave to the Emergency Services Network.

Operational Phase

5.9 The draft DCO makes provision for emergency access to the carriageways in both directions at the tunnel portals in Work No.3G(i) and No.5B(ii) – as shown on the Works Plans sheets 9, 17 and 20. These are also referred to in the Environmental Statement (ES) Chapter 2, paragraphs 2.3.25, 2.3.37, and 2.4.90; and at paragraph 1.2.11 of the Design Principles.

5.10 An emergency access route for both directions on to the LTC is also shown at Chadwell St Mary, Brentwood Road – this appears to be Work No.6D(viii) and (viii). Though these works are referred to as private means of access in the draft DCO, they are referred to as emergency provision in the ES paragraph 2.3.43. The emergency access is also labelled as such on sheet 25 of the General Arrangement drawings published for the Community Impacts Consultation.

5.11 It is also noted that the General Arrangement drawings published for the Community Impacts Consultation labels on Sheet 26 an emergency access leading from Heath Road on to the A1089 southbound, providing a connection with the A1013.

5.12 The ESSP Steering Group is pleased that the following additional emergency access routes have been provided since DCO v1 was prepared:

- from the B186 between North and South Ockendon (both directions)
- a short section of road to provide more direct access on to the LTC northbound from the Orsett Cock roundabout

5.13 (These are shown on the General Arrangement drawings published for the Community Impacts Consultation, sheets 29 and 36, though they are not labelled as such.)

5.14 The ES at paragraph 2.4.100 indicates that the entrance control arrangements for use of emergency access roads has yet to be decided, and would be determined and agreed in co-ordination with the TDSCG. It is considered that this might alternatively be agreed in co-ordination with the ESSP Steering Group. It is considered appropriate to determine those entry arrangements at the detailed design stage – as long as consultation with the emergency services and safety partners is required when the details are approved (see recommendations in Section 2 and Appendix B of this response). In addition, the following factors should be taken into account in the design of access arrangements.

5.15 Paragraph 2.4.90 of the ES states that emergency vehicle access from the local road network to the LTC carriageway will be provided in both directions. In terms of the emergency access routes provided on sections of the LTC away from the tunnel portals, their number, locations and design

(e.g. width) appear to be, in general terms, to be reasonable and appropriate. However, there remain substantial distances between these points along the new road; and they may not overcome issues related to the absence of a hard shoulder. Experience indicates that in the event of an incident, traffic often backs up rapidly, and emergency services find it more challenging to attend promptly on all-lane running roads than where a hard shoulder is present. This is especially the case for larger emergency service vehicles such as fire and rescue and ambulance units. The ESSP Steering Group requests clarification on how routes through stationary traffic for emergency vehicles will be ensured, especially along the two-lane southbound section from junction 29 on the M25 to the Orsett interchange with the A13.

5.16 In the absence of details and a commitment to deliver emergency service access to incidents, the ESSP Steering Group's default position is that a hard shoulder should be provided.

5.17 At the tunnel portals, emergency access requirements are likely to be somewhat different. It is noted that the emergency access roads appear to be in the region of 4m in width, as shown on the Works Plans and the General Arrangement drawings.

5.18 Consideration should be given to the capacity of the emergency access routes to accommodate large numbers of emergency service vehicles attending a major incident. This should include taking into account the width of the roadway, emergency vehicle turning circles, and the need for laybys and passing places. For instance, it is noted that the emergency access route to the southern portal comprises a single entry point off the A226, with the roadway subsequently splitting in two to reach each carriageway. This first section of roadway might need to accommodate vehicles travelling in different directions, and therefore may need to be wider than shown. For the emergency access roads at both the north and south tunnel portals, consideration should be given to providing passing places or laybys, to avoid roadways becoming blocked.

5.19 It is understood that removeable barriers close to the tunnel portals (see Environmental Statement paragraph 2.4.90) are primarily designed to enable stationary traffic on one carriageway to be transferred to the other carriageway, and taken away from an incident. These are shown on the General Arrangement drawings (sheets 10 and 17), but not distinguished from other forms of barrier in the draft DCO approved Works, or shown on the Works Plans or Tunnel Area Plans.

5.20 The following features of the emergency access to the northern tunnel portal and approaches are also noted:

- entry on to the LTC northbound carriageway is approximately 250m from Station Road, and 860m north of the removable barrier
- entry on to the LTC southbound carriageway is approximately 550m from Station Road, and 580m north of the removable barrier

5.21 For the southern portal:

- entry on to the LTC northbound carriageway is approximately 900m from the A226 road, and 470m south of the removable barrier
- entry on to the LTC southbound carriageway is approximately 1300m from the A226, and 580m south of the removable barrier

5.13 It would be helpful to understand the rationale for the positioning of the emergency entry points on to the carriageways, relative to the local road network, the tunnel portals and the removable barriers. This may have implications for vehicle circulation (including emergency vehicles in the event of an incident). It is not yet clear whether there might be additional benefits from providing additional removeable barriers closer to the emergency entry points. The removable barriers should also be relatively easy to remove and/or replace, and the documents need to be clear regarding other requirements such as temporary signs and diversions in order to facilitate this.

5.22 The DCO v1 and Community Impacts Consultation documents do not contain any provisions for emergency helicopter landing areas. These could take the form of unlicensed landing sites, and do not need to be complex or expensive to provide. The main criteria are sufficient size (ideally to accommodate more than one helicopter, including some larger aircraft such as those used by the coastguard), with a safe approach path, and protected from development. The absence of such an area has become an issue for the current Dartford crossings. The Hindhead Tunnel could act as an appropriate model, which includes a landing site close to the north portal on some open ground marked with a "H". The landing areas will also need to support the transfer of the patient from the ground ambulance to the helicopter, which will require appropriate slopes, gradient and vehicles parked close by.

Recommendations

a) Construction Phase

Recommendation 5.1

The procedures and requirements for the development of Contractor emergency plans should be formalised in the DCO, to include an explicit requirement for

approval, and a commitment to consultation with relevant emergency services and safety partners. This could be combined with provisions in the Construction Code of Practice and the Construction Traffic Management Plan.

Recommendation 5.2

Provision should be made for helicopter landing during the construction phase at locations in addition to the hyperbaric facilities at the northern tunnel portal. Identification of helicopter landing facilities should be made a requirement prior to commencement of the development, and their location should be confirmed in approved plans.

Recommendation 5.3

Emergency access arrangements should be included within the emergency preparedness procedures to be developed in consultation with the emergency services and safety partners, as outlined in paragraph s 5.9.1 – 5.9.2 of the CoCP; and should be listed under paragraph 5.9.3, rather than as a separate item. This should include ensuring that any internal haul roads which might be used by the emergency services are fit for that purpose.

Recommendation 5.4

Emergency preparedness procedures should include ensuring that communications provisions are compatible with those used across all of the emergency services and other responding organisations, not just Fire and Rescue (bearing in mind the planned change from Airwave to a new Emergency Services Network), and the continued requirement for ability to use the mobile phone network.

b) Operational Phase

Recommendation 5.5

All of the emergency access road provisions in the scheme should be consistently referred to in the DCO, and labelled as such on the relevant Works, General Arrangements, Tunnel Area and other approved plans and drawings.

Recommendation 5.6

The arrangements for emergency services to enter the emergency access roads should be designed in accordance with the advice provided in Appendix B to this response. This should form part of an approved Emergency Response / Management Plan for the road.

Recommendation 5.7

Emergency Response / Management Plans for the LTC should be required to address how prompt access to incidents is to be achieved, especially if traffic backs up, and given the absence of a hard shoulder. In the absence of these plans

to deliver emergency service access to incidents, the ESSP Steering Group's default position is that a hard shoulder should be provided.

Recommendation 5.8

The width of the tunnel emergency access roadways should be assessed in terms of their adequacy to accommodate emergency vehicles (including a review of appliance turning circles), allow sufficient facility for vehicles to pass, and to avoid conflict with members of the public evacuating the tunnel.

Recommendation 5.9

As removeable barriers are an important element of emergency response around the tunnel:

c) they should be clearly identified as such in the DCO Works in Schedule 1
d) justification should be provided for their positioning and number, related to plans for responding to incidents, with consideration being given to the provision of additional removeable barriers.

Recommendation 5.10

Clear provision should be made in the preliminary design for designated emergency helicopter landing areas close to the north and south portals. These could be shown on the control drawings, and referenced in the list of authorised Works in the DCO.

6. Rendez Vous Points (RVPs)

6.1 Rendez Vous Points (RVPs) are a significant element of emergency service incident control associated with major infrastructure. They provide the location to which personnel and vehicles from the emergency services and safety partners:

- travel and gather;
- gain some information about an incident;
- before moving to attend the scene under the direction of the Forward Control Point (FCP) command.

6.2 RVPs are often therefore not immediately next to the focus of their attention and may be more peripheral to infrastructure; but they have to be located to enable quick and easy onward travel to an incident.

6.3 Further information relating to RVPs and FCPs is included at Appendix C to this response. Provision of RVPs requires making land available. For the existing Dartford tunnel there has historically been a relatively close relationship between the tunnel entrances / bridge, the RVPS and the tunnel control buildings. For Stanstead Airport, there is more than one RVP –for the runway and the terminal, standing off the main site itself.

6.4 The Environmental Statement (ES, Document 6.1) refers to the provision of emergency service Rendez Vous Points (RVPs) at paragraph 2.4.100. However, they are not included in the authorised Works in the draft DCO, or shown on either the General Arrangement drawings, the Works Plans or the Tunnel Area Plans.

6.5 The ESSP Steering Group considers that provision of RVPs is an important element of the LTC. It is recognised that there is no set distance to infrastructure or list of requirements for RVP design. It is also recognised that circumstances are different for the north and south LTC tunnel portals, in terms of their locations relative to the local road network and other emergency service provision.

6.6 Nevertheless, the ESSP Steering Group considers that RVPs should be provided as a minimum to serve both ends of the tunnel. They should be identified in the authorised Works and Requirements in the DCO; and ideally shown on the approved Works Plans, General Arrangement Drawings and Tunnel Area Plans.

6.7 Whilst the ESSP Steering Group does not wish to be proscriptive, two possible RVP sites are suggested for locations to the south and north of the River Thames, as set out in Appendix D to this response. These locations would utilise:

a) Site CA1 used as a compound during the construction phase - It is recognised that at least part of the site may be occupied by a drainage facility, so it is unclear whether sufficient space can be provided. However, the site is understood to be under the control of Highways England, and is likely to be accessible from the A2 and surrounding roads, with potential to travel on to a tunnel incident along the LTC if not blocked; or to travel onwards to the emergency access off the A226 if the direct LTC route is not available. Therefore, CA1 gives an indication of the sort of location which is suitable.

b) Land to the east of the proposed route, north of Station Road – It is recognised that although these areas were previously shown as forming part of the (now removed) Tilbury rest and service area, currently they are indicated on the Land Plans as being required for temporary occupation. Nevertheless, the areas close to the existing recycling facility and industrial estate appear to represent a good location for an RVP, providing immediate entry to the emergency access roads off Station Road.

6.8 These RVPs could be linked in a response plan to possible FCPs, which might be located in Emergency Hubs at the tunnel portal (see later in this response).

6.9 In addition to any fixed RVP and FCP near to the tunnel portals, Emergency Response Plans for the LTC should plan for where additional provision might be made elsewhere along the route. Other possible provision is also indicated in Appendix D to this response.

6.10 RVPs need to include emergency services communications capability and electric vehicle charging capability. It is also suggested that RVPs might be linked to or have similar infrastructure as emergency hubs, providing the opportunity for shared use and co-working with Highways England traffic officers working along the route, as already occurs at similar facilities at Chigwell and Cold Harbour. This would be in accordance with the JESIP principles (see section 7 of this response).

Recommendations

Recommendation 6.1

The preliminary design should be amended to reflect the acknowledged need for Emergency Services Rendez Vous Points (RVP), both in the general vicinity of the tunnel portals, and elsewhere along the route. RVP should be included in the list of authorised Works in Schedule 1 of the DCO, and indicated on the approved Works Plans.

Recommendation 6.2

Consideration should be given to whether sufficient and suitable land has been secured for RVP, particularly in relation to the tunnel portals.

Recommendation 6.3

Consideration should be given to the location of RVPs at an early stage, so that the following can be taken into account in the preliminary proposals:

e) road links
f) availability of land
g) integration with emergency access routes and Emergency Hubs.
h) RVP should be identified in more detail on the General Arrangement Drawings if appropriate.

Recommendation 6.4

The preliminary scheme design should be reviewed to consider whether there are other locations on the proposed route, away from the tunnel portal areas, where RVP could be provided, and to include these in the development of Emergency Response Plans.

7. Emergency Hubs

7.1 The draft DCO refers to Tunnel Service Buildings (TSB) under Work No.3C(vi) (Works Plans sheet 10) and Work No.5A(v) (Works Plans sheets 13 and 17). TSB are also referred to at article 6(1)(c) of the draft DCO in terms of the Tunnel Limits of Deviation plans. However, those plans do not show the TSB[3], and it is not clear what limits would apply.

7.2 The Environmental Statement (ES, Document 6.1) refers at paragraphs 2.4.10 – 2.4.12 to the provision of Tunnel Service Buildings (TSB) close to each tunnel portal. The TSB functions are described as:

a) to house mechanical and electrical plant, drainage pumps etc

b) power supply equipment

c) provide an office, with provision for local tunnel control (during maintenance and as a backup to remote control from the Regional Control Centre)

d) water storage for firefighting

e) TSBs would be accessed using the emergency vehicle accesses from the local road network

f) appropriate vehicle parking will be provided.

7.3 Some elements of this description are reflected at paragraph 1.2.11 of the Design Principles. It is also noted that Clause S9.06 in Table 4.5 of the Design Principles states that as far as possible, all of the required tunnel operations and facilities at the northern portal are to be integrated into the portal structure and within a single building. For the southern portal, a slightly different approach is suggested in the Design Principles. Clause S3.11 in Table 4.3 seeks to integrate the tunnel portal building into its surroundings, and have a green roof. Currently, no further details of the TSB are contained in the documents.

7.4 The TSBs also offer opportunities for enhanced emergency service provision. As well as day-to-day running of the LTC, the TSBs could be designed to be adaptable Emergency Hubs, and provide a range of functions in addition to those for the day-to-day running of the road and tunnel. These could potentially include the following:

[3] The General Arrangements drawings sheet 10 for the Community Impacts Consultation shows a building 35m x 30m footprint, but this is labelled separately from the TSB, and is for "primary substation and switchgear equipment".

a) **serve as Silver Tactical Command / Forward Control Points during a major incident**. Whilst many elements of incidents can be managed remotely, there is still added value in bringing commanders together in person. These are potentially good locations for incident management, which could have both access to relevant information and communications but with the advantages of being present on the ground – such as having a direct visual appreciation of the situation.

b) **provide joint emergency service / LTC control staging posts**. This could enable emergency services with waiting areas between tasks, assist in fostering communication and co-ordination with the operators and Highways England traffic officers working along the route, in accordance with the Joint Emergency Services Interoperability Principles (JESIP). This kind of function is seen as potentially particularly beneficial to the roads policing function (see also section 8 of this response relating to Response Times), and might also be achieved through provision of RVPs if that suited circumstances at a particular location (see section 6 of this response).

7.5 Facilities which it would be beneficial to include:

- vehicle parking
- vehicle charging points
- access to CCTV, public address systems
- office / conference
- waiting and welfare provision[4]
- local control of ventilation and lighting systems

7.6 The service building at Hindhead Tunnel provides some of these facilities. However, there is concern that emergency planning exercises have indicated that although there is some flexibility provided at Hindhead, overall the building may not be sufficiently large to cover silver command requirements during a major incident.

7.7 It is recognised both that:

- there may be some overlap between potential Emergency Service Hubs the consideration of Rendezvous Points / Forward Control Points, which are discussed elsewhere in this response; and

- circumstances are different for the north and south LTC tunnel portals, in terms of their locations relative to the local road network and other emergency service provision.

[4] as a minimum, the ESSP Steering Group would welcome a commitment to provide a rapid response mobile welfare unit for emergency services staff in both shorter term and longer term incidents.

7.8 Clearly, if Emergency Hubs are planned, then it will be necessary to ensure that sufficient land is identified to accommodate them; and that the DCO requires their provision, with adequate guidance on what they should consist of.

7.9 It is noted that Work No. 5A in Schedule 1 of the draft DCO includes the following item:

> "(ix) the construction of a new emergency area"

7.10 Looking at sheets 13 and 17 of the Works Plans (and the equivalent General Arrangement and Tunnel Area drawings), it does not appear that this is one of the roadside emergency areas for road users described at paragraph 2.4.6 of the Environmental Statement. However, from those plans it is not clear what the new emergency area at the north tunnel portal referred to in Work No. 5A(ix) consists of.

Recommendations

Recommendation 7.1

The preliminary design should be amended to provide Emergency Hubs at the tunnel portals, with consequent changes to the list of authorised Works in Schedule 1 (and corresponding Works Plans), the General Arrangement drawings if appropriate. The Emergency Hubs should be integrated with the provision of Rendez Vous Points and Forward Control Points, as discussed in the previous section of this response. Details of the Emergency Hubs should be the subject of consultation with the Emergency Services prior to submission to the Secretary of State for their approval.

Recommendation 7.2

What is intended by the new emergency area noted in Work No. 5A (ix) in Schedule 1 of the draft DCO (Works plans 13 and 17) should be clarified in the DCO documents, shown on the General Arrangement drawings and approved plans, and referred to in the description of the development (for instance in Chapter 2 of the Environmental Statement).

8. Emergency Service Response Times

8.1 The Emergency Services are set demanding national targets for various aspects of their performance. Achieving those targets is already challenging with the current resources available and within the existing operating environment.

8.2 The ESSP Steering Group has concerns regarding the potential for the LTC to adversely affect the ability of Emergency Services to attend incidents promptly and within their respective target response times. This could happen in the following ways:

Construction phase –

- potential for adverse effects on local journey times for emergency services due to additional construction and workforce traffic on parts of the existing strategic and local road network
- diversions put in place to accommodate necessary works
- possible difficulties travelling to construction locations, including via construction haul roads
- potential in-combination effects with the construction of other major developments in the wider area, including London Resort and Bradwell B power station, as well as a large number of houses planned across both sides of the River Thames
- impacts could affect response times to incidents both on parts of the LTC under construction, and other calls to incidents at existing locations elsewhere in the area

Operational phase -

- need for emergency services to attend incidents on the new LTC road and tunnel
- potential for adverse effects on local journey times for emergency services due to changes to the pattern of traffic in the area, including additional journeys generated by the LTC
- impacts could affect response times to incidents both on parts of the LTC in operation, and to other calls to incidents at existing locations elsewhere in the area
- potential in-combination effects with other major developments in the wider area – for instance the Port of Tilbury is identified for expansion, but the previously planned junction near East Tilbury does not form part of the DCO v1 proposals, which has taken away the opportunity to remove some of the port traffic from other roads in the area

8.3 Across all the emergency services, the areas close to which the LTC would pass, north and south of the river are viewed as already giving rise to a high level of demand. The construction of the LTC, together with other development activity in the area, is anticipated to increase that demand.

8.4 The potential effects on each of the main three emergency services is likely to be somewhat different, not least because of the different ways in which they operate. Response targets for the emergency services affected by the LTC will be provided in due course. Some of the factors which affect the modelling and assessment of response times for each service are summarised below.

Fire and Rescue response times

8.5 Fire and Rescue services tend to operate from fixed bases, travelling to incidents from fire stations, and subsequently returning to base unless another call takes them elsewhere. To an extent, this makes modelling and assessing response times more straightforward than for the other two main emergency services.

Ambulance response times

8.6 Ambulance service vehicles tend to operate on a more mixed basis, often attending incidents by travelling from their previous job, and less often from a fixed base. This could mean a journey from a hospital or Ambulance Community Response Post (ACRP), as well as from the formal estate of the relevant trust (such as an ambulance station). ACRPs are occasionally shared locations at Fire Stations, but are more commonly flexible and can change over time, as different agreements with landlords and others are secured or end. In the Eastern Area, not only is the fixed estate under review, but the service is moving towards more of a hub and spoke strategy.

8.7 Complications in assessing ambulance response times include first and foremost that targets do not just cover time to reach the incident site for attendance and treatment; they also include targets for subsequent onward transport for treatment by other specialists at another destination, usually a hospital. In the SECAM area there is no serious trauma unit, meaning that ambulances need to travel into London for relevant cases.

Policing response times

8.8 The various The LTC has the potential to impact on the response times of several aspects of police operations. At the divisional level, there are likely to be concentrations of criminal activity associated with the delivery and storage of materials, plant and machinery to construction sites, as well as petty crime related to the worker accommodation. Even with some of the measures described in section 4 of the response in place, it is anticipated that there will be additional workload for police officers.

8.9 There are other policing functions which could be affected. Roads policing nationally is set strategic Policing priorities which acknowledge the part it can play in improving not only the safety for all road users and addressing vehicle crime; but also in detecting and disrupting those who use the road network with criminal intent, people trafficking and other immigration crime. Roads policing also operates over large areas, with for instance one base at Chigwell covering the whole of the county of Essex. It is suggested that roads

policing is one area for which additional response time modelling should be carried out (see below).

8.10 A common reported feature for all the emergency services in the area is that they operate for much of the time close to the limits of capacity. This means that relatively few additional incidents or relatively small increases in journey times can have a significant effect on meeting response targets. It also needs to be recognised that journey time increases can impact not only on "blue lights" emergency situations, but on other less urgent work which the services undertake. All of this can eat into service user-facing staff hours – and the only way to address this is to have more police officers, ambulance and fire crews available on shift.

Proposal Documents

8.11 The DCO v1 and Community Impacts Consultation documents do not address directly the potential for LTC to impact on emergency services response times and targets. However, document 7.9 Transport Assessment does examine potential impacts on conventional journey times, both during the construction phase (Chapter 8) and during the operational phase (Chapter 7), with mitigations proposed in chapter 10.

8.12 The Outline Traffic Management Plan for Construction (oTMPfC) also includes measures the contractors are expected to take to reduce adverse effects on journey times. These include the submission of detailed Traffic Management Plans (TMP) for approval prior to construction commencing; there may be TMPs for different areas and stages of the development. The proposal to consult with stakeholders at paragraph 2.4.3 is noted.

8.13 It is also noted from Table 2.2, paragraphs 3.3.10 and 3.3.11 that Highways England intends to appoint a Traffic Manager to chair Traffic Management Forum.

8.14 The picture for impacts on journey times set out in the documents is a mixed one, both for the construction phase and the operational phase. For parts of the road network, journey times are forecast to improve, for many of the roads to the west of the A13 junction to the north of the River Thames. However, in other areas journey times are predicted to increase – including several roads to the east of the A13 junction.

8.15 The Wider Network Impacts Management and Monitoring Plan looks further ahead, providing a framework within which other, unanticipated impacts on the local road network can be identified. However, solutions for any such impacts would not necessarily be addressed by the LTC project. Paragraph 1.1.4 refers to the economic impact of delays – but this does not appear to include impacts on the emergency services.

Other information

8.16 A number of modelling exercises have been carried out and shared with members of the Ambulance Services and with the Fire and Rescue Services in

Essex and Kent. These have been undertaken in connection with the Tunnel Design Safety Consultation Group. The ESSP Steering Group is grateful that these exercises have been undertaken; and that some changes have been made to the scheme preliminary design – including the emergency access improvements to the west of Orsett Fire Station, and where the LTC would cross the A1089 near South Ockendon.

8.17 However, concern remains on the following points:

a) modelling to date has only assessed response times to points to attend incidents along the LTC itself. This does not therefore attempt to assess the potential impacts of the LTC on responses to other incidents elsewhere in the area

b) no assessment appears to have been made of the potential impacts on emergency service response times during the construction phase – both to incidents at construction sites, and to incidents in the local area.

This should include input from information and proposals contained in documents such as the Outline Traffic Management Plan for Construction – for instance delivery route planning, the road closure proposals contained in tables 4.2 and 4.3; the compounds and HGV routes in Plates 4.1 – 4.4; and the diversions set out in section 4.7.

c) the ESSP Steering Group members remain unclear on some aspects of how emergency response times have been predicted, including the underlying assumptions, some of which may have changed. For instance, in terms of starting points, the Corringham location is no longer part of the East Area Ambulance Service estate. This could affect the validity of the results.

d) it is not known how estimates of response times to incidents on the LTC have addressed the absence of a hard shoulder, which may impede emergency vehicle progress

e) there is particular concern at the length of the journey required to reach the emergency access roadways for the north tunnel portal, which would take emergency service vehicles along winding stretches of minor roads – and if helicopters are not available, this will also apply to patient transport for further treatment, for instance at hospital

f) it is not clear if other changes to both the preliminary design and tools such as the transport model have been used to update the emergency services response time modelling previously undertaken. For instance, it is known that traffic associated with the London Resort has relatively recently been included in the model

g) the ESSP Steering Group is aware that some local highway authorities have queried some aspects of the modelling used by LTC in relation to how impacts on the local road network have been assessed. This has the potential have underestimated congestion, which in turn could affect

how emergency service response times have been predicted. Factors might include:

i. differences in peak traffic periods between the strategic road network and the local road network
ii. which other developments in the area have been included in the model – emergency service resource planners are already anticipating increases in demand with or without the LTC
iii. the level of detail to which the local modelling has been carried out

h) it is unclear if any mitigation for unresolved adverse effects on response times will be proposed

i) no assessment of potential impacts on police response times has been attempted to date

8.18 It is likely that different impacts will result in relation to different emergency services; and that the impacts on each service will be different to the north and south of the River Thames. For instance, the distances to the tunnel portal is much less to the south of the river than to the north portal; and there is concern that removal from the scheme of the previously proposed East Tilbury junction could lead to additional congestion and journey times once the planned Port of Tilbury expansion takes place.

8.19 There is particular concern in relation to the estimated 6 - 8 year construction phase, when impacts on journey times are seen as less predictable and changeable from time to time. This makes it particularly difficult to plan and allocate resources. The operational phase appears somewhat more stable and predictable.

8.20 The ESSP Steering Group therefore seeks further clarification and additional assessment to cover these points and put forward any additional mitigation which might be needed as a result. The Steering Group welcomes the offer of further liaison, and will provide modelling expertise of its own from relevant services.

8.21 It is therefore suggested that:

a) a review should be undertaken of the impacts of the LTC on emergency services performance, and the implications for their funding as a consequence
b) emergency response time modelling is reviewed and extended, as indicated above
c) these items might be included in an over-arching Emergency Services document, as referred to in Section 2 of this response, or as stand-alone exercises.

<u>Mitigation</u>

8.22 It is suggested that mitigation for any adverse impacts the modelling might identify could take the form of amendments to the scheme, or financial

support to adapt to the changing traffic environment, providing additional staff and flexibility to meet these challenges.

8.23 One way of mitigating construction impacts on emergency services might also be for contractors to be required to commission some services from private operators. This strategy is used in some instances for events such as festivals, where private ambulance providers are used to ensure prompt attendance, which in turn helps to alleviate the additional burden placed on the NHS.

8.24 Also through the construction phase, further mitigation could be provided by ensuring the consultation with the emergency services in the scrutiny of individual Traffic Management Plans; attendance at the Traffic Management Forums.

8.25 The effective implementation of measures such as Traffic Regulation Orders throughout the construction phase and beyond (into the period covered by the Wider Networks Monitoring and Management Plan) could make a significant difference to the work of the emergency services, in particular that of roads policing. For a number of years, Essex Police employed staff in a "Traffic Management Officer" role. This provided a key point of contact between the Police, contractors and local highway authorities on new or existing road schemes. During the last 10 years these posts have been removed due to cost savings, with the roles and responsibilities instead linked to other job descriptions within the force. However, this has been at the cost of a reduced focus and output.

8.26 It is suggested that a full-time dedicated post should be funded to perform the role of police Traffic Management Officer, in line with the main responsibilities set out in Appendix E, including attendance at the construction phase Traffic Management Forum. The view of the ESSP Steering Group is that failure to create this post will result in a Police officer being withdrawn from front line duties for the period of the construction. The officer would be based in Essex, but would cover the entire LTC route including the section in north Kent.

8.27 The post would continue through into the initial post construction period, to be reviewed in light of the monitoring and recommendations of the WNMMP. Indeed, it is suggested that consideration should be given to extending the Traffic Management Forum approach to that initial operating period, albeit perhaps in a different form.

8.28 It is also considered that provision of emergency hubs (as described in section 7 of this response) could assist in offsetting adverse impacts on roads policing response capability and response times. For instance, roads policing currently lacks a facility in south west Essex from which to operate. The provision of facilities at the north tunnel portal could help alleviate this.

Recommendations

Recommendation 8.1

A review should be undertaken of the impacts of the LTC on emergency services.

Recommendation 8.2

Further modelling and assessment of the impacts of the LTC on emergency service response times and targets should be undertaken, including clarification on the points raised in paragraph 8.16 of this response.

Recommendation 8.3

Following the further assessment of response times, mitigation measures should be proposed where necessary to ensure that emergency service responses do not deteriorate as a result of the project. Mitigation may include:

c) funding additional emergency service staffing and vehicles over the construction phase
d) requirements on contractors to commission private emergency service support such as ambulance cover with appropriate levels of staffing, training, hours of cover and working practices to be agreed and reviewed with the ESSP Steering Group on an annual basis.

Recommendation 8.4

The Emergency Services should be formally consulted on the production and approval of the Traffic Management Plans as a requirement of the DCO.

Recommendation 8.5

The proposals and (if necessary the draft DCO) should make the setting up of the Traffic Management Forum a clear commitment of the project

Recommendation 8.6

Funding should be provided for the creation of a Police Traffic Management Officer, as described in paragraphs 8.23 – 8.25 and Appendix E of this response, to cover the construction phase and the first five years of operation of the LTC.

9. Displacement of people and vehicles from a tunnel incident / emergency

9.1 This section of the response deals with how the LTC proposals deal with incidents in and around the tunnels where there is a need to:

- evacuate road users
- move their vehicles
- meet users needs whilst separated from vehicle
- reunite users with their vehicles if possible, assist with onward travel if not

9.2 All of this is in the context of the requirement to first and foremost resolve the incident; but also seeking to return the LTC to normal operating conditions.

9.3 The Environmental Statement refers to evacuation of the tunnels in an emergency at paragraphs 2.4.86 and 2.4.101 in terms of using the cross-passages between the bores; paragraph 2.4.95 in connection with emergency lighting; and at paragraph 2.6.8 in relation to the future development of emergency / incident response plans. A similar reference to the cross passages is made in the Design Principles at paragraph 1.2.11. It is noted that the draft Order includes articles 49 and 50, which provide that an authorised person (which includes police officers and fire-fighters) may remove vehicles and obstructions from the tunnel area; but the order contains no further information or requirements related to this issue.

9.4 The Tunnel Operational Risk Assessment indicates that in the event of an emergency incident which closes one tunnel bore, road users would evacuate that bore via the nearest cross-passage available; and enter the non-incident bore, where it is anticipated traffic would have been prevented from continuing to enter the tunnel. Currently, it is less clear what users would be required to do next, but presumably they would be given further instructions, and a response plan would have been put in place for this purpose (please see also references to response plans in the next section). There is some concern from the ESSP Steering Group as to the impact of this if emergency service are using the non-incident tunnel to response to an incident in the incident tunnel, which requires emergency services vehicles to travel down the non-incident tunnel at high speeds. The ESSP Steering Group considers that this concern needs to be considered and incorporated into the Tunnel Operational Risk Assessment.

9.5 The ESSP Steering Group considers that the scheme design should have regard to a range of issues around the displacement of people and vehicles from the tunnels when an incident occurs, alongside dealing directly with the incident itself.

9.6 Firstly, there is a need to identify an area where members of the public can move to safely if they have to evacuate the tunnel on foot. A muster area may need to accommodate around 300 people in the event of a major incident. Ideally this should be accessible via a route which will avoid conflict with emergency vehicles arriving at the scene. The tunnel portals are also set down, so for instance there is a height difference of around 28m from the top of the southern portal to the carriageway. This may indicate the need for steps on the route. At the same time, it needs to be recognised that evacuating members of the public may include people with disabilities; and they may be accompanied by pets and assistance animals.

9.7 Currently the Works Plans, General Arrangement drawings, Tunnel Area Plans, Environmental Statement and Design Principles give no information on a muster area or access to it; nor on whether use of things like the removeable crash barriers in the central reservation might assist in evacuating members of the public safely.

9.8 Secondly, consideration needs to be given to how evacuating members of the public can best be provided for, in terms of shelter and welfare. This might involve a building or other structure with power and other facilities; and might potentially be combined with an Emergency Hub. But if this is not possible, the scheme needs to make other forms of provision. Again, the scheme to date provides no information on this point.

9.9 Thirdly, it may be necessary to take members of the public further away from the scene, to a more substantial form of shelter which can better meet their needs. Consideration needs to be given to how transport, for instance using coaches, is to reach the muster area safely and without conflict with the emergency services. It may be possible for the emergency access roads to the tunnel portal to be used for these purposes, but in the absence of other information currently in the scheme proposals this is not clear.

9.10 Across these three areas of concern, the following have to be overlain:

a) Plans need to address both shorter term and longer-term events – An incident might involve a large number of people, but could be resolved in a short space of time, perhaps up to 4 hours. In that instance it would be best for people not to have been taken away from the locality, so that they can be reunited with their vehicles and continue on their journeys. There is in any case a natural inclination for members of the public to seek to remain relatively near to their vehicles and belongings if possible. On the other hand, in the event of an incident which takes longer to resolve, it would be best to take people to a remote location where welfare provisions may be more suitable.

b) Plans need to take into account the full range of possible conditions – including seasonal weather and time of day / night.

c) Costs and availability of remote rest centres – In the Thurrock area there is limited availability of public buildings which could potentially act as rest centres. Some are schools which are unavailable for much of the time. South of the Thames the only potential building identified to date is the Cascades, which although close to the tunnel portal has limited capacity.

d) Costs and availability of transport – similarly, there are limited numbers of coach operators who could be contracted to provide assistance to move people to rest centres, and later return them to their vehicles. Coach operator availability may also be constrained by things like school transport commitments during term times. Coaches are unlikely to arrive in a short period of time.

9.11 It should be borne in mind that although local authority emergency planning teams will plan for incident management, they will seek to recover the costs of this from the scheme operators. It may be more practical, effective and economical to make better provision in the tunnel portal areas for short term rest and welfare facilities than to rely on provision elsewhere.

Recommendations

Recommendation 9.1

The DCO list of authorised Works in Schedule 1 should include reference to the provision of tunnel evacuation assembly areas, and these should be indicated on the Works plans, shown on the General Arrangement drawings if appropriate, with further detail required be reference to the Design Principles. The proposals should include details of safe routes from the tunnel to the evacuation assembly areas. Such plans referenced in this recommendation should be approved plans.

Recommendation 9.2

Any Emergency Response/ Incident Management Plan prepared for the tunnel must include an evacuation section, and extend to show how the scheme will provide for the welfare of members of the public during both short term and longer term incidents; how road users will be reunited with their vehicles where possible; and the means of transport away from the tunnels where necessary. Any Emergency Response/Incident Management Plan should be a control document.

Recommendation 9.3

Response plans and contractual arrangements with the scheme operators should include provisions to reimburse local authorities and emergency services in for their costs in dealing with major incidents in appropriate circumstances.

10. Fire Suppression and Management of Incidents Within the Tunnels

10.1 The proposed tunnels would be the longest road tunnel in the UK. The documents contained in DCO v1 contain relatively little detail about the tunnels, including what fire suppression provisions they would incorporate. The Environmental Statement refers to water storage for firefighting in the Tunnel Service Building (paragraph 2.4.102); dealing with used firefighting water in the drainage system (2.4.91); the generality of how the ventilation system would contribute to fire suppression (2.4.98). However, the draft DCO, Works Plans, General Arrangement Drawings, Tunnel Area Plans, and Design Principles do not address dealing with fires in the tunnels.

10.2 In that context, this section of the response provides some comments on key issues relating to the management of such incidents.

10.3 As well as CD 352, members of the ESSP Steering Group refer to "Fixed Fire Fighting Systems in Road Tunnels: Current practices and recommendations" published by the Technical Committee C.3.3 of the World Road Association.

Construction

10.4 The Code of Construction Practice mentions some measures related to dealing with fire across the project, including providing suitable access to compounds, (paragraph 6.9.3); and having appropriate plans and controls in place to deal with fires (paragraphs 6.9.6 and 6.9.7). It is welcome that these general statements are made, including that the local emergency services (including Fire and Rescue services) would be consulted.

10.5 However, the documents make no specific reference to the particular hazards which might be presented by the tunnel construction, both to the workforce and to attending fire and rescue crews. This should be addressed, and include details of emergency service vehicle access to the tunnel portals during construction, including whether the surface of any internal haul roads to be used with be suitable for fire fighting units – especially as the north portal will be some distance from the local road network.

Risk Assessment

10.6 The ESSP Steering Group has received the following documents:

- Methodology for Operational Risk Assessment HE540039-CJV-GEN-GEN-REP-TUN-00027 rev 1.0
- Tunnel Operational Risk Assessment (ORA) HE540039-CJV-GEN-REP-TUN-00025 dated august 2020
- Tunnel Operational Control Philosophy HE540039-CJV-STU-GEN-REP-OPS-00002 dated July 2021.

10.7 The ESSP Steering Group is considering its response to these documents, and will comment further in due course. It would be helpful to know if any member of the Emergency Services sits on the Safety Control Review Group which oversees these safety documents.

10.8 One initial comment is that perhaps the methodology and ORA should be revised to consider a scenario where both tunnel bores are blocked by concurrent incidents and events. Key operational assumptions underlying the ORA include that if an incident such as a significant fire occurs in one tunnel bore, traffic will be prevented from continuing to enter the non-incident bore. This will then allow road users to evacuate the incident bore using the cross-passages, and they will congregate in the non-incident bore. The emergency services will use the non-incident bore to reach the location, usually travelling in the normal direction of traffic[5].

10.9 This sequence of steps and the ensuing risks may be affected if concurrent events close both tunnel bores. This might result from either incidents such as accidents or fires in both bores; or from things like mechanical breakdowns blocking traffic. Concurrent bore closures could significantly alter the road user evacuation and emergency service access assumptions in the ORA. In turn this could potentially affect the findings regarding things like the cross-passage spacings (see below).

10.10 It is acknowledged that the likelihood of simultaneous bore closures needs to be factored in, so that scenarios are not so improbable as to be outwith this sort of assessment. But the ESSP Steering Group's present position is that concurrent closure of both tunnel bores should be included as part of a reasonable worst-case scenario.

10.11 A further comment is that situations should be considered whereby one of the tunnel bores is closed for maintenance - will the other bore remain open, with a contra-flow system in place? Clearly this would impact the tunnel operation and evacuation strategy, not least due to the direction of ventilation being in the direction of traffic ordinarily - when traffic is flowing in both directions in the same tunnel, this does not work. Or will the tunnel operate only in one direction?

10.12 The following points are also not currently clear:

- If the cross-bore passageways were to be used to evacuate a tunnel bore, would there be sufficient capacity and the ability to guarantee compartmentation for a 100MW fire (Max theoretical loading)?
- How would the number and location of evacuees be known to the tunnel operator and how would this be communicated to responders?

[5] though there may be rare instances when emergency services have to travel in the opposite direction, depending on the particular circumstances of the incident

- What influence would cross bores full of evacuees have on operational response?
- is the risk assessment to be reviewed in light of both changes to the design, and comments made at the TDSCG. For instance, it has previously been mentioned that some of the fire sizes considered in the ORA are unrealistically low – e.g. a car or small HGV fire would result in an event of more than 5MW, and that a figure of 8-10MW should be used instead.
- a fire involving a hazardous load could potentially exceed a peak heat release rate of 100MW, which is the maximum for the longitudinal ventilation design, as set out in the ORA -this in the context of a tunnel designed to be free flowing for all traffic moving on the wider road network (unlike for the existing Dartford tunnels).

Cross-passages

10.13 The proposed LTC twin bore tunnels would be the longest road tunnels in the UK, carrying three lanes of traffic in each bore / direction, with a variable speed limit of up to 70mph, and no hard shoulder or emergency refuge areas for motorists. Cross passages are required for road users and workforce to leave the scene of incidents which occur in the tunnel; and for emergency service personnel to access and attend incidents.

10.14 DCO v1 includes in Schedule 1 the following authorised works for the construction of tunnel cross-passages, as shown on the Works plans:

- Work No.3C (iii) – sheet 10
- Work No.4A – sheets 10 - 13
- Work No.5A (iii) – sheets 13 and 17

10.15 However, document 2.6 Works Plans sheets 10 – 13 and 17 do not show any cross-passages for the tunnel. The draft DCO does not itself specify a cross-passage spacing or a range within which the cross-passages must be constructed.

10.16 It is also noted that sheets 10 – 13 and 17 of the General Arrangement drawings and the Tunnel Area Plan contained in DCO v1 show tunnel cross passages; but the General Arrangement drawings published as part of the Community Consultation do not show cross-passages.

10.17 Under the heading of "Tunnel design" the Environmental Statement Chapter 2 states at paragraph 2.4.86 that cross-passages connecting the tunnels will be provided at a regular spacing of approximately 150m intervals. The ES describes the functions of the cross-passages as (paragraph 2.4.101) *"… for emergency evacuation, emergency incident responder access as well as maintenance works."*

10.18 The v.1 DCO document 2.5 General Arrangement drawings sheets 10 – 13 show the tunnel cross-passages at a spacing of 150m, the most northerly being a cross-passage located approximately 150m to the south the cut line between Sheet 13 and Sheet 17. No cross-passages are identified on DCO v1 General Arrangement drawing Sheet 17, meaning that there would be a distance of approximately 325m with no cross-passages - comprised of a short section of bored tunnels, followed by a longer section of cut-and-covered tunnel. It is not clear what parts of that length of tunnel would require inter-connectivity for emergency service and other access, though it does appear that the two carriageways would be separated by walls of some form.

10.19 Cross-passages at a spacing of 150m are also shown on the following DCO v1 documents:

- 2.12 the Tunnel Area Plan; and
- 2.15 Tunnel Limits of Deviation Plans.

10.20 However, no indication is provided as to the degree of deviation which might be allowed for the cross-passage spacing.

10.21 As a result of the above, there is uncertainty over the tunnel cross-passages which would be authorised for construction under the DCO.

10.22 Past accepted practice has often positioned cross-passages at a spacing of no more than 100m, and this reflects the situation in some existing tunnels elsewhere. Current Highways England guidance in the form of DMRB document CD 352 Design of Road Tunnels (paragraph 3.26) maintains a 100m spacing as a baseline standard. However, referring to escape door intervals, paragraph 3.26.1 allows for this to be "… *extended to a maximum where determined appropriate by a quantified risk analysis*."

10.23 It is understood that some flexibility is sought, with the cross-passage details (including spacing) to be confirmed as part of the approval of a more detailed design package. The desirability of retaining some flexibility to allow for innovation and an optimal solution is acknowledged. However, concern remains at the risks arising from increased cross-passage spacing, both in terms of road users, and for emergency service personnel. For instance, fire crews would have to move further on foot carrying substantial kit; and ambulance crews are not protected from the effects of fire and smoke inhalation to the same degree as their firefighting colleagues.

10.24 The ESSP Steering Group's view, consistent with CD 352, is that a cross-passage spacing of up to 100m should remain the benchmark. At that distance, emergency services including fire and rescue crews are confident that incidents can be dealt with effectively.

10.25 At the same time, the project objective to deliver a safety improvement is clearly important.

Fixed Fire Fighting System (FFFS)

10.26 No references are made in the draft DCO, Works Plans, General Arrangement Drawings, Tunnel Area Plans, and Design Principles, to the installation of a FFFS.

10.27 The acceptability of increased cross-passage spacing, as well as incident response plans and procedures, are both closely related to and dependent on the type of any FFFS which is installed. Without knowledge of the FFFS, it is difficult to comment in detail.

10.28 However, in the view of the ESSP Steering Group, a FFFS should be a clear commitment of the project. It is also considered highly likely that the cost of installing a FFFS would be more than offset by potential savings arising from any increase in cross-passage spacings; and potentially by reduced operational downtime spent dealing with remedial work following an incident.

10.29 By way of comparison, the Dartford Crossing tunnels have an active fire suppression system consisting of a water mist, with pumping stations in Kent and Essex which can operate for 2 hours, deploying 2500 litres/min. The Fire Suppression system is not designed to extinguish fires; it is designed to reduce the size and spread of the fire.

Detailed Points

10.30 It is noted that the scheme proposes a range of technology to assist in improving safety, including CCTV, detection of stationary vehicles and other events. It is important to note that that CCTV has to be specified appropriately for the particular environment in which it is operating. For instance, there is needs to consider the impact of dust (in case of fire); water (from rain near the tunnel entrance, and sprinkler systems within it); and lighting.

10.31 In addition, as part of the detailed design, the ESSP Steering Group would also expect to see a comprehensive suite of features to safely evacuate the tunnels (if required) and assist with survivability. These would come under a number of headings, including emergency service access, firefighting installations, fire detection systems, fire suppression systems (including the use of water and other substances to suppress fires), provision for public safety, provision for emergency service worker safety, the impact of smoke from vehicle fires, and environmental protection measures. The expectation is that the opportunity would be taken to improve on the equivalent provision at the existing Dartford Crossings.

10.32 In light of that, the ESSP Steering Group can offer the following more detailed suggestions of what needs to be included in the tunnel detailed design, using

the Dartford Crossing provisions as a starting point for comparison. It should be borne in mind that this is not intended to be a definitive statement about the design standards required for the proposed Thames Lower Crossing.

- CCTV – monitored, to provide the best possible situational awareness to share with Emergency Service Commanders about exact location, type of incident, scale of incident.

- fire detection systems – to include heat and smoke detection, numbered and zoned to a control centre to give an exact location - positioning detector heads in the crown of the tunnel, inverts, cross-passages, cable risers, hidden voids, under the road-bed

- public address system to help communicate with road users in the event of an incident, informing them of what actions they need to take

- emergency lighting - suitable for the range of conditions (including lighting, water and dust) experienced during both normal operation, and during emergency situations in the tunnel

- smoke control and ventilation systems

- emergency services communications – need to ensure that Airwave and hand-held (UHF) communications remain operable in the tunnel (bearing in mind the planned change over to a new Emergency Services Network system).

- hydrants in the tunnel – at a spacing of approximately 50m, each consisting of a single landing valve with 65mm female instantaneous coupling

- external underground Fire Hydrants - located at each portal – Dartford fire main is a full ring main system capable of delivering up to 2500lt/min of flow.

- dry-risers – potentially located close to the cross-passages, so that a unit can pump water directly from its own supply to crews tacking the fire in the incident bore

- Fire Points (FP) - located every 50m[6] along the nearside wall of each tunnel bore, with:

  - 2No. Fire Extinguishers: 1no. Foam; 1no. Dry Powder

  - Hydrant in walkway below the FP

  - Fire alarm Break Glass Unit (BGU)

[6] it is noted that a separation of 75m has been mentioned – see paragraph 2.9 of this response

- Flashing red light when Break Glass Unit is operated
- Emergency Roadside Telephone (ERT)
- Flashing orange light when telephone operated from Crossing Control
- Electrical isolation for lighting supplies

- Fire Protection - as part of the construction, Dartford have passive fire protection boards (to ensure the structural integrity of the tunnel) for 2 hours plus an additional hour at 1200^{o}C

Response Plans

10.33 For the existing Dartford Crossings, a multi-agency Emergency Response Plan has been developed. The project team are probably aware of this, but a copy is attached at Appendix F for ease of reference. The early development of an Emergency Response Plan for the tunnels – and indeed the other parts of the scheme – can help to shape the detailed design from the outset, thereby helping to avoid some problems arising later on in the process. Clearly, the Response Plan would have to integrate with many other issues raised in this consultation response - including emergency access routes, RVPs, and evacuation muster areas.

Other points

10.34 The ESSP Steering Group remains concerned that the tunnel has no hard shoulders or emergency refuge areas; and that the proposed speed limit is 70mph (variable control). The objective in the ORA is to maintain the same level of risk (to safety and availability) in the tunnel as for the rest of the LTC open road, despite the inherent additional risk factors involved in a road tunnel.

10.35 Given these factors and the overall LTC safety improvement objective (relative to other roads on the strategic road network), the ESSP Steering Group is particularly keen to see that the full range of measures to deal with fire suppression in the tunnel is included in the detailed design; and in an operational response plan in due course.

Recommendations

Recommendation 10.1

The Construction Code of Practice should make a clear commitment for contractors to produce emergency response plans for dealing with fire incidents in the tunnel, in consultation with the emergency services. These should include any particular requirements related to access from the public highway via internal haul roads, and address the risks to both the workforce and emergency service

personnel. The CoCP should also set out the minimum contents required to be included in the Emergency Response Plans as described at paragraph 10.33 above.

Recommendation 10.2

The draft DCO, the Works plans, General Arrangement drawings, Tunnel Area plans and the Tunnel Limits of Deviation should be amended to be clear on the location, number and spacing of tunnel cross-passages which are sought under the Order. If flexibility is required, the cross-passages could be shown on the drawings and expressed in the other documents as subject to confirmation within stated parameters, including the range of separation distances. The ESSP Steering Group considers that these parameters should be expressed in a way which is consistent with paragraph 3.26.1 of CD 352, i.e. 100m, up to a maximum of 150m subject to a quantitative risk analysis[7].

Recommendation 10.3

LTC should consider revising the Operational Risk Assessment to address a scenario where both tunnel bores are closed at the same time.

Recommendation 10.4

If flexibility is sought through the Order, the cross-passage design and spacing in detailed design must be subject to thorough consultation prior to approval by the Secretary of State, with the Emergency Services named as statutory consultees. This would be along the lines referred to in the recommendations made in the General Points section of this Response.

Recommendation 10.5

Given the potential advantages it offers, the ESSP Steering Group consider that a Fixed Fire Fighting System should be an unequivocal commitment in the preliminary design, DCO and control documents, to be approved in detail. This is especially important if cross-passage spacing may be increased from the benchmark 100m stated in CD 352.

Recommendation 10.6

The British Automatic Fire Sprinkley Association should be consulted at an early stage in the detailed design of the tunnel and the FFFS.

Recommendation 10.7

The detailed tunnel design should be subject to thorough consultation with the Emergency Services from the outset, and not just prior to submission to the Secretary of State for approval. LTC should consider whether details of the tunnel safety design should be specifically and separately identified in the DCO as a

[7] ESSP Steering Group are currently reviewing the Tunnel Operational Risk Assessment

matter where a dispute mechanism is required, should there be a difference of opinion with the Emergency Services.

Recommendation 10.8

A multi-agency Emergency / Incident Response Plan for the tunnel should be a requirement of the DCO, for approval by the Secretary of State in consultation with the Emergency Services. The Emergency / Incident Response Plan should be a control document.

11. Suicide prevention, mental health and wellbeing

11.1 The LTC development has the potential to impact on the health and wellbeing of the communities through which the route passes. The ESSP Steering Group is aware that LTC have had engagement with local authorities on health matters, and some issues have already been raised. DCO v1 document 7.10 Health and Equalities Impact Assessment (HEqIA) covers many of the potential impacts on health. This includes for instance section 7.10 which is an assessment of effects on mental health and wellbeing.

11.2 This response deals with particular aspects of the mental health and wellbeing, and does not put forward a comprehensive position on the whole of the HEqIA.

Workforce impacts

11.3 A key concern is that the HEqIA does not appear to address potential impacts on mental health and wellbeing across the whole of the local population, notably the substantial workforce that will be involved in constructing the project. The assessment summary in Table 7.30 looks at impacts on the existing communities due to construction, and identifies a number of positive and negative effects – including a sense of loss of control, and uncertainty over the lengthy construction period; but also the potential for job creation for low-income and long term unemployed people. But it does not address the potential effects on the in-coming workforce.

11.4 The workforce is expected to include many non-resident workers, some of whom will come into the area from outside the UK. The construction period is expected to last roughly 5 - 6 years, and there are factors which could lead to adverse impacts on the wellbeing of these workers, including potential harmful effects on their mental health, and possibly to an increase in suicide. These factors might include:

- age – middle aged men working in construction are at high risk
- isolation – from family and other support networks
- working conditions – possibly including long hours
- lifestyles – sometimes involving overuse of alcohol and non-prescription drugs
- accommodation – if not provided by contractors as part of the project, may be sub-standard
- conflict with established local communities

11.5 The Code of Construction Practice (CoCP) identifies that minimising adverse impacts on health and the environment is one of the Scheme Objectives agreed with the Department for Transport. Table 4.1 notes that the Highways England Environmental Manager responsibilities include integrating with the Quality and Health, Safety, Security and Welfare (HSSW) team for

"... a joint assurance focus." It is unclear what role the HSSW might play in seeking to avoid and mitigate adverse effects on mental health and wellbeing, but clearly this has the potential to address some of the factors identified above. Paragraph 1.5.2 of the CoCP states that Chapter 7 (the REAC, also forming Appendix 2.2 to the Environmental Statement) presents mitigations, including those for topic i."Population and human health". However, the only issue on health in the REAC appears to be related to changes to public rights of way.

11.6 It would also be appropriate for a review of the HEqIA to consider whether the whole of the supply chain needs to be included within the workforce assessment.

11.7 Extending the HEqIA to ensure it covers the whole of the local population during and following the implementation of the project – including the incoming workforce - would help to pre-empt and address some of the potential problems which might result. Although the CoCP identifies the potential for impacts of the workforce on the local community through use of temporary accommodation (4.3.4 f), it is considered that the reverse may also be the case. Good relationships between the local community and the workforce can help to avoid exacerbating some of the issues identified in paragraph 11.4 above, such as isolation. Early intervention is considered important in planning and implementing mitigation – for instance programmes to identify and reduce workforce stress can be effective, and should include crisis support. But these may be more difficult to slot in once a development construction site is up and running. The CoCP may be a useful tool to embed mitigations into the project. However, the ESSP Steering Group would like to emphasise that the health and wellbeing of the workforce needs to be addressed even at the enabling stage, for instance in the design of the workforce accommodation. Appendix B looks at this issue in section 8 on page 7.

Suicide prevention

11.8 One important aspect of the general mental health and wellbeing of the population, including the workforce, is that of suicide risk. The Kent and Medway Suicide Prevention Strategy, and the Southend Essex and Thurrock Suicide Prevention Strategy Update Report 2019 (see Appendix G to this response) are useful reference documents in this regard.

11.9 In terms of training, it is suggested that all of the construction workforce is encouraged to undertake some suicide awareness training so they are more aware of warning signs and risk factors. This includes equipping managers with the confidence to ask staff if they are really OK. Consideration should be given to using tools such as the free Zero Suicide Alliance training, available here: Zero Suicide Alliance.

11.10 Across both the existing population and the incoming workforce, structures such as roads, bridges and tunnels - particularly new structures - can often draw the attention of someone considering taking their own life. The LTC is characterised by some substantial bridge works, as well as the tunnels themselves. At the same time, experience suggests that these issues may extend to other parts of the route, such as the approaches to the bridges and tunnels. It is not clear that the HEqIA has addressed this issue. It is important to recognise that the risk associated with every structure is different, depending on a range of factors including location, access, design, usage, exposure to natural conditions. This means that measures to reduce the risk will be different each time.

11.11 The Design Principles identifies at paragraph 1.3.1 state that minimising adverse impacts on health and the environment is one of the objectives of the LTC agreed with the Department for Transport. Tunnel portal security structures are mentioned at clause S9.03 in Table 4.5 of the REAC, in relation to the safety of the public, but only in terms of integrating these safety measures into the wider landscape.

11.12 There are design features, familiar to Highways England, which can be introduced to help address potential impacts on mental health and wellbeing including the risk of suicide. These range from parapet barrier design and restricting access to risk locations (for instance from nearby public rights of way), to information and signage for crisis management help-lines. However, they do not feature in the DCO v1 documentation, including the Design Principles.

11.13 It is considered important that the design is reviewed so that suicide reduction can be built into the scheme from the outset – including at the enabling works stage - alongside action plans to help reduce risk and manage incidents. Public Health England's document Preventing Suicide in Public Places offers guidance, and a summary of key considerations is given in Appendix H to this response. Retro-fitting such measures is likely to be less effective or may even be impossible, due for instance to bridge engineering criteria, so consideration should be given to addressing these issues in the Design Principles.

Recommendations

Recommendation 11.1

The HEqIA and ES Chapter 13 should be revised to cover potential impacts on the mental health and wellbeing of the workforce (and closely related elements of the supply chain) engaged in the construction phase of the LTC, including those who do not currently live in the area. Any requirements for mitigation of adverse impacts should be linked to the Construction Code of Practice. The review should take into

account, among other guidance, the Kent and Medway Suicide Prevention Strategy, and the ESSP Steering Group, should be involved in this review.

Recommendation 11.2

Any contractor engaged in the in the construction of the LTC should be required to become a supporter partner of Mates in Mind, which would help to ensure that best practice is followed across the project, consistent with CoCP Table 4.1 and the Highways England Environmental Manager responsibilities to integrate with the Quality and Health, Safety, Security and Welfare (HSSW) team for "... a joint assurance focus." This approach should be pursued from the outset, including preparations for the enabling works stage.

Recommendation 11.3

The current scheme design should be reviewed in terms of whether it has incorporated adequate measures to reduce the risk of suicide during the construction and operational phases, in particular having regard to the Public Health England document Preventing Suicide in Public Places. Any deficiencies in this regard should be reflected in changes to the preliminary design where these would require changes to the description of the authorised Works, the General Arrangement Drawings, the CoCP or requires additional land.

Recommendation 11.4

In addition, further guidance for including suicide prevention measures through development of the detailed design should be included in the Design Principles. This would ensure that all aspects of the detailed design - such as bridges, landscape boundary enclosures, and fencing of public rights of way – address the need for suicide prevention measures.

12. Future threats

12.1 The ESSP Steering Group would welcome reassurance that the LTC design is, as far as possible, considering future changes which could present issues for the emergency services and the functioning of the road and tunnels. Some of the potential future threats have already been touched upon earlier in this response, but some of the areas for consideration include those set out below.

12.2 The emergency services are currently in the process of moving their shared communications from Airwave to the new Emergency Services Network. The ESSP Steering Group considers that emergency communications capability should be designed into the scheme across the whole of the route from the outset; and bear in mind the changes identified above, in order to future-proof the LTC. Key points are:

- ensuring coverage along the route and in the tunnel in terms of mast provision and secure protection, cabling
- making provision to include RVPs and possible emergency service hubs
- continuous coverage through the tunnels

12.3 A major concern of the ESSP Steering Group members is the level of development planned for the area, which could have impacts on the ability of the emergency services to deliver. These include several Nationally Significant Infrastructure Projects, and developments of differing types - major housing schemes, expansion of the Port of Tilbury, Bradwell power station, and London Resort. These developments will be introduced into an area which is already busy in terms of traffic and emergency service demand; and have the potential to combine with each other, and with the LTC – both during the five year construction period, and beyond during the operational phase. The ESSP Steering Group urges the project team to ensure that as far as possible these potential combined effects have been taken into account in the project assessments – particularly the Transport Assessment modelling.

12.4 Furthermore, it is considered that a 5-yearly review process should be set up, to examine the impacts and cost implications of LTC on the emergency services over the long term. This could include linkage to the Wider Network Impacts and Monitoring Plan.

12.5 Although relying on technology for many safety and security features, the preliminary design and accompanying documents do not make any reference to the specific and inherent risks associated with likely future changes in terms of road users – in particular driverless vehicles and the shift to alternative fuelled vehicles. It would be helpful for the documents to make a statement about:

- if and how potential threats and opportunities have been identified;
- how the design will address these threats; and
- whether mechanisms will be put in place to review the effects of advancing technologies on the safety and security of the road and tunnel.

Recommendations

Recommendation 12.1

The scheme documents should provide a commitment to ensuring emergency services communications coverage (including forthcoming transfer from Airwave to the new Emergency Services Network) along the entire route and in the tunnel in terms of mast provision and secure protection, cabling, RVPs and possible emergency service hubs.

Recommendation 12.2

A clear statement should be made regarding which of the major developments planned for the area of influence for the LTC have been taken into account when assessing the effects of the project through the construction and operational phases.

Recommendation 12.3

A five-yearly review of the impacts of the LTC on the emergency services should be set up, to cover the construction phase and the first 30 years of the operational phase of the development.

13. Conclusions

13.1 Some amendments to the preliminary design of the Lower Thames Crossing proposals have been made over the period of its evolution, including some which respond to comments provided by ESSP Steering Group members, mainly through the Tunnel Design Safety Consultation Group. Similarly, the various assessments for the project continue to be added to and revised over time. It is also possible that changes continue to be made to the design and the project assessment documents.

13.2 However, a significant number of issues and questions remain to be resolved; and the scheme design documents and plans seen to date do not include all of the suggested revisions. The ESSP Steering Group remains concerned at the lack of detail provided, and at gaps in assessment. These gaps span all stages of the project, from design, through the construction phase (including enabling works), and into the operational phase. The DCO and proposed control documents do not secure commitments to address these gaps; and the ESSP Steering Group members are not identified as consultees for the detailed design stage, prior to approval by the Secretary of State.

13.3 Concerns remain that the LTC could have a significant and adverse effect on the ability of the ESSP Steering Group members to deliver appropriate services. They cover issues of:

- problems associated with ensuring safe protest
- security, including criminality, terrorism, human trafficking and modern slavery – including making the site construction compounds, worker accommodation and the completed project safe and secure against a range of threats
- ensuring the emergency services and safety partners can obtain suitable access to the LTC in ways which accord with their collaborative ways of working – including emergency access routes, Rendez Vous Points, emergency hubs, and measures such as those to deal with the absence of a hard shoulder
- ensuring that emergency response times and achievement of nationally set targets will not be adversely affected – during construction and operation, and in reaching incidents both on the LTC and in the wider area
- ensuring the public can be safely evacuated and their needs met in the event of a major incident in the tunnels
- tunnel safety – especially ensuring that the design and appropriate response plans are in place to deal with major incidents such as a large fire
- delivering a project which does as much as possible to support the mental health and wellbeing of the existing community and in-coming

construction workers – including measures to minimise the risk of suicide

13.4 For all of the above issues, the ESSP Steering Group is concerned that the effects of the LTC will have an adverse impact on the ability of members to deliver within their current budgetary constraints. These concerns are exacerbated by the prospect of combined impacts with the numerous other developments proposed for the wider area.

13.5 Therefore, each section of this response offers a number of recommendations. The ESSP Steering Group members look forward to continuing their liaison through discussing these recommendations with the LTC project team.

brownejacobson LLP

Appendix D Tunnel Design and Safety Consultation Group (TDSCG) DRAFT Terms of Reference

national highways

Lower Thames Crossing

Tunnel Design and Safety Consultation Group (TDSCG) DRAFT Terms of Reference

DATE: December 2023
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Lower Thames Crossing

Tunnel Design and Safety Consultation Group (TDSCG) DRAFT Terms of Reference

List of contents

Page number

List of tables

Page number

1 Background and purpose

1.1 Background

1.1.1 The National Highways Design Manual for Roads and Bridges (DMRB) CD 352 'Design of road tunnels' provides requirements and guidance on tunnel design and safety; this is a basis of design for the Lower Thames Crossing tunnels.

1.1.2 The planning, safety, and general design requirements of this manual requires establishing a Tunnel Design and Safety Consultation Group (TDSCG) for all tunnel construction or refurbishment projects.

1.1.3 This document sets out the Terms of Reference (ToR) within which the TDSCG would operate during the detailed design, operating procedures and delivery of the Lower Thames Crossing.

1.2 Purpose

1.2.1 The TDSCG would be convened in accordance with DMRB CD 352 sections 2.15 and 2.16.

1.2.2 DMRB CD 352 describes the purpose of the TDSCG as:

"The purpose of the TDSCG is to establish a forum within which interested parties (see below) [Section 2] *can be acquainted with proposals for a tunnel construction or refurbishment project and have an opportunity to share their specialist knowledge and experience to clarify the design outcomes."*

1.2.3 In the specific context of the Lower Thames Crossing, the purpose of the TDSCG is:

a. to provide a consultation forum that meets regularly throughout the detailed design and construction period of the Lower Thames Crossing.

b. to allow all relevant stakeholders to meet in order to be consulted on proposals for the entire Lower Thames Crossing and to contribute their specific specialist knowledge and experience to clarify the design outcomes.

c. to identify potential hazards and consider how the associated risks should be avoided or minimised.

d. to consult on the design and operating / emergency procedures for the Lower Thames Crossing in the context of a fully integrated system of tunnel and associated road management.

e. to enable all relevant stakeholders to raise any concerns in relation to aspects of the detailed design or implementation of the Lower Thames Crossing.

f. to feed into the delivery of the Safety Consultation Document that formally records the outcomes of the consultation undertaken and recommendations made by the TDSCG that effect the design and operation of the Lower Thames Crossing.

1.2.4 The TDSCG will align with the commencement of detailed design and will continue until the emergency exercise(s), prior to the Lower Thames Crossing opening to traffic, is complete and any findings from the exercise have been formally addressed.

1.2.5 It would then be envisaged that the TDSCG would either remain in place or transition into an Emergency Planning Group (EPG) that meets regularly during the operational phase of the Lower Thames Crossing.

2 Membership

2.1 Membership of the TDSCG

2.1.1 In accordance with DMRB CD352 paragraph 2.15, the initial membership of the TDSCG would comprise appropriate representation from the following parties:

a. the Overseeing Organisation;

b. the designer;

c. the Technical Approval Authority;

d. the tunnel manager;

e. the tunnel safety officer;

f. the emergency services;

g. relevant environmental regulator appropriate for the specific tunnel;

h. relevant local government authorities;

i. on-road traffic services;

j. competent operator and competent maintainer.

2.1.2 The following list provides details of the proposed members of the TDSCG:

Table 2.1 Lower Thames Crossing TDSCG member list

Role	Organisation	Lead contact	Contact details
Overseeing Organisation	National Highways		
Designer (Delivery Partner)	TBC		
Technical Approval Authority	National Highways		
Tunnel Manager	National Highways		
Tunnel Safety Officer	National Highways (with independence)		
Emergency Services	Essex Police		
	Kent Police		
	Metropolitan Police (as required)		
	Essex County Fire and Rescue Service		
	Kent Fire and Rescue Service		

Role	Organisation	Lead contact	Contact details
	London Fire Brigade (as required)		
	East of England Ambulance Service		
	South East Coast Ambulance Service		
	London Ambulance Service (as required)		
Environmental Regulator	Environment Agency		
Local Government Authorities	Essex County Council		
	Kent County Council		
	Thurrock Council		
	Gravesham Borough Council		
Traffic Officer Representative	National Highways		
Operator / Maintainer	National Highways		

2.1.3 This is not intended to be an exhaustive list and it may include other organisation as noted in DMRB. The TDSCG membership should be reviewed and agreed on a regular basis, recognising that specialist input may be required at different phases of the project life cycle. Where specialist input / attendance is required, this should be notified to the Chair for agreement a minimum of one week in advance of the TDSCG where the attendance is required.

2.1.4 Any changes to TDSCG membership would need to be endorsed by the majority of TDSCG members and approved by the Chair person.

2.2 Tunnel Manager and Tunnel Safety Officer

2.2.1 'Tunnel Manager and Safety Officer will be in accordance with the definitions in the Road Tunnel Safety Regulations 2007. In particular, it should be noted that in accordance with Section 10, paragraph 2 of the Road Tunnel Safety Regulations 'The Safety Officer shall be independent in respect of road tunnel safety issues and shall not be under instructions from his employer in respect of those issues.

3 Meetings and working arrangements

3.1 Timings and frequency

3.1.1 The TDSCG will meet at a regularity appropriate for the stage of the project:

a. Detailed design:

i. Likely frequency: monthly

ii. Minimum frequency: quarterly

b. Construction:

i. Likely frequency: monthly

ii. Minimum frequency: quarterly

c. Commissioning:

i. Likely frequency: monthly

ii. Minimum frequency: quarterly

3.1.2 Meeting duration and frequency may vary depending on the need.

3.1.3 In addition to TDSCG meetings, working groups may be initiated in relation to specialist areas. Any working groups will report all progress and conclusions to the TDSCG.

3.1.4 Wherever possible TDSCG meetings will be held in a physical environment, however arrangements for virtual or hybrid meetings would be made available.

3.2 Roles and responsibilities

3.2.1 The TDSCG meetings will be chaired and facilitated by a National Highways project representative.

3.2.2 The Chair person would be responsible for:

a. Convening, administering and managing meetings of the TDSCG

b. Setting agenda (with support from all members)

c. Ensuring all agenda items are discussed

d. Leading the group and facilitating discussion and ensuring meetings start and finish on time

e. Inviting other persons to facilitate relevant discussions

f. Coordinating consensus on any recommendations

g. Ensuring all discussions, conclusions and recommendations are accurately recorded and meeting minutes are issued

h. Providing final recommendations of the TDSCG to National Highways

3.2.3 TDSCG members would be responsible for:

a. Representing their relevant organisation at the meetings

b. Providing specialist knowledge, advice and opinions to deliver the best outcomes for the Lower Thames Crossing

c. Attending TDSCG meetings, or providing a nominated delegate at each meeting in their absence

d. Providing advice, direction and feedback where required

e. Leading or attending working group meetings

f. Consulting within their organisation to communicate TDSCG actions, outcomes and next steps.

g. Reviewing of meeting minutes and sharing endorsed minutes within their organisation as appropriate

3.3 Nominated delegates

3.3.1 In order to ensure consistency and continuity, the use of nominated delegates should be avoided if at all possible. If these are to be used this should be notified and agreed in advance to the Chair person. Nominated delegates should be of a broadly equivalent position/status as the nominated TDSCG member in terms of knowledge and experience of the TDSCG's work and should be fully briefed in advance by the relevant TDSCG member and have full authority to act on the TDSCG member's behalf.

4 Agenda

4.1 Agenda

4.1.1 A notice of each meeting would be provided to TDSCG members at least four weeks in advance of the proposed meeting date, unless otherwise agreed by the TDSCG members.

4.1.2 To allow for preparation, wherever possible the key topics for the next TDSCG should be agreed during the preceding meeting. An invitation to suggest any additional items for the agenda would be sent out two weeks ahead of each meeting.

4.1.3 The finalised agenda would be circulated to TDSCG members at least one week prior to the meeting. The finalised agenda would also include relevant information (e.g., papers and/or presentations) to enable informed consultation to take place.

4.1.4 Meetings would cover progress with and close out of the previous meeting's actions.

4.1.5 Regular agenda items would likely include:

a. Health, safety and wellbeing moment

b. General Project update

c. Risks and issues

d. Actions from the previous meeting

e. Specific subject matter discussions:

   i. A non-exhaustive list of likely TDSCG subjects is provided in Appendix A (based on DMRB CD 352 Appendix A2)

   ii. Feedback from any active working groups

   iii. Initiation of new working groups as appropriate

f. Intervention / escalation proposals (if needed)

g. Actions from the meeting

h. Draft agenda / specific subject matters for next meeting

i. Any Other Business (AOB)

4.2 Code of conduct

4.2.1 It is expected that positive participation and a collaborative approach is taken and that the application of the Nolan Principles (HM Government, 1995) for committee meetings is adhered to.

5 Review and reporting

5.1 Review and reporting

5.1.1 TDSCG reporting would be captured through meeting minutes, published and circulated to the group. All members will have the opportunity to review and comment on meeting minutes.

5.1.2 Any actions arising from the TDSCG meetings would be documented in these minutes and reviewed again at the next TDSCG meeting.

5.1.3 Any changes to the TDSCG ToR or membership would need to be endorsed by the majority of TDSCG members and approved by the Chair person.

5.2 Outcomes

5.2.1 All output of TDSCG will feed the development of the Safety Consultation Document that formally records the outcomes of all consultation undertaken through the TDSCG. All TDSCG members would receive a copy of the Safety Consultation Document.

5.2.2 The Safety Consultation Document will be appended to the Approval in Principle (AiP) documentation, in accordance with DMRB CG 300 ‘Technical approval of highway structures’.

5.2.3 The AiP forms a permanent record of the agreed basis and criteria for the detailed design or assessment of a highway structure.

6 Consultation process

6.1 Consultation process

6.1.1 The Chair person would lead the consultation process with the aim of achieving consensus at the TDSCG meetings.

6.1.2 The consultation process shall generally follow these steps:

a. Discussion: The issue or matter requiring consultation would be presented for discussion within the TDSCG

b. Information sharing: Relevant information, data and expertise would be shared among TDSCG members to facilitate informed discussions

c. Options and alternatives (where available): Where multiple options and alternatives would be considered, their pros and cons would be evaluated. TDSCG members may also propose additional options or alternatives for consideration

d. Consensus building: The TDSCG would strive to reach consensus whenever possible. Members would work together to find mutually agreeable solutions

e. Outcome: After this consultation process, should a consensus not be reached, any remaining issues or concerns should be raised by the affected TDSCG member(s). Where a full consensus cannot be reached, a vote will take place to establish the majority position (see Section 3.3 for instances where a regular member cannot attend).

f. Escalation resolution: In circumstances where a TDSCG member wishes to raise an objection and escalate a matter arising during the course of the relevant TDSCG matter, they may make representation to the Chair person to that effect. Should the matter be unlikely to be resolved through further TDSCG consultation, the Chair person will escalate the matter in accordance with the prescribed escalation process (see Section 7)

g. Timeliness: The consultation processes would be carried out promptly to avoid unwarranted delays in addressing matters. It is expected that this would take place during a meeting (with supporting materials), but an exceptional additional meeting could be convened if this is not achieved.

h. Documentation/reporting: Outcomes reached, along with the rationale behind them, would be documented by the Chair person and communicated to all TDSCG members and relevant stakeholders before the subsequent TDSCG meeting. This documentation would be formally recorded as part of the Safety Consultation Document (See Section 5.2)

7 Escalation process

7.1 Escalation process

7.1.1 Every attempt would be made to resolve issues within the TDSCG's membership.

7.1.2 In the first instances, this would likely include the establishment of a specific working group to explore the detail of the issue and attempt to reach a consensus.

7.1.3 Following that, if consensus cannot be achieved, the Chair person would escalate the matter. Should an escalation occur it is anticipated that it would most likely link to achieving the safety objectives of the Lower Thames Crossing.

7.1.4 Therefore, the most appropriate escalation mechanism would be in accordance with National Highways Health and Safety Arrangement HSA009 'Management Arrangement of Safety Risk for National Highways Activities', and DMRB GG104 'Requirements for safety risk assessment'.

7.1.5 This process would involve the matter being considered through a Safety Control Review Group (SCRG). Decision making and attendance of the SCRG is suitably independent of the activity and can also invite external independent advice.

7.1.6 The key complainant member(s) of the TDSCG would be invited to make representations to the SCRG where the subject matter is being heard.

7.1.7 External expert representation may also be invited to attend the SCRG where the matter is being heard. This is to ensure that decision making is suitably and sufficiently independent from the activity.

7.1.8 Should the SCRG be unable to conclude a matter, it would then be escalated to the National Safety Control Review Group (NSCRG) which is chaired by the Chief Highways Engineer.

7.1.9 Progress and outcomes of any escalation(s) would be reported to the TDSCG and recorded.

7.1.10 Further details and outline ToRs for the SCRG and NSCRG can be found:

HSA009: Management Arrangement of Safety Risk for National Highways Activities

7.1.11 Further details of the DMRB GG104 requirements can be found:

DMRB GG 104 - Requirements for safety risk assessment

8 Governance and performance monitoring

8.1 Governance and performance monitoring

8.1.1 The ToR should be reviewed annually by the TDSCG (or sooner if agreed by TDSCG members).

8.1.2 Performance of the TDSCG would be monitored by National Highways against the following:

a. Meetings held as programmed

b. Attendance at meetings

c. Resolution of actions recorded at meetings

d. Compliance with ToR

8.1.3 Performance would be reported to the TDSCG members.

Appendices

Appendix A TDSCG topics (summary)

The TDSCG members shall discuss and agree the topics for inclusion at TDSCG, the following list is provided as a non-exhaustive scope of likely topics, based on DMRB CD 352 Appendix A2:

A.1 Planning, safety, general design considerations, and Lower Thames Crossing operation and maintenance

- safety and operational effectiveness of the overall systems proposed for the Lower Thames Crossing;
- In accordance with SACR-022 and Design Principles S3.20, S9.21 & S10.16 - identification of RVPs, routes to them and their operation;
- In accordance with Design Principles S3.22 & S9.24 - identification of evacuation muster points, routes to them and their operation;
- In accordance with Design Principles S3.21 & S9.23 - consideration of areas suitable for helicopter landing;
- identification of emergency incident and hazard scenarios to be effectively dealt with;
- development and coordination of operating procedures and contingency plans for all services attending an emergency;
- the consequences of planned and unplanned closures of Lower Thames Crossing on the surrounding road network;
- requirements for the passage of hazardous goods;
- contribution of safety consultation document to the road safety audit;
- personal safety equipment provision, training needs;
- consideration of partial or full loss of any facilities due to fire damage or explosion;
- review of feedback and any necessary follow-up actions resulting from previous emergency incident drills.

A.2 Operational classification of safety facilities for the road user

- any unusual features of the Lower Thames Crossing which may give rise to particular hazards;
- In accordance with Design Principle S6.01 - the level of provision of emergency panels, walkways, refuges, cross-passages and escape routes for emergency use;
- the level of provision of communications and firefighting equipment;
- public information for all Lower Thames Crossing users to facilitate their safe usage of the Lower Thames Crossing.

A.3 Geometric design

- the siting of signs and gantries;
- the general layout in terms of standby areas at portals, vehicle recovery and cross-over and contraflow arrangements for emergency and maintenance purposes;
- access facilities for emergency services, including removable barriers in accordance with Design Principles STR.18, STR.19, S3.23 & S9.25;
- considerations for tunnel users making use of emergency panels/ escape facilities.

A.4 Ventilation

- the adequacy of the ventilation system to maintain an acceptable air quality during all normal operation and tunnel maintenance scenarios;
- any restrictions that may need to be imposed on traffic or maintenance operations due to limitations of the ventilation system;
- the performance and operation of the ventilation system in all foreseeable fire or emergency situations, including plans for automatic and manual ventilation control, protection of escape routes and safe areas and any assumptions regarding the self-evacuation of tunnel users. Fixed fire fighting systems. Customer behaviour/ Impact on emergency services response / communications.

A.5 Lighting

- cleaning and maintenance regimes and related Lower Thames Crossing closures and traffic orders;
- adequacy of lighting design for special and emergency operating conditions, including power supply failure.

A.6 Drainage

- the operational assumptions of the inflow rates upon which the design of the drainage system is based, climate change assumptions and impacts;
- the possible results and hazards of abnormal storm conditions exceeding the design criteria;
- the ability of the drainage system to accept and safely contain a hazardous spillage;
- the acceptability of arrangements to discharge storm water and polluted water (e.g. from tunnel Cleaning operations or spillages);
- the proposed means of disposing of hazardous or other substances which cannot be discharged normally;
- arrangements and procedures for inspecting and cleaning pipework and sumps, including procedures for any confined spaces.

A.7 Fire safety engineering

- the appropriateness of the facilities described in Section 8 of CD352 for use by the emergency services when responding to a fire in accordance with Design Principle S6.03;
- review of time lines for the detection and development of tunnel fires, evacuation and emergency response;
- requirements for familiarisation of emergency services personnel with equipment provided for their use.

A.8 Traffic control, communications and information systems

- a communications and control systems, including control of CCTV;
- the adequacy and use of automatic incident detection systems;
- the automatic, static and temporary signing to be provided, in advance of and at the tunnel, for normal, maintenance and emergency traffic operations for the tunnel;
- the requirements for and siting of emergency and smoke control telephones;
- the requirements and provision of equipment for radio rebroadcast facilities for the emergency services, public service radio broadcasting and mobile telephones;
- the use of public address/voice alarm systems, including the precise wording of emergency messages;
- provisions for removing broken down vehicles and similar from within the tunnel.

A.9 Plant monitoring and control

- location of local and remote control facilities for day-to-day monitoring and supervision of the Lower Thames Crossing and for emergency response (if different);
- the possible consequences of failure of part, or all, of the SCADA system and/or data communications network.

A.10 Electrical power supply and distribution

- possible hazardous consequences of failure or temporary interruption of the incoming mains supply or a section of the tunnel internal power distribution network;
- security of supplies to essential equipment required to continue operating under mains power failure conditions, including duration requirements;
- the effect on tunnel operation and safety of disconnection or removal of key items of equipment, such as transformers or circuit breakers, for maintenance or repair.

A.11 Tunnel service buildings and plant rooms

- any requirements for use of the tunnel service buildings by emergency services (emergency hubs) in accordance with Design Principles S3.24 & S9.26, including access and parking arrangements;
- review of fire alarm and automatic fire extinguisher systems.

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