

Lower Thames Crossing 7.13 Framework Construction Travel Plan

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Lower Thames Crossing

7.13 Framework Construction Travel Plan

List of contents

	Page number
1 Executive summary.....	1
2 Introduction	3
2.1 Purpose of the document.....	3
2.2 FCTP structure	4
2.3 The Project	5
2.4 Approach to the document.....	8
2.5 Ownership of the document.....	11
3 Aims and objectives.....	12
3.1 Aims and objectives.....	12
3.2 Intent of the framework	13
4 Management and organisation.....	15
4.1 Introduction.....	15
4.2 National Highways responsibilities.....	16
4.3 Contractor responsibilities	17
4.4 Subcontractor and supplier responsibilities	18
4.5 Worker responsibilities.....	18
4.6 Travel Plan Liaison Group	19
5 Project construction details and programme	21
5.1 Introduction.....	21
5.2 Construction programme and phasing plan.....	21
5.3 Construction worksites and compounds	22
5.4 Workforce details	26
5.5 Statutory Undertaker arrangements.....	43
6 Baseline networks.....	45
6.1 Introduction.....	45
6.2 Highway network	45
6.3 Walking, cycling and horse-riding network.....	46
6.4 Public transport network at transport hubs	50
7 Targets	66
7.1 SMART targets	66

7.2	Changing the forecast modal split.....	67
7.3	Influencing travel behaviour.....	67
8	Measures.....	69
8.1	Introduction.....	69
8.2	Compound and ULH measures	69
8.3	Securing process.....	71
9	Implementation strategy and action plan.....	72
9.1	Introduction.....	72
9.2	Overarching action plan.....	72
9.3	Funding.....	74
10	Monitoring and remedial measures	75
10.1	Introduction.....	75
10.2	Travel surveys	75
10.3	Review programme and Travel Plan updates.....	75
10.4	Remedial measures.....	76
10.5	Funding.....	76
11	Summary.....	77
	References	78
	Glossary	80
	Appendices	85
	Appendix A Policy and guidance	87
	Appendix B SSTP example template	99

List of plates

	Page number
Plate 2.1 Lower Thames Crossing route.....	7
Plate 2.2 Control plan	9
Plate 4.1 FCTP management structure	16
Plate 4.2 The role of the TPLG	20
Plate 5.1 Compound and ULH locations (South of the River Thames).....	23
Plate 5.2 Compound and ULH locations (North of the River Thames - 1)	24
Plate 5.3 Compound and ULH locations (North of the River Thames - 2)	25
Plate 5.4 Marling Cross compound workforce origin locations	30
Plate 5.5 A2 compound workforce origin locations	30
Plate 5.6 Southern tunnel entrance compound workforce origin locations	31
Plate 5.7 A226 Gravesend Road compound workforce origin locations	31
Plate 5.8 Milton compound workforce origin locations	32
Plate 5.9 Northern tunnel entrance compound workforce origin locations	33
Plate 5.10 Station Road compound workforce origin locations	33
Plate 5.11 Brentwood Road compound workforce origin locations	34
Plate 5.12 Stanford Road compound workforce origin locations	34
Plate 5.13 Long Lane A and B compound workforce origin locations	35
Plate 5.14 Stifford Clays Road West compound workforce origin locations.....	35
Plate 5.15 Stifford Clays Road East compound workforce origin locations.....	36
Plate 5.16 Mardyke compound workforce origin locations	36
Plate 5.17 Medebridge compound workforce origin locations.....	37
Plate 5.18 M25 compound workforce origin locations.....	37
Plate 5.19 Ockendon Road compound workforce origin locations.....	38
Plate 5.20 Warley Street compound workforce origin locations	38
Plate 5.21 Park Pale Lane ULH workforce origin locations.....	39
Plate 5.22 Low Street Lane ULH workforce origin locations	40
Plate 5.23 Muckingford Road ULH workforce origin locations	40
Plate 5.24 Stanford Road ULH workforce origin locations	41
Plate 5.25 Folkes Lane ULH workforce origin locations.....	41
Plate 5.26 Beredens Lane ULH workforce origin locations	42
Plate 6.1 Rail accessibility to Gravesend transport hub.....	56
Plate 6.2 Rail accessibility to Grays transport hub.....	57
Plate 6.3 Rail accessibility to Upminster transport hub	57
Plate 6.4 Rail accessibility to Pitsea transport hub	58
Plate 6.5 Walking times to Gravesend transport hub.....	59
Plate 6.6 Walking times to Grays transport hub.....	59
Plate 6.7 Walking times to Upminster transport hub	60
Plate 6.8 Walking times to Pitsea transport hub	60
Plate 6.9 Cycle times to Gravesend transport hub.....	61
Plate 6.10 Cycle times to Grays transport hub	61
Plate 6.11 Cycle times to Upminster transport hub.....	62

Plate 6.12 Cycle times to Pitsea transport hub	62
Plate 6.13 Public transport accessibility to Gravesend transport hub	63
Plate 6.14 Public transport accessibility to Grays transport hub	64
Plate 6.15 Public transport accessibility to Upminster transport hub	64
Plate 6.16 Public transport accessibility to Pitsea transport hub.....	65

List of tables

	Page number
Table 2.1 Relevant stakeholders consulted on the SSTP	3
Table 5.1 Main works construction programme and phasing.....	22
Table 5.2 Forecast workforce numbers	26
Table 5.3 Workforce numbers.....	28
Table 5.4 ULH programme and phasing.....	43
Table 5.5 Forecast Utility Logistic Hub workforce numbers	44
Table 6.1 WCH routes south of the River Thames	46
Table 6.2 WCH routes north of the River Thames	48
Table 6.3 Frequency of rail services	52
Table 6.4 Frequency of bus and coach services	52
Table 9.1 Project action plan	72

1 Executive summary

- 1.1.1 The purpose of this Framework Construction Travel Plan (FCTP) is to set out a framework with regard to the implementation of travel planning for the movement of personnel to and from the construction worksites, compounds and Utility Logistic Hubs (ULH) during the construction phase of the A122 Lower Thames Crossing (the Project).
- 1.1.2 The key aims of this FCTP are to minimise adverse local disruption or traffic impacts on the highway network from worker and visitor travel to and from construction worksites, compounds and ULHs by reducing the number of single-occupancy vehicle trips and encouraging the uptake of sustainable and active modes of travel. Potential changes in travel behaviours would also be explored to identify the most efficient ways of working, such as reducing the distance travelled and the need to travel.
- 1.1.3 This FCTP is a standalone document and complies with the measures secured under Requirement 11 (Part 1 of the DCO Schedule 2) (Application Document 3.1). It has been produced in support of the commitments set out in the Code of Construction Practice (CoCP) (Application Document 6.3) (which aligns and feeds into the Register of Environmental Actions and Commitments (REAC) (Application Document 6.3) and subsequent Environmental Management Plan (EMP) iterations) with regards to how the mitigation and management of environmental effects of the Project would be delivered and maintained.
- 1.1.4 It is also closely related to the Outline Materials Handling Plan (OMHP) (Application Document 6.3), the Outline Traffic Management Plan for Construction (OTMPfC) (Application Document 7.14) and the Workers Accommodation Report (WAR) (Application Document 7.18) with regards to the management and logistics of traffic, materials, and workers movements during the construction period, setting out how this will be organised and prepared for through specified temporary measures.
- 1.1.5 It also relates to the Transport Assessment (TA) (Application Document 7.9) which assesses the forecast impacts of the Project on the highway and public transport networks during the construction phase, which in turn is assessed from an environmental impact perspective in the Environmental Statement (Application Document 6.1 – 6.3).
- 1.1.6 In line with this overarching FCTP, Contractors would be required to develop Site-Specific Travel Plans (SSTPs) in respect of the sites for which they are responsible (either an individual construction worksite or compound and ULH, or a number of construction worksites, compounds and ULHs where these are closely located with similar levels of accessibility), following the latest policy advice and best practice documents and before the relevant part of the authorised development can commence.
- 1.1.7 The SSTPs would be required to contribute to the development and refinement of Project-wide targets, measures and incentives, as outlined in this FCTP, as suitable for each of the specific construction worksites, compounds and ULHs. Some of the key measures that would be required to be implemented within each SSTP include a welcome pack, access to an accommodation helpdesk, a cycle to work scheme and season ticket loans, a car park management

scheme, car-sharing scheme, managed electric vehicle and e-bike charging facilities, and minibus shuttle buses (using zero emission vehicles) providing connectivity to and from public transport hubs (currently identified at Gravesend, Grays, Pitsea and Upminster).

- 1.1.8 This FCTP and future SSTPs are designed to incorporate the flexibility needed to respond and adapt to changing conditions over the duration of the construction of the Project and will require a continuous monitoring and reviewing process. Regular employee travel surveys would be undertaken at each site, reviewing targets and indicators as necessary.
- 1.1.9 A Travel Plan Liaison Group (TPLG) would be established, with the collective responsibility of providing high-level support to, and critical review of, travel planning across the Project. It would support efforts towards achieving greater use and increased uptake of sustainable travel, monitoring and reviewing progress, and agreeing new or amended initiatives. To ensure sufficient progress is being made, the effectiveness of this FCTP and SSTPs would be reviewed, audited and reported to National Highways by the Travel Plan Manager (TPM).
- 1.1.10 National Highways would fund the preparation, implementation and operation of this FCTP, including the activities related to the implementation of this FCTP and the TPLG. The preparation of the SSTPs and the implementation and monitoring of SSTP measures would be a requirement of Contractors' appointment and so would be funded by those Contractors.

2 Introduction

2.1 Purpose of the document

- 2.1.1 This document is the Framework Construction Travel Plan (FCTP) for the Lower Thames Crossing (hereafter referred to as the Project).
- 2.1.2 The purpose of this FCTP is to set out a framework with regard to the implementation of travel planning for the movement of personnel to and from the construction worksites and compounds (including the Utility Logistic Hubs (ULH)) during the construction phase of all works related to the Project. These construction worksites, compounds and ULHs are located to support distinct works such as the tunnel portals or areas such as the A2 compound to the A2/M2 connection area. Compounds are sized based on forecast worker population, catering and welfare, and plant and material storage.
- 2.1.3 The key aim of this FCTP is to minimise adverse local disruption or traffic impacts on the highway network from worker and visitor travel to and from construction worksites, and construction compounds and ULHs, by reducing the number of single-occupancy vehicle trips and encouraging the uptake of sustainable and active modes of travel. Potential changes in travel behaviours will also be explored to identify the most efficient ways of working, such as reducing the distance travelled and the need to travel, where possible.
- 2.1.4 This FCTP forms part of the DCO Application. An early iteration of this FCTP formed part of the community impact consultation; comments from local authorities as well as wider stakeholders have been considered and this document has been updated. The Consultation Report (Application Document 5.1) sets out in detail how responses to consultation have been considered. As per Requirement 11 (Part 1 of Schedule 2) of the draft DCO (Application Document 3.1) no part of the authorised development can commence until a Site-Specific Travel Plan (SSTP) for that part has been submitted to and approved in writing by the Secretary of State, following consultation with the stakeholders identified in Table 2.1.

Table 2.1 Relevant stakeholders consulted on the SSTP

Authority	Local Planning Authority	Local Highway Authority
Brentwood Borough Council	X	-
Essex Country Council	-	X
Gravesham Borough Council	X	-
Kent Country Council	-	X
London Borough of Havering	X	X
Medway Council	X	X
Maidstone Borough Council	X	-
Thurrock Council	X	X
Transport for London	-	X
Tonbridge and Malling Borough Council	X	-

- 2.1.5 This FCTP sets out guidance for developing SSTPs for each construction compound and ULH, or compounds and ULHs where these are closely located with similar levels of accessibility. As noted, this includes the ULH that would be required for Statutory Undertakers (SUs) to carry out the utility-specific works. The ULH would be established in different locations and at different time periods to the main works compounds.
- 2.1.6 The SSTPs would be developed by the Contractors as set out in the Requirements and produced following the latest guidance and best practice. Any subsequent updates to the SSTPs would be managed by the TPLG as detailed in Section 4.6.
- 2.1.7 As set out in the Government guidance Travel Plans, Transport Assessments and Statements (Ministry of Housing, Communities and Local Government, 2014) (outlined in detail in Appendix A) some of the main high-level benefits which Travel Plans can positively contribute towards, include the following:
- a. Encouraging sustainable travel
 - b. Lessening traffic generation and its detrimental impacts
 - c. Reducing carbon emissions and climate impacts
 - d. Creating accessible, connected, inclusive communities
 - e. Improving health outcomes and quality of life
 - f. Improving road safety
 - g. Reducing the need for new development to increase existing road capacity or provide new roads
- 2.1.8 These benefits provide the key focus of this FCTP and subsequent SSTPs and are captured in detail in Chapter 3.

2.2 FCTP structure

- 2.2.1 This FCTP comprises the following 11 chapters:
- a. Chapter 2 – introduces the purpose, and sets out the approach and ownership of the document
 - b. Chapter 3 – sets out the aims and objectives of the document
 - c. Chapter 4 – sets out details of the wider management organisation, and roles and responsibilities relevant to this document and the SSTPs
 - d. Chapter 5 – provides an overview of the Project's construction traffic details and arrangements
 - e. Chapter 6 – sets out the baseline traffic conditions on the road and public transport networks
 - f. Chapter 7 – details high-level targets for workforce travel

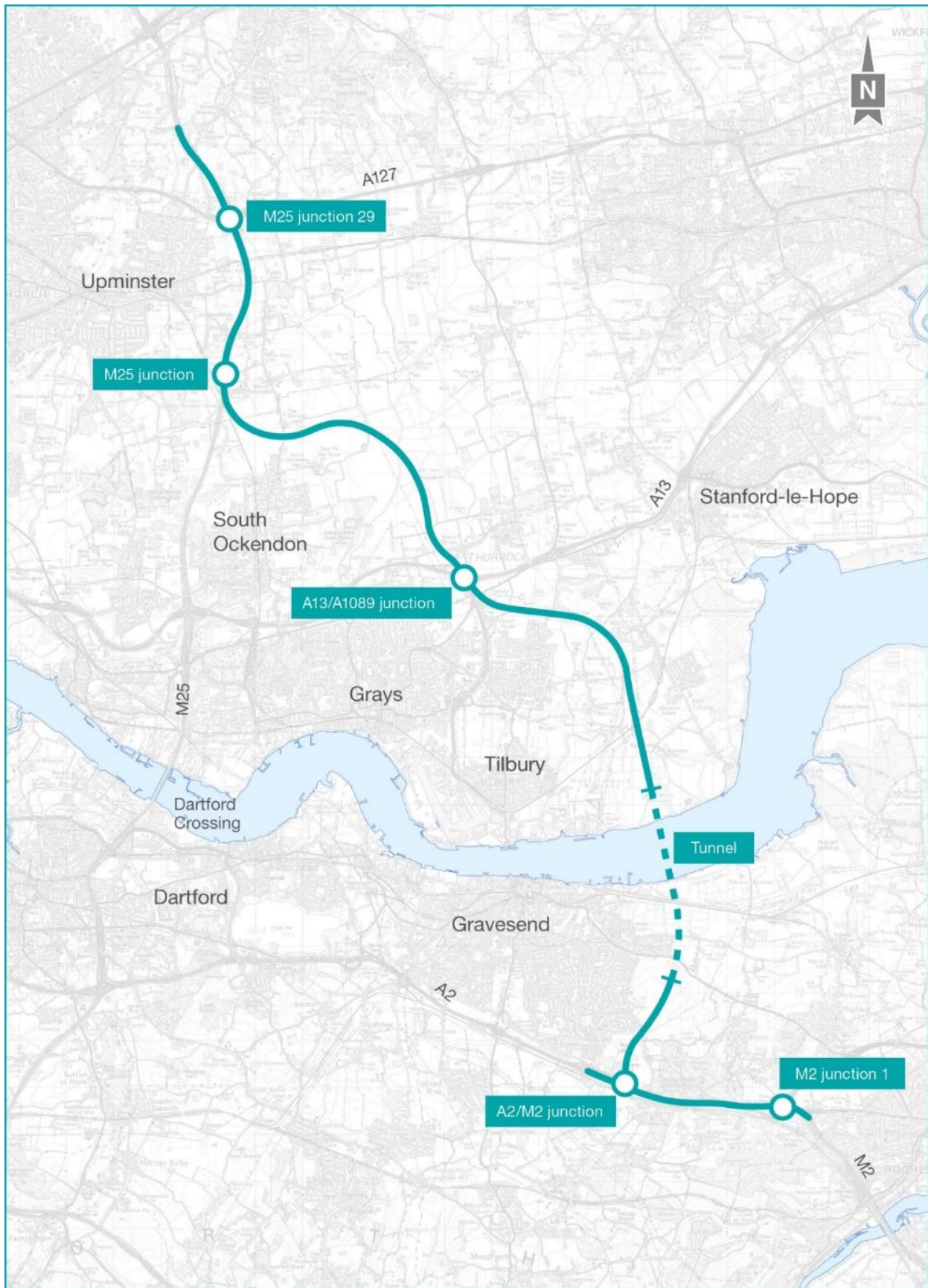
- g. Chapter 8 – sets out the measures and incentives proposed for workforce travel
- h. Chapter 9 – sets out the proposed implementation strategy and action plan
- i. Chapter 10 – sets out the proposed monitoring and review process, along with the steps to be taken to roll out any remedial measures required in the short term
- j. Chapter 11 – provides a summary of the document
- k. Appendix A – summarises the overarching and local highway authority policy guidance related to travel planning which has informed the preparation of this document
- l. Appendix B – provides a template which sets out a suggested structure for the SSTPs

2.3 The Project

- 2.3.1 The A122 Lower Thames Crossing (the Project) would provide a connection between the A2 and M2 in Kent and the M25 south of junction 29, crossing under the River Thames through a tunnel. The Project route is presented in Plate 2.1.
- 2.3.2 The A122 would be approximately 23km long, 4.25km of which would be in tunnel. On the south side of the River Thames, the Project route would link the tunnel to the A2 and M2. On the north side, it would link to the A13, M25 junction 29 and the M25 south of junction 29. The tunnel entrances would be located to the east of the village of Chalk on the south of the River Thames and to the west of East Tilbury on the north side.
- 2.3.3 Junctions are proposed at the following locations:
 - a. New junction with the A2 to the south-east of Gravesend
 - b. Modified junction with the A13/A1089 in Thurrock
 - c. New junction with the M25 between junctions 29 and 30
- 2.3.4 To align with National Policy Statement for National Networks (Department for Transport, 2014) policy and to help the Project meet the Scheme Objectives, it is proposed that road user charges would be levied in line with the Dartford Crossing. Vehicles would be charged for using the new tunnel.
- 2.3.5 The Project route would be three lanes in both directions, except for:
 - a. link roads
 - b. stretches of the carriageway through junctions
 - c. the southbound carriageway from the M25 to the junction with the A13/A1089, which would be two lanes

- 2.3.6 In common with most A-roads, the A122 would operate with no hard shoulder but would feature a 1m hard strip on either side of the carriageway. It would also feature technology including stopped vehicle and incident detection, lane control, variable speed limits and electronic signage and signalling. The A122 design outside the tunnel would include emergency areas. The tunnel would include a range of enhanced systems and response measures instead of emergency areas.
- 2.3.7 The A122 would be classified as an ‘all-purpose trunk road’ with green signs. For safety reasons, walkers, cyclists, horse riders and slow-moving vehicles would be prohibited from using it.
- 2.3.8 The Project would include adjustment to a number of local roads. There would also be changes to a number of Public Rights of Way, used by walkers, cyclists and horse riders. Construction of the Project would also require the installation and diversion of a number of utilities, including gas mains, overhead electricity powerlines and underground electricity cables, as well as water supplies and telecommunications assets and associated infrastructure.
- 2.3.9 The Project has been developed to avoid or minimise significant effects on the environment. The measures adopted include landscaping, noise mitigation, green bridges, floodplain compensation, new areas of ecological habitat and two new parks.

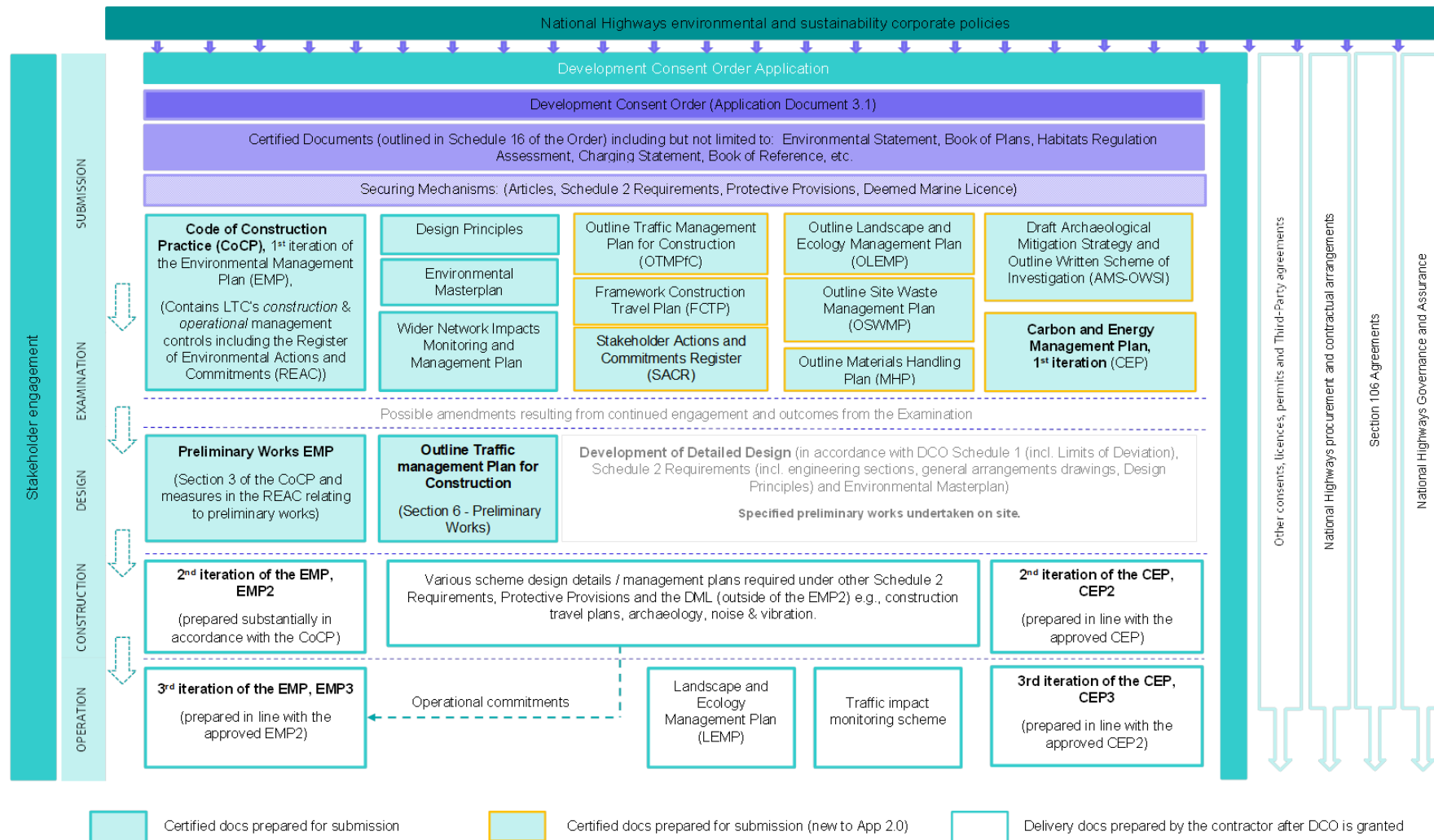
Plate 2.1 Lower Thames Crossing route



2.4 Approach to the document

- 2.4.1 This FCTP forms part of the DCO Application for the Project. This is a standalone document and compliance with the measures set out in this document are secured under Requirement 11 (Part 1 of the DCO Schedule 2) (Application Document 3.1). However, this FCTP has been developed in coordination with a number of related Project documents, including those illustrated in Plate 2.2.
- 2.4.2 Plate 2.2 sets out the Project stage at which each document is produced, and how they relate to the controls of the DCO.

Plate 2.2 Control plan



- 2.4.3 This document has been produced in support of the commitments set out in the CoCP (Application Document 6.3) which, together with the Register of Environmental Actions and Commitments (REAC) (Application Document 6.3) as the first iteration of the Environmental Management Plan (EMP), provide a framework for how the mitigation and management of environmental effects of the Project would be delivered and maintained. This is detailed further in Chapter 3.
- 2.4.4 As shown in the diagram above, the CoCP would feed into the Environmental Management Plan (Second Iteration) (EMP2) and Third Iteration (EMP3) for construction and operational phases. The EMP2 must be substantially in accordance with the CoCP and must reflect the mitigation measures set out in the REAC. During the final phases of construction, the Contractors would prepare an EMP3 in consultation with, and subject to agreement by, National Highways. The information contained within the EMP3 serves to inform the approach to environmental management during the Project's operational phase to be implemented by National Highways. The EMP3 would build on the EMP2 and would provide the relevant information on existing and future environmental commitments and objectives that will need to be honoured, and ongoing actions and risks that will need to be managed.
- 2.4.5 This FCTP is also closely related to the Outline Materials Handling Plan (OMHP) (Application Document 6.3), the Outline Traffic Management Plan for Construction (OTMPfC) (Application Document 7.14) (Requirement 10, Part 1 of the DCO Schedule 2) and the Workers Accommodation Report (WAR) (Application Document 7.18).
- 2.4.6 The OMHP (Application Document 6.3 Appendix 2.2) presents the outline strategy for handling construction materials required for the construction of the project, including the handling of excavated materials and the delivery of large and/or frequent materials defined as bulk deliveries. It also includes the approach which the Project intends to reduce the impact of construction-related movements, including heavy goods vehicles (HGVs) on the road network. Contractors would be required to produce further MHPs before commencing works (As per Requirement 4 of Part 1 Schedule 2 of the Draft Order (Application Document 3.1)). These documents would be submitted to and approved by the SoS before the relevant part of the authorised development can commence.
- 2.4.7 The OTMPfC (Application Document 7.14) provides outline concepts and principles that would inform the temporary traffic management measures and transport logistics for the Project. Contractors would be required to produce Traffic Management Plans for construction before commencing works (as per Requirement 10 of Part 1 Schedule 2 of the draft Order (Application Document 3.1)). These documents would be presented to National Highways and submitted to and approved by the SoS before the relevant part of the authorised development can commence.
- 2.4.8 The WAR (Application Document 7.18) sets out the expected number of workers (not Full Time Equivalent, FTEs) for the Project, what type of accommodation these workers are anticipated to sleep in and whether there is sufficient suitable accommodation to meet this demand.

- 2.4.9 This FCTP is also closely related to the Transport Assessment (Application Document 7.9), in particular Chapter 8 which assesses the impacts of the Project on the performance of the highway and public transport network during the construction phase. This is detailed further in Chapter 6.
- 2.4.10 It is important to retain a coordinated approach to managing and mitigating the impacts of the Project during the construction phase. While the development of this FCTP provides a framework for improving travel opportunities to and from the compounds and ULHs and their associated construction worksites and managing travel demands, it must remain consistent with the other related documents and control processes required to be implemented.
- 2.4.11 This FCTP falls within a dynamic process intended to adapt and develop with time as the travel patterns of the construction workforce change, and new initiatives are introduced. This FCTP sets out a framework and overarching principles for the future SSTPs. This would incorporate the flexibility required to respond and adapt to changing conditions over the duration of the Project, such as:
- a. Variation in the levels of construction activity over the duration of the construction programme in each location.
 - b. New or amended public transport provision in the vicinity of each site.
 - c. Transport network operation as a result of changing background levels of travel demand over time.
 - d. Initiatives employed through travel planning, drawing on experience of its implementation.
 - e. Consideration of updates in policy or guidance. This FCTP has been prepared based on current established policy and guidance including that from the Department for Transport (DfT) and Transport for London (TfL), alongside local highway authority guidance, which are the most up-to-date documents available. This is detailed further in Appendix A.
- 2.4.12 All numbers presented in this document are estimates based on the preliminary design and delivery proposals. As the contractor develops detailed delivery proposals these estimates will be developed further and used in preparation of the detailed plans submitted for approval.

2.5 Ownership of the document

- 2.5.1 This FCTP is owned by National Highways who would retain overall responsibility for the implementation of the SSTPs approved under it, and for liaising with the appropriate local highway authorities and transport operators.
- 2.5.2 Operational responsibility for the development of measures within each SSTP, and for day-to-day implementation of these measures, would be delegated to the relevant appointed Contractor. Contractors would be required to work within the context of this FCTP and to monitor and report progress to National Highways.
- 2.5.3 This is set out in detail in Chapter 4 which includes details of the wider management organisation, roles and responsibilities applicable to this FCTP and the SSTPs.

3 Aims and objectives

3.1 Aims and objectives

3.1.1 The overarching aims and objectives of this FCTP are presented below.

3.1.2 These have also been set out in the CoCP (Application Document 6.3) within Section 6.3 (journey planning) and are secured as commitments to be delivered by the Project, through Requirement 4, Part 1 of the DCO Schedule 2.

Aims

3.1.3 The key aims of this FCTP are as follows:

- a. To demonstrate that the Project is committed to, and will encourage, sustainable travel.
- b. SSTPs for the movement of personnel to and from the compounds and ULHs and their associated construction worksites would be developed by the Contractors following the latest guidance and best practice (see Appendix A).
- c. SSTPs would be produced by the Contractors for each compound, or compounds and ULHs where these are closely located with similar levels of accessibility. The SSTPs would be subject to review (and approval) by the SoS, in consultation with relevant planning authorities, and subsequently by the TPLG.
- d. The intent of the SSTPs would be to identify, mitigate and appropriately manage negative travel impacts that may be generated by travel to and from construction sites.

Objectives

3.1.4 The SSTPs would adhere to the following principles to promote the use of sustainable transport:

- a. Walking and using sustainable forms of transport at sites shall be supported where travel can be completed in a safe, lit highway environment, with footways for pedestrians.
- b. Parking would be controlled at each compound and ULH to ensure demand does not exceed supply.
- c. Shuttle buses would operate from existing transport hubs on both sides of the River Thames. These hubs are currently envisaged at Gravesend (Bus, HS1, National Rail), Grays (Bus, National Rail), Pitsea (Bus, National Rail) and Upminster (Bus, National Rail, London Underground, London Overground). Buses are currently expected to provide routes to each compound as well as inter-compound and ULH connectivity, although this will be determined as the SSTPs are brought forward and as agreed at the TPLG. These buses would be for the Project workforce only.

3.1.5 The mechanism for implementing these objectives is set out in paragraph 8.3.1.

Implementation strategy and action plan

- 3.1.6 Each SSTP will contain the following information:
- a. An assessment of the existing accessibility of the compound and ULH
 - b. The sustainable transport principles, as encapsulated above
 - c. Targets, which will be SMART (specific, measurable, attainable, realistic and time-bound)
 - d. Measures, which are targeted to the location to enable the targets to be achieved
 - e. Details of the management of the SSTP, including the appointment of a Travel Plan Coordinator (TPC)
 - f. Details of a clear monitoring programme which will establish the effectiveness of the SSTP measures against the targets set
 - g. An action plan which provides a programme for the delivery of the measures, setting this out in a clear way

3.2 Intent of the framework

- 3.2.1 The information below sets out how this document aims to support meeting the aims and objectives detailed above.

Guidance for Contractors

- 3.2.2 This document provides a single central framework to manage and guide the movement of construction workers to and from compounds and ULHs and their associated construction worksites across the Project. Given that the Project falls within a number of local authority areas (both highway and planning) and has a complex overlapping programme of construction at each site, the travel planning strategy would be underpinned by the SSTPs. This is to ensure that implementation, development of targets and the subsequent monitoring and management are appropriate to each site and its surroundings, whilst also retaining a project-wide overview.

Inclusion of commitments

- 3.2.3 Contractors would be required to develop SSTPs for the sites for which they are responsible, and to contribute to the development and refinement of Project-wide measures.
- 3.2.4 To support this process, guidance has been developed which will form part of the arrangements for appointed Contractors. These will include the following obligations:
- a. A requirement to develop an SSTP within the framework of the FCTP and to implement the SSTP prior to the start of construction at that site

- b. To meet the minimum requirements for the content of the SSTPs in relation to the aims, objectives and measures to be employed as set out in this FCTP, and the need for an identified action plan
- c. A requirement to work with National Highways to monitor the effectiveness of the SSTPs, including undertaking regular travel surveys
- d. A requirement to ensure that subcontractors and suppliers comply with the SSTPs

3.2.5 The contractual requirements to produce SSTPs are supported by the content of this FCTP, including understanding the objectives of the SSTPs, the responsibilities of the various parties and the range of potential measures that should be considered for inclusion in the action plan.

3.2.6 A template, which provides a suggested structure for the SSTPs is provided in Appendix B.

Flexibility

3.2.7 This FCTP identifies a series of travel plan measures which may be relevant to one or more sites or could be applied on a Project-wide basis. These are discussed in further detail in Chapter 8.

3.2.8 Issues which are specific to individual site locations would be captured in the SSTPs to ensure that local characteristics are fully and appropriately reflected.

3.2.9 It is important that the implementation of measures within this FCTP and associated SSTPs are responsive, flexible, appropriate, and dynamic in order to respond to changes in the context within which they are delivered and assessed.

3.2.10 This means that the SSTPs would draw from a range of potential measures, identifying those which are appropriate for each location and are likely to be most effective. During the construction period, it may be appropriate to add, remove or amend measures in the SSTPs, following the high-level guidance set out in this FCTP, to respond to changing requirements and travel patterns.

3.2.11 Updates to this FCTP or the SSTPs would be managed by the TPLG, as detailed in Section 4.6.

3.2.12 Measures which are considered suitable for the Project fall into the following broad categories:

- a. Travel awareness
- b. Walking and cycling
- c. Public transport
- d. Shared worker transport
- e. Single-occupancy car travel

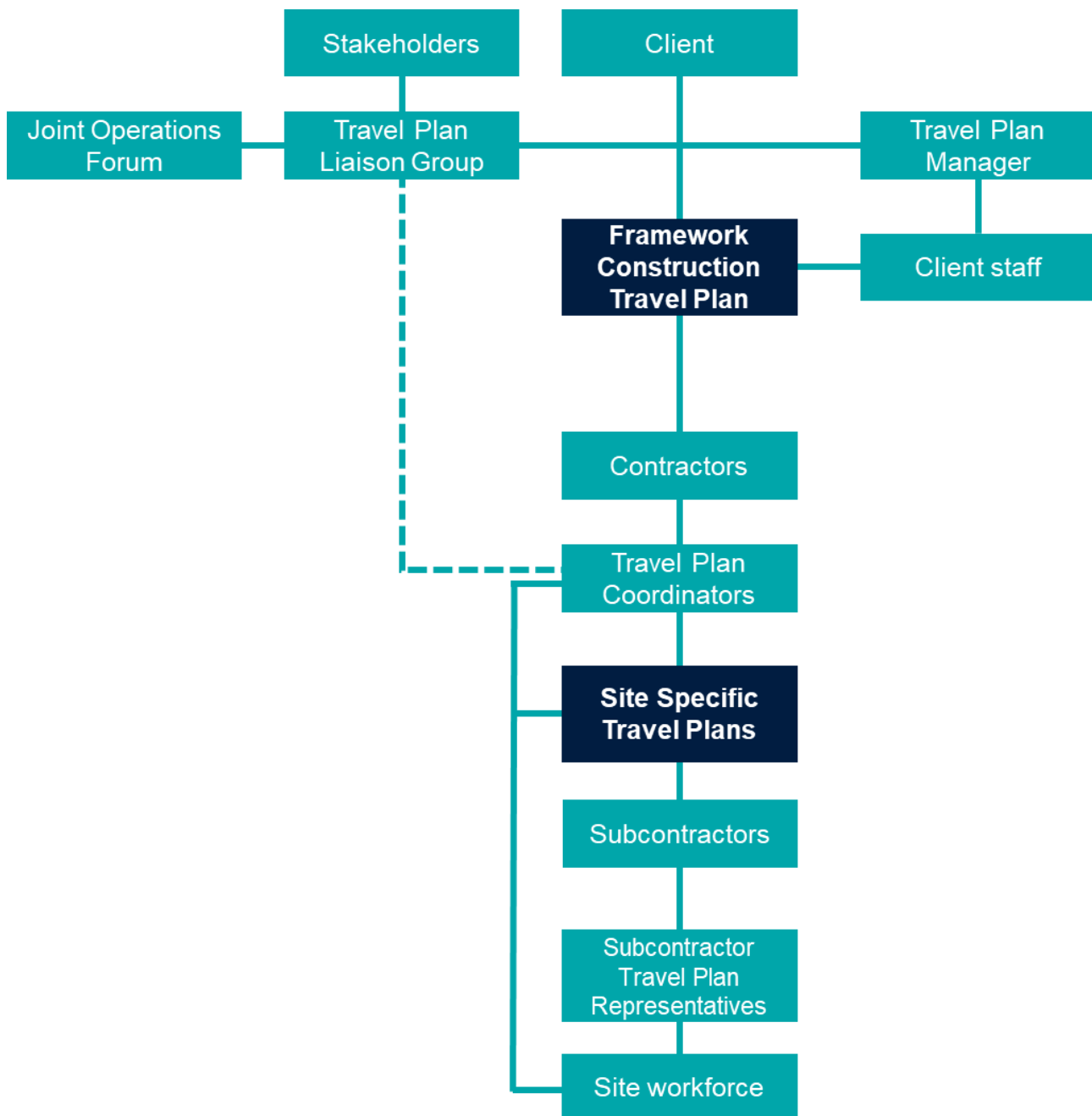
3.2.13 This highlights the importance of effective communication with and support from local planning and highway authorities throughout the process, ensuring local changes or updates have been taken into consideration, and that proposed measures and targets remain aligned with local policies.

4 Management and organisation

4.1 Introduction

- 4.1.1 This FCTP is owned by National Highways. The Contractors would be required to commit to its principles as part of their appointment to the Project and would also be required to work in conjunction with National Highways to ensure that the SSTPs are implemented effectively and are reviewed on a regular basis.
- 4.1.2 In order to successfully achieve the objectives of this FCTP, a consistent and well-managed programme of action needs to be implemented. This would involve a number of key parties including National Highways, Contractors working on the Project, subcontractors and suppliers, transport authorities and transport providers.
- 4.1.3 Plate 4.1 illustrates the management structure proposed for the implementation of the FCTP and SSTPs. The roles contained within this structure are explained below.
- 4.1.4 National Highways would manage the SSTPs through a Travel Plan Manager (TPM). Contractors and subcontractors would be required to identify nominated individuals within their organisations to manage travel plan activities for their sites.
- 4.1.5 A TPLG would be established, comprising stakeholder representatives such as public transport operators and local highway authorities, together with the TPM and National Highways representatives. The Travel Plan Coordinators (TPCs) provided by the Contractors would also be invited to attend the TPLG as necessary to discuss site-specific issues. Plate 4.2 provides more information about the consultative role of the TPLG.

Plate 4.1 FCTP management structure



4.2 National Highways responsibilities

4.2.1 National Highways would appoint a TPM. The TPM would be a suitably qualified person with relevant experience within National Highways that would enable them to attend the Joint Operations Forum (JOF) (see paragraph 4.2.3 for more details), for the purposes set out below:

- a. Ensure standards and best practice are applied across the Project through coordination and information-sharing with the appointed Contractors
- b. Issue and explain this FCTP and the requirement to produce SSTPs, to each appointed Contractor

- c. Review and ensure this FCTP and the SSTP action plans are identified, appropriate, and implemented
- d. Support procurement and implementation of measures set out in this FCTP and the SSTPs in conjunction with Contractors
- e. Assess, collate and report progress on the SSTPs' performance and determine amendments and further initiatives where required
- f. Liaise and consult with the TPLG
- g. Update this FCTP on a regular basis as required (at a maximum frequency of monthly, following each TPLG meeting) before and during the construction programme

4.2.2 As outlined in the CoCP (Application Document 6.3), the construction works are expected to be split into three packages across the Project to enable appropriate management and phasing. Some of these packages would proceed concurrently with ongoing construction activities in either the same or different locations under the control of other Contractors.

4.2.3 National Highways would therefore establish and chair a JOF, which would help coordinate the different activities undertaken by the Contractors. It would help manage the interface between the different Contractors efficiently and maximise opportunities for reducing the overall impact on the surrounding communities and environment. The JOF would be attended by the TPM and the Contractors and would meet regularly to discuss the internal interface between the Contractors, as well as the potential interaction with other schemes and external stakeholders.

4.2.4 Furthermore, the JOF would be required to coordinate several activities, one of which refers to monitoring the impact of the construction workforce on the community in its travel to and from work and its use of temporary accommodation. Other key tasks would include the management of environmental effects, maintaining communication with the emergency services, the coordination of construction phasing and logistics, traffic management and site access, alongside the coordination and communication between the Contractors to deliver a consistent approach across the Project.

4.3 Contractor responsibilities

4.3.1 Each Contractor would be required to appoint a TPC to develop and implement the relevant SSTPs. Each TPC would be expected to be suitably qualified and experienced. Contractors may choose to appoint a single TPC with responsibility for a number of compounds and ULHs. The appointed TPCs would be required to:

- a. Develop an SSTP (which should use the template in Appendix B) for each compound and ULH or group of compounds and ULHs (where these are closely located and with a similar level of accessibility), in accordance with the contractual requirements and travel plan guidance set out in this FCTP, working with the TPM

- b. Procure, implement, and actively promote travel plan measures in the SSTPs and support implementation of the FCTP
- c. Act as a focal point on transport-related issues at the sites being represented and ensure that Contractors' staff comply with their responsibilities
- d. Manage the monitoring, audit, and review of SSTPs
- e. Liaise with other TPCs and representatives in order to share ideas, coordinate efforts and review progress
- f. Ensure subcontractors and suppliers comply with their role and, where appropriate, appoint Travel Plan Representatives (TPRs)

4.3.2 Contractors would also be required to carry out early proactive engagement as part of their recruitment activities, ensuring that potential workers are aware of the emphasis of travel planning as part of the role(s) being advertised, and to assist potential workers in making any decision about accepting an offer of employment on the Project.

4.3.3 Contractors would need to give consideration to the potential travel patterns of their workforce before the construction period starts, and the potential for sustainable and/or active travel to and from the construction worksites, compounds and ULHs.

4.4 Subcontractor and supplier responsibilities

4.4.1 Subcontractors and suppliers would be required to comply with the SSTP(s) that they work on and/or deliver to.

4.4.2 Depending on the amount of work that each subcontractor or supplier is contracted to do under the works covered by each SSTP, the TPC may require the appointment of a TPR.

4.4.3 The TPR will:

- a. Promote the SSTP(s) to their employees
- b. Act as a point of contact and liaison to the TPC
- c. Provide data as required to the TPC to aid with monitoring of the SSTP(s)

4.5 Worker responsibilities

4.5.1 Each worker on the Project (including those employed by National Highways, Contractors, Subcontractors and suppliers) would be required to uphold and comply with the SSTP requirements and objectives. This would be implemented through an introductory session, with workers asked to agree and sign a commitment to their assigned responsibilities. Their responsibilities would be to:

- a. Consider all transport options available to them for travel to and from the site and ensure that adequate travel time is allowed for their journey

- b. Ensure they have all the necessary equipment to travel safely by their chosen mode of transport
- c. Report on the effectiveness of the SSTP applicable to them and raise concerns about any problems that become apparent
- d. Suggest ideas to their appointed representative on how to modify the plan to suit the workforce

4.6 Travel Plan Liaison Group

- 4.6.1 The TPLG would comprise stakeholder representatives (such as public transport operators, TfL and local authorities) together with National Highways and the TPCs provided by the Contractors.
- 4.6.2 The TPLG would meet on a monthly basis, commencing in line with the details set out in Table 9.1.
- 4.6.3 The TPM would lead and coordinate the TPLG activities to promote partnership working. The TPM would be responsible for agendas, briefing papers and minutes for the TPLG meetings.

Constitution and voting

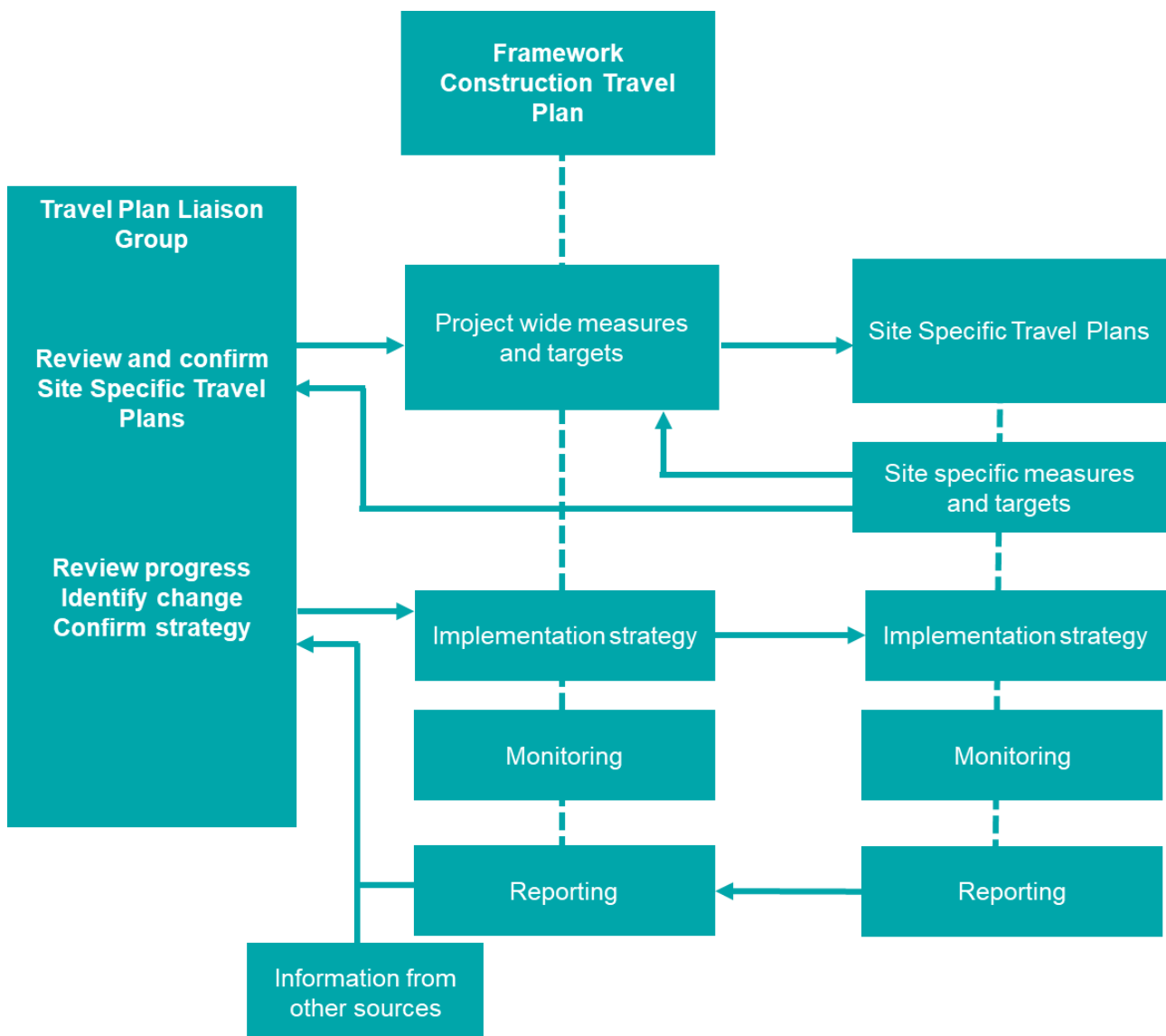
- 4.6.4 The TPLG would be constituted by the TPM before the commencement of construction.
- 4.6.5 It would be for the TPLG to determine whether it is appropriate to set up sub-groups to deal with particular groups of sites with similar characteristics or particular interactions.
- 4.6.6 The TPLG would often be required to vote on matters relating to this FCTP and the SSTPs, including disputes. Where a vote is required, this will be subject to voting rights (and other areas of the constitution such as a quorate) set out when the TPLG is constituted.
- 4.6.7 If there is a dispute that cannot be resolved by the TPLG, the SoS would be called upon as a last resort.

Responsibilities

- 4.6.8 The TPLG would be responsible for providing high-level support to, and critical review of, travel planning across the Project. It would support efforts towards achieving greater sustainable travel, monitoring, and reviewing progress and agreeing new or amended initiatives.
- 4.6.9 In particular, the TPLG would be responsible for agreeing revised targets if targets are met or exceeded ahead of the planned date, or if remedial measures are required as targets are not achieved. More detail is set out in Section 10.3 and Section 10.4 of this FCTP.
- 4.6.10 The TPLG would be responsible for reviewing the operation of this FCTP and the SSTPs. Effectiveness of the FCTP and SSTPs would be considered as a standing agenda item. Further information on the requirements for review and update are set out below in Section 10.3.

- 4.6.11 The TPLG would ensure that local authorities and key stakeholders are consulted during the development of the SSTPs.
- 4.6.12 Following approval of the SSTPs by the SoS and, where different, the local planning authority on matters relating to its function.
- 4.6.13 If agreement of an update to a SSTP is not possible, the Contractor would be either able to revert back to the SSTP already approved, or following consultation submit to the SoS for their approval.
- 4.6.14 Plate 4.2 details the consultative role of the TPLG and illustrates the SSTP process and how the success of the measures would feed into the FCTP targets. A solid line denotes a direct input into the process, while a dashed line denotes where each stage of the process would feed into the next from the top down.

Plate 4.2 The role of the TPLG



5 Project construction details and programme

5.1 Introduction

- 5.1.1 A summary of the Project's construction details, and programme is outlined in this chapter, for both the main construction works and the utility works. The main construction works are related to construction elements associated with the permanent designed scheme (including earthworks, structures, roads, drainage etc.). The utility works are works related to both the temporary utility works (e.g., temporary power to compounds) and the permanent utility works (e.g., diversion of assets, permanent power to the tunnels etc.).
- 5.1.2 Further details are also provided in Chapter 2: Project Description of the Environmental Statement (Application Document 6.1) which sets out a comprehensive overview of the construction activities, construction packages of work for delivery of the Project and the construction of the tunnel and approaches. It also provides a summary with regard to information on the construction compounds and ULHs, haul routes, river transport for construction, working hours, waste and monitoring.
- 5.1.3 A more detailed description is also provided in Appendix 2.1: Construction Supporting Information (Application Document 6.3) and presents a practical and achievable approach to the construction of the Project. It is still acknowledged however, that the methodology ultimately employed would be determined by the Contractors, dependent on the detailed design and the construction methodology developed in accordance with the parameters and controls in the DCO.

5.2 Construction programme and phasing plan

- 5.2.1 Following the DCO Grant there would be preparatory works, referred to in the draft DCO as preliminary works taking place in 2024. The main construction period for the Lower Thames Crossing would start in early 2025, with the road being open for traffic in late 2030. The construction of the Project would require the use of traffic management measures (such as narrow lanes and traffic signals to control traffic through contraflows) and so the phasing described in Table 5.1 has been based primarily on the different elements of traffic management scheduled across the Project's construction programme.
- 5.2.2 The proposed construction measures for the Project are outlined in further detail in the OTMPfC (Application Document 7.14).
- 5.2.3

- 5.2.4 Table 5.1 sets out the location and programme dates associated with each of the 18 sites across the construction, operation and de-mobilisation phases of the programme.

Table 5.1 Main works construction programme and phasing

Compound	Borough	Start	End	Duration (months)
Marling Cross	Gravesham	January 2025	July 2027	31
A2	Gravesham	January 2025	February 2030	62
Southern tunnel entrance	Gravesham	January 2025	March 2030	63
A226 Gravesend Road	Gravesham	January 2025	December 2027	36
Milton	Gravesham	January 2025	December 2027	36
Northern tunnel entrance	Thurrock	January 2025	March 2030	63
Station Road	Thurrock	July 2025	June 2028	36
Brentwood Road	Thurrock	January 2025	May 2029	53
Stanford Road	Thurrock	January 2025	December 2026	24
Long Lane A	Thurrock	February 2027	August 2028	19
Long Lane B	Thurrock	February 2027	August 2028	19
Stifford Clays Road West	Thurrock	March 2027	March 2029	25
Stifford Clays Road East	Thurrock	January 2025	February 2029	50
Mardyke	Thurrock	April 2026	September 2028	30
Medebridge	Thurrock	January 2025	November 2029	59
M25	Havering	January 2025	December 2029	60
Ockendon Road	Havering	November 2025	January 2029	39
Warley Street	Brentwood	May 2026	December 2028	32

5.3 Construction worksites and compounds

5.3.1 The proposed locations of the construction worksites, compounds and ULHs are shown across three separate maps in Plate 5.1 (south of the River Thames) and Plate 5.2 and Plate 5.3 (north of the River Thames).

Plate 5.1 Compound and ULH locations (South of the River Thames)

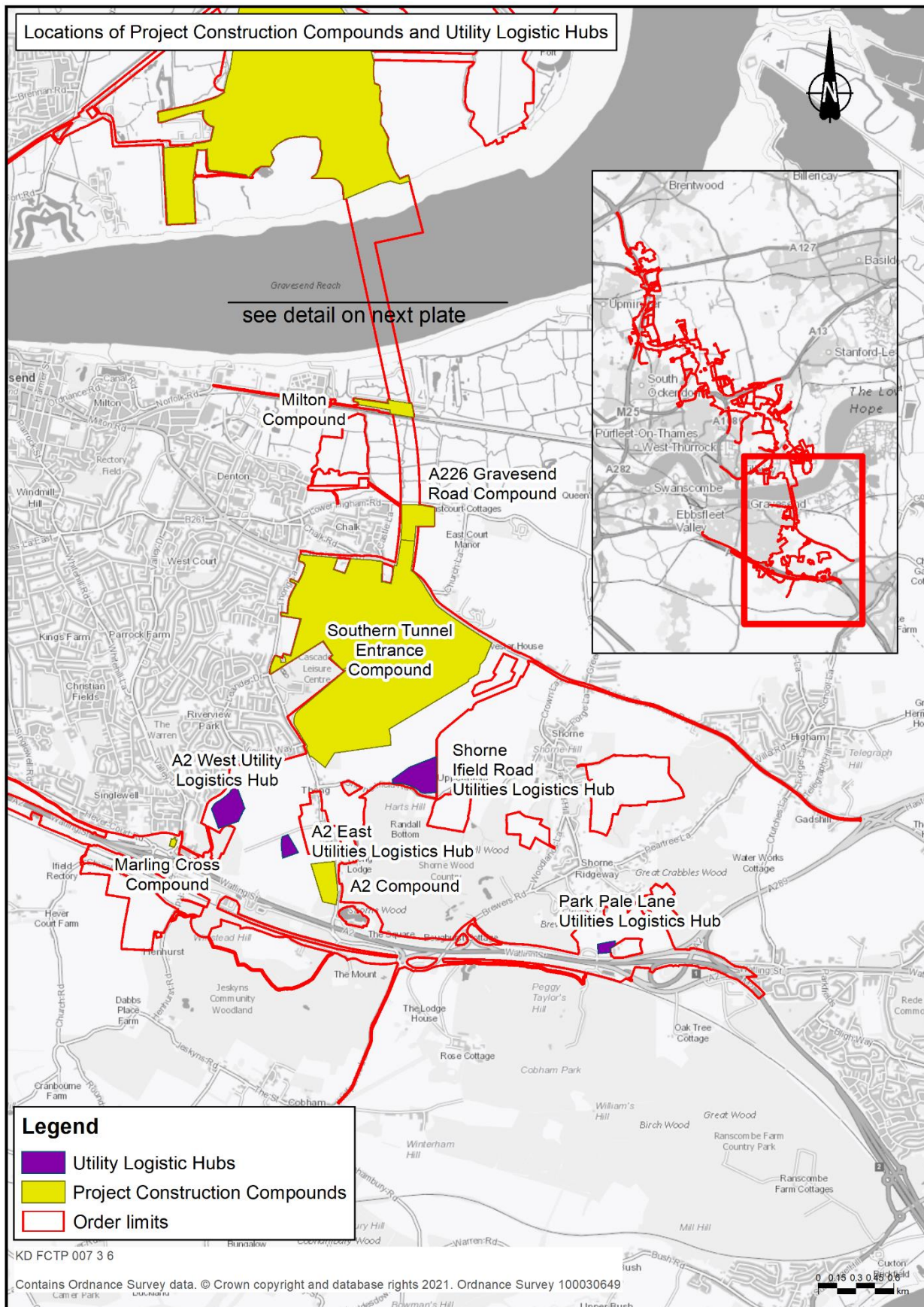


Plate 5.2 Compound and ULH locations (North of the River Thames - 1)

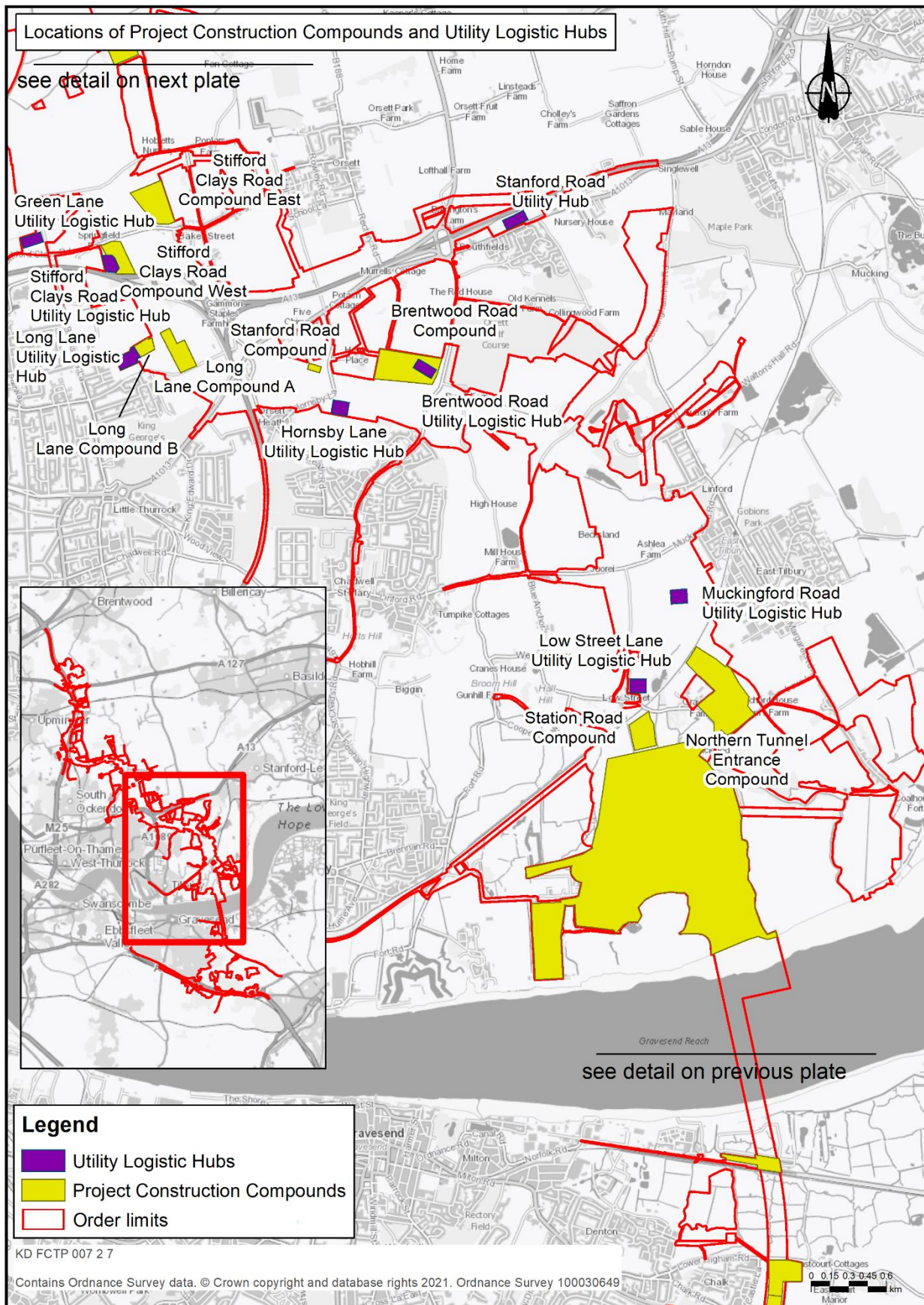
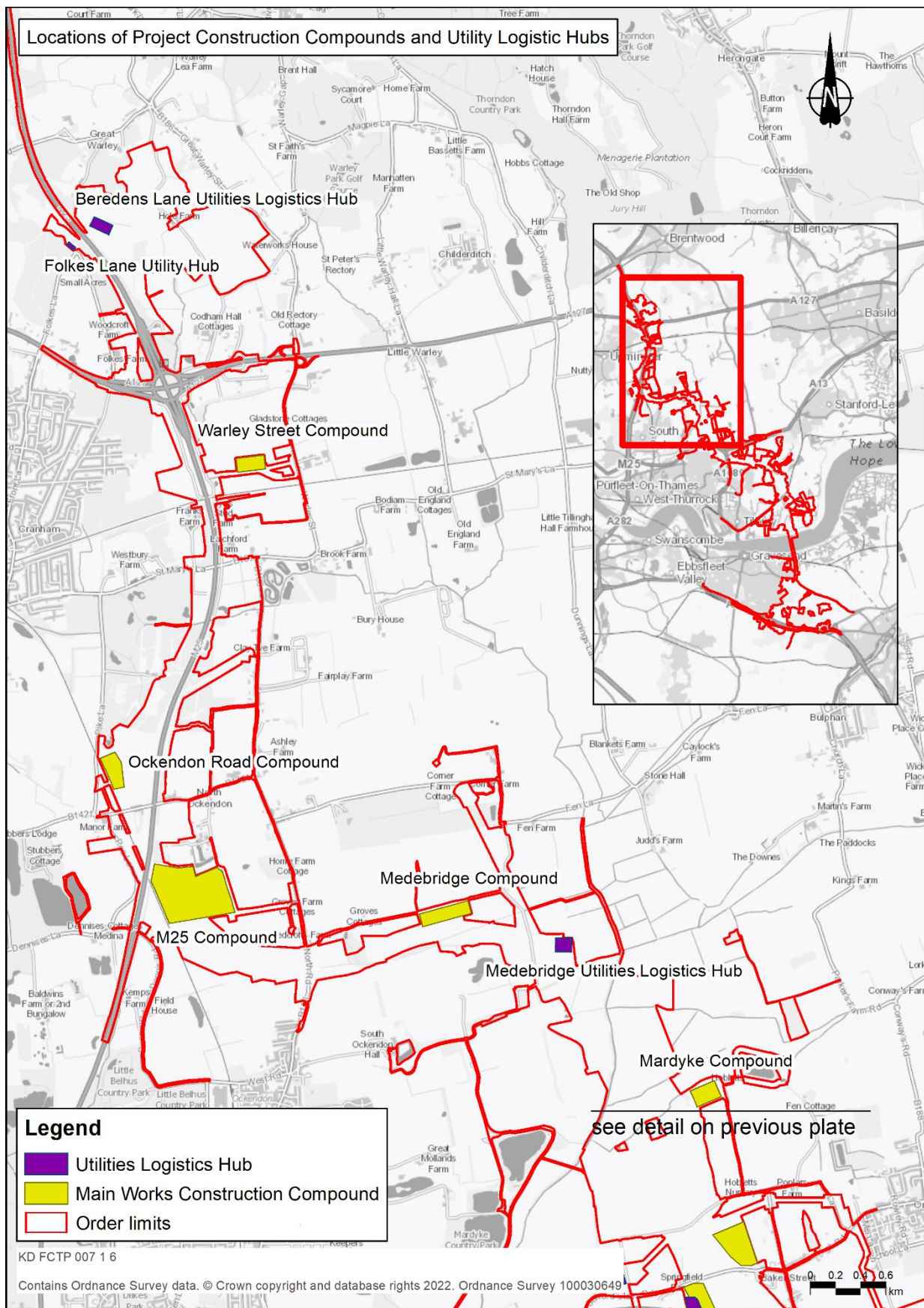


Plate 5.3 Compound and ULH locations (North of the River Thames - 2)



- 5.3.2 As shown above, the compounds and ULHs fall within the local planning authority areas of Brentwood Borough Council, the London Borough of Havering, Thurrock Council, and Gravesham Borough Council.

5.4 Workforce details

Workforce numbers

- 5.4.1 Estimates of the number of workers at each compound throughout the construction programme have been derived. The total number of workers at the peak phase of construction is shown in Table 5.2.
- 5.4.2 Further detail on the number of workers, and where they would reside during the construction of the Project are contained within the WAR (Application Document 7.18).
- 5.4.3 Some workers would already live close to the construction sites, and so would be classed as 'locally employed'. Some workers would be accommodated onsite within the Northern tunnel entrance compound to the north of the River Thames. For assessment purposes, it has been assumed there would be up to 480 spaces at this location. The remaining workers would be expected to move into the area, typically within 90 minutes' travel time from the construction sites. These workers would require accommodation within the local community.

Table 5.2 Forecast workforce numbers

	North (at peak)	South (at peak)
Total workers	3,802	885
Locally employed	1,331	310
Onsite	480	0
Requiring accommodation	1,991	575

Workforce shift arrangements

- 5.4.4 Most compounds and ULHs would be expected to use the same time-based profile, thereby operating to the same shift pattern (08:00–18:00), arriving in the AM peak between 07:00 – 08:00 and departing in the PM peak between 18:00 – 19:00. In addition, at some compounds and ULHs there would be some discrete activities unrelated to tunnelling that would require 24 hour working.
- 5.4.5 For compounds and ULHs associated with tunnelling, it is expected that there would be three different shift patterns as follows:
- Daytime (arrivals between 07:00 – 08:00 and departures between 18:00 – 19:00)
 - Extended daytime (50% of arrivals split between 07:00 – 08:00 and 13:00 – 14:00; 50% of departures split between 18:00 – 19:00 and 22:00 – 23:00)
 - 24-hour shift (arrivals split equally (33% in each) between 06:00 – 07:00, 14:00 – 15:00 and 22:00 – 23:00; departures split equally (33% in each) between 07:00 – 08:00, 15:00 – 16:00 and 23:00 – 00:00)

Workforce travel arrangements

Onsite worker accommodation

- 5.4.6 For assessment purposes, it has been assumed there would be up to 480 onsite accommodation spaces available for workers to use, which would be located within the Northern tunnel entrance compound.
- 5.4.7 If an employee is staying in the onsite accommodation, it is assumed that they would not make a journey-to-work trip.
- 5.4.8 It has been assumed that workers south of the River Thames would not have access to the onsite accommodation within the Northern tunnel entrance compound.

Mode share

- 5.4.9 The baseline mode share applied in the modelling assessments (as set out in the Transport Assessment (Application Document 7.9)), has been assumed based on the number of available parking spaces at each compound and the likely vehicle occupancy without travel plan measures in place. The modal share assumptions are as follows:
- For small compounds (where the maximum number of compound workers would be fewer than 50), 100% single occupancy car mode share and 0% by other modes has been assumed
 - For medium-sized compounds (where the maximum number of compound workers would be between 50 and 100), 80% single occupancy car mode share and 20% by other modes (including multiple occupancy car trips) has been assumed
 - For large compounds (where the maximum number of compound workers would be greater than 100), 70% single occupancy car mode share and 30% by other modes (including multiple occupancy car trips) has been assumed
- 5.4.10 These baseline figures have been used to develop suitable targets for increasing the sustainable mode share for the construction workforce, as set out in detail in Chapter 7. They are considered to be a conservative assumption of the likely use of sustainable modes to access the compounds. As such, these are likely to provide a robust assessment of the likely impacts of construction of the Project on the highway network, which in reality would be bettered through the implementation of this FCTP and the SSTPs.
- 5.4.11 Table 5.3 sets out the size (forecast worker population), associated number of workers, the modal share assumptions applied in the assessment for each compound (and ULH where the access would be shared) and the number of two-way hourly car trips. The number of workers and car trips represent the average across the identified construction phase that shows the highest number of workers forecast for each of the compounds. It should be noted that the worker numbers for each compound would peak at different times during the construction programme, thus the total number of movements at any one time are likely to be lower than the sum of the movements shown.

Table 5.3 Workforce numbers

Compound	Size	Number of workers	% cars	Number of two-way hourly car trips
Marling Cross	Medium	54	80	43
A2	Large	314	70	220
Southern tunnel entrance	Large	524	70	259
A226 Gravesend Road	Small	40	100	40
Milton	Small	10	100	10
Northern tunnel entrance	Large	1,968	70	820
Station Road	Small	38	100	38
Brentwood Road	Large	191	70	134
Stanford Road	Medium	58	80	46
Long Lane A and B	Medium	52	80	41
Stifford Clays Road West	Medium	75	80	60
Stifford Clays Road East	Large	259	70	181
Mardyke	Medium	63	80	51
Medebridge	Large	140	70	98
M25	Large	300	70	210
Ockendon Road	Medium	57	80	46
Warley Street	Large	110	70	77

5.4.12 As shown in Table 5.3, nearly half of the compounds would be considered as 'large' with a total of eight sites with a 70% car mode share in the baseline. A further six compounds would be considered as 'medium', with an 80% car mode share in the baseline. The remaining three compounds would be considered 'small', with a 100% car mode share in the baseline.

Workforce temporary accommodation

5.4.13 The WAR demonstrates that there is sufficient capacity in local accommodation market for temporary workers. Given concerns raised by Local Authorities about localised effects on some parts of the accommodation market, the Applicant is nonetheless proposing the following pro-active measures to monitor and manage the uptake of accommodation:

- a. Accommodation Helpdesk – this would be operated by National Highways and would be a tool to assist workers with finding suitable and available accommodation near the Project. The Helpdesk would support prospective providers of accommodation in understanding the Project and its workforce and managing tenancies safely and legally. Workers would not be mandated to use accommodation registered on the Accommodation Helpdesk. The Helpdesk would also oversee collation of monthly data from the contractors and produce accommodation monitoring reports which would in turn inform where workers could be directed/recommended via the Helpdesk.

- b. Accommodation database – the contractors would be required to create and maintain a live database that monitors the accommodation being used by the workforce in terms of the type of accommodation (on-site project accommodation, private rented, spare rooms/latent, owner-occupied or tourist/visitor) and the location of this accommodation (via a postcode). The contractors would mandate that its workforce, and those of its suppliers, regularly update their information related to the database for every worker. This database would be reported on a monthly basis to members of the Workforce Accommodation Working Group (WAWG).
- c. Workforce Accommodation Working Group – this would include representatives from National Highways, its contractors, and local authorities. The WAWG would receive monthly workforce accommodation monitoring reports from the Helpdesk, and regular updates and information from the Project including 'look-ahead' for potential workforce implications over a 12-month period led by National Highways and contractors. The findings of the workforce accommodation monitoring report would be considered alongside other information, such as other monitoring secured by the Project (e.g., via the FCTP and SEE Strategy (Appended to s106 Agreement, Application Document 7.3)) and information provided by authorities on market conditions and other developments in the local area.

5.4.14 Contractors would also be required to propose further reasonably practicable measures which encourage a higher proportion of locally employed workers (thereby reducing demand for accommodation) and incentivise workers to live in areas which have higher capacity. Measures would be presented to the WAWG, and National Highways would have due regard to comments raised at that group on the measures to be undertaken.

Workforce trip origins

- 5.4.15 An assessment has been undertaken using the modelling data to illustrate where workforce trips could be expected to originate when travelling to and from the various compounds and ULHs at the start and end of the working day. Plate 5.4 to Plate 5.26 illustrate the geographical catchment of trips for each compound and ULH, and how these trips are distributed across the wider area. This analysis has helped ensure that the transport hubs and the services provided at them are likely to be sufficient, and to identify where further measures may need to be considered to better align workforce movements with transport services provided.
- 5.4.16 Plate 5.4 to Plate 5.8 present the information for all main works compounds located south of the River Thames.

Plate 5.4 Marling Cross compound workforce origin locations

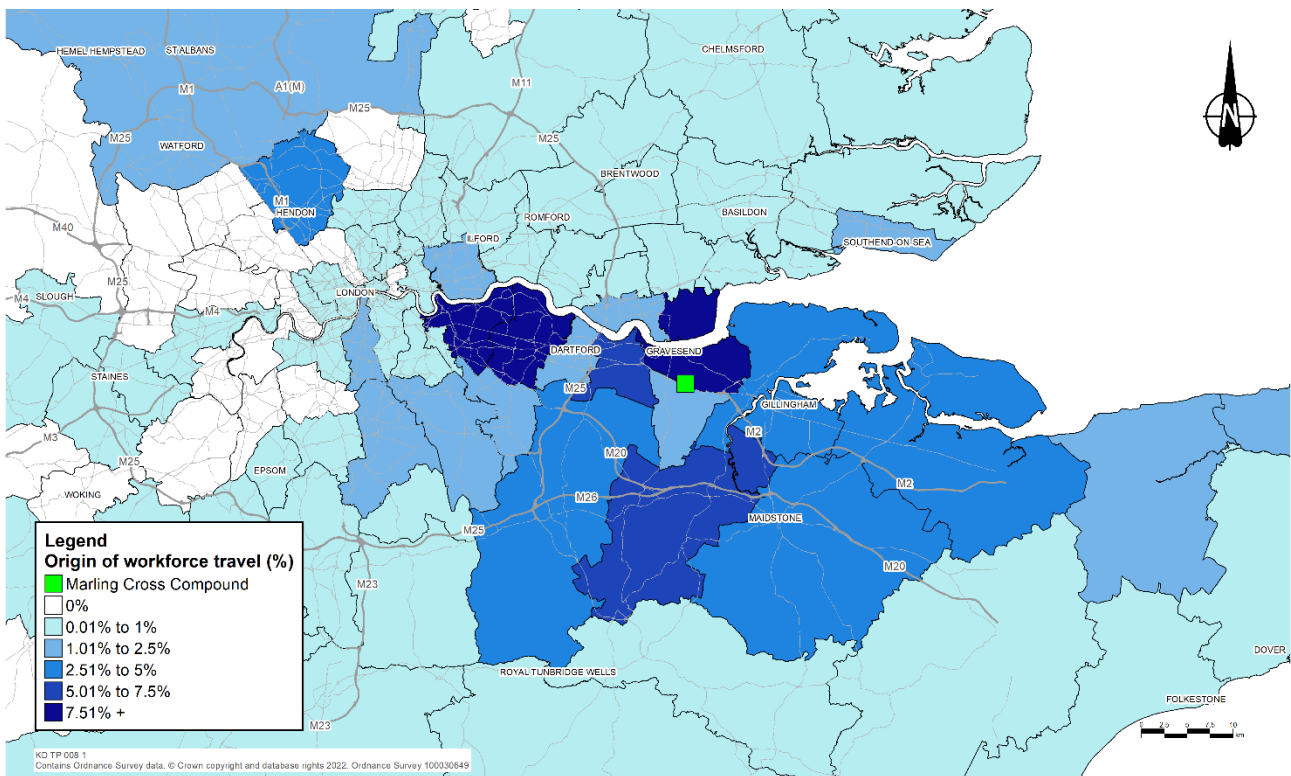


Plate 5.5 A2 compound workforce origin locations

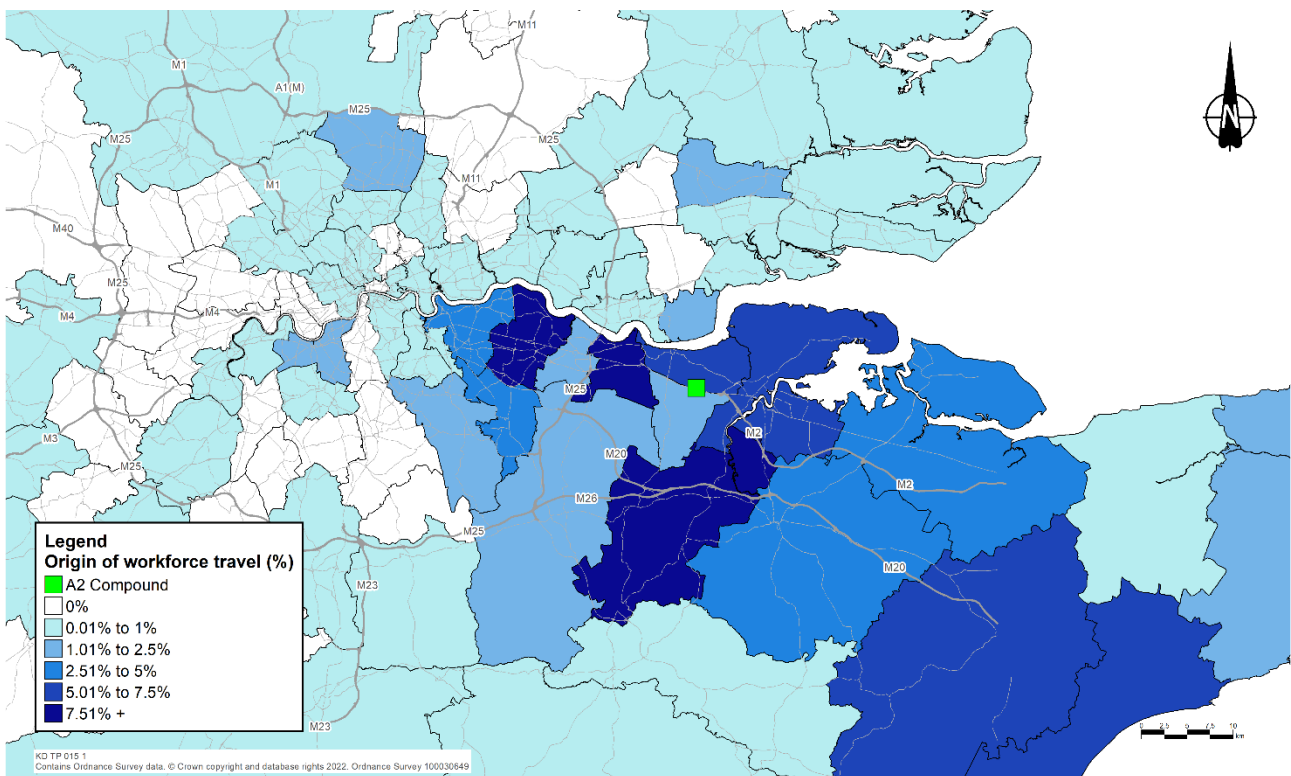


Plate 5.6 Southern tunnel entrance compound workforce origin locations

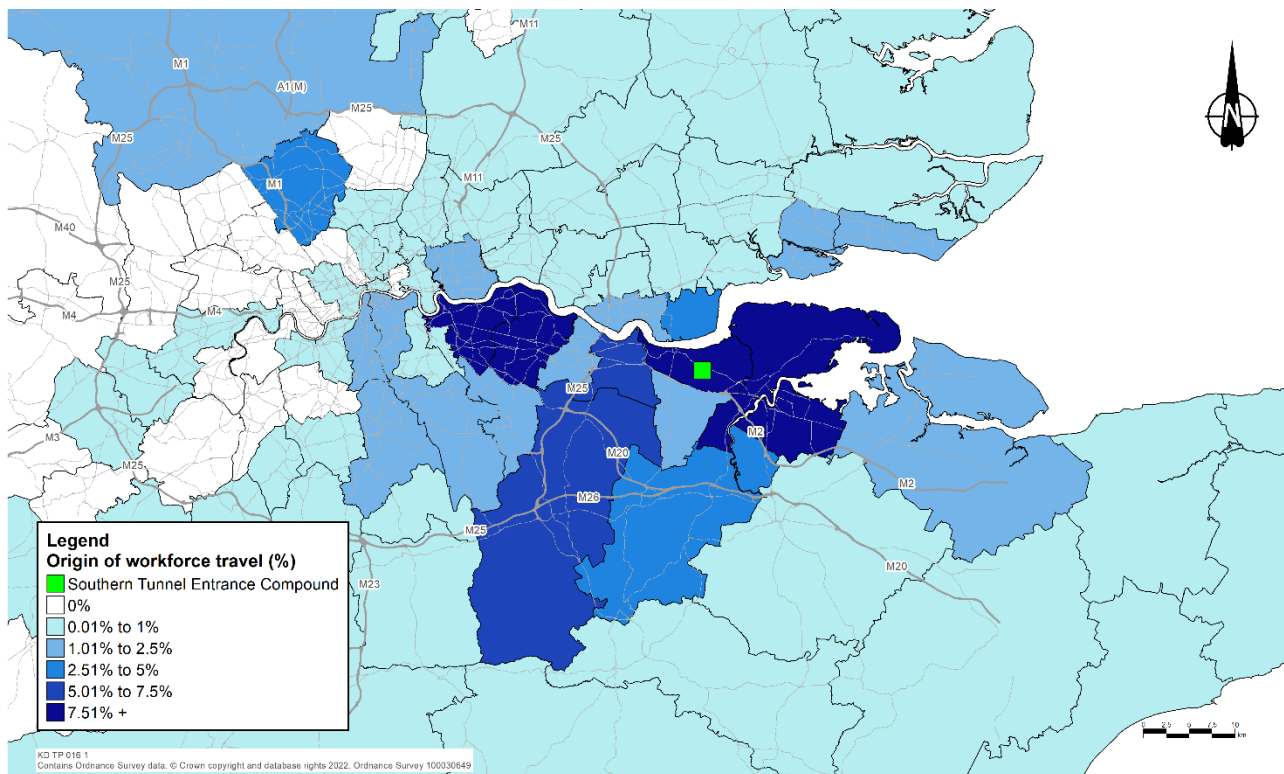


Plate 5.7 A226 Gravesend Road compound workforce origin locations

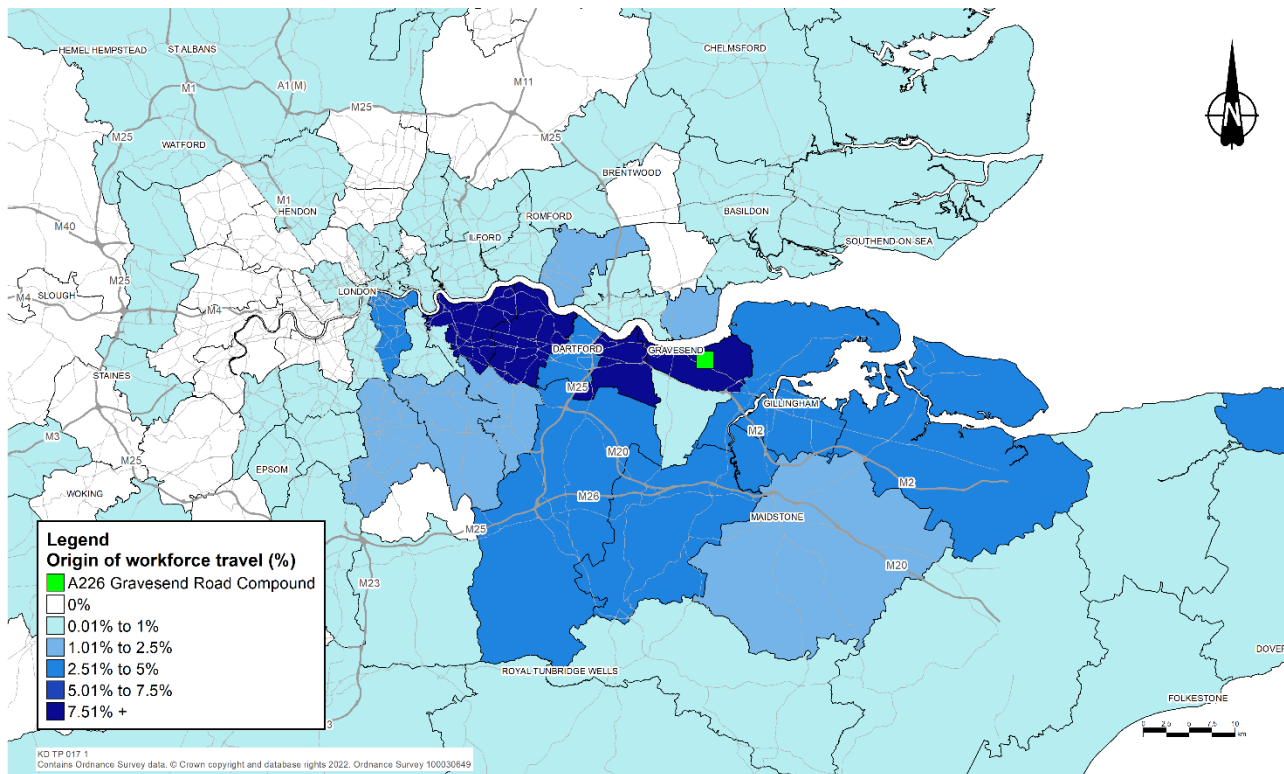
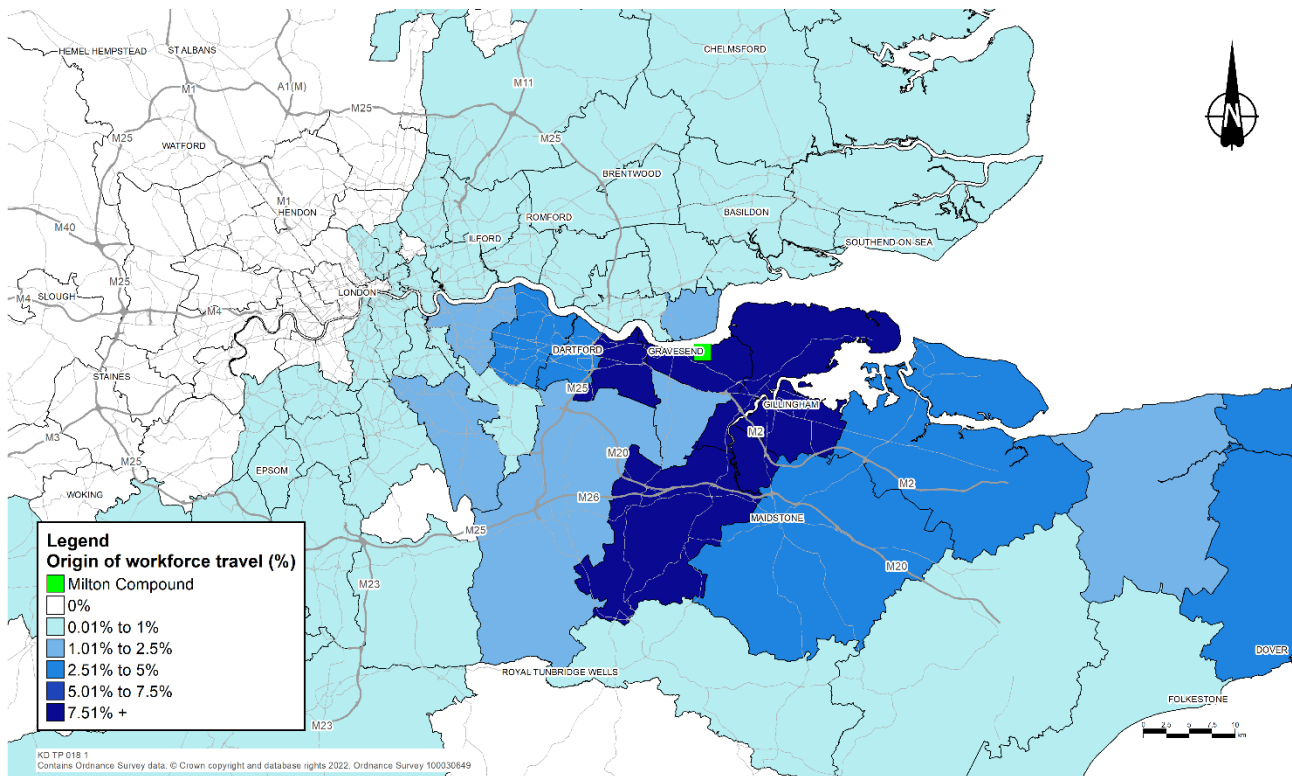


Plate 5.8 Milton compound workforce origin locations



- 5.4.17 For all compounds located south of the River Thames, the majority of trip origins are concentrated in the Medway Towns, Gravesend and Dartford sector boundaries (all located in Kent) with each of them expecting 7.5%+ trips across the different locations.
- 5.4.18 Plate 5.9 to Plate 5.20 present the information for all main works compounds located north of the River Thames.

Plate 5.9 Northern tunnel entrance compound workforce origin locations

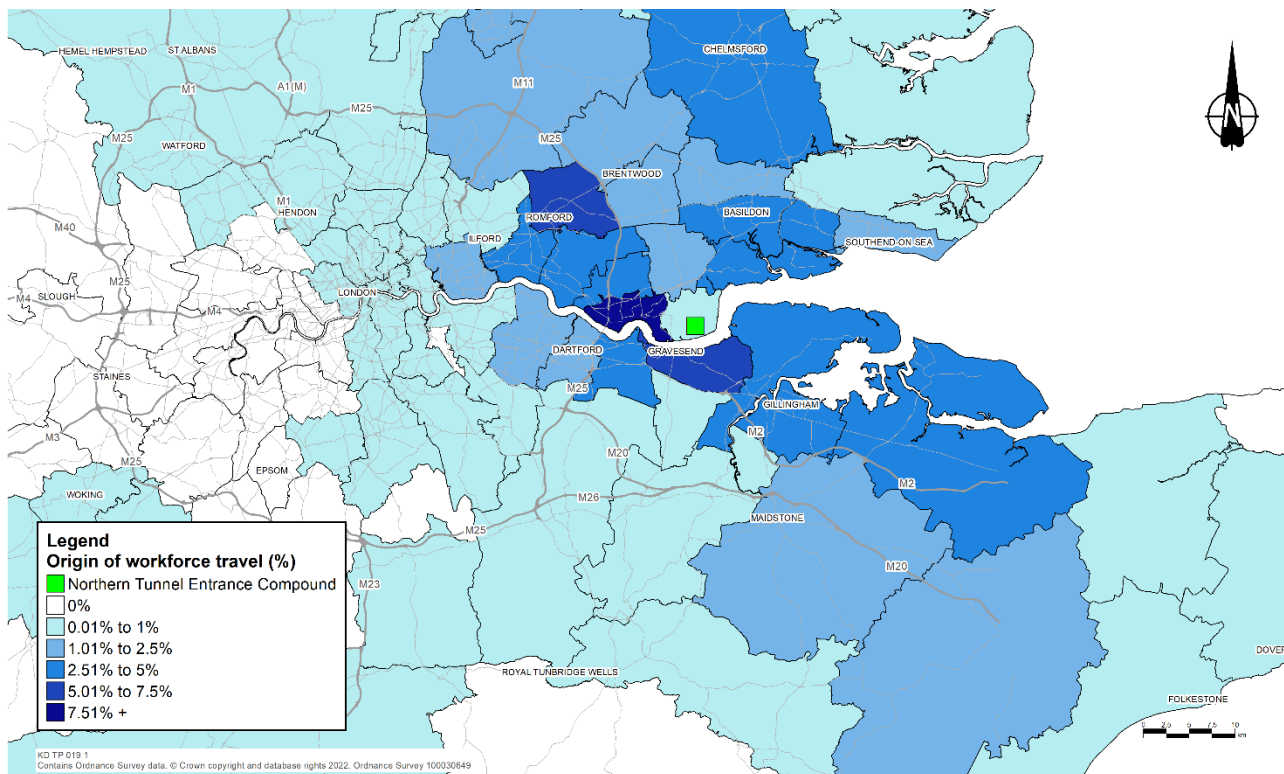


Plate 5.10 Station Road compound workforce origin locations

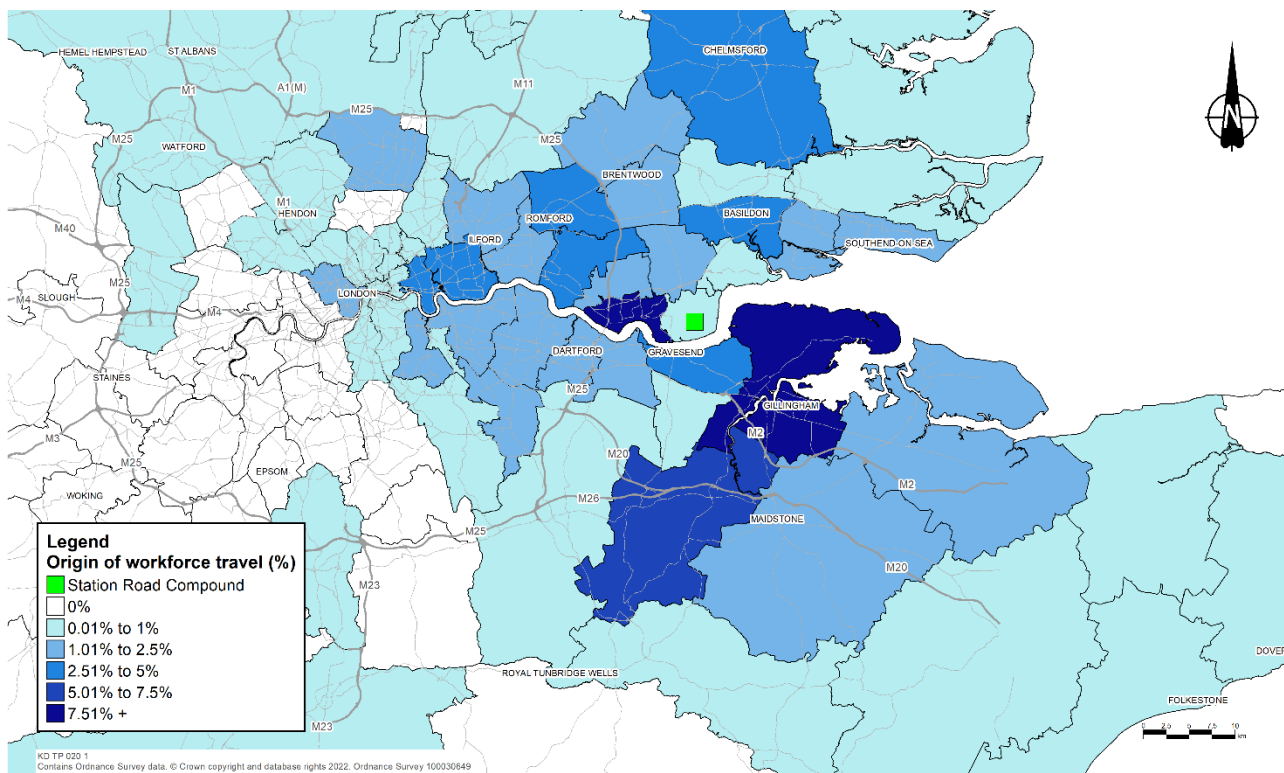


Plate 5.11 Brentwood Road compound workforce origin locations

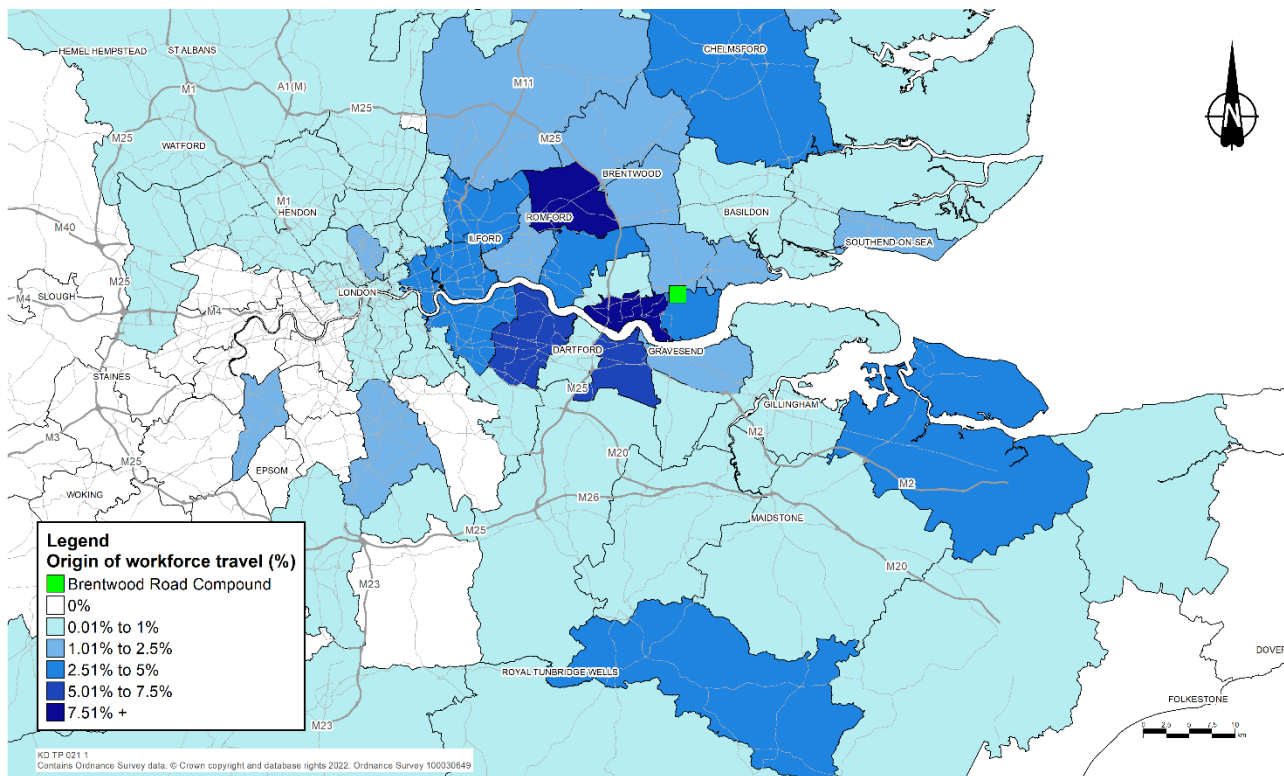


Plate 5.12 Stanford Road compound workforce origin locations

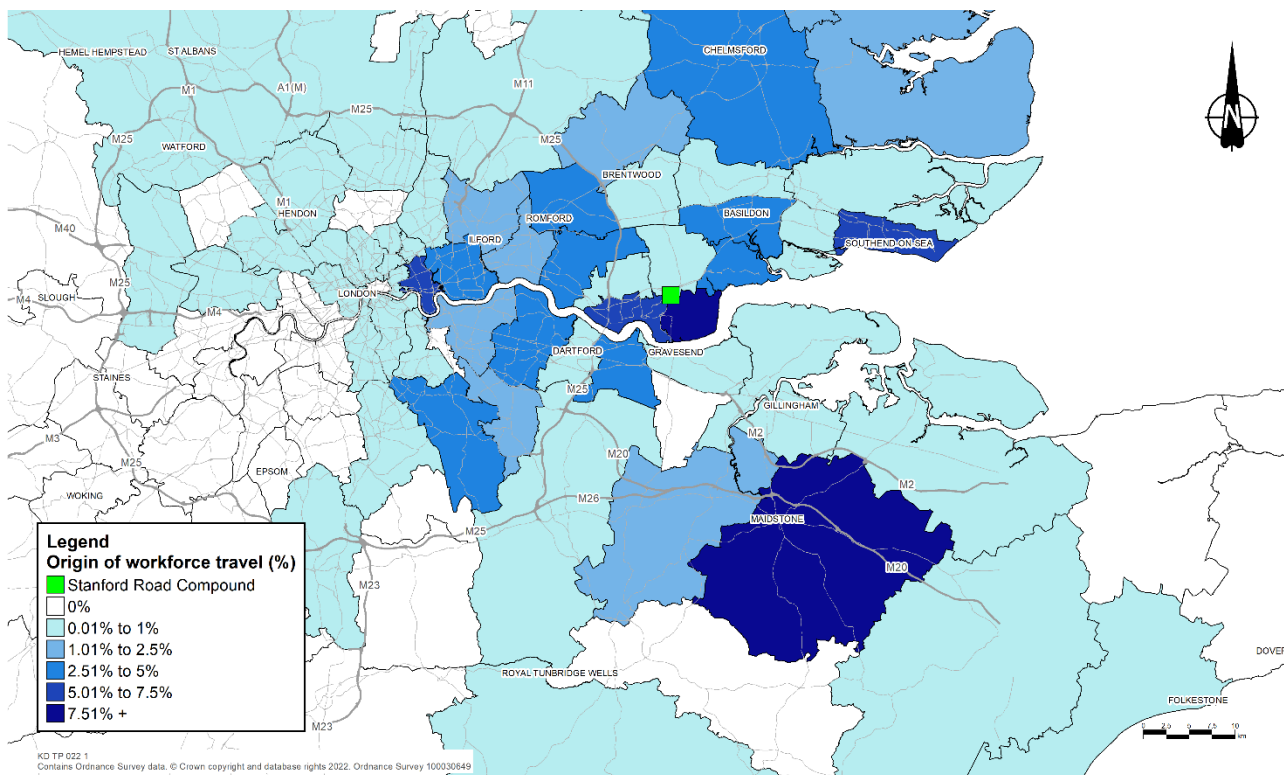


Plate 5.13 Long Lane A and B compound workforce origin locations

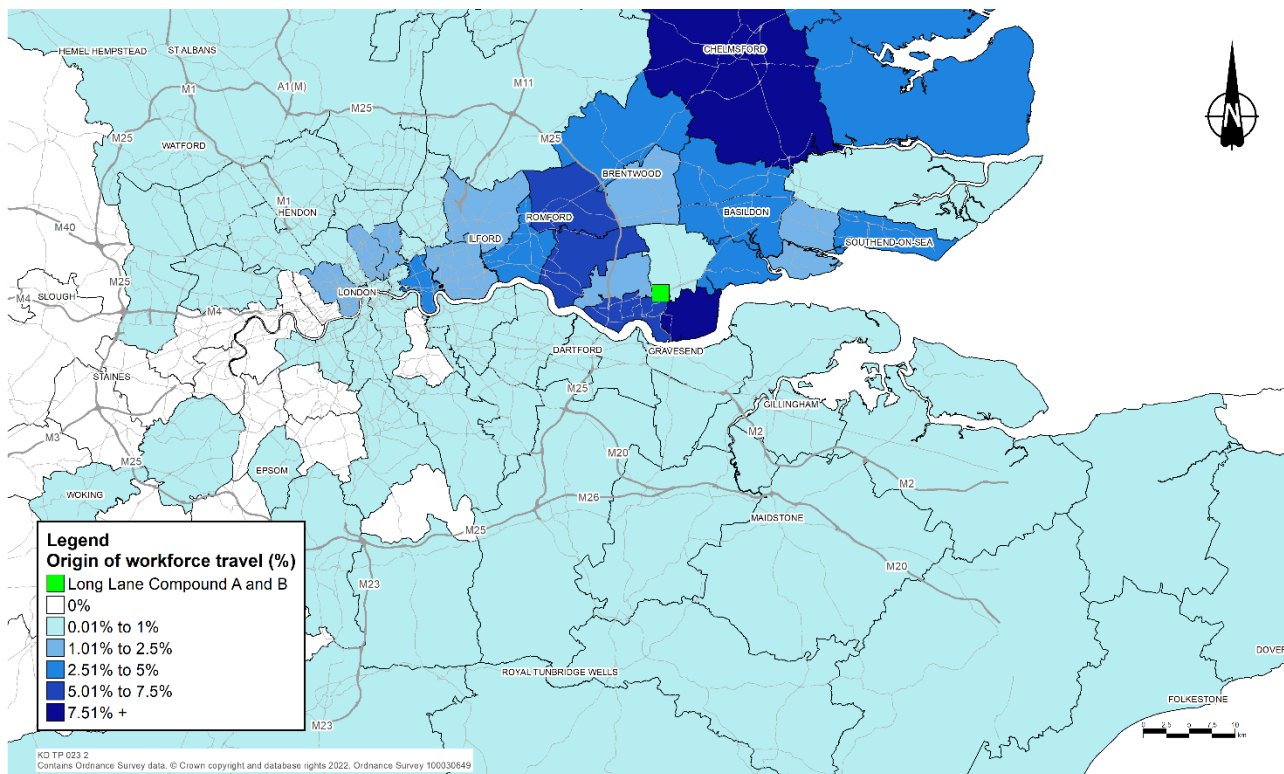


Plate 5.14 Stifford Clays Road West compound workforce origin locations

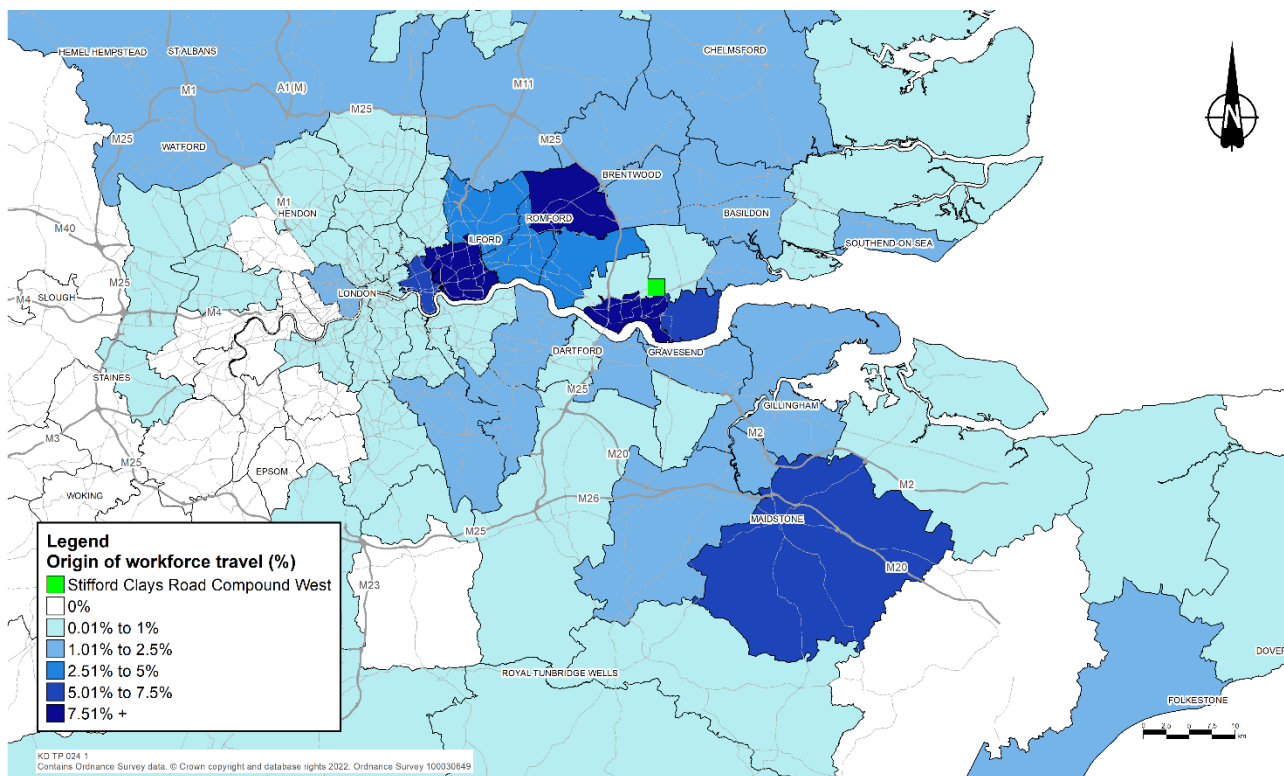


Plate 5.15 Stifford Clays Road East compound workforce origin locations

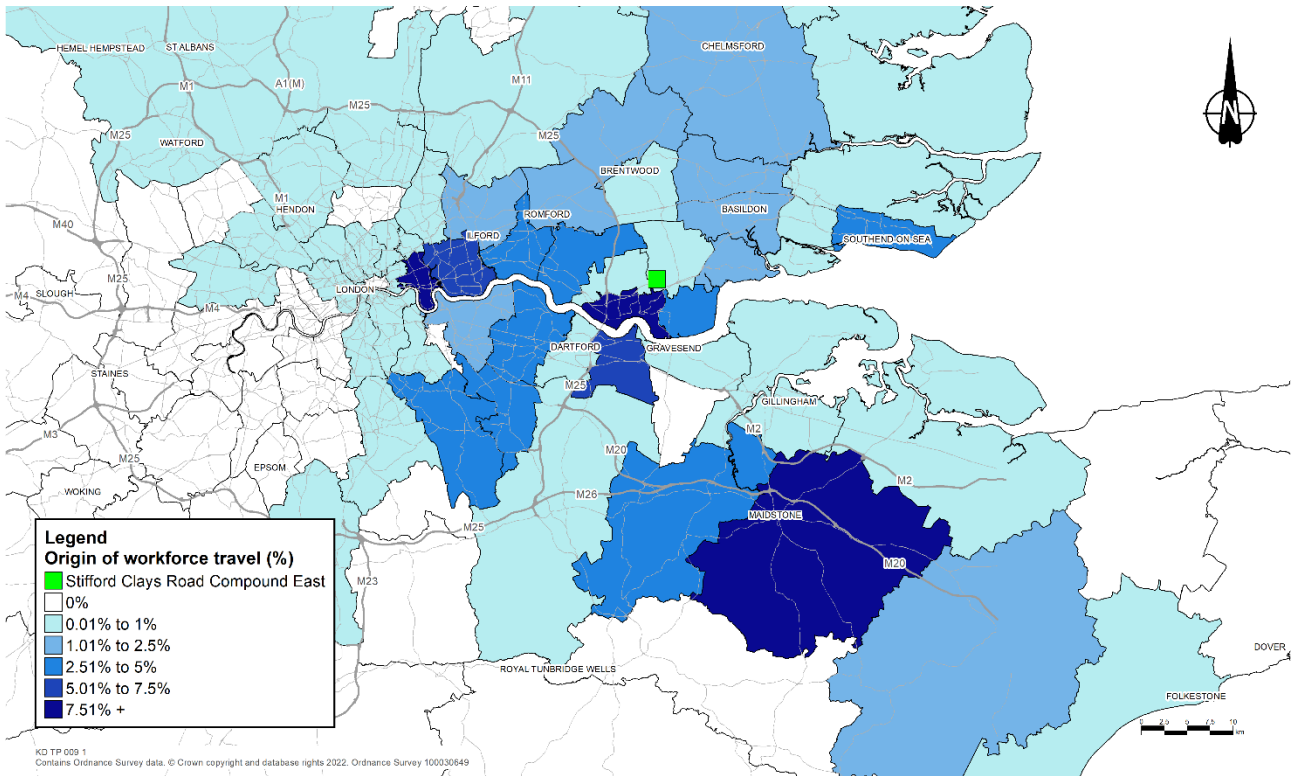


Plate 5.16 Mardyke compound workforce origin locations

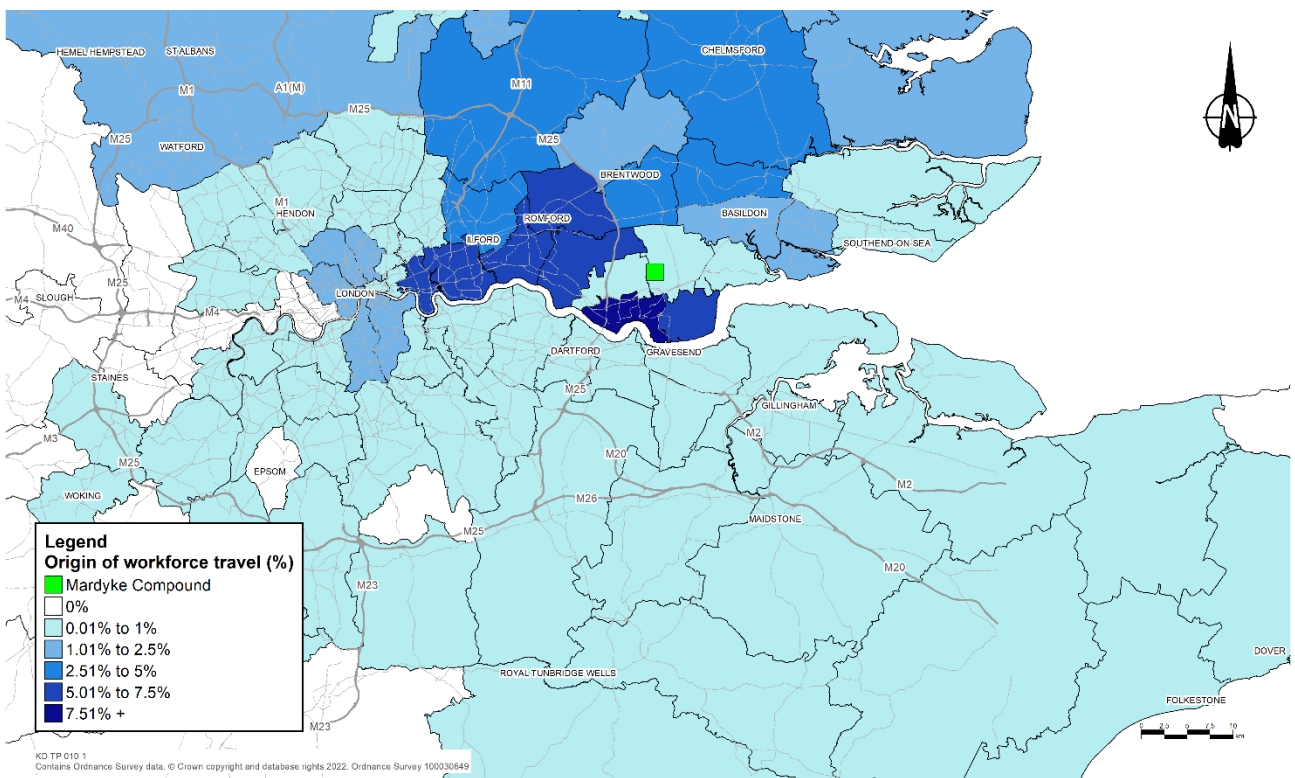


Plate 5.17 Medebridge compound workforce origin locations

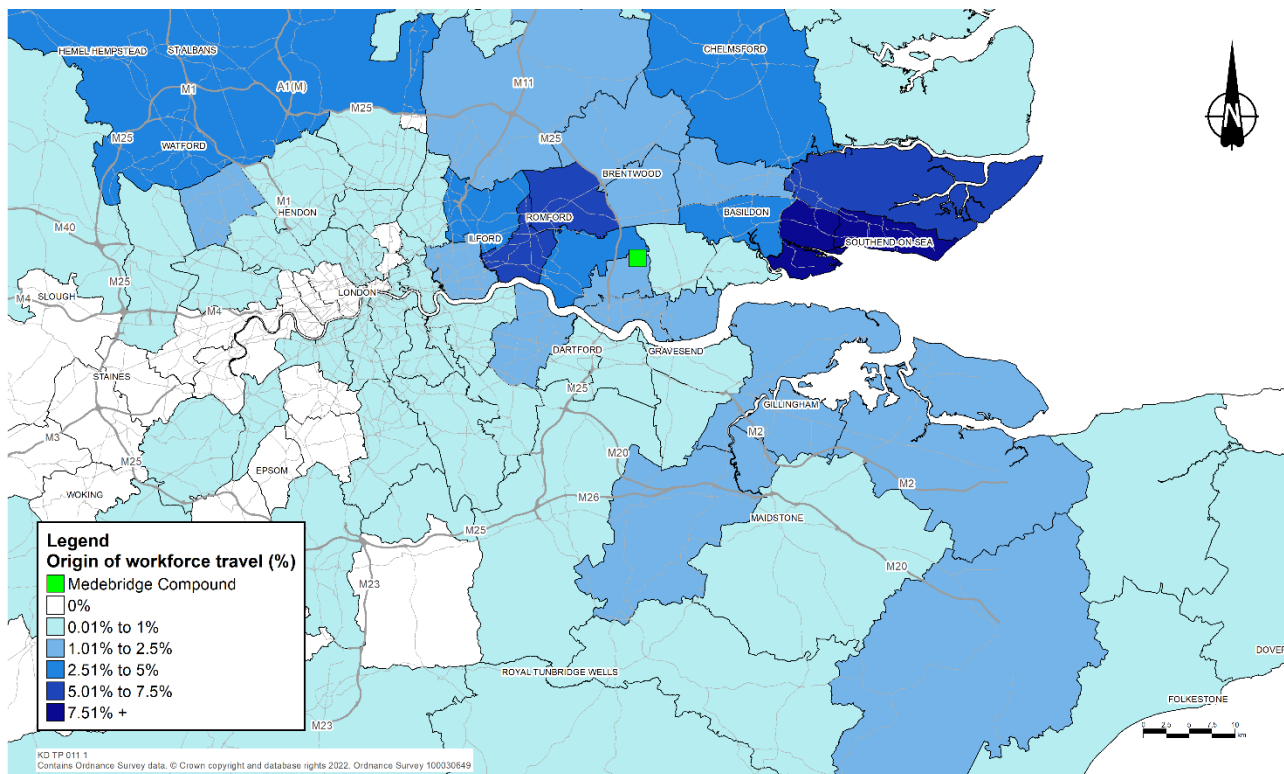


Plate 5.18 M25 compound workforce origin locations

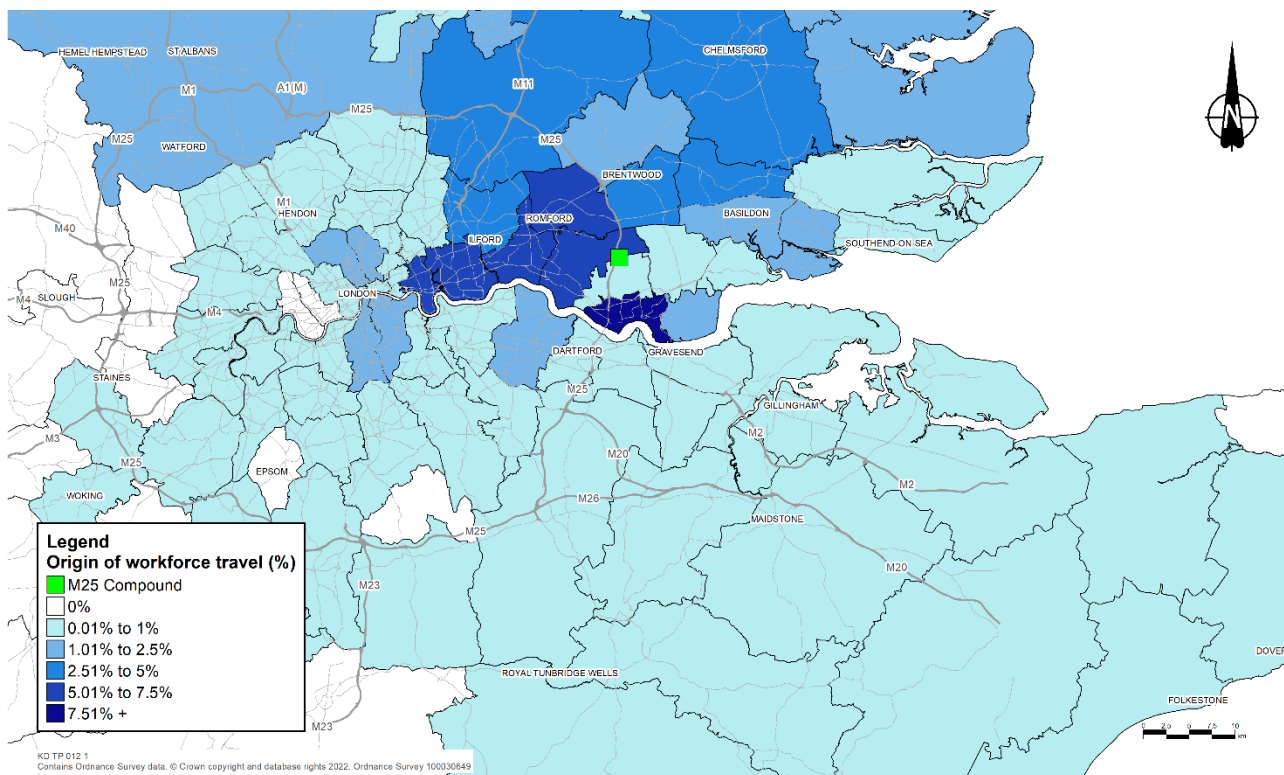


Plate 5.19 Ockendon Road compound workforce origin locations

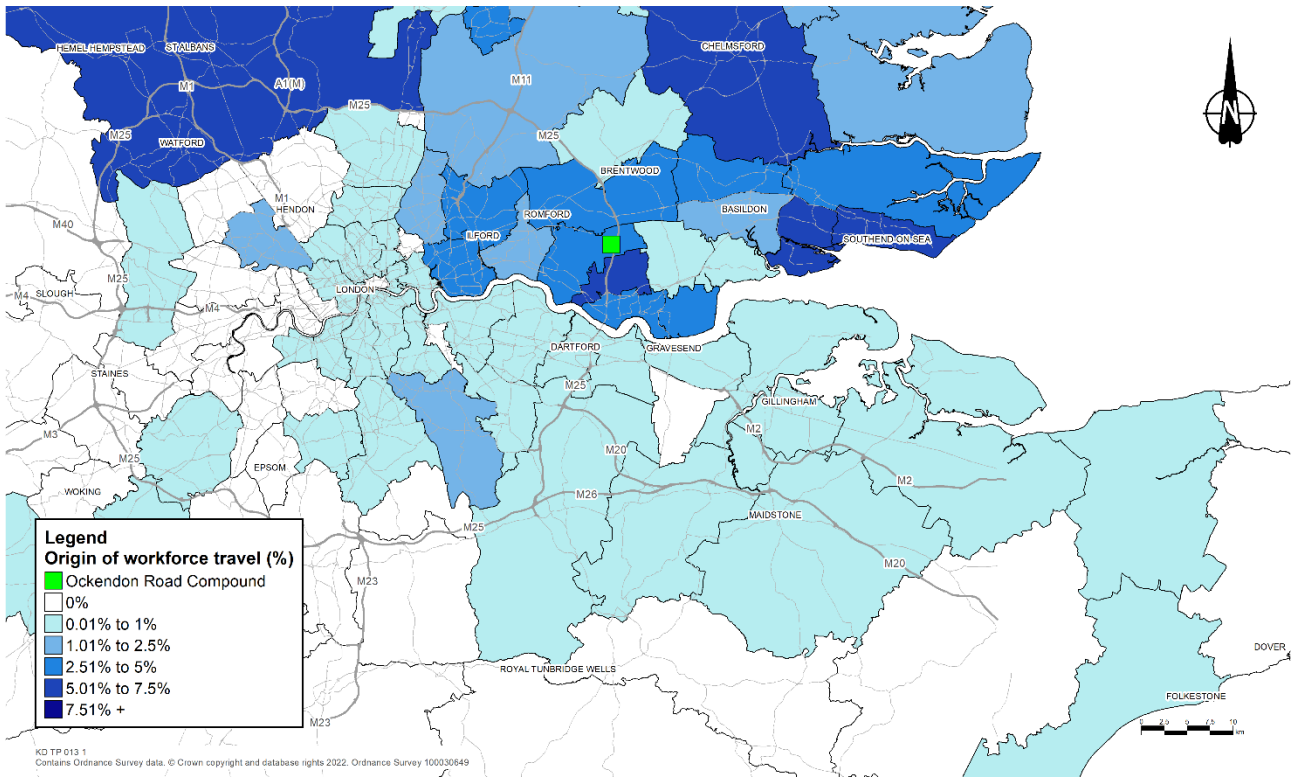
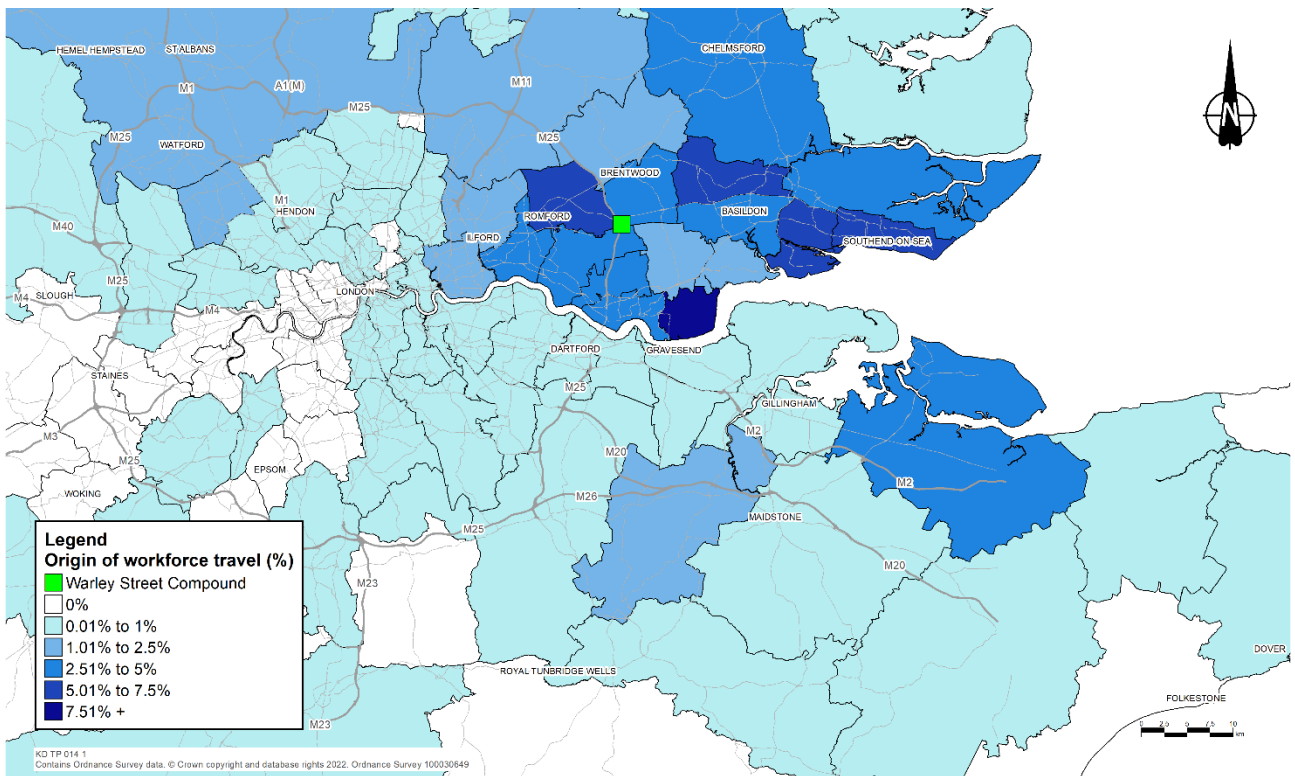


Plate 5.20 Warley Street compound workforce origin locations



- 5.4.19 For most compounds located north of the River Thames, the majority of trips are shown to be concentrated within the Grays sector boundary, with almost all of these locations expecting over 7.5% of all trips to originate in this area. Other noticeable areas include the London Borough of Havering, and Essex (in particular Basildon, Brentwood, Chelmsford, Billericay, Wickford, South Benfleet, Canvey Island, and Southend-on-Sea).
- 5.4.20 Whilst the majority of trips to these compounds originate from north of the River Thames, the maps show a number of cross river trips, with all but the Long Lane (A and B) compound showing trips originating from south of the River Thames, from locations across south London and Kent.
- 5.4.21 Plate 5.21 to Plate 5.26 present the information for all six ULHs, with all but one located north of the river Thames.

Plate 5.21 Park Pale Lane ULH workforce origin locations

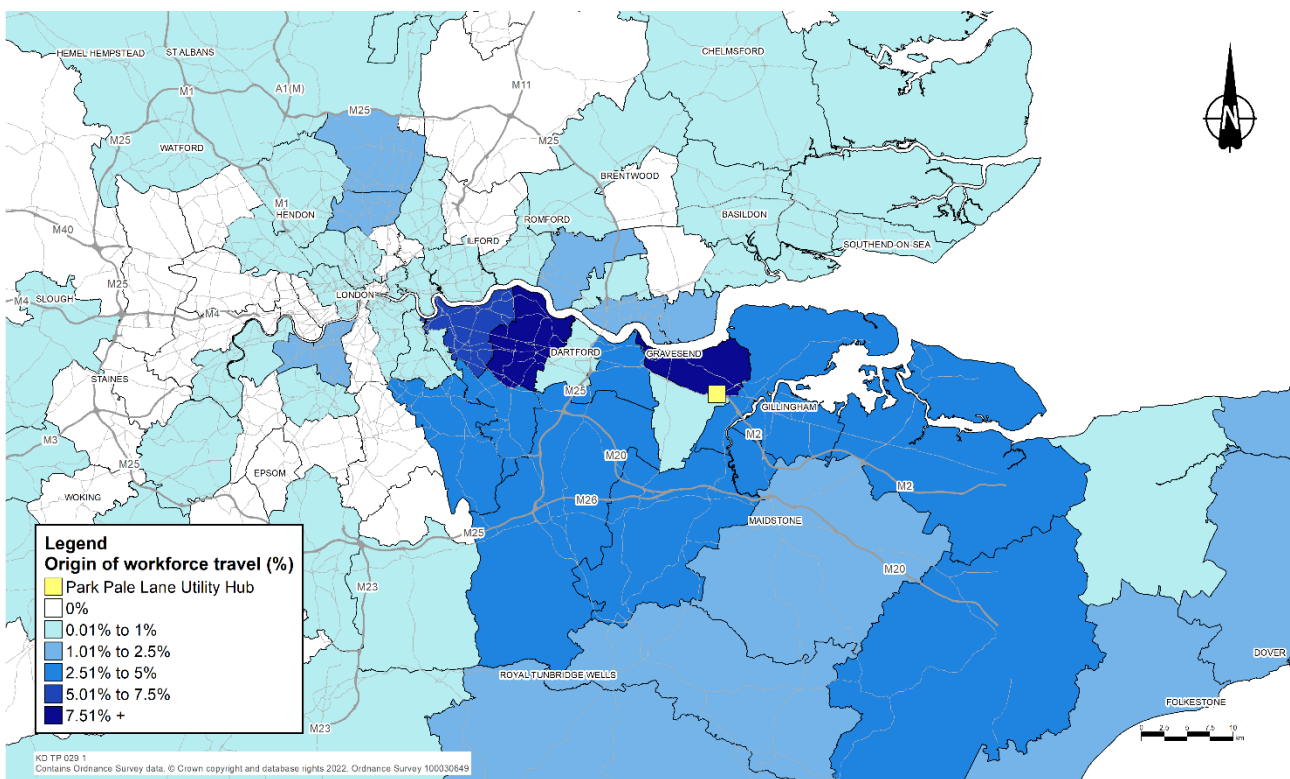


Plate 5.22 Low Street Lane ULH workforce origin locations

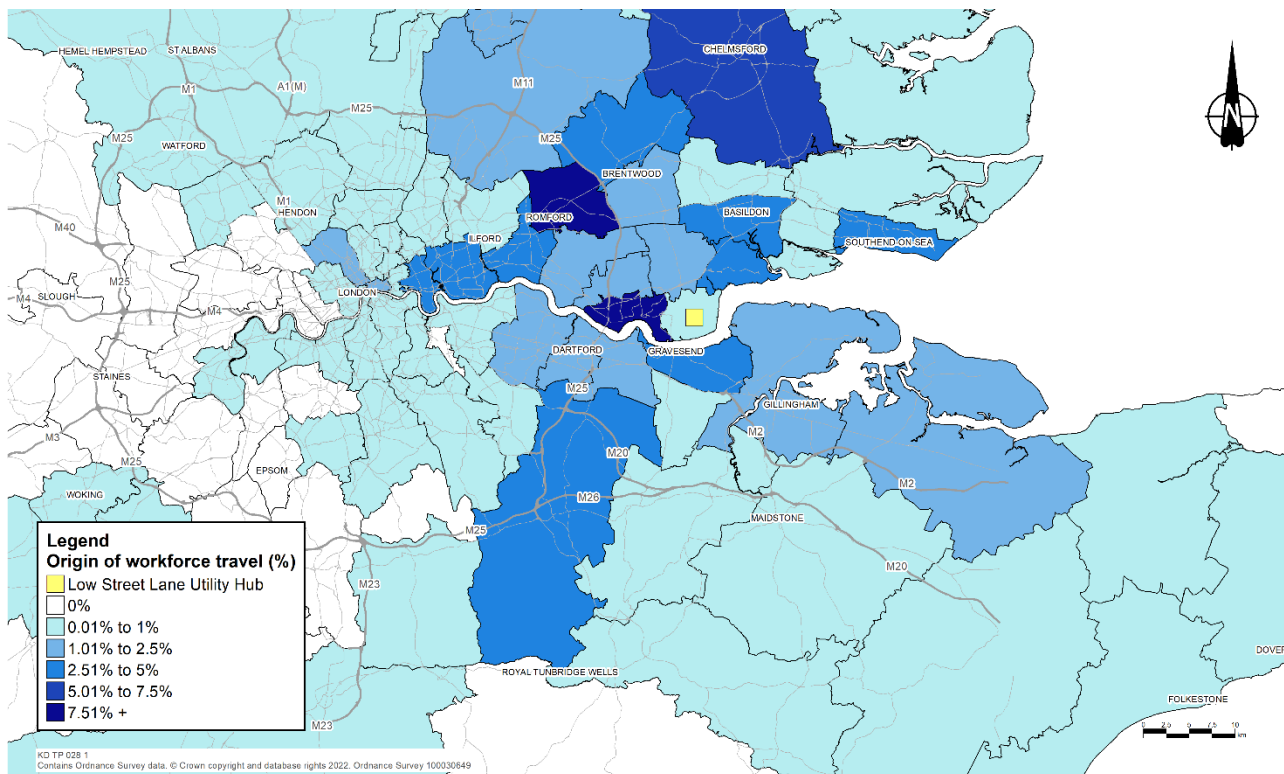


Plate 5.23 Muckingford Road ULH workforce origin locations

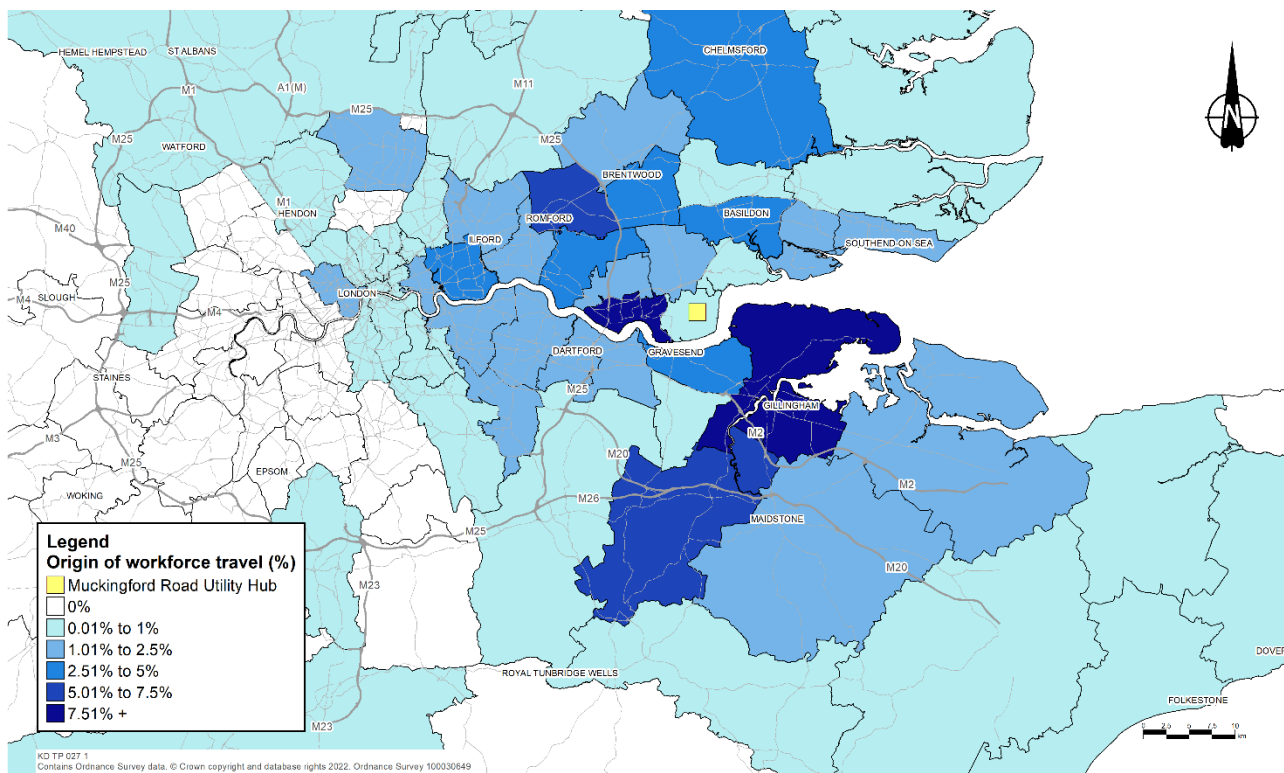


Plate 5.24 Stanford Road ULH workforce origin locations

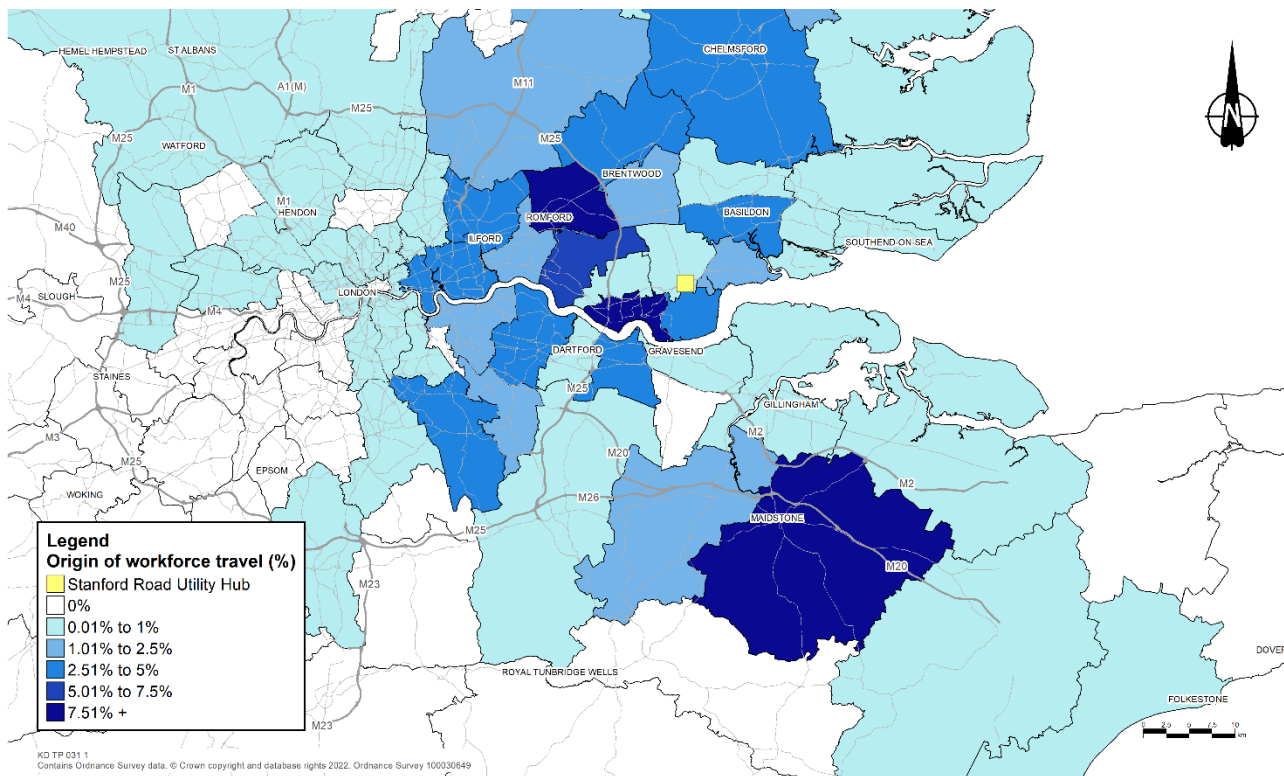


Plate 5.25 Folkes Lane ULH workforce origin locations

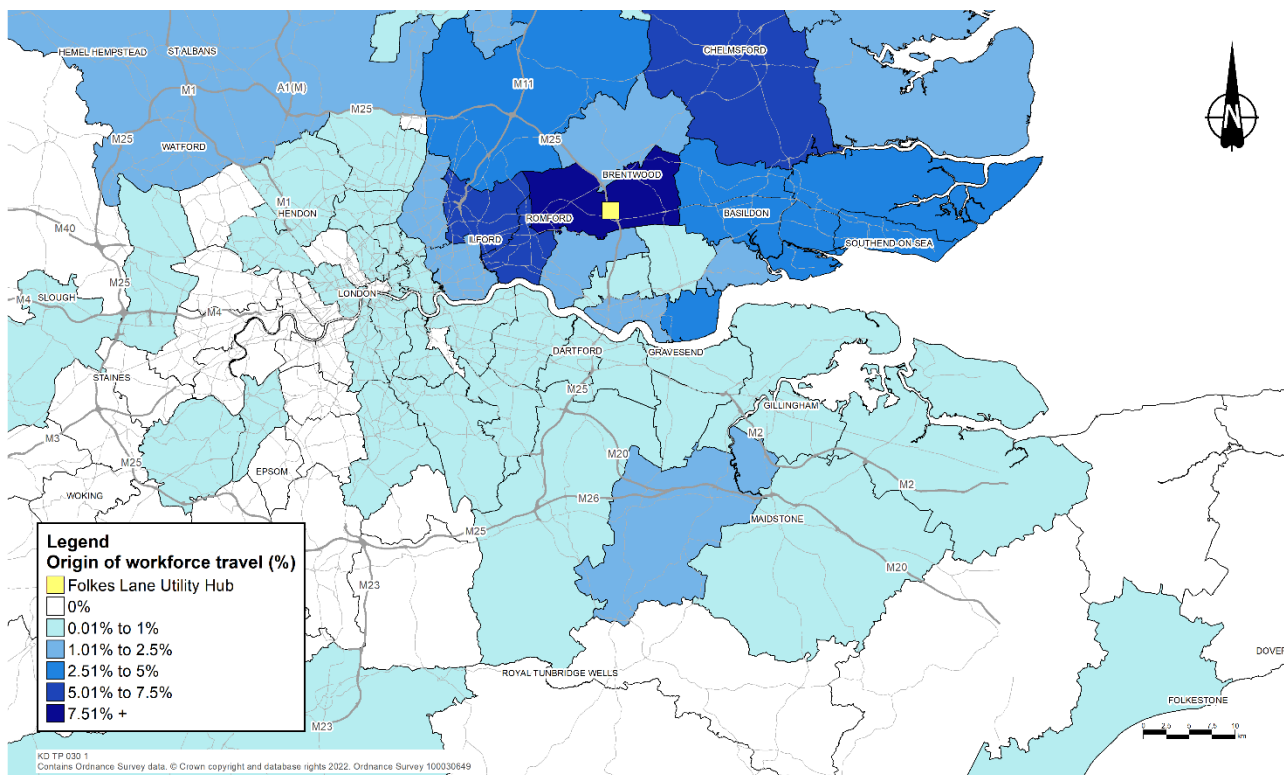
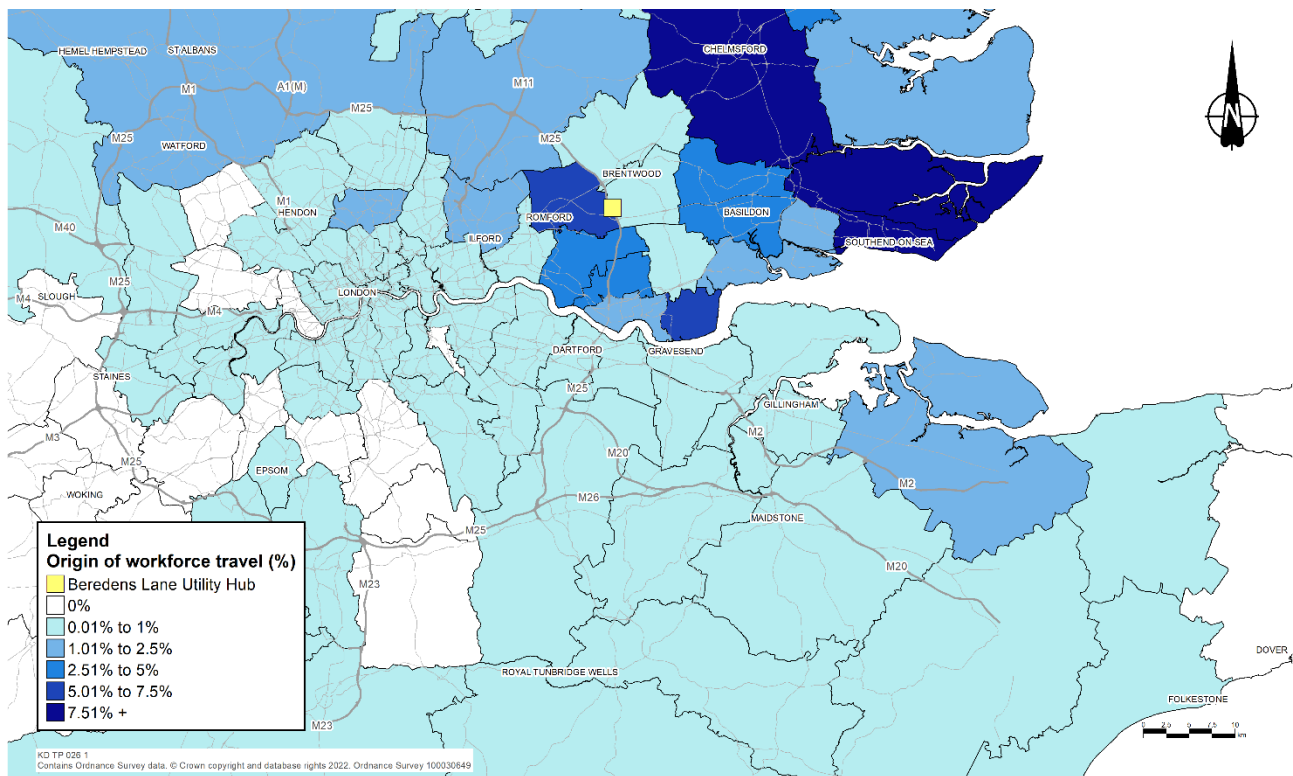


Plate 5.26 Beredens Lane ULH workforce origin locations



- 5.4.22 The travel patterns for the ULHs reflect a similar pattern shown for the compound locations, with each ULH experiencing high demand areas (7.5% of all trips originating from specific locations in the surrounding areas) as well as noticeable levels of cross river trips for ULHs located both north and south of the River Thames.
- 5.4.23 All of the maps also identify a low number of trips (up to 1%) that are expected to originate from a significant catchment area in the wider vicinity of the compound and ULH locations (as indicated by the lightest blue marker).

Inter-compound movements

- 5.4.24 The vast majority of the Project workforce would primarily travel to and from the compounds at the beginning and end of their working day. From these, the workforce would travel to the construction worksite where work was taking place.
- 5.4.25 As a result, for most of the workforce there would be little inter-compound movement.
- 5.4.26 However, for a limited number of personnel with roles that require visiting multiple compounds, some inter-compound movements would likely occur.
- 5.4.27 In initial phases, before the establishment of Project haul roads, this would happen via the local road network, but once established it is expected that the majority of these movements would use the haul roads.
- 5.4.28 In addition, the shuttle buses proposed to run from public transport hubs to the compounds (see Section 6.4 and Section 9.2 for more information) would also be available to reduce any impact on the road network.

5.5 Statutory Undertaker arrangements

- 5.5.1 This section provides a summary of the SU's ULH arrangements that would be required to deliver specific utility works. The workforce at the ULH would be specialist contractors that work on the utility networks on behalf of the SU's, undertaking work that would be required to facilitate the construction and operation of the Project.
- 5.5.2 Table 5.4 sets out the location and programme dates associated with each of the 15 sites across the construction, operation and de-mobilisation phases of work.

Table 5.4 ULH programme and phasing

Utility Logistic Hub	Location	Start	End	Duration (months)
Park Pale	West of Harlex Haulage, north of Park Pale	July 2025	September 2027	27
A2 East	West of Thong on the eastern side of the Project	October 2026	January 2028	16
A2 West	West of Thong Lane, north of Claylane Woods	January 2025	December 2026	24
Shorne Ifield Road	East of Thong Lane, north of Shorne Ifield Road	January 2025	December 2026	24
Low Street Lane	West of the Project, 950m south of Muckingford Road	January 2025	February 2026	14
Muckingford Road	East of the Project, 400m south of Muckingford Road	January 2025	February 2026	14
Brentwood Road	North of the Project, west of Brentwood Road	February 2025	February 2026	13
Hornsby Lane	South of the Project, 700m west of Brentwood Road	January 2025	September 2027	33
Long Lane	West of the Project, north of Long Lane	January 2025	September 2027	33
Stifford Clays Road	West of the Project, south of Stifford Clays Road	January 2025	September 2027	33
Stanford Road	North of Stanford Road, to the east side of the Orsett Cock junction	February 2025	April 2027	27
Green Lane	West of Green Lane, north of Stifford Clays Road	February 2025	April 2027	27
Medebridge	2km to the east of the B186 North Road	January 2025	September 2027	33
Folkes Lane	South-eastern side of M25 junction 29	April 2027	April 2028	13
Beredens Lane	1km north of M25 junction 29 (eastern side)	April 2027	April 2028	13

- 5.5.3 The proposed locations of the ULH are shown in Plate 5.1 to Plate 5.3, alongside the main construction works compound locations.
- 5.5.4 The access arrangements extend from the highway network, with a mixture of standalone sites and combined sites (where a number of ULH have been grouped together with a single access point). A number of the ULH would also have a shared access with the main works compounds. Those sites which do not share an access with a main works compounds are all assumed to have a 100% single occupancy car mode share.
- 5.5.5 Table 5.5 sets out the associated number of workers, and the number of two-way hourly car trips at each ULH which does not share an access with a main works compound. These numbers have been derived using the same methodology described for the compounds in Table 5.3 above. All other ULH locations not shown in Table 5.5, have been combined within the compound locations shown in Table 5.3 (as they would make use of the same access points).

Table 5.5 Forecast Utility Logistic Hub workforce numbers

Utility Logistic Hub	Number of workers	Number of two-way hourly car trips
Park Pale Lane	20	20
Low Street Lane	17	17
Muckingford Road	17	17
Stanford Road	60	60
Folkes Lane	10	10
Beredens Lane	29	29

6 Baseline networks

6.1 Introduction

6.1.1 This chapter provides a summary of the existing baseline conditions along the highway and walking, cycling and horse-riding (WCH) networks, in the vicinity of the Project. Details of the public transport network are also provided, in relation to the proposed ‘transport hubs’.

6.2 Highway network

- 6.2.1 Key routes on the highway network (situated in proximity to the Project’s construction sites) that are expected to be used for workforce travel include the:
- a. M25 (between junction 27 to the north of the River Thames and junction 2 to the south of the River Thames)
 - b. A127
 - c. A13
 - d. A1089
 - e. A282 Dartford Crossing
 - f. A2/M2
- 6.2.2 The M25 motorway is a dual four-lane carriageway from junction 27 to junction 30, before reaching the A282 Dartford Crossing. The A127 runs east-west from M25 junction 29 and is dual two-lane between M25 junction 29 and the junction with Progress Road in Eastwood. The A13 also runs east-west from M25 junction 30, with the carriageway predominantly dual three-lane between M25 junction 30 and the A128 junction. The section between the A128 and the A1014 has recently been widened from two lanes to three lanes (opened on 2 May 2022). The new three-lane section of the A13 joins with the 3-lane section west of the A128. This means there is now a continuous 3-lane road in both directions between the M25 and Stanford-le-Hope. An improvement scheme on the A13 at M25 junction 30 was completed in early 2017. The A1089 links the A13 and Tilbury Port, the majority is two-lane dual carriageway with the southern end a single carriageway. The A127, also known as the Southend Arterial Road, is a major road in Essex, England. It extends from the A12 in the west from Gallows Corner (London Borough of Havering) and crosses the M25 motorway at junction 29 – before passing Brentwood and continuing through southern Essex and into the Basildon district.
- 6.2.3 South of M25 junction 30 the route becomes the A282 Dartford Crossing, which provides four lanes for traffic in each direction across the River Thames between Dartford and West Thurrock. The four lanes northbound are provided in two tunnels, each with two lanes. The four lanes southbound are provided over the Queen Elizabeth II Bridge. There is a charge for using the Dartford Crossing which is collected remotely. South of the A282, the M25 motorway is dual four lanes to junction 2 with the A2. The A2 runs east-west from M25

junction 2 and is dual four-lanes from the A282 to M2 junction 1, except for a dual three-lane section through the Bean junction. The A2 meets the M2 at junction 1 between Gravesend and Strood, extending eastwards through Kent to junction 7 just east of Faversham. The M2 is a dual four-lane carriageway between junction 1 and junction 3, predominantly dual three-lane carriageway between junction 3 and junction 4, and dual two-lane carriageway between junction 4 and junction 7.

6.3 Walking, cycling and horse-riding network

- 6.3.1 There is an extensive walking, cycling and horse-riding network (situated in proximity to the Project's construction sites) that would be expected to be used for workforce travel.
- 6.3.2 There are pedestrian footways adjacent to many of the local roads in the proximity of the Project's construction sites. There are also roads without footpaths used by pedestrians. There is a network of advisory cycle routes and traffic-free routes, particularly around Thurrock, including two National Cycle Routes (NCR) and two Regional Cycle Routes.
- 6.3.3 In addition to the pedestrian facilities on the public roads, there are Public Rights of Way (PRoW) linking local communities.
- 6.3.4 Many of these existing PRoW have been severed by the construction of major roads, including the M25, A13, A2, as well as HS1, adjacent to the A2. There are also numerous bridleways in the vicinity of the Project construction sites.
- 6.3.5 Table 6.1 and Table 6.2 provide details of the existing cycleways, footpaths and bridleways within the vicinity of the Project's construction sites to the south and north of the River Thames respectively.

Table 6.1 WCH routes south of the River Thames

Facility	Route/ref.	Description
Cycleway	National Cycle Route 1	Runs along the disused Thames and Medway Canal, bordering a number of marshes near the River Thames. It connects Lower Higham and Gravesend, along the A2260 through Ebbsfleet to Bluewater.
	Regional Cycle Route 177	Runs parallel north of the A2 from the A2260 Northfleet into Strood, Rochester and crosses the A2 at Park Pale bridge. The route is mixed on-road and partially traffic-free along Watling Street. It is connected to National Cycle Route 1 (NCR1) at A2260 Northfleet.
	Jeskyns Community Woodland Network	Formed of a number of cycle tracks in close proximity, to the south of the A2, in the vicinity of Henhurst Road and Jeskyns Road
	NS195 Thong Lane	Thong Lane overbridge over the A2
	Gravesend Road (A226)	Accommodates an on-road cycle lane from Strood via Higham to Gravesend

Facility	Route/ref.	Description
Bridleway	NU48	Crosses the A2 at the Hog Lane overbridge, located to the west of Cyclopark. It connects to NU27 from Istead Rise to the Painters Ash housing estate via Downs Road/Northfleet Green Road.
	NS174	Originating from NG17 by the Gravesend East junction and finishing halfway up footpath NS167
	NS318	Originates at NG2 (the disused Thames and Medway Canal) and ends at NG1 by the Shornemead Fort
Footpath	NG22	Crosses the A2 east of Gravesend Central junction, via a footbridge from Roman Road to Wrotham Road
	NS183	Passes under the M2 at Albatross Avenue, connecting RR28 and NS183
	NS359	Crosses the A2 via a footbridge west of Gravesend East junction, connecting Church Road and Hever Court Road
	NS167	Route links Thong and the A2 via Thong Lane and Valley Drive
	NS170 and NS355	Both routes stem from NS167 north, joining onto Shorne Ifield Road
	NS169	Route connects FP NS167 and Riverview Park housing estate
	NG17	Originates from Valley Drive/Franklin Road, passes through a small group of houses just off the Gravesend East junction and ends when it joins the footpath along the A2
	NS367	Originates from Henhurst Road and looks to have been previously connected to NG17, but has been severed by the A2 construction
	NS177	Route is located south of the A2 connecting Cobham and Henhurst Road, just south of the Gravesend East junction of the A2
	NS177A	Joins NS177 to Henhurst Road, but further south of where NS177 meets Henhurst Road
	NS311 and NS195	Originating from Cobham, they merge within Ashenbank Wood and use the Thong Lane bridge to cross the A2
	NS178	Originates in Cobham, travels through Ashenbank Wood and joins the roundabout connecting Halfpence Lane, Darnley Lodge Lane and Brewers Road
	NS179	Originates at Halfpence Lane in Cobham, travels north to the A2 then runs parallel to the A2 before joining Park Pale. NS179, NS180, NS161 all converge at this point.
	NS180	Originates at Lodge Lane in Cobham, travelling through Rochester & Cobham Park Golf Club and joins NS179 and NS161 at Park Pale
	NS161	Originates at Knights Place Farm Equestrian Centre, travels through Rochester and Cobham Park Golf Club and then joins the roundabout connecting Halfpence Lane, Thong Lane and Brewers Road. It looks to have been connected to NS161 north of the A2, heading towards Shorne Ridgeway, before the A2 was constructed.
NS183	Passes under the M2 at Albatross Avenue and joins onto RR28	

Facility	Route/ref.	Description
	NS1563	Route links NS182; via Knights Place Farm Equestrian Centre and crossing over a rail track, to a service road connecting to an A2 slip road heading westbound
	NG8, NG9, NG7, NS165, NS164, NS163 and NS163A	Collection of footpaths that form part of a network of PRow that cross fields between Shorne and Gravesend. NG7 goes across several fields from Thong Lane/A226 Gravesend Road to Shorne at Crown Lane. NG8 goes across the Southern Valley Golf Club from Riverview Park and ends at the A226 Gravesend Road.
	NG3 and NG4	Run parallel to one another in a north to south direction, starting at Lower Higham Road and finishing at the Thames and Medway Canal
	NG1	Runs right along the edge of the River Thames from Cliffe to Gravesend
	NG2	Runs parallel to the north of the disused Thames and Medway Canal

Table 6.2 WCH routes north of the River Thames

Facility	Route/ref.	Description
Cycleway	National Cycle Route 13	The eastern section connects Tilbury town via the A1089 at Tilbury docks, with East Tilbury at Coalhouse Fort. This route is also partly footpath (FP146). The western section connects Wouldham Road to the Tilbury Power Station site. National Cycle Route 13 is in development and will connect Tower Bridge in London with Fakenham in Norwich.
	Regional Cycle Route 137	An entirely traffic-free path that follows the route of the Mardyke River from the south of Aveley to North Stifford. The route starts just off Ship Lane and passes under the M25 and the A13. It travels through Davy Down Riverside Park before finishing at the B186 just outside North Stifford. Here the route connects to local cycle routes that continue on into Chafford Hundred and skirt the Grays Chalk Quarry Nature Reserve
	Stifford Road	Route in the vicinity of M25 providing a connection to NCR137 and the Mar Dyke Bridleway
	Route from NCR137	Route from B186 Pilgrims Lane, B186 Burghley Road, B186 Fenner Road to the junction of the A126 and Lakeside Shopping Centre. The route crosses under the A13.
	London Road	Located south of Lakeside, parallel to A282, along the A1306 Arterial Road West Thurrock, A1306 Arterial Road North Stifford, Lodge Lane, A1013 Stanford Road to Stanford-le-Hope, where it meets London Road. The cycle route has connections from Lodge Lane along Hogg Lane to Grays Chalk Quarry Nature Reserve and also Hathaway Road to Little Thurrock.
	Little Thurrock and Horndon-on-the-Hill	Connects Little Thurrock and Horndon-on-the-Hill, via Blackshots Lane and Stifford Clays Road, passing under the A13, through Orsett. The route splits north and south at Rectory Road providing a link to the on-road cycle lane on the A1013 Stanford Road. The route also provides a wider loop between Little Thurrock and

Facility	Route/ref.	Description
		Horndon-on-the-Hill, via Stanford-le-Hope, connecting via the A1013 Stanford Road cycle route.
	A1089	Route linking Ferry Road, Dock Road, across the A1089 Asda roundabout, adjacent to A1089, A126 Marshfoot Road, passing over the A1089, connecting into Tilbury via A126 St Chad's Road, Chadwell Hill. There is also a connection between B149 Chadwell By-Pass along Wood View Road and Chadwell Road, linking Chadwell St Mary and Little Thurrock, crossing over the A1089.
Bridleway	BR187	Runs along the edge of the River Thames from Coalhouse Fort NCR146
	BR161	Green Lane bridleway and farm track
	BR58	Route (also referred to as Coal Road) begins at the point where Station Road meets Love Lane, then crosses over the rail line; via a level crossing, crosses Low Street Lane, joins onto BR66 and ties into Muckingford Road
	BR63	Connects to BR58 and provides access onto Muckingford Road
	BR233	Connects the A1013 and Long Lane, passing through a travellers' site
	BR206 and BR94	Route links a private track owned by the Foxhounds Riding School and Baker Street (B188) running parallel to the edge of the A13
	Heath Road	An unknown bridleway starts at Heath Road, runs parallel to the edge of the A1089 and connects to a footpath
	Orsett Heath	Unknown bridleway connects Orsett Heath Crescent (Orsett) and King Edward Drive (Little Thurrock), via a footbridge over the A1089
Footpath	FP193 & 98	Connect Tilbury Fort with Fort Road
	FP144	Connects Fort Road and Brunel Close, running along the edge of the Port of Tilbury vehicle handling centre
	FP200	Originates at Coalhouse Fort, travels through the East Tilbury Marshes and connects into Station Road
	FP68	Route links Gun Hill and Church Road
	FP72	Route links Biggin Lane and Turnpike Lane
	FP71, FP69 and FP70	A small network of footpaths that occupy a field between Turnpike Lane and Blue Anchor Lane
	FP74	Routes links Turnpike Lane and Linford Road
	FP66	Route link Blue Anchor Lane and Muckingford Road, crossing over BR58 (Coal Road)
	FP61	Route originates at Princess Margaret Road and connects to Low Street Lane and BR58 (Coal Road) at the point where they intersect
	FP60	Connects FP61 and Muckingford Road
	FP65 and FP64	Both link High House Lane to Hoford Road at different points. FP65 to the south and FP64 to the north
	FP75	Route links Linford Road to Cole Avenue (housing estate)

Facility	Route/ref.	Description
	FP78	Originates at High House Lane, crosses Brentwood Road and joins onto FP79 at the most northern point of Chadwell St Mary
	FP79	Originates in northern Chadwell St Mary, crosses FP78 and joins the A1013 at Rectory Road bridge
	FP95	Originates at the end of FP78 and ends at the start of FP107
	FP108	Route links Heath Road and an unknown footpath (Orsett Heath Crescent; Orsett, and King Edward Drive; Little Thurrock), via a footbridge over the A1089
	FP107	Originates at the end of FP95 and ties into Hornsby Lane
	FP43, FP45, FP46, FP106 and FP105	These paths connect to one another to create a route from Buckingham Hill Road, around the edge of Orsett Golf Centre, to the A1013 where the Rectory Road bridge is located.
	FP105	Links the A1013 at Rectory Road bridge to Brentwood Road
	FP97	Originates at Long Lane, heading in a north direction but has no final destination, ending where it is intersected by the A13
	FP104	Connects the A13 Brentwood junction to Rectory Road as it enters Orsett
	FP93	Route links Mill Lane to Rectory Road at the point where it crosses the A13
	FP82	Route starts at School Lane but has no final destination, ending where it is intersected by the A13
	FP96	Connects Mill Lane and Baker Street (B188)
	FP207	Originates at Baker Street (B188) but ends where the A13 link road onto the A1089 intersects it

6.3.6 The OTMPfC (Application Document 7.14) sets out the details of the management of PRow, with respect to their short-term closure and/or diversion. This would be carried out following engagement with the relevant local authority in accordance with the terms of the DCO. The expected footfall, likely usage, and length and suitability of an alternative route would determine whether a temporary diversion would be required and what route it would follow. The DCO contains a provision which requires National Highways to provide reasonable access for pedestrians going to or from premises abutting a street or private means of access affected by the temporary closure, alteration, diversion or restriction of a street or private means of access under this article if there would otherwise be no such access.

6.3.7 Details of diversions and/or closures of PRow would be detailed within the relevant SSTP(s) and communicated to the workforce via noticeboard/intranet.

6.4 Public transport network at transport hubs

6.4.1 Transport hubs (offering a point of interchange between different transport modes) located on both sides of the River Thames have been identified as important locations to provide onward transport (in the form of a shuttle bus service) for those within the Project workforce who are unable to (or choose not to) drive to and from the construction worksites, compounds and ULHs.

- 6.4.2 These hubs would provide an interchange point between the existing public network services, and the shuttle bus service. The proposed hub locations have been selected given the range of public transport provision available, as well as surrounding urban areas which would provide opportunities for walking and cycling to them. The hubs are:
- a. Gravesend (Bus, HS1, National Rail)
 - b. Grays (Bus, National Rail)
 - c. Pitsea (Bus, National Rail)
 - d. Upminster (Bus, National Rail, London Underground, London Overground)
- 6.4.3 The hub locations would be refined by the Contractors in producing the SSTPs. Locations, and the specific details of their operation (such as set down and pick up locations (including additional locations outside of the hubs, compounds and ULHs, e.g., the Tilbury passenger ferry terminal), routes, hours of operation and frequency) would be agreed with the relevant local highway authority(s) and/or public transport operator(s) and would follow their relevant approval processes.
- 6.4.4 Where suitable, Contractors would be encouraged to consider the use of Demand Responsive Transport (DRT) services, to and from the transport hubs.
- 6.4.5 The following sections set out the existing public transport connectivity at each of the proposed hub locations.

Rail network

- 6.4.6 The frequency, described as trains per hour (tph), of rail services at the proposed hub locations are detailed in Table 6.3. These are correct as of 15 July 2022.

Table 6.3 Frequency of rail services

Hub	Route	Frequency
Gravesend	Southeastern Highspeed	2tph Highspeed to London St Pancras 2tph Highspeed to Faversham 1tph extended to Margate and Ramsgate
	Southeastern Charing Cross – Gravesend	2tph London Charing Cross via Sidcup
	Thameslink Luton – Rainham (Kent)	2tph Luton 2tph Rainham (Kent)
Grays	C2C London – Tilbury –Southend	4tph London Fenchurch Street: 2tph via Rainham (Essex) 2tph via Ockendon 2tph Southend Central
Pitsea	C2C London – Shoeburyness (via Grays or via Upminster)	4tph London Fenchurch Street: 2tph via Grays 4tph via Upminster
Upminster	London Underground District Line	6tph to Richmond 6tph to Ealing Broadway
	London Overground Romford – Upminster	2tph to Romford
	C2C London – Tilbury – Southend/Shoeburyness	4tph London Fenchurch Street 4tph Southend Central (2tph via Ockendon) 2tph Shoeburyness via Basildon

Bus and coach networks

6.4.8 The frequency of existing public bus and coach services for the proposed hub locations is detailed in Table 6.4. These are correct as of July 2022.

Table 6.4 Frequency of bus and coach services

Hub	Route	Frequency (Mon – Fri)
Gravesend	190 Chatham Waterfront Bus Station – Gravesend Station (via Chatham and Rochester Stations)	20 minutes (08:00 – 16:00) (30 minutes before 08:00 and after 16:00)
	306 Bluewater Bus Station – Gravesend – Borough Green – Sevenoaks (via Swanscombe, Northfleet Arriva Depot, Gravesend and Borough Green Stations)	Five evening services (hourly between 19:00 – 23:00)
	308 Sevenoaks Bus Station – Gravesend Station (via Sevenoaks and Borough Green Stations)	Nine services per day (07:00 – 19:00)
	480 (Sapphire) Riverview Park Cascades Leisure Centre – Dartford	30 minutes (06:00 – 19:00)

Hub	Route	Frequency (Mon – Fri)
	(via Gravesend, Northfleet Arriva Depot and Bluewater Bus Stations)	
	481 Riverview Park Cascades Leisure Centre – Bluewater Bus Station (via Gravesend and Ebbsfleet International Stations)	35 minutes (06:00 – 19:00) (60 from 19:00)
	483 Gravesend – Bluewater Bus Station (via Gravesend and Ebbsfleet International Stations)	30 minutes (07:00 – 19:00) (60 minutes from 19:00)
	489 Gravesend – New Ash Green (via Gravesend and Longfield Railway Stations)	Eight services per day (07:00 – 18:00)
	490 (Sapphire) Singlewell – Dartford (via Gravesend and Bluewater Bus Station)	20 – 25 minutes (07:00 – 19:00) (30 minutes from 19:00)
	Fastrack B, Gravesend Station – Temple Hill (via Ebbsfleet International, Greenhithe and Bluewater Bus Stations)	10 – 15 minutes (07:00 – 19:00)
	Fastrack AZ, Dartford – Amazon LCY3 – Greenhithe – Swanscombe – Ebbsfleet – Gravesend Station	Three AM peak hour services and three PM peak hour services
Grays	22 Aveley – Grays Bus Station (via Lakeside and West Thurrock)	20 minutes (08:00 – 17:30)
	33 Chafford Hundred Station – Grays Bus Station	30 minutes (06:00 – 19:00)
	44 Lakeside – Grays Bus Station (via Purfleet and West Thurrock)	30 minutes (07:00 – 19:00) (60 minutes before 08:00 and after 17:00)
	66 Grays Bus Station – Tilbury (via Tilbury Asda and Civic Square)	30 minutes (07:00 – 18:30)
	73 Lakeside – Tilbury (via Grays Bus Station and Chadwell St Mary)	30 minutes (08:00 – 18:30) 60 minutes before 08:00
	77 Aveley – Tilbury (via South Ockendon, Lakeside, Grays Bus Station and Chadwell)	Seven early AM services (04:00 – 08:00) and two PM peak hour services
	77A Aveley – Tilbury (via South Ockendon, Lakeside, Grays Bus Station and Chadwell)	30 minutes (evening only from 19:00 – 23:00)
	83 Lakeside – Chadwell St Mary (via Grays Bus Station and Socketts Heath)	30 minutes (06:00 – 18:00)
	88/88A/88C Stifford Clays – Grays Bus Station	30 – 60 minutes (06:30 – 19:00)
	100 Lakeside Bus Station - Grays Bus Station - Stanford Le Hope	20 minutes (05:00 – 19:00)

Hub	Route	Frequency (Mon – Fri)
	Railway Station – Basildon Town Centre Bus Station	30 minutes after 19:00
	200 Grays Bus Station – Stanford Le Hope Railway Station – Basildon Town Centre Bus Station	60 minutes (07:00 – 19:00)
	265 Grays – West Horndon Station	One service Mon, Wed, Fri only
	269 Grays Bus Station – Brentwood (via Ockendon and Brentwood Stations)	Four to five services per day (07:00 – 17:00)
	374 Grays Bus Station – Basildon Bus Station (via Stanford-le-Hope Station)	Eight services per day (07:00 – 18:00)
	Z1 Tilbury (Amazon) – Aveley (via Tilbury Station, Grays and Lakeside Bus Stations)	Two AM peak hour services and two PM peak hour services
Pitsea	1 Pitsea Tesco – Basildon Town Centre Bus Station	Six services per day (09:00 – 15:00)
	B3 Pitsea Tesco – Basildon Town Centre	10 – 20 minutes (05:30 – 19:00) 30 minutes after 19:00
	B4 Pitsea Tesco – Basildon Town Centre Bus Station	20 minutes (07:00 – 19:00) (30 minutes before 07:00 and after 19:00)
	B5 Pitsea Broadway – Basildon Town Centre Bus Station	20 minutes (07:00 – 19:00) (30 minutes before 07:00 and after 19:00)
	21 Basildon Hospital – North Benfleet	60 minutes (07:00 – 17:00)
	22 Basildon Bus Station – Canvey Island	20 – 30 minutes
	28 Basildon Bus Station – Southend	20 minutes (07:00 – 18:00), 30 minutes from 18:00
	Z4 Tilbury (Amazon) – Pitsea	Two early AM services and two PM peak hour services
Upminster	248 Romford Market – Cranham (via Romford, Upminster Bridge and Upminster Stations)	6 – 10 minutes (07:00 – 19:00) (15 – 30 minutes before 07:00 and after 19:00)
	346 Upminster Station – Cranham	15 minutes (08:00 – 18:00) (30 minutes before 08:00 and after 18:00)
	347 Romford Station – Ockendon Station (via Harold Wood and Upminster Stations)	Four services per day
	370 Romford – Lakeside Bus Station (via Romford, Emerson Park, Upminster Bridge and Upminster Stations)	15 minutes (06:00 – 20:00)

River network

- 6.4.9 A regular ferry service operated by Jetstream Tours runs from Monday to Saturday between Tilbury riverside and Gravesend. Tilbury sailings are to and from the Tilbury Riverside pontoon, off Ferry Road, Tilbury. On the Gravesend side, sailings are to and from the Town Pier.
- 6.4.10 Crossings take between five and 10 minutes depending on river traffic and run from both sides approximately every 30 to 60 minutes between 05:40 and 19:10 (correct as of 15 July 2022).
- 6.4.11 In addition, there are aspirations to run scheduled Uber boat by Thames Clippers services from the Town Pier in Gravesend into central London.

Impacts of construction on public transport

- 6.4.12 The OTMPfC (Application Document 7.14) sets out details of how impacts arising from Project construction activities on public transport services during the construction period would be managed. This would take place alongside discussions with stakeholders, including public transport users, operators and local highway authorities.
- 6.4.13 The OTMPfC sets out that the Project would take the following considerations and objectives into account:
- a. Maintain existing routes (as far as reasonably practicable)
 - b. Provide temporary diversions, temporary bus stops when and where required
 - c. Seek the view of local highway authorities when designing diversion routes and temporary bus stops
 - d. Reduce impact on the rail network and schedule
 - e. Engage with rail companies on proposed works and programme to reduce impacts

Hub accessibility

- 6.4.14 Plate 6.1 to Plate 6.3 illustrate an indicative catchment area for travelling to each of the proposed hub locations by train or underground for the AM peak period (between 07:00–09:00) within a maximum 90 minute travel time for that leg and method of travel. For the Gravesend hub, south of the River Thames, the one-hour travel time catchment extends to St Albans in Hertfordshire to the north-west, Maidstone to the south and Whitstable to the east, both in Kent.
- 6.4.15 The hubs north of the River Thames (Grays, Pitsea and Upminster) show a similar indicative catchment area extending out to central London to the west, and Southend-on-Sea to the east. Upminster and Gravesend also extend north of London into areas of Hertfordshire. The hub south of the river (Gravesend) also extends to the far east of Kent up to the coastline of Margate. As indicated by the green markers, there is also a considerable catchment area within a maximum of 30 minutes' travel time by rail (for that leg and method of travel). For the hubs north of the river this includes a number of locations in east

London, Thurrock and Essex, while for Gravesend, this also includes a number of locations within east London and also to the west of Kent.

Plate 6.1 Rail accessibility to Gravesend transport hub

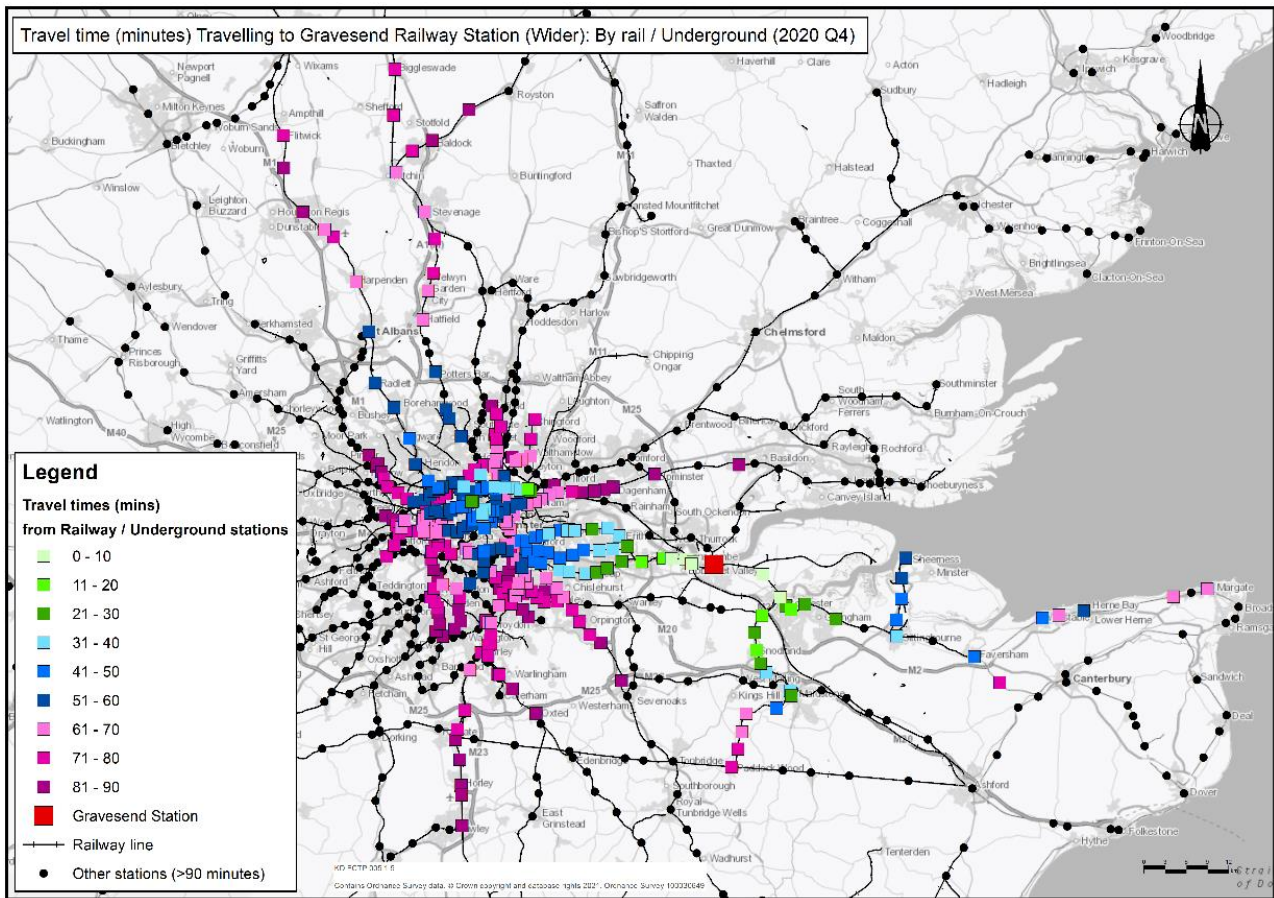


Plate 6.2 Rail accessibility to Grays transport hub

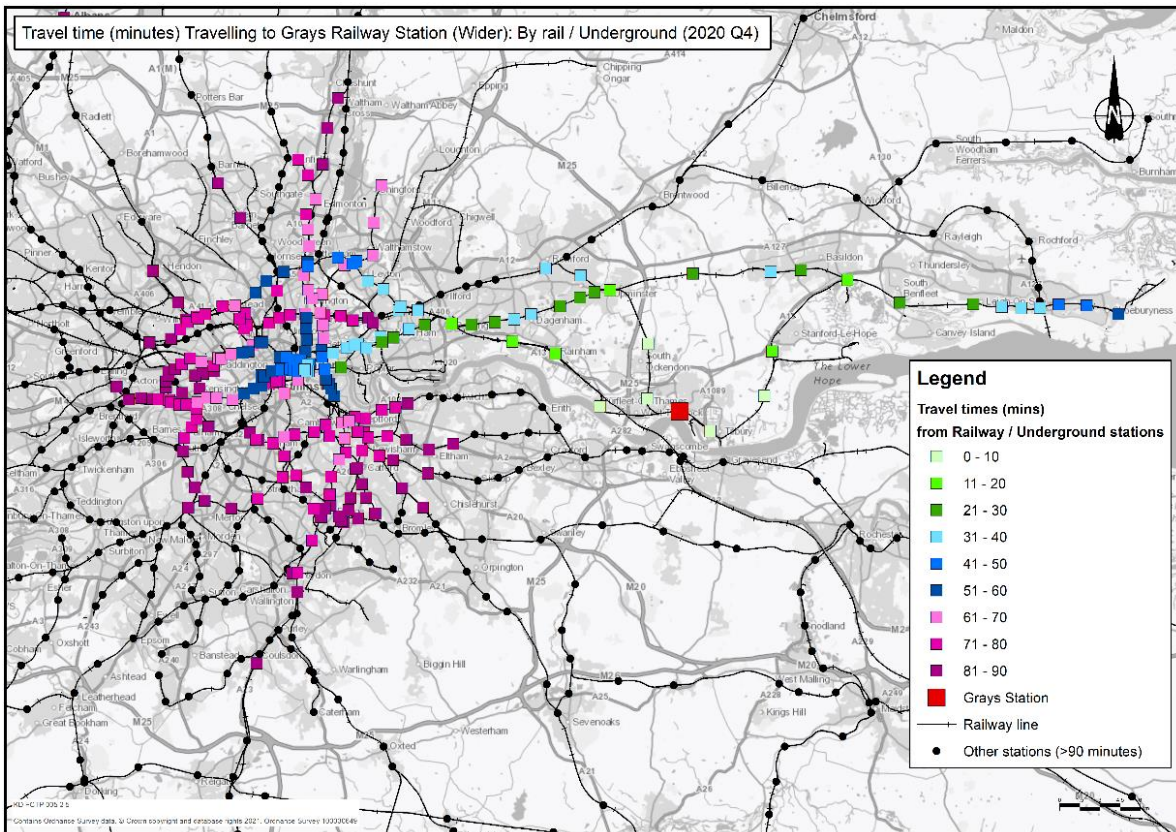


Plate 6.3 Rail accessibility to Upminster transport hub

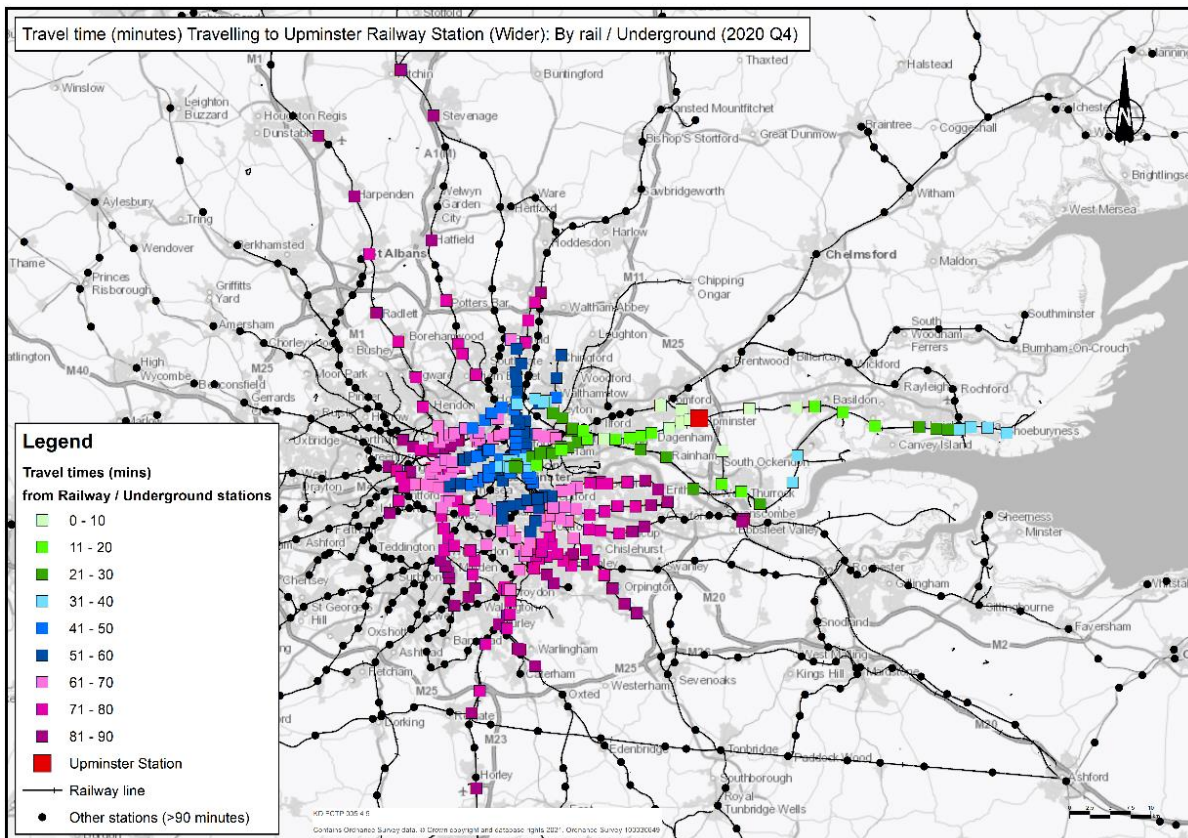
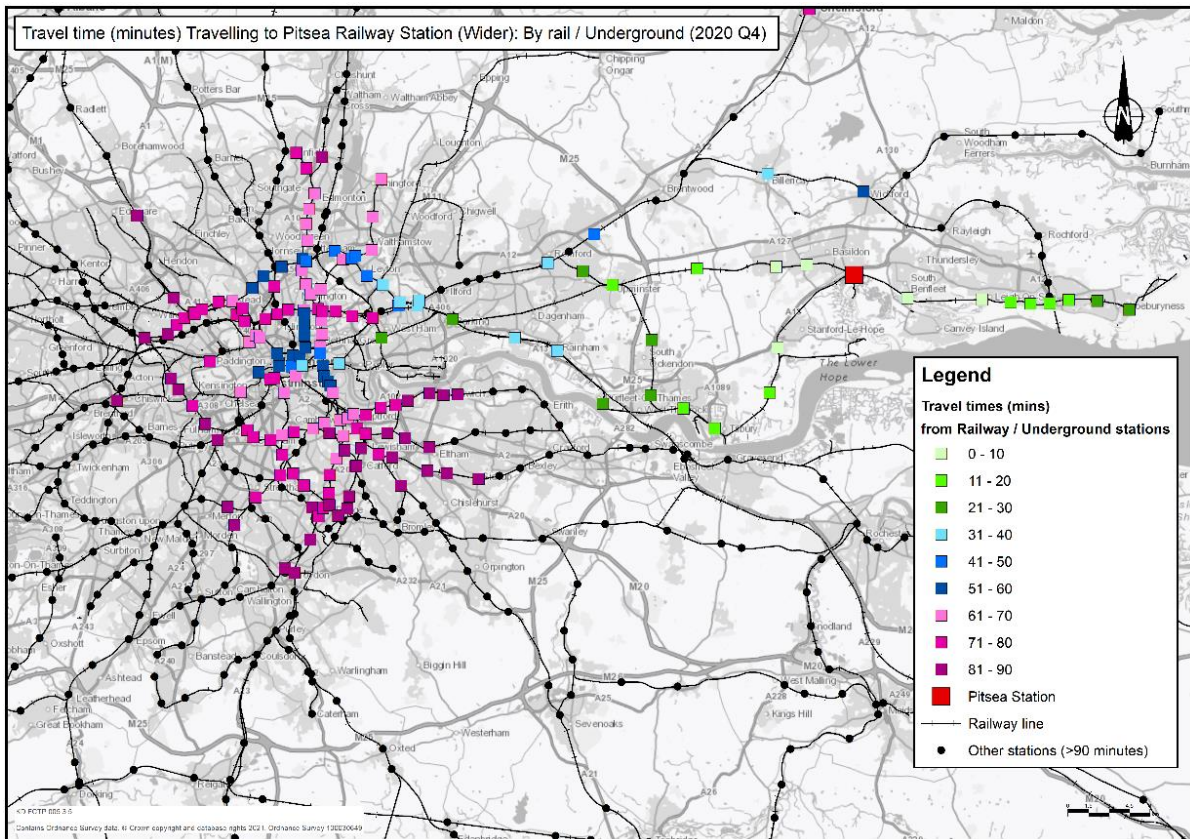


Plate 6.4 Rail accessibility to Pitsea transport hub



6.4.16 Plate 6.5 to Plate 6.12 illustrate the walking and cycling routes in proximity to all four proposed hub locations, and the travel time associated with these modes of travel for trips up to 30 minutes for that leg and method of travel. For walking, this appears to capture a distance of approximately 2km from each of the hubs while for cycling this extends to a distance of approximately 5-7km comprising a number of towns and suburban areas situated in the wider vicinity of the hub locations.

Plate 6.5 Walking times to Gravesend transport hub

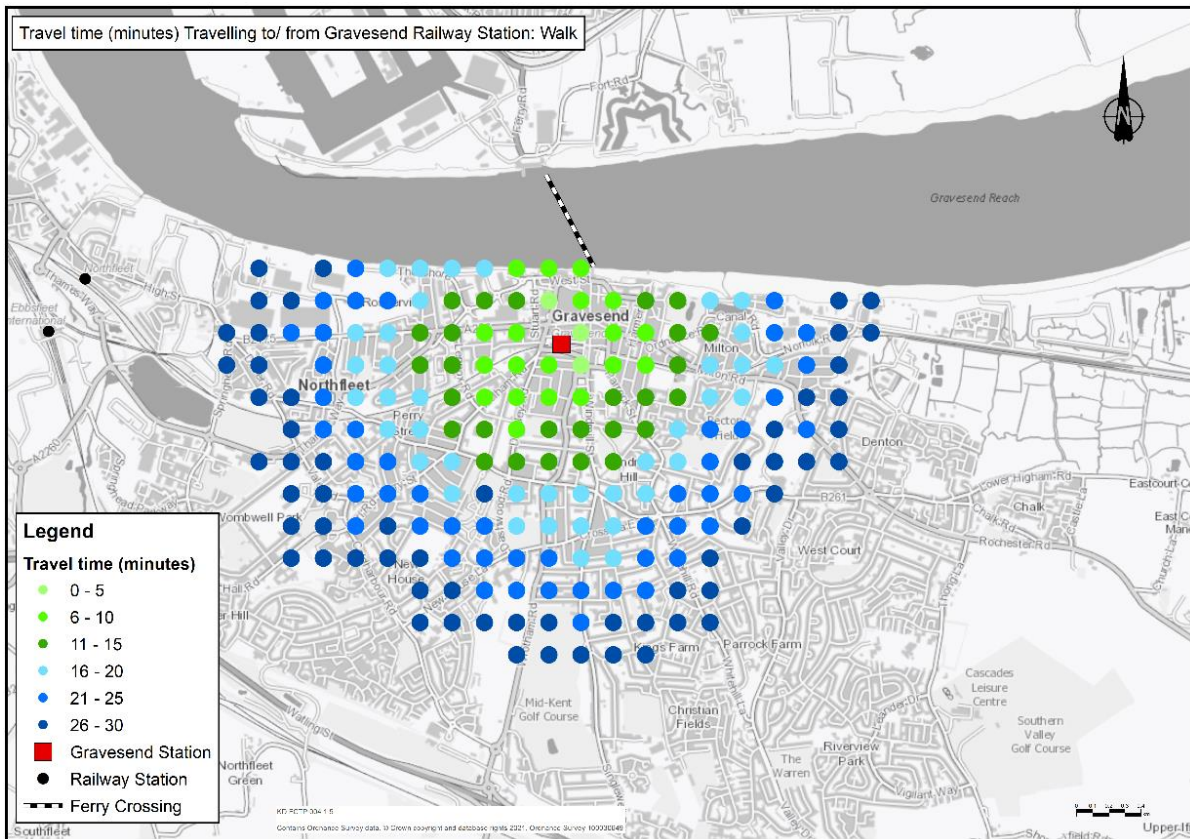


Plate 6.6 Walking times to Grays transport hub

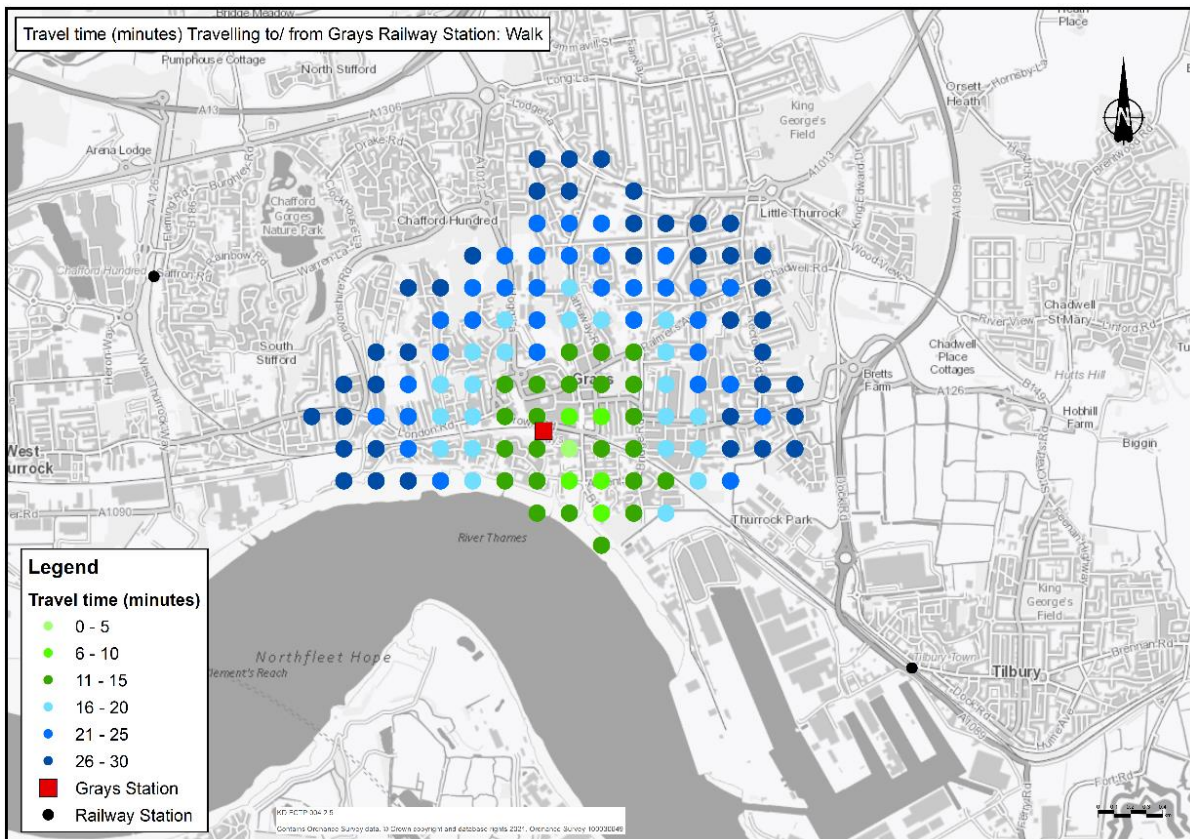


Plate 6.7 Walking times to Upminster transport hub

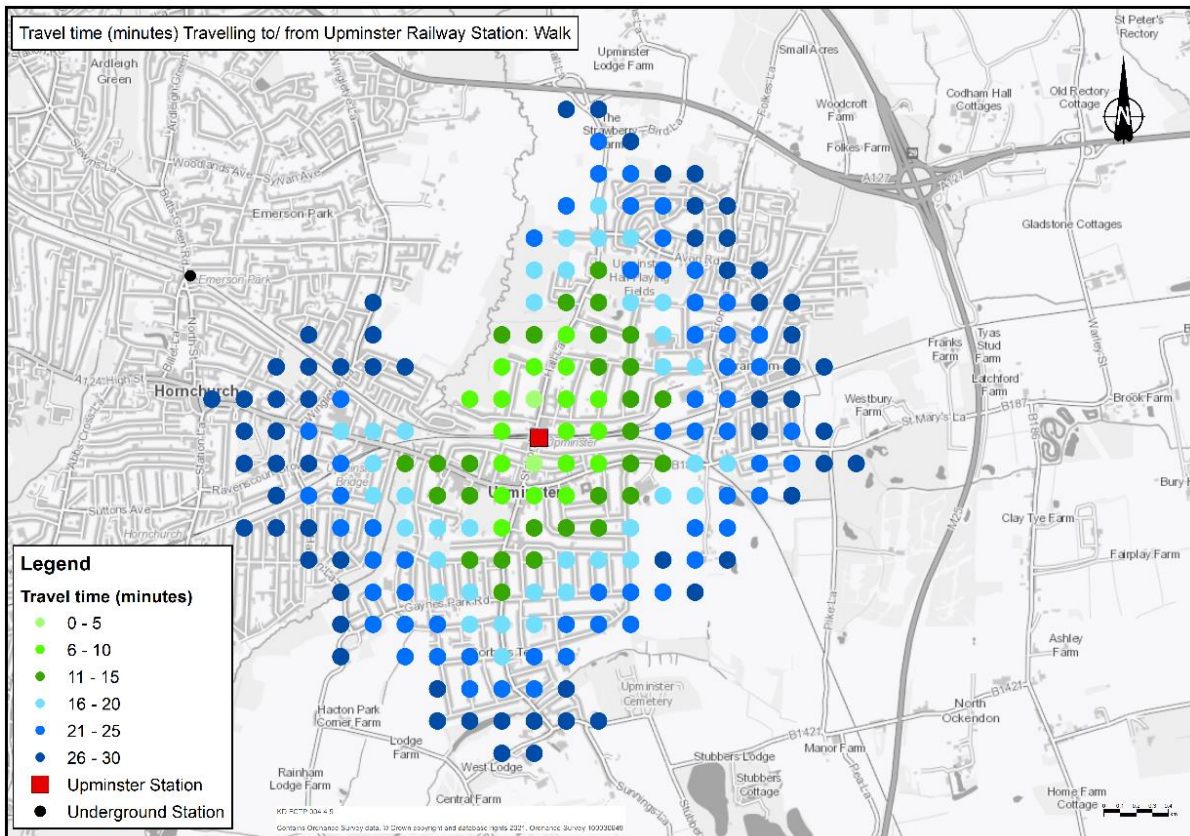


Plate 6.8 Walking times to Pitsea transport hub

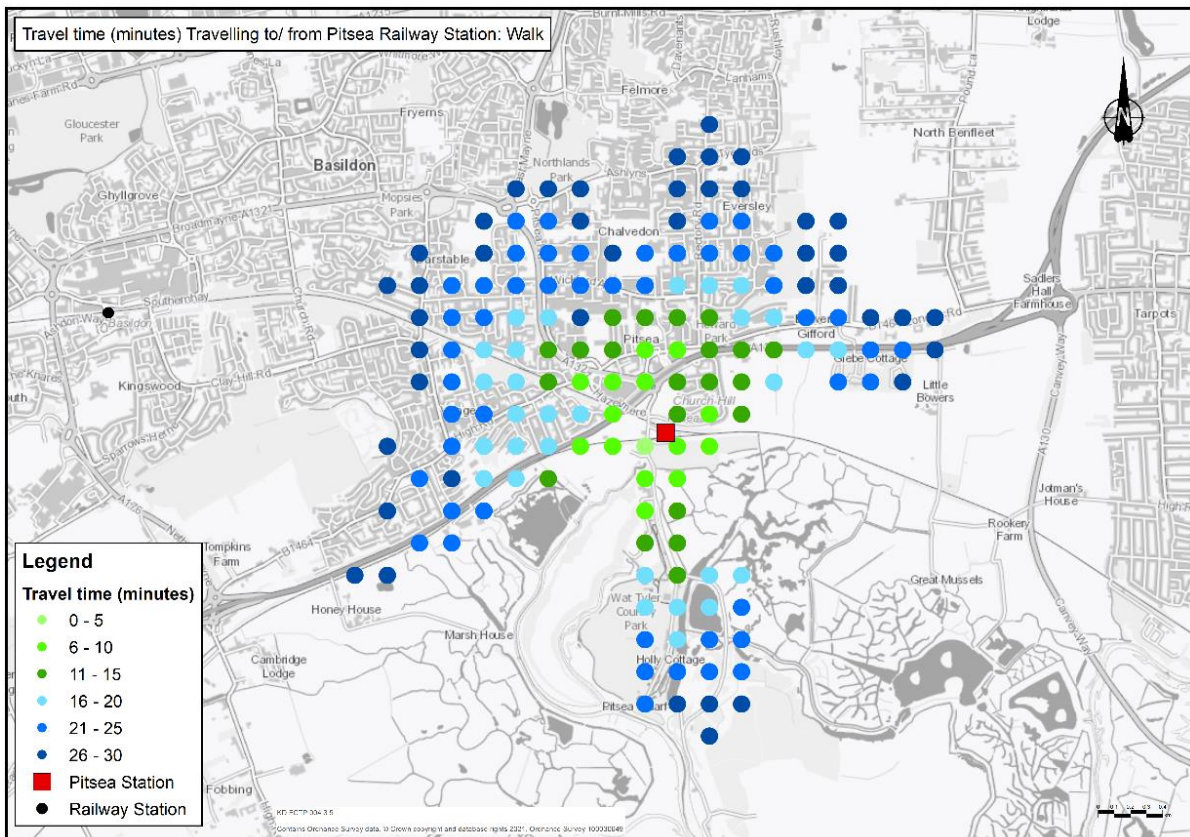


Plate 6.9 Cycle times to Gravesend transport hub

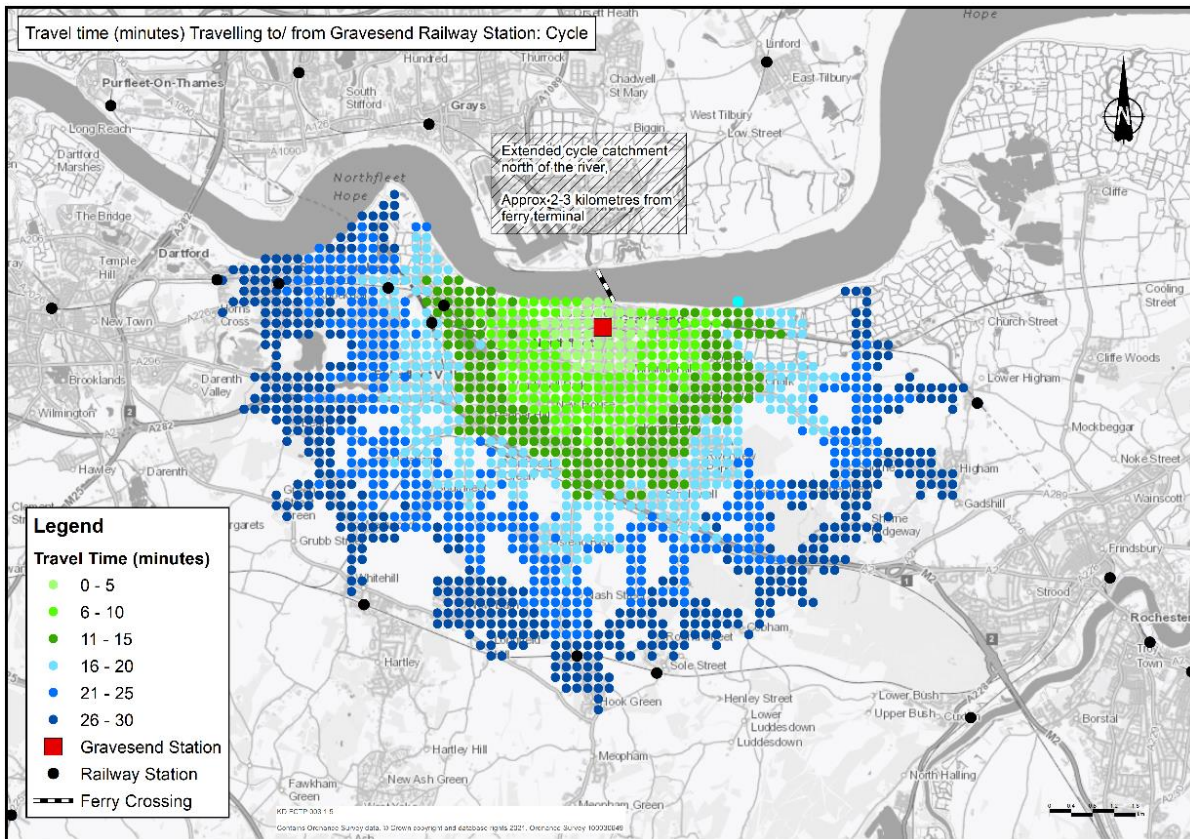


Plate 6.10 Cycle times to Grays transport hub

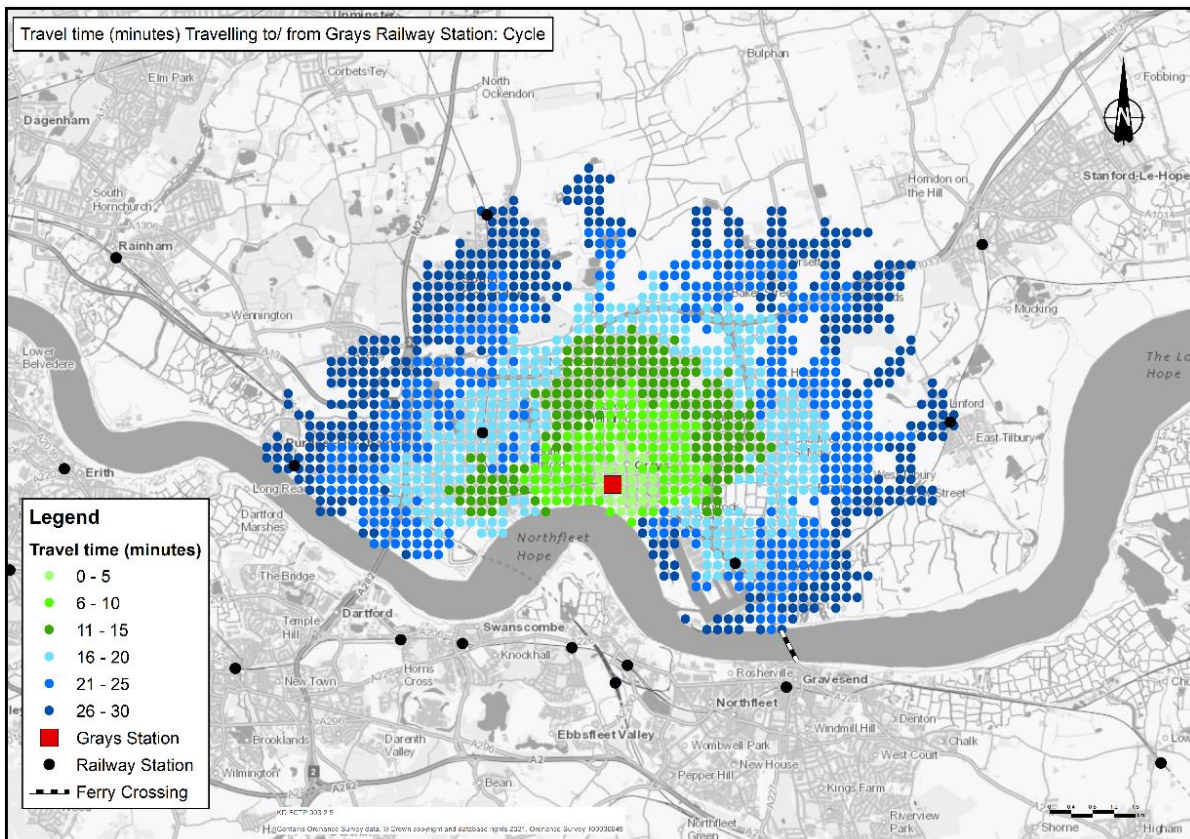


Plate 6.11 Cycle times to Upminster transport hub

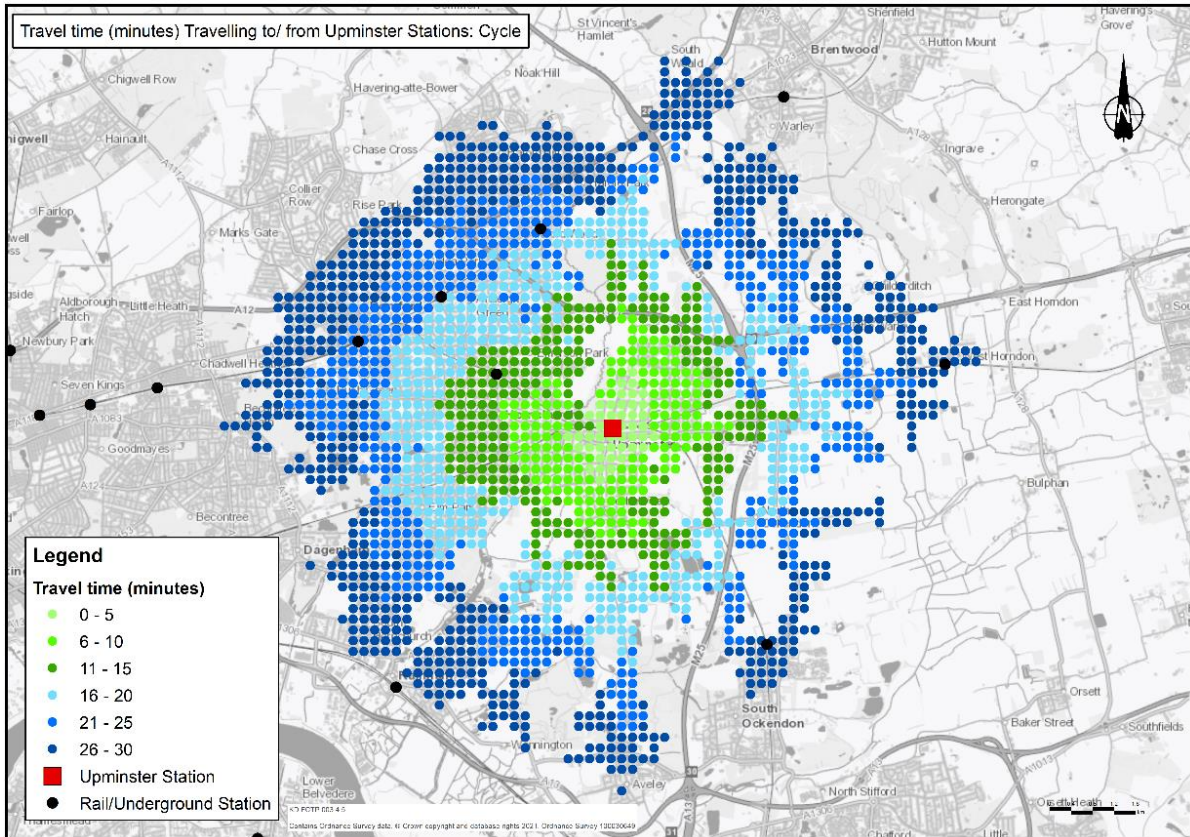
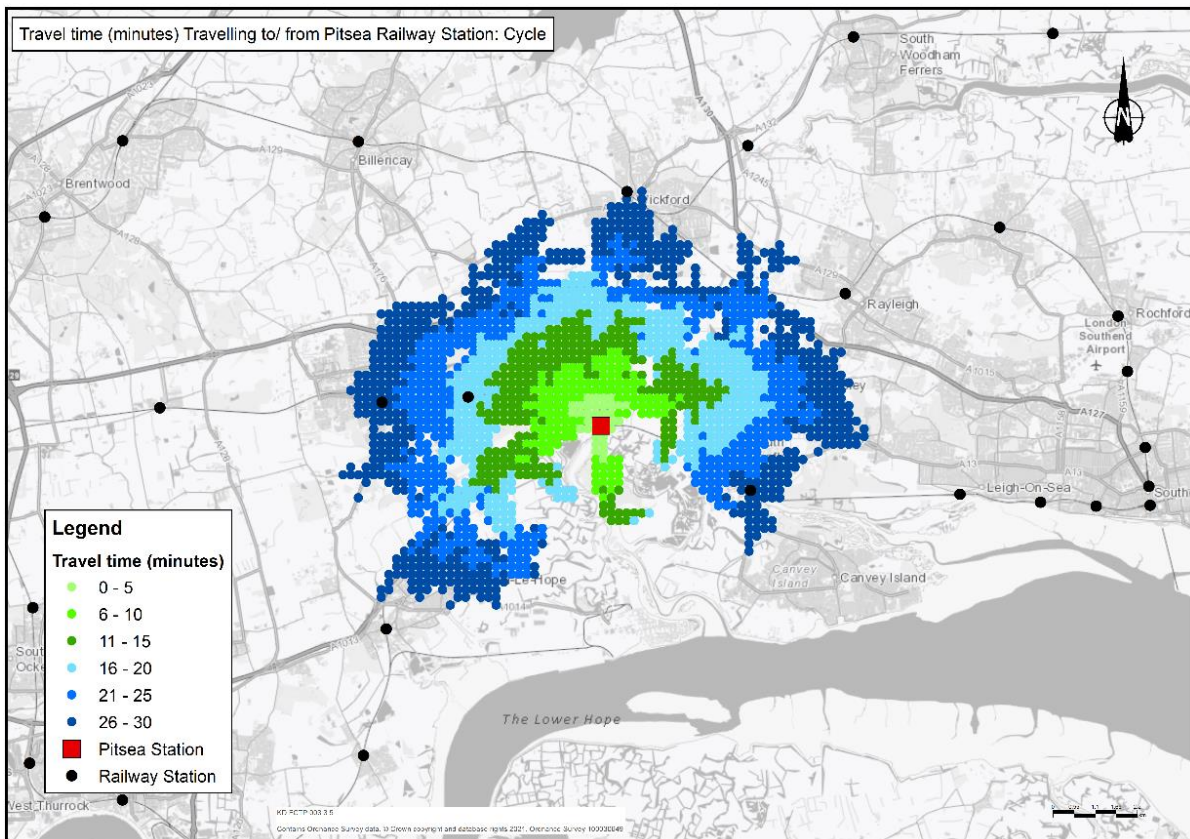


Plate 6.12 Cycle times to Pitsea transport hub



- 6.4.17 Plate 6.13 to Plate 6.16 illustrate the indicative catchment areas for travelling to each of the hub locations by public transport modes other than rail (namely bus and ferry services) within a maximum 30-minute travel time for that leg and method of travel (rail services are shown to identify how these public network routes interrelate across a multimodal transport system). This is also across the AM peak period (between 07:00–09:00).
- 6.4.18 At Gravesend, south of the river, the indicative catchment extends to Dartford to the west; south of the A2; and across to Higham in the east. There is also a small catchment opportunity to the north of the River Thames in Tilbury as a result of the ferry service available. Similarly to the cycle network, bus services comprise a number of towns and suburban areas situated in the wider vicinity of the hub locations, extending a slightly greater distance of approximately 10km in some instances.
- 6.4.19 For Upminster, bus routes are focused within the London Borough of Havering, extending out to East Horndon to the east and South Ockendon and Grays to the south. This is mirrored for Grays, with the majority of its indicative catchment focused in Thurrock, albeit extending to Upminster to the north, Rainham (Essex) to the west and East Tilbury to the east. For Pitsea, the majority of bus routes are within Essex, including Basildon to the west, Stanford-le-Hope to the south, and Benfleet and Leigh-on-Sea to the east.

Plate 6.13 Public transport accessibility to Gravesend transport hub

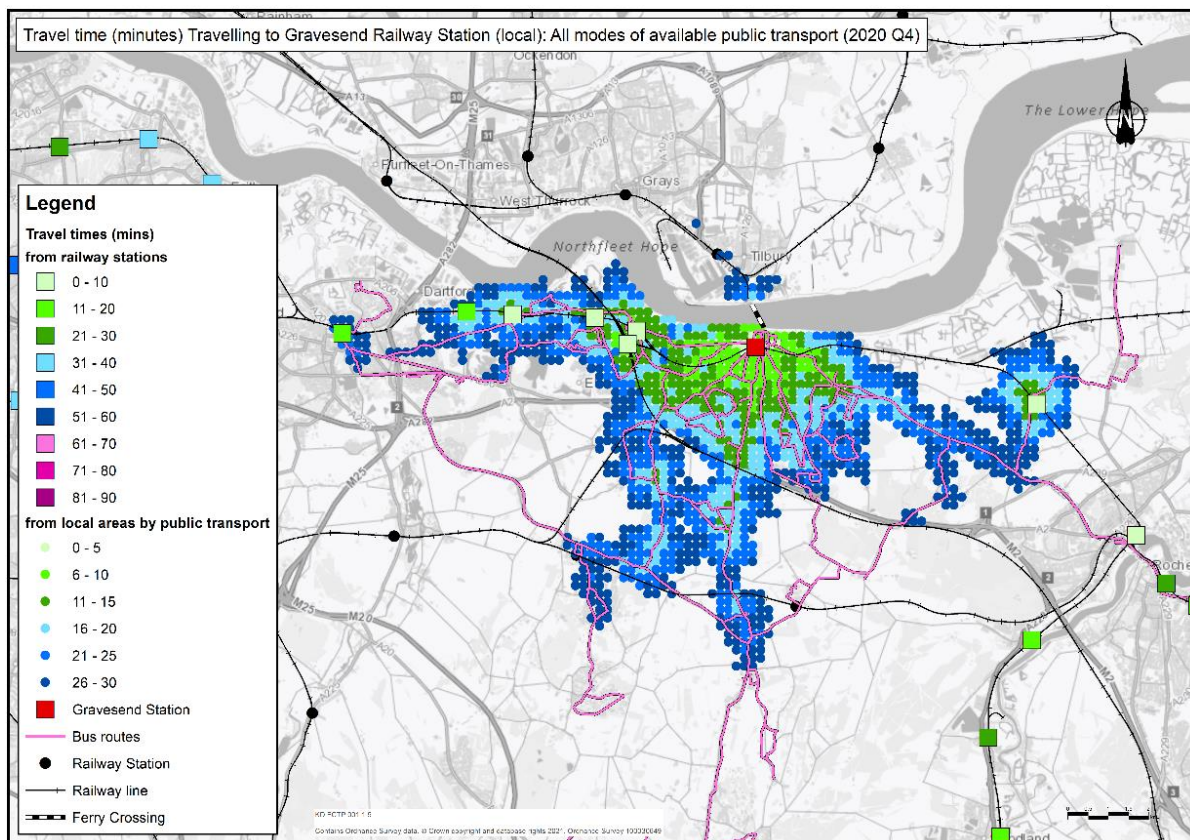


Plate 6.14 Public transport accessibility to Grays transport hub

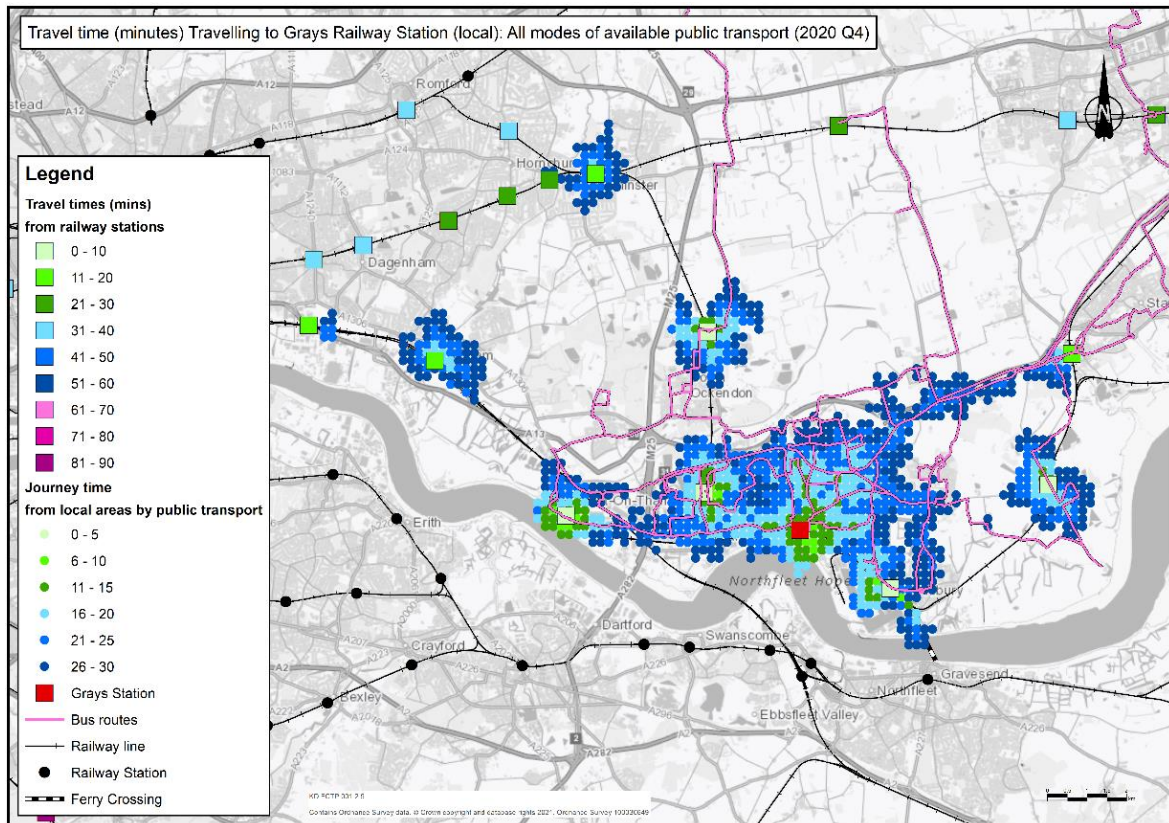


Plate 6.15 Public transport accessibility to Upminster transport hub

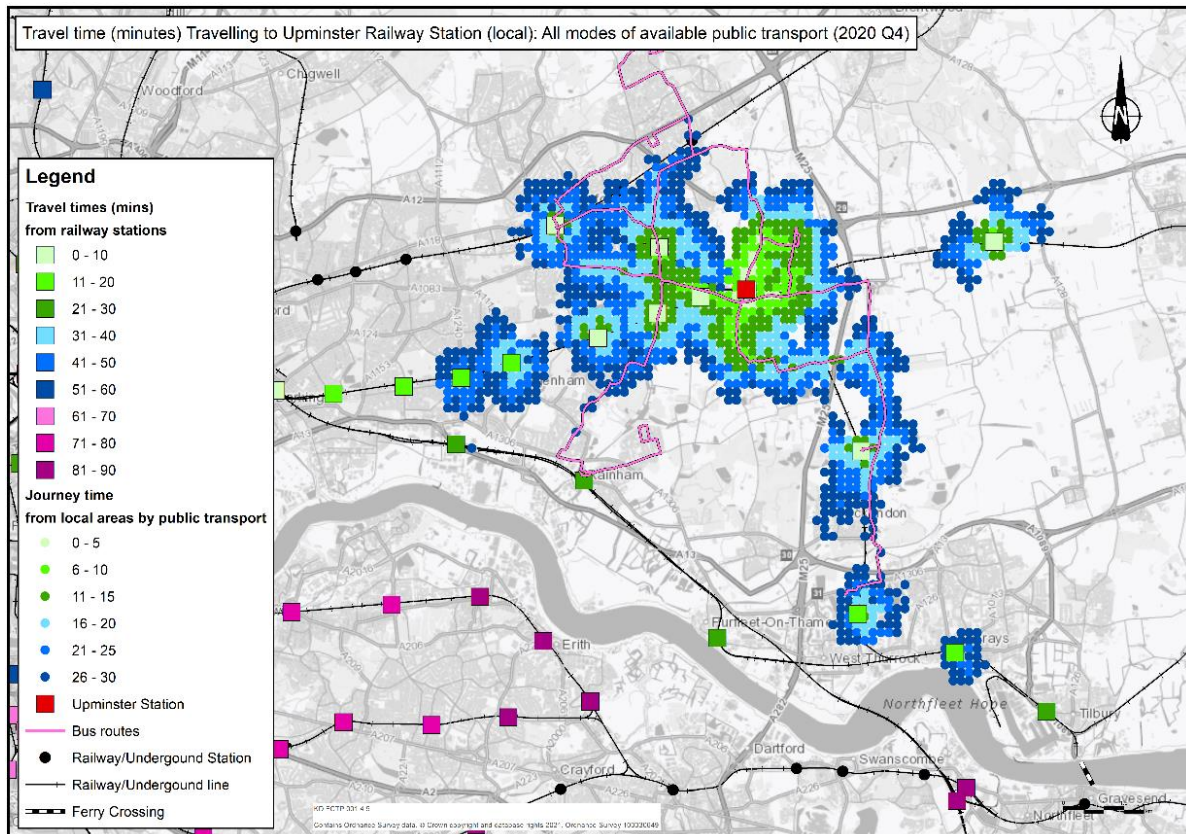
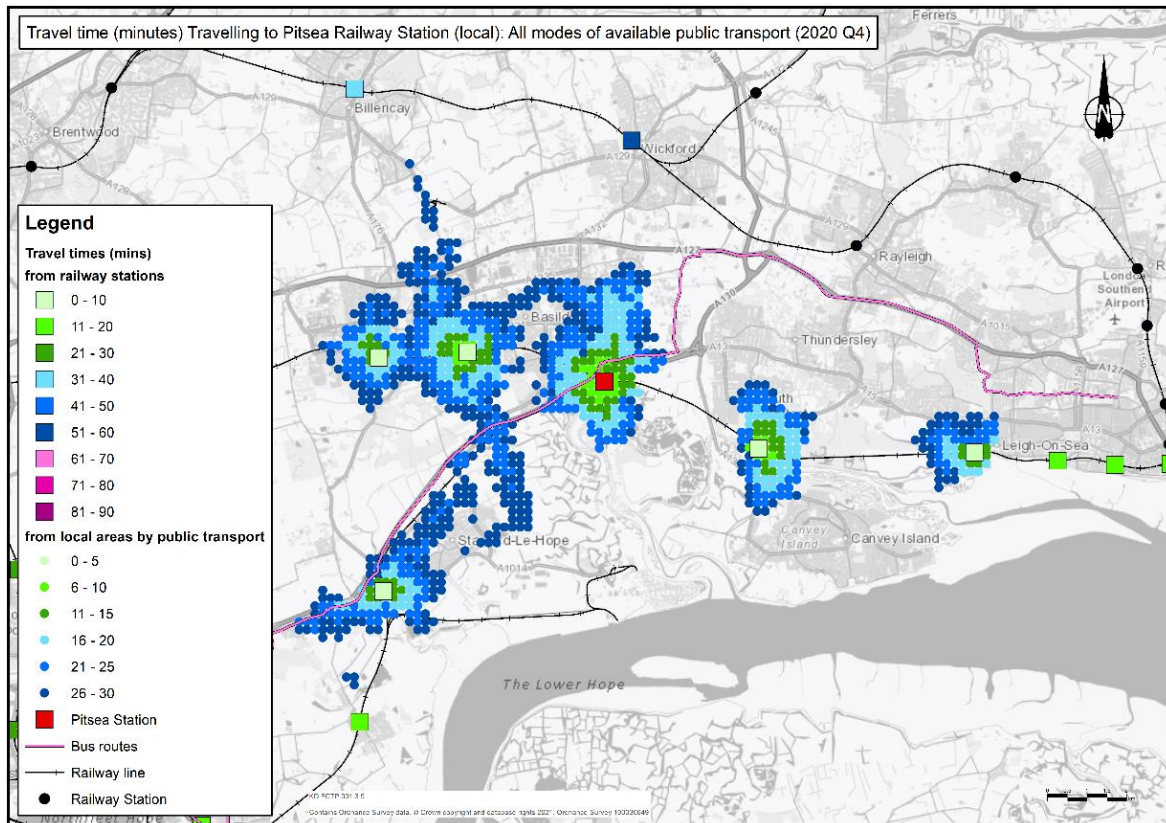


Plate 6.16 Public transport accessibility to Pitsea transport hub



- 6.4.20 The wider highway connections to each of the proposed hub locations have also been identified. As shown above, trips originating from the Medway Towns, Gravesend and Dartford would be expected to utilise the hub located in Gravesend, also located south of the River Thames. This hub can be accessed via Singlewell Road which runs north to south from the station through the town towards the A2 which spans the southern edge of the town. The M2 links the A2 for journeys from the Medway Towns to the east, while the A282 and the A296 both link to the A2 for journeys from Dartford to the west.
- 6.4.21 For those travelling to the proposed Grays transport hub via road, the A13 spans to the north of the town, with both the A226 and the A1012 connecting the SRN southwards into the central area where Grays railway station is located. As shown in the plates above, a significant number of workforce trips are expected to originate within the local area, in close proximity to the proposed transport hub at Grays railway station.
- 6.4.22 For trips originating in Romford (or the wider Havering Borough area), the closest transport hub would be Upminster with the A125/A124 connecting the Romford ring road to Upminster via Hornchurch.
- 6.4.23 For those travelling to the proposed Pitsea transport hub via road, the A13 is located directly north of the station, spanning both west towards Stanford-le-Hope, and east towards Benfleet, providing a connection with the A127 that captures wider trips in the surrounding area from locations such as Basildon and Southend-on-Sea. As shown in the plates above, a significant number of workforce trips are expected to originate within the local area (Basildon, Canvey Island and Southend-on-Sea), in close proximity to the proposed transport hub at Pitsea railway station.

7 Targets

7.1 SMART targets

- 7.1.1 Guidance from TfL, and industry best practice, is that travel plan targets should be Specific, Measurable, Attainable, Realistic and Time-bound (SMART).
- 7.1.2 At present there are a number of unknown factors and considerations including the locations from and to which construction workers would commute on a daily basis and details about individual members of the workforce.
- 7.1.3 Additionally, the nature of construction work would change over time. Initially work would involve more generalised civil engineering activities, where labour may be sourced locally. However, as construction progresses, the proportion of workers with specific skills (in tunnelling, for example) would increase and this in turn may influence the catchment area from which such workers can be drawn.
- 7.1.4 At this stage, the Project-wide targets within this FCTP can be categorised as changing the modal split and travel behaviour. This sets out the high-level aspirations for the SSTP targets, which would be refined as appropriate for each construction worksite, and compound and ULH, to be developed further as SMART targets.
- 7.1.5 The initial focus of changing the modal split and travel behaviour would be driven through the following aspirations:
- Minimising the number of single-occupancy vehicle journeys made to and from each site
 - Maximising the proportion of workers using public transport to travel to and from each site
 - Promoting health and active travel through encouraging workers to walk or cycle to and from the site where safe and practical
 - Reducing the distance travelled by workers
 - Reducing the need to travel for workers where practical
- 7.1.6 The SSTPs would be required to set annual targets over a five year period with timescales attached, and be integrated, alongside the Project aims and objectives, into the recruitment process.
- 7.1.7 As noted above, given the uncertainties, setting specific mode share targets at a Project-wide level is difficult especially prior to undertaking initial baseline travel surveys (which will provide real-world data from the Project's workforce). Project-wide targets would also be related to site-specific targets, which have not yet been prepared, and would be developed and included within the SSTPs.
- 7.1.8 As details of the workforce travel patterns would not be available until construction commences, 2011 Census Journey to Work data (ONS) would be used as a basis for setting initial targets. Consideration would be made to the 2021 Census, but it is expected that the data would be impacted by the temporary changes required to travel, as a result of the COVID-19 pandemic. As a result, alternative sources of data may be utilised following discussions with the TPLG.

- 7.1.9 More accurate mode share data would be derived after the baseline travel survey at each site has been conducted. The Action Plan, within Table 9.1 provides an indicative programme.
- 7.1.10 The site-specific targets would be reviewed and agreed with the relevant stakeholders following analysis of the baseline travel survey results. It is proposed that the analysis of the survey will be completed within three weeks from the date of the survey and would be incorporated into the relevant SSTPs within six weeks of that date, unless otherwise agreed with the TPLG. This is detailed further in Chapter 4.
- 7.1.11 The mechanism for implementing these targets is set out in Chapter 9.

7.2 Changing the forecast modal split

- 7.2.1 Within the Transport Assessment (Application Document 7.9), baseline assumptions have been made regarding the car driver mode share for each construction worksite, compound and ULH, depending on its size (forecast worker population).
- 7.2.2 The difference between the car driver mode share and the total number of trips made to each site includes an allowance for car sharing, public transport, workforce transport (shuttle buses) and walking and cycling.

Reduction in single-occupancy vehicle trips

- 7.2.3 Targets in this area would seek to increase the share of multiple-occupancy car trips made to construction worksites, compounds and ULHs, through car-sharing incentives.

Increased use of sustainable modes of transport

- 7.2.4 Targets in this area would seek to increase the share of sustainable trips made, whether through public transport, workforce transport, walking or cycling.

Promoting health and active travel

- 7.2.5 The health of the workforce would be promoted through targets which focus on increasing walking and cycling trips to construction worksites, compounds and ULHs, either as part of the journey or for the full trip.
- 7.2.6 Any walking and cycling trips to sites will only be encouraged where these modes can be used safely.

7.3 Influencing travel behaviour

Reduced distance travelled

- 7.3.1 The Project's workforce is likely to be transient in nature, with some specialist labour moving into the area for a temporary period whilst other elements of the workforce will be sourced from the existing broader labour pool in the south-east.
- 7.3.2 Whilst some of the workforce would remain at home, a proportion of workers would likely move into the local area to take advantage of closer proximity to the Project. In addition, some of the workforce would be accommodated onsite within the Northern tunnel entrance compound.

- 7.3.3 For those moving into the local area, the consequent reduction in distance travelled to work is expected to positively affect the modal choices made by the workforce to further reduce the impact on the highway network.

Reduced need to travel

- 7.3.4 Reducing the need for trips to occur at all is the ultimate way in which the impact of workforce trips can be reduced.
- 7.3.5 It is appreciated that, for most construction worksites, compounds and ULHs, the scope for this would be limited, given that the workforce would need to be present onsite in order to undertake their work.
- 7.3.6 However, there would be some opportunities for staff in management/office roles to work from home or remotely, especially for meetings, to reduce the number of trips made. This is particularly the case following the COVID-19 pandemic, which has advanced remote working technologies and made home working more of the norm. It is likely that staff in these roles would have a degree of flexibility to vary their working hours and location.
- 7.3.7 Virtual meeting technology would be used to host meetings wherever possible to ensure that unnecessary journeys are reduced.
- 7.3.8 In addition, the workforce staying in the onsite accommodation within the Northern tunnel entrance compound would also make fewer trips overall, given the lack of a need to make a daily journey-to-work trip.
- 7.3.9 On other sites, there may be opportunities for trip consolidation, ensuring that all trips made are necessary.

8 Measures

8.1 Introduction

- 8.1.1 Measures and incentives are a vital part of a travel plan, as they set out how it is proposed that targets would be met.
- 8.1.2 Given this is an FCTP, the measures set out in this chapter are indicative and would be developed further by the TPLG, TPM and TPCs for incorporation into the SSTPs.
- 8.1.3 However, it would be expected that many, if not all of the measures here would be incorporated into the SSTPs but adapted as necessary to ensure they would have the most impact against the targets. The relevant measures within the SSTPs would be identified alongside interventions to achieve the targets and funding to ensure they can be implemented. Key measures will also be implemented before sites are occupied, as identified in Table 9.1.

8.2 Compound and ULH measures

Methodology

- 8.2.1 As set out in Chapter 5, the compounds would be of varying sizes (forecast worker population). This, alongside the existing levels of accessibility and location of a particular compound, will have a bearing on the measures that it would be possible to successfully implement at each construction worksite, or compound and ULH.
- 8.2.2 Depending on these varying elements, for each of the compounds and ULHs covered by an SSTP, a tier would be allocated to that compound and ULH. The TPC for each SSTP would agree the tier to be used with the TPM, following suitable consideration of each of the varying elements.
- 8.2.3 The tiers provide a framework for the proposed measures, and sites in higher tiers would be expected to incorporate measures from the lower tiers. As such, the measures contained within tier 1 should be seen as a minimum set of interventions that would be applied across all SSTPs.
- 8.2.4 Further measures for SSTPs would be proposed as part of their development and would need to be agreed with the TPLG.

Tier 1

- 8.2.5 The measures set out within this tier are the base level of measures that would be implemented within each SSTP:
- a. An SSTP specific welcome pack, noticeboard and intranet/website page providing details of the SSTP, key contacts, the measures in force at that construction worksite, or compound and ULH, and local public transport information.

- b. Access to an accommodation helpdesk, providing support and assistance to obtain accommodation. A number of other significant construction projects, including Hinkley Point C and Heathrow expansion have implemented versions of an accommodation helpdesk, and other sectors such as student campuses also often use helpdesks as a means to manage accommodation requirements. The aim of the helpdesk would be to bring together accommodation providers and the Project workforce who require accommodation local to the compounds and ULHs and help guide staff to the most suitable and available accommodation for their individual needs. The helpdesk could collate and analyse data, such as availability of beds, occupancy, and location which could be used to understand and manage the Project's impact on the local community.
- c. Access to schemes such as cycle to work and season ticket loans.
- d. Exploration of subsidised or discounted public transport.
- e. Facilities for walkers and cyclists (secure cycle parking, changing facilities, showers and lockers).
- f. Onsite vending machines providing a range of snacks and drinks, provision for making hot drinks, and chilled food storage provision.
- g. A car park management scheme which would seek to ensure car parking spaces meet demand (ideally reducing the number over time). SSTPs would be required to ensure that the level of car parking provision is consistent with achieving the objectives of the SSTP.
- h. A car-sharing scheme, enabling staff to sign up to offer or look for car-sharing opportunities, where appropriate for their role.
- i. Priority car parking for car-share scheme users.
- j. Minibus shuttle buses (using zero emission vehicles) providing connectivity to and from public transport hubs (currently identified as Gravesend, Grays, Pitsea and Upminster (see Section 6.4)) and between construction worksites, compounds and ULHs. These buses would align with the commitments set out in the REAC (Application Document 6.3) which details the use of low emission vehicles, diesel particulate filters (or similar devices), and ultra-low sulphur fuels where practicable, keeping vehicles well maintained and ensuring that all vehicle engines are not left running or idling unnecessarily.
- k. Managed electric vehicle charging facilities, using zero carbon electricity, for 30% of the parking capacity (to be increased where required to satisfy demand).

- l. Managed electric charging facilities for E-bikes, in covered cycle parking areas, to satisfy demand.
- m. The provision of cycle training and maintenance for all levels of cyclists, to encourage new cyclists to switch to this form of active travel and promote safety and awareness of cycling travel. This would be linked to local provision (either by local authorities, charities or cycling groups), if available.

Tier 2

- 8.2.6 Measures in tier 2 would be applied in addition to those outlined in tier 1, and include the following:
- a. Additional facilities for walkers and cyclists (laundry facilities)
 - b. Personalised travel planning services for the whole workforce

8.3 Securing process

- 8.3.1 The measures set out in this FCTP will be secured by way of DCO Schedule 2 Requirement 11, to ensure that there is a commitment to their delivery.

9 Implementation strategy and action plan

9.1 Introduction

- 9.1.1 This FCTP sets out an overarching action plan for key tasks and measures, alongside associated timescales and responsibilities, to be achieved across all construction worksites, compounds and ULHs during the construction of the Project. These actions would come into force through each of the SSTP's and would be prepared for the point in time in which each compound and ULH or group of compounds and ULHs are ready for mobilisation. This is set out in Table 9.1 and represents all tasks required to be undertaken as a minimum.
- 9.1.2 This overarching action plan aims to provide clear guidance on the responsibilities of the TPCs and TPM and where wider involvement is required from the TPLG, throughout the Project's construction period.
- 9.1.3 The overarching action plan also identifies a programme of regular scheduled activities and monitoring for the TPCs to carry out during the Project's construction period. This will identify which measures are the most effective for the TPCs to implement.
- 9.1.4 The TPCs would also be required to set out separate action plans within the SSTPs (above and beyond what is included in Table 9.1), to include short, medium, and long-term activities. These may need to include additional tasks where required, in order to ensure effective implementation of site-specific measures and targets. In addition, modifications may need to be made throughout the Project's construction period to respond to changing requirements and circumstances.

9.2 Overarching action plan

- 9.2.1 Table 9.1 sets out the key tasks required as a minimum to be achieved across all construction worksites, compounds and ULHs during the Project's construction period.
- 9.2.2 The table provides indicative timings for completion of the actions (based on a 2024 grant of the DCO with construction following thereafter).

Table 9.1 Project action plan

Item	Action	Designated responsibility	Indicative date for completion
1	Appointment of TPCs (provide contact details to TPLG)	National Highways/ Contractors	One month within DCO grant
2	Meet with the TPLG to discuss the initial timeframes associated with the measures set out	TPCs/TPM/ TPLG	One month within DCO grant
3	Develop an effective communications strategy to support implementation of the SSTPs (marketing and branding)	TPCs	One month within DCO grant

Item	Action	Designated responsibility	Indicative date for completion
4	Organise and hold recurring (monthly) TPLG meetings	TPCs/TPM/ TPLG	One month within DCO grant
5	Establish a central database for organising workforce travel arrangements, obtaining staff postcodes to examine travel patterns and distribution	TPCs	One month within DCO grant
6	Organise a car-share scheme (align with planned shift patterns and workforce numbers) including contractual agreements	TPCs/TPM	One month within DCO grant
7	Organise transport hub shuttle bus services (align with planned shift patterns and workforce numbers) including contractual agreements	TPCs/TPM	One month within DCO grant
8	Review active travel (walking and cycling) facilities within the vicinity of the site	TPCs	One month within DCO grant
9	Desk-based research to collate the necessary local transport network information	TPCs	One month within DCO grant
10	Develop car park management strategy (align with planned shift patterns and workforce numbers) for both onsite and offsite car parking	TPCs/TPM	One month within DCO grant
11	Arrange onsite staff facilities (including showers, lockers, changing facilities, welfare areas)	TPCs/TPM	One month within DCO grant
12	Set out dates for regular reviews of periodic actions to ensure effective implementation	TPCs	One month within DCO grant
13	Prepare welcome packs and information for construction worksite and compound and ULH noticeboards	TPCs	Three months within DCO grant
14	Implementation of travel surveys	TPCs	Three months within DCO grant
15	Analysis of travel surveys	TPCs	Three months within DCO grant
16	Analysis of workforce origin locations to identify journey to work patterns (where available)	TPCs	Three months within DCO grant
17	Develop travel initiatives and incentives in line with SMART targets and initial analysis and survey findings	TPCs/TPM/ TPLG	12 months within DCO grant
18	Monitor travel patterns through use of multiple data sources	TPCs	12 months within DCO grant
19	Repeat travel survey	TPCs	12 months within DCO grant
20	Review travel survey and implement remedial measures	TPCs/TPM	12 months within DCO grant

Item	Action	Designated responsibility	Indicative date for completion
21	Review shuttle bus services and construction worksite, compound and ULH facilities	TPCs	18 months within DCO grant (repeat every three months)
22	Review car-share scheme and car parking arrangements	TPCs	18 months within DCO grant (repeat every three months)
23	Review maintenance of agreed walking/cycling routes	TPCs	18 months within DCO grant (repeat every three months)
24	Maintain and review the communications strategy	TPCs	18 months within DCO grant (repeat every three months)
25	Maintain public transport information	TPCs	18 months within DCO grant (repeat every three months)
26	Repeat travel survey	TPCs	18 months within DCO grant (repeat every six months)
27	Hold ad hoc steering group meetings with workforce	TPCs	18 months within DCO grant construction (repeat every three months)
28	Adapt initiatives and incentives in line with SMART targets	TPCs/TPM/ TPLG	18 months within DCO grant (repeat every three months)
29	Review of FCTP and SSTPs and make modifications where needed	TPCs/TPM/ TPLG	18 months within DCO grant (repeat every three months)

9.3 Funding

- 9.3.1 National Highways would fund the preparation, implementation, and operation of the FCTP, including the TPM role and activities related to the implementation of the FCTP and the TPLG.
- 9.3.2 National Highways would also fund the role of the Contractors (who would be required to provide the TPC roles, preparation of the SSTPs and the implementation and monitoring of SSTP measures).

10 Monitoring and remedial measures

10.1 Introduction

- 10.1.1 Monitoring is an important part of achieving travel plan success, as noted in Government guidance. It provides an evidence base to inform the review and evaluation of travel plan measures on a continuous basis.
- 10.1.2 This FCTP and the SSTPs would be actively implemented throughout the construction of the Project. National Highways, Contractors, subcontractors, and suppliers would all be required to commit to the monitoring and review process, as detailed below.

10.2 Travel surveys

- 10.2.1 Employee travel surveys would be conducted by the TPCs at each site. Details of indicative dates for their completion are shown in Table 9.1. These would then be repeated every six months thereafter during the construction phase.
- 10.2.2 A common survey structure would be set by the TPM to enable standardised information to be captured across the Project. This would be supplemented by discussions with the TPCs to ensure that relevant site-specific information is collected in each location. These surveys would be iTrace compliant and would allow progress towards targets within this FCTP and the SSTPs to be reviewed.

10.3 Review programme and Travel Plan updates

- 10.3.1 The TPLG would be responsible for reviewing the operation of this FCTP and the SSTPs and would require continuous engagement for review and discussion as part of the monthly TPLG meetings. The review would be based on the targets and indicators identified and the regular reporting from the TPM.
- 10.3.2 Following the receipt of information from the TPCs, the progress on the effectiveness of this FCTP and the SSTP action plans would be reviewed, audited and reported to National Highways by the TPM every six months throughout the duration of construction, continuing for as long as sites which relate to each SSTP are in use.
- 10.3.3 In the event of targets being met early or exceeded, the TPM, together with National Highways and the relevant TPC(s), would look to proactively set more challenging targets in agreement with the TPLG to strive to achieve greater levels of sustainable travel.
- 10.3.4 Chapter 5 of the CoCP (Application Document 6.3) establishes that National Highways would develop a Communications and Engagement Strategy (CES) that outlines the objectives and processes for engagement and communications with stakeholders, and each Contractor would develop an Engagement and Communications Plan (ECP) which would support the CES to ensure that stakeholders are informed of the works activities and to maintain good relationships with other parties.

- 10.3.5 Each Communications and Engagement Plan would provide details of the complaints procedure which could include feedback with regards to the review and monitoring of the Travel Plans. In addition, the CoCP sets out that the National Highways Customer Contact Centre will be used to deal with enquiries and complaints from the public.

10.4 Remedial measures

- 10.4.1 In the event of this FCTP and the SSTP targets not being met, the TPLG would meet and agree whether the shortfall is significant.
- 10.4.2 Significance would be determined by whether the failure to meet a target results in a demonstrable impact. For example, it is possible that failure to achieve a mode share target may be offset by lower overall trip generation or better performance in other area(s) of the plan.
- 10.4.3 If the degree of shortfall is considered to be significant, the TPM, along with National Highways and the relevant TPC, would agree a package of remedial measures designed to address the shortfall in relation to the initial targets set out in the SSTPs. These measures would be presented to the TPLG for agreement, including a timescale over which the success of these measures should be reviewed.
- 10.4.4 Remedial measures may include further use (spatially, temporally or intensity) of measures set out in either the relevant SSTP or this FCTP (such as measures from tier 2 if the SSTP doesn't currently apply them), drawing on measures set out in national and/or local highway authority guidance (or other sources). These may be implemented directly by National Highways if appropriate. The emphasis of addressing any target shortfall would be to consider 'soft' measures first, including incentives or disincentives specifically designed to address the shortfall.
- 10.4.5 Where the SSTPs are not able to mitigate the effects of workforce travel, complementary initiatives could be sought in order to support the wider community (albeit not directly related to the Project), to transfer wider trips on the network to active travel or other environmentally sound modes of travel. These initiatives could include improvements to local cycling and walking facilities or public transport focused measures. These could help to offset the effects of the Project and leave a positive legacy in the area.

10.5 Funding

- 10.5.1 Funding for the monitoring of each SSTP would be provided by National Highways (as set out in Section 9.3).
- 10.5.2 It would be expected that a sum of money for each construction worksite, compound and ULH be held by the Contractors to cover proportionate remedial measures. The exact sum of money will be agreed between the Contractors and National Highways as part of their appointment.
- 10.5.3 If remedial measures are required at a particular site, these would be proposed as set out in Section 10.4. If the measures agreed require funding in excess of that available, or the funding set aside has been previously exhausted, National Highways and the Contractors will enter discussions to agree the source for funding between them.

11 Summary

- 11.1.1 This document is the FCTP for the Project.
- 11.1.2 The document is designed to provide a framework for how the impacts of the Project's construction workforce on the highway network would be reduced and/or transferred to more sustainable modes.
- 11.1.3 The principles set out in this framework are intended to be implemented in a series of SSTPs which would be implemented for a construction worksite, or compound and ULH, or collection of construction worksites, compounds and ULHs, by the appointed Contractors.
- 11.1.4 Details of the Project's proposed construction programme have been detailed, with particular regard to the workforce numbers and peak period trips.
- 11.1.5 Baseline conditions on the transport network in and around the Project's construction worksites, compounds and ULHs have been set out, providing context particularly in relation to existing sustainable transport provision.
- 11.1.6 Reference has been made to relevant national, regional and local policy and guidance with regard to travel plans.
- 11.1.7 This FCTP has set out the overall aims and objectives (established as commitments to be delivered by the Project) and intent of this framework so that it is clear, particularly to those implementing it, what the Project wishes to achieve and how.
- 11.1.8 This FCTP then sets out high-level targets and how more detailed targets will be developed for the SSTPs.
- 11.1.9 Measures have been set out, providing a minimum level for construction worksites, compounds and ULHs, and providing flexibility for further measures if locally appropriate.
- 11.1.10 The management and organisation of this FCTP and SSTPs are set out, providing clear roles and responsibilities.
- 11.1.11 These are then set out further in the implementation strategy and action plan which provide a simple checklist to ensure this FCTP is implemented as planned. Details of funding for the implementation of this FCTP and SSTPs are also set out.
- 11.1.12 Finally, the monitoring and review programme has been set out, which includes details of remedial measures that would need to be implemented if targets are not being met or if they are exceeded early.

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Glossary

Term	Abbreviation	Explanation
A122		The new A122 trunk road to be constructed as part of the Lower Thames Crossing project, including links, as defined in Part 2, Schedule 5 (Classification of Roads) in the draft DCO (Application Document 3.1)
A122 Lower Thames Crossing	Project	A proposed new crossing of the Thames Estuary linking the county of Kent with the county of Essex, at or east of the existing Dartford Crossing.
A122 Lower Thames Crossing/M25 junction		New junction with north-facing slip roads on the M25 between M25 junctions 29 and 30, near North Ockendon.
A13/A1089/A122 Lower Thames Crossing junction		Alteration of the existing junction between the A13 and the A1089, and construction of a new junction between the A122 Lower Thames Crossing and the A13 and A1089, comprising the following link roads: <ul style="list-style-type: none"> • Improved A13 westbound to A122 Lower Thames Crossing southbound • Improved A13 westbound to A122 Lower Thames Crossing northbound • Improved A13 westbound to A1089 southbound • A122 Lower Thames Crossing southbound to improved A13 eastbound and Orsett Cock roundabout • A122 Lower Thames Crossing northbound to improved A13 eastbound and Orsett Cock roundabout • Orsett Cock roundabout to the improved A13 westbound • Improved A13 eastbound to Orsett Cock roundabout • Improved A1089 northbound to A122 Lower Thames Crossing northbound • Improved A1089 northbound to A122 Lower Thames Crossing southbound
A2		A major road in south-east England, connecting London with the English Channel port of Dover in Kent.
Application Document		In the context of the Project, a document submitted to the Planning Inspectorate as part of the application for development consent.
Communications and Engagement Strategy	CES	Outlines the objectives and processes for engagement and communications with all stakeholders. The Contractors will each develop an Engagement and Communications Plan (ECP) in support of the CES that will ensure that stakeholders are informed of the works activities and to maintain good relationships with other parties.
Code of Construction Practice	CoCP	Contains control measures and standards to be implemented by the Project, including those to avoid or reduce environmental effects.

Term	Abbreviation	Explanation
Construction		Activity on and/or offsite required to implement the Project. The construction phase is considered to commence with the first activity on site (e.g. creation of site access) and ends with demobilisation.
Department for Transport	DfT	The government department responsible for the English transport network and a limited number of transport matters in Scotland, Wales and Northern Ireland that have not been devolved.
Development Consent Order	DCO	Means of obtaining permission for developments categorised as Nationally Significant Infrastructure Projects (NSIP) under the Planning Act 2008.
Development Consent Order application	DCO application	The Project Application Documents, collectively known as the ‘DCO application’.
Demand Responsive Transport	DRT	A form of public transport, where vehicles alter their routes based on demand without a fixed route or timetable. These services typically pick-up and drop-off passengers in locations according to passengers needs.
Engagement and Communications Plan	ECP	Provides a detailed programme of community engagement, setting out how relevant planning authorities, communities, stakeholders and affected parties will be engaged with throughout the construction period.
Essex County Council	ECC	The county council that governs the non-metropolitan county of Essex in England.
Framework Construction Travel Plan	FCTP	A framework with regard to the implementation of travel planning for the movement of personnel to and from the construction worksites, compounds and ULHs during the construction phase of the Project.
Heavy Goods Vehicle	HGV	A large, heavy motor vehicle used for transporting cargo.
Joint Operations Forum	JOF	A forum to coordinate the different activities undertaken by the Contractors, and to provide an escalation route to resolve cross party or stakeholder issues if necessary and support “Best for Programme” decision making.
Local Implementation Plan	LIP	Funded by TfL, these documents set out how each London borough will meet the objectives of the Mayor’s Transport Strategy.
Local Transport Plan	LTP	Planning document produced by a local highway authority that sets out the transport planning policy framework within its area.
M2 junction 1		The M2 will be widened from three lanes to four in both directions through M2 junction 1.
M2/A2/Lower Thames Crossing junction		New junction proposed as part of the Project to the east of Gravesend between the A2 and the new A122 Lower Thames Crossing with connections to the M2.
M25 junction 29		Improvement works to M25 junction 29 and to the M25 north of junction 29. The M25 through junction 29 will be widened from three lanes to four in both directions with hard shoulders.
National Cycle Route	NCR	A cycle route part of the National Cycle Network created by Sustrans to encourage cycling throughout Britain.

Term	Abbreviation	Explanation
National Highways		A UK government-owned company with responsibility for managing the motorways and major roads in England. Formerly known as Highways England.
National Planning Policy Framework	NPPF	A framework published in March 2012 by the UK's Department of Communities and Local Government, consolidating previously issued documents called Planning Policy Statements (PPS) and Planning Practice Guidance Notes (PPG) for use in England. The NPPF was updated in February 2019 and again in July 2021 by the Ministry of Housing, Communities and Local Government.
National Policy Statement	NPS	Set out UK government policy on different types of national infrastructure development, including energy, transport, water and waste. There are 12 NPS, providing the framework within which Examining Authorities make their recommendations to the Secretary of State.
National Policy Statement for National Networks	NPSNN	Sets out the need for, and Government's policies to deliver, development of Nationally Significant Infrastructure Projects (NSIPs) on the national road and rail networks in England. It provides planning guidance for promoters of NSIPs on the road and rail networks, and the basis for the examination by the Examining Authority and decisions by the Secretary of State.
Nationally Significant Infrastructure Project	NSIP	Major infrastructure developments in England and Wales, such as proposals for power plants, large renewable energy projects, new airports and airport extensions, major road projects etc that require a development consent under the Planning Act 2008.
Operation		Describes the operational phase of a completed development and is considered to commence at the end of the construction phase, after demobilisation.
Outline Materials Handling Plan	OMHP	The outline strategy for handling construction materials required for the construction of the project, including the handling of excavated materials and the delivery of large and/or frequent materials defined as bulk deliveries.
Outline Traffic Management Plan for Construction	OTMPfC	Provides outline concepts and principles that will inform the temporary traffic management measures and transport logistics for the Project. Contractors will be required to produce Traffic Management Plans for construction before commencing works.
Planning Act 2008		The primary legislation that establishes the legal framework for applying for, examining and determining Development Consent Order applications for Nationally Significant Infrastructure Projects.
Project road		The new A122 trunk road, the improved A2 trunk road, and the improved M25 and M2 special roads, as defined in Parts 1 and 2, Schedule 5 (Classification of Roads) in the draft DCO (Application Document 3.1).
Project route		The horizontal and vertical alignment taken by the Project road.
Regional Cycle Route	RCR	A cycle route planned and maintained by a local authority or other regional body.

Term	Abbreviation	Explanation
Secretary of State	SoS	The Secretary of State has overall responsibility for the policies of the Department for Transport.
Site-Specific Travel Plans	SSTPs	Travel Plans for each construction compound and ULH, or group of compounds and ULHs where these are closely located with similar levels of accessibility. To be developed by the Contractors as set out in the Requirements and produced following the latest guidance and best practice.
South Essex Active Travel		An innovative project between Southend-on-Sea Borough Council, Essex County Council and Thurrock Council. Set out to better connect local jobseekers, young people and newly recruited employees with job, education and training opportunities available in south Essex and boost walking and cycling. The three-year project was launched in April 2017 and is funded by the Department for Transport's Access Fund.
Specific Measurable Achievable Relevant and Time-Bound	SMART	A SMART target incorporates all of these criteria to help focus the target efforts and increase the chances of achievement.
Statutory Undertaker	SU	Bodies carrying out functions of a public character under a statutory power. They may either be in public or private ownership, for example the Post Office, Civil Aviation Authority, the Environment Agency, or any water undertaker, public gas transporter or supplier of electricity.
The tunnel		Proposed 4.25km (2.5 miles) road tunnel beneath the River Thames, comprising two bores, one for northbound traffic and one for southbound traffic. Cross-passages connecting each bore would be provided for emergency incident response and tunnel user evacuation. Tunnel portal structures would accommodate service buildings for control operations, mechanical and electrical equipment, drainage and maintenance operations. Emergency access and vehicle turn-around facilities would also be provided at the tunnel portals.
Transport for London	TfL	The integrated body responsible for London's transport system.
Travel Plan Coordinator	TPC	A role to develop and implement the relevant SSTPs.
Travel Plan Liaison Group	TPLG	A group responsible for providing high-level support to, and critical review of, travel planning across the Project. It would support efforts towards achieving greater sustainable travel, monitoring, and reviewing progress and agreeing new or amended initiatives. Comprising stakeholder representatives together with the TPM and National Highways representatives.
Travel Plan Manager	TPM	National Highways would manage the SSTPs through a Travel Plan Manager. Contractors and subcontractors would be required to identify nominated individuals within their organisations to manage travel plan activities for their sites.
Travel Plan Representatives	TPRs	Public transport operators and local highway authorities, together with the TPM and National Highways representatives.

Term	Abbreviation	Explanation
Ultra-low emission vehicles	ULEV	The Office for Low Emission Vehicles (OLEV) is a team working across government to support the early market for ultra-low emission vehicles (ULEV). OLEV is part of the Department for Transport and the Department for Business, Energy & Industrial Strategy.
Utility Logistic Hubs	ULH	A compound required for receiving, storing and distributing the plant and materials needed to complete specific utility works. They would include facilities such as office space, welfare, refuelling, security, vehicle and wheel-wash and parking

Appendices

Appendix A Policy and guidance

A.1 Introduction

A.1.1 This chapter provides a summary on the latest planning policy (national and local level), and guidance and best practice documents available with regard to travel planning. These (together with any new or updated guidance) would be referred to by the Contractors, when producing the SSTPs for each construction worksite, or compound and ULH, or group of construction worksites, compounds and ULHs, unless updated and replaced by government or the relevant local highway authorities. While it is acknowledged that a large majority of the guidance is set within the context of development sites rather than construction worksites, compounds and ULHs, it is expected the overall principles for implementing sustainable travel will still be applicable as a guide for the SSTPs.

National planning policy

A.1.2 This section outlines national planning policies in relation to travel planning requirements set out in the NPSNN (Department for Transport, 2014) and the National Planning Policy Framework (NPPF) (Ministry of Housing, Communities & Local Government, 2021).

National Policy Statement for National Networks

A.1.3 Paragraph 5.208 of the NPSNN (2014) states that, “*Where appropriate, the applicant should prepare a travel plan including management measures to mitigate transport impacts. The applicant should also provide details of proposed measures to improve access by public transport and sustainable modes where relevant, to reduce the need for any parking associated with the proposal and to mitigate transport impacts*”.

A.1.4 This document is set out specifically in regard to strategic rail freight interchange developments, however, paragraph 5.209 goes on to state that “*For schemes impacting on the Strategic Road Network, applicants should have regard to DfT Circular 02/2013 ‘The Strategic Road Network and the delivery of sustainable development’ (or prevailing policy) which sets out the way in which the highway authority for the Strategic Road Network will engage with communities and the development industry to deliver sustainable development and, thus, economic growth, whilst safeguarding the primary function and purpose of the Strategic Road Network*”.

A.1.5 The document also refers to ultra-low emission vehicles (ULEVs), including pure electric vehicles, plug-in hybrids and fuel cell electric vehicles. As stated in paragraph 3.7 these vehicles will play an increasing role in future travel as technology develops, with these vehicles now starting to come onto the market

in significant numbers. In the coming decade there will be a move towards the mass market roll-out of ULEVs, alongside the Government commitment to supporting the switch to the latest ultralow emission vehicles.

Overarching National Policy Statement for Energy (EN-1)

- A.1.6 The EN-1 (Department of Energy and Climate Change, 2011a) sets out the overarching national policy for energy infrastructure and applies to the full suite of energy National Policy Statements (NPSs) and any associated development (referred to as energy Nationally Significant Infrastructure Projects (NSIPs)).
- A.1.7 The policy acknowledges that “*The transport of materials, goods and personnel to and from a development during all project phases can have a variety of impacts on surrounding transport infrastructure and potentially on connecting transport networks, for example through increased congestion*”.
- A.1.8 Paragraphs 5.13.3 to 5.13.5 of EN-1 set out that if a project is likely to have significant transport implications, a Travel Plan should be prepared where appropriate, including demand management measures to mitigate transport impacts. Details referring to proposed measures to improve access by public transport, walking and cycling, and to reduce the need for parking associated with the proposal, as well as to mitigate transport impacts, should also be provided.

National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4)

- A.1.9 The EN-4 (Department of Energy and Climate Change, 2011b) sets out the national policy for the gas supply infrastructure and gas and oil pipelines. It follows the same high-level objectives, policy and regulatory framework for new nationally significant infrastructure projects, as set out in EN-1. This includes the key principles to be followed, policy on good design, and the assessment and handling of generic impacts that are not specific to particular technologies.
- A.1.10 Consistent with the instructions and guidance set out in the EN-1, if a project is likely to have significant transport implications, a Travel Plan should be prepared where appropriate.

National Policy Statement for Electricity Networks Infrastructure (EN-5)

- A.1.11 The EN-5 (Department of Energy and Climate Change, 2011c) sets out the national policy for electricity networks infrastructure. It follows the same high-level objectives, policy and regulatory framework for new nationally significant infrastructure projects, as set out in EN-1. This includes the key principles to be followed, policy on good design, and the assessment and handling of generic impacts that are not specific to particular technologies.

- A.1.12 Consistent with the instructions and guidance set out in EN-1, if a project is likely to have significant transport implications, a Travel Plan should be prepared where appropriate.

National Planning Policy Framework

- A.1.13 Paragraph 113 of the NPPF (updated July 2021) states that “*All developments which will generate significant amounts of movement should be required to provide a travel plan, supported by a transport statement so that the likely impacts of the proposal can be assessed*”.
- A.1.14 Travel Plans therefore support national planning policy, which provides that planning should actively manage patterns of growth in order to make the fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable.

A.2 Local planning policy

- A.2.1 This section outlines local travel planning policies, guidance and current schemes in relation to Travel Plans, as determined by the local highway authorities in proximity to the Project. This highlights the existing approach undertaken in each area, and the measures currently provided. SSTPs would also be expected to demonstrate compliance with up-to-date local travel planning policies, guidance and schemes in relation to travel planning.

Maidstone Borough Council

- A.2.2 The adopted Maidstone Local Plan (Maidstone Borough Council, 2017) sets out a section on influencing travel behaviour, as follows: “*The council, together with KCC, will continue to promote and support the use of Travel Plans as a way of influencing travel behaviour away from journeys by private car to more sustainable modes. Maidstone Borough Council and Kent County Council will continue to implement and monitor their own corporate Travel Plans as well as securing Travel Plans for new development as part of the planning process. Workplace and School Travel Plans will also continue to be developed, implemented and monitored through partnership working across the borough where appropriate*”. This is further supported by Policy DM 21: Assessing the transport impacts of development, that states “*Development proposals must provide a satisfactory Transport Assessment for proposals that reach the required threshold and a satisfactory Travel Plan in accordance with the threshold levels set by Kent County Council’s Guidance on Transport Assessments and Travel Plans and in Highways England guidance*”.

Tonbridge and Malling Borough Council

- A.2.3 The Local Development Plan Core Strategy (Tonbridge and Malling Borough Council, 2007) sets out a sustainable transport section, which sets out its aim to “*reduce trip generation to the greatest degree possible at source, through such measures as Travel Plans that are specific, measurable and monitored, with effective targets and incentives to meet them*”. This is further reinforced through Policy CP2, stating that “*new development that is likely to generate a significant number of trips should: minimise the need to travel through the implementation of Travel Plans and the provision or retention of local services and facilities*”.

Medway Council

- A.2.4 The Medway Local Plan (Medway Council, 2003) sets out the council’s guidance on travel planning within Policy T14: Travel Plans. It states that “*travel plans will be required for all developments which require a transport assessment or as otherwise required by the council’s vehicle parking standards, including the following: . (i) all substantial developments comprising employment, retail, leisure and/or service floorspace; (ii) smaller developments in category (i) which would generate additional traffic movements in or near to air quality management areas or other areas specifically targeted for a reduction in road traffic; (iii) new or expanded educational facilities; (iv) where a local traffic problem would otherwise lead to a refusal of planning permission*”. A travel plan coordinator is also employed by the council and can provide advice to existing companies and potential applicants for new developments.
- A.2.5 Medway Council promotes the use of company travel plans through their Transport Plans and Policies webpage (Medway Council, 2022) providing guidance both to reduce the number of business trips made by private car, and to reduce the overall need to travel. The adoption of a company travel plan is a key element in the council’s strategy. The council has set out to establish a forum of major employers in Medway to share initiatives around travelling to work. Medway Council’s own travel plan offers a range of incentives (including the Medway carshare scheme and bus ticket and bicycle discounts) as well as supporting schemes to allow more flexible working and reduce the need to travel (including nine-day fortnight, reduced office attendance and increased homeworking). The reduction in traffic congestion and the improvement of air quality that should result from travel plans are essential elements of the council’s core values.
- A.2.6 Travel also forms an important part of Medway’s Local Transport Plan (LTP). The webpage states “*The third LTP, which runs from 2011, includes the development of a new travel strategy with a greater focus on cycling initiatives. During the second LTP period (2006–2011) 16 workplace travel plans were adopted, targeting in excess of 15,000 employees*”.

Kent County Council

- A.2.7 Kent County Council has been working with a variety of partners to secure sustainable and active travel funding, to support its Sustainable Transport Projects, as set out on the webpage (Kent County Council, 2022) as well as support its ambitions and sustainable transport projects across Kent. These projects aim to promote sustainable transport options, active travel, and encourage the switch to alternatively fuelled vehicles. Kent County Council is committed to making sustainable travel an attractive, realistic choice for journeys which will help to improve air quality, reduce congestion on the roads, and promote health and wellbeing in Kent.
- A.2.8 Among these projects are schemes to improve sustainable travel for education, adult cycle training, access to the liftshare platform to help commuters find car-share members, access to KentConnected a free journey planner app, and a number of walk and cycle to work schemes and initiatives.

Gravesham Borough Council

- A.2.9 The Gravesham Local Plan Core Strategy (Gravesham Borough Council, 2014) sets out Gravesham Borough Council's guidance on travel planning within Policy CS11: Transport. It states that new developments are to prepare and adopt Transport Assessments and Travel Plans (as appropriate) using Kent County Council's guidance, 'Transport Assessments and Travel Plans, October 2008'. This will ensure new developments mitigate their impact on the highway and public transport networks as required and ensure the delivery of travel choice and sustainable opportunities for travel.

Thurrock Council

- A.2.10 The Thurrock Core Strategy and Policies for Management of Development (Thurrock Council, 2015) sets out the council's guidance on travel planning within Policy PMD10: Transport Assessments and Travel Plans. This ensures new developments play their role in implementing travel planning measures and the intensive application of 'Smarter Choices' (which has been found to reduce car use by up to around 10%). The policy aims to encourage safe, healthy and sustainable travel options. By reducing car travel, the council considers that travel plans/Assessments can improve health and wellbeing, free up car parking spaces, and contribute positively to mitigating adverse transport, environment and amenity impacts. Travel plans must be consistent with the council's policies, and ensure it is clear the development can provide adequate provision for existing or planned transport infrastructure and other proposed measures. The objectives within the travel plans will be monitored, and must include targets, coupled with penalties if outcomes are not being met.

- A.2.11 The Thurrock Council travel planning guidance webpage (Thurrock Council, 2022) is set out in four key areas: workplace, rail stations, school, and development-related travel planning. This is in order to provide suitable and tailored advice for the different development types.
- A.2.12 The guidance clearly sets out the importance of travel planning in line with development planning, which provides a long-term strategy to mitigate and monitor the negative transport impacts of development, promote sustainable development, and maximise the potential for sustainable travel behaviour. Thurrock Council also provides travel plan assessment guidance and a checklist to assist with the development of the documents.
- A.2.13 The workplace Travel Plan guidance provides support to businesses looking to promote and encourage sustainable travel use among their staff members. The example set out by Thurrock Council highlights the benefits available to both employers and employees when effective workplace travel planning is implemented, including lower costs for travel, increased staff productivity and health and wellbeing, and reducing parking issues by encouraging staff to travel by other means.
- A.2.14 The rail operator c2c works with Thurrock Council and others to develop rail station travel plans for the stations in Thurrock, in order to reduce congestion around the station, lessen the station's effect on the environment and encourage more travel by rail. A station travel plan will include information on the site and surrounding area, details of any problems, passenger and operator views, and information on how passengers travel to and from the station.

Transport for London

- A.2.15 The 2021 London Plan (Greater London Authority, 2021) sets out guidance on travel planning within Policy T4: assessing and mitigating transport impacts. With regard to national or local guidance, travel plans should be produced alongside Transport Assessments and/or Transport Statements as part of development proposals, to ensure that impacts on the capacity of the transport network at the local, network-wide and strategic level, are fully assessed. This should focus on embedding the 'Healthy Streets Approach' within, and in the vicinity of, new development. The phasing of development, and the use of Travel Plans and freight strategies, will help reduce negative impacts of development on the transport network and bring about positive outcomes.
- A.2.16 The 2018 Mayor's Transport Strategy (Greater London Authority, 2018) focuses on putting into practice the theory of reducing car dependency and increasing active, efficient and sustainable travel. This requires an understanding of how Londoners interact with their city, what defines their quality of life, especially in relation to streets. High-quality public transport services will also be required to provide alternatives to car use, connecting seamlessly to other forms of active, efficient and sustainable travel. The central aim is for 80% of all trips in London to be made on foot, by cycle or using public transport, by 2041.

- A.2.17 Travel planning guidance (TfL, 2013) in line with national, regional and local policy, highlighting the need to reduce car dependency, increase travel choices and encourage sustainable travel. This guidance was produced in 2013, with new travel plan guidance and tools expected to be released in 2022 (not yet published).
- A.2.18 The guidance details a number of benefits that can be achieved through travel planning, which have a significant impact on the road network. This includes road safety improvements, reduced highway capacity issues and environmental improvements through reduced levels of congestion, carbon emissions, pollution, and noise. Other benefits away from the highway network include increased opportunities for active healthy travel, and improved travel choice, quality, and affordable access to services. Benefits for employers include the reduced demand for parking spaces (enabling land to be put to more cost-effective or commercially beneficial use and freeing space for active travel initiatives) and increased opportunities to feed into corporate social responsibility or sustainability initiatives.
- A.2.19 The guidance states that the overarching purpose of a travel plan should be to encourage behaviour change and should aim to address any issues identified within the associated Transport Assessment. This should be done through setting out a package of measures that clearly contribute to achieving the targets and meeting the objectives of the travel plan. To help set targets in context, the current Mayor's Transport Strategy (at the time this guidance was produced) aims to:
- a. Achieve a 5% modal share for cycling, from the baseline of 2%
 - b. Significantly increase walking mode share above the baseline of 24%
 - c. Reduce private motorised transport by 4%, from the baseline of 43%
 - d. Achieve a 60% reduction in London's CO2 emissions by 2025
 - e. Balance capacity and demand for public transport
- A.2.20 The guidance states that including a timetable and action plan for delivering the measures (and a means of communicating this to the ultimate site users), along with an appointed Travel Plan Coordinator, is crucial in order to secure and enforce travel plan targets. This should be followed by monitoring and surveys, to ensure the site achieves the targets and objectives set out in the travel plan. A clear monitoring programme should be provided detailing what and how frequently surveys will be undertaken, who will be responsible and how this information will be reported.

London Borough of Havering

- A.2.21 The London Borough of Havering Local Plan Proposed Submission 2016–2031 (London Borough of Havering, 2017) sets out the Borough’s guidance on travel planning within Policy 23: Transport Connections. It states that travel plans will be required for development as set out in TfL’s latest Guidance on travel plan requirements, and that they will continue to promote the benefits of and support the development, delivery and monitoring of school, residential and workplace travel plans. It continues to state that *“Travel plans submitted through the planning application process will be reviewed and monitored to ensure that developers are meeting their targets for modal shift. The council will engage with local business to encourage the use of travel planning to increase modal shift to/from work, away from the private vehicle”*.
- A.2.22 Havering’s Local Implementation Plan (LIP) (London Borough of Havering, 2019) is the borough’s transport strategy, which sets out how Havering will deliver the Mayor’s Transport Strategy at a local level. The LIP contains a series of objectives and targets, in particular, improving north-south transport connectivity in the borough through the provision of alternative travel choices to the private vehicle, to deliver fully accessible transport links and to enable healthier lifestyles through the provision of active and sustainable travel choices, with regards to the Mayor’s ‘Healthy Streets’ agenda.
- A.2.23 The London Borough of Havering currently provides a transport and travel advice webpage (London Borough of Havering, 2022), in particular advice for businesses on sustainable travel options such as cycling workplace schemes, promoting ultra-low emission vehicles and electric vehicles. This website and app provide a platform to encourage new and current employees to travel more actively and sustainably with employees able to log journeys, compete on leader boards and team challenges to earn rewards. The airTEXT alert system is also encouraged, designed to alert users to when air pollution levels are expected to be elevated the following day, and provide users with suitable health advice.
- A.2.24 Key information and supporting maps are also available for cycling routes within Romford town centre, and along heritage cycle routes. There is also information on the ‘Walking for Health’ national scheme, which started in 2003 and encourages people to exercise for the benefit of their health. There are over 20 trained walk leaders and 19 walk venues.

Essex County Council

- A.2.25 The sustainable travel guidance webpage (Essex County Council (ECC), 2022) sets out how the council aims to use its roads and transport network to promote sustainable economic growth in Essex, alongside guidance for creating travel plans for new developments, businesses, and schools.

- A.2.26 ECC’s Travel Plan guidance aims to promote greener modes of transport for new developments, workplaces or new and expanding schools. ECC is committed to working with developers, businesses and consultants to create and deliver travel plans for new or expanding developments, and provide guidance notes, templates and other resources where required. ECC also has a dedicated Travel Plan Coordinator to help conduct site visits, promote the travel plan, monitor and review residential travel plans, and supply and distribute travel information packs for these developments. The ‘smarter travel for Essex network’ scheme also promotes active and sustainable travel for organisations, offering entry into a National Accreditation Scheme and support with issues such as car park management, and making alternative travel modes an attractive option for employees.
- A.2.27 ECC also has a number of sustainable travel initiatives for the wider area, including its ‘Sustainable Modes of Travel Strategy’ which outlines what ECC is doing to make it easier to travel around Essex, while reducing dependence on the private car and improving the environment. ECC also promotes up to date information on their webpage ‘Getting around’ (Essex County Council, 2022) which provides details on travelling around the county by all transport modes, including cycle routes, PRow and bus timetables. Other partnerships include working with the local rail operators to improve the local rail network (as part of the Rail strategy and the Community Rail Partnership) as well as working with Southend and Thurrock councils to deliver the South Essex Active Travel project, which aims to boost active travel and improve access to jobs, learning and skills in south Essex.

Brentwood Borough Council

- A.2.28 The Brentwood Local Plan (Brentwood Borough Council, 2005) sets out guidance on travel planning within Policy T1: Travel Plans. It states that the council will promote the use of travel plans by businesses, schools, hospitals and other uses. All applications for proposals which are likely to give rise to significant transport implications (either of themselves or in conjunction with other proposals) will be required to provide a travel plan, incorporating measures to reduce travel to and from the site by car, provision of onsite facilities for cyclists, contributions to the improvement or expansion of public transport provision, the promotion of safe cycle and pedestrian routes, and provide for more environmentally friendly delivery and freight movements.
- A.2.29 Travel plans should be provided for major commercial and leisure development or smaller developments in sensitive locations, new or expanded school facilities, and where they may address local traffic problems. These Travel Plans must provide measurable outputs, which relate to Local Transport Plan targets and arrangements for enforcement, in the event that agreed targets are not met. Applicants will be expected to enter into a legal agreement proposing how such measures are to be achieved.

A.3 Guidance and best practice

Government guidance

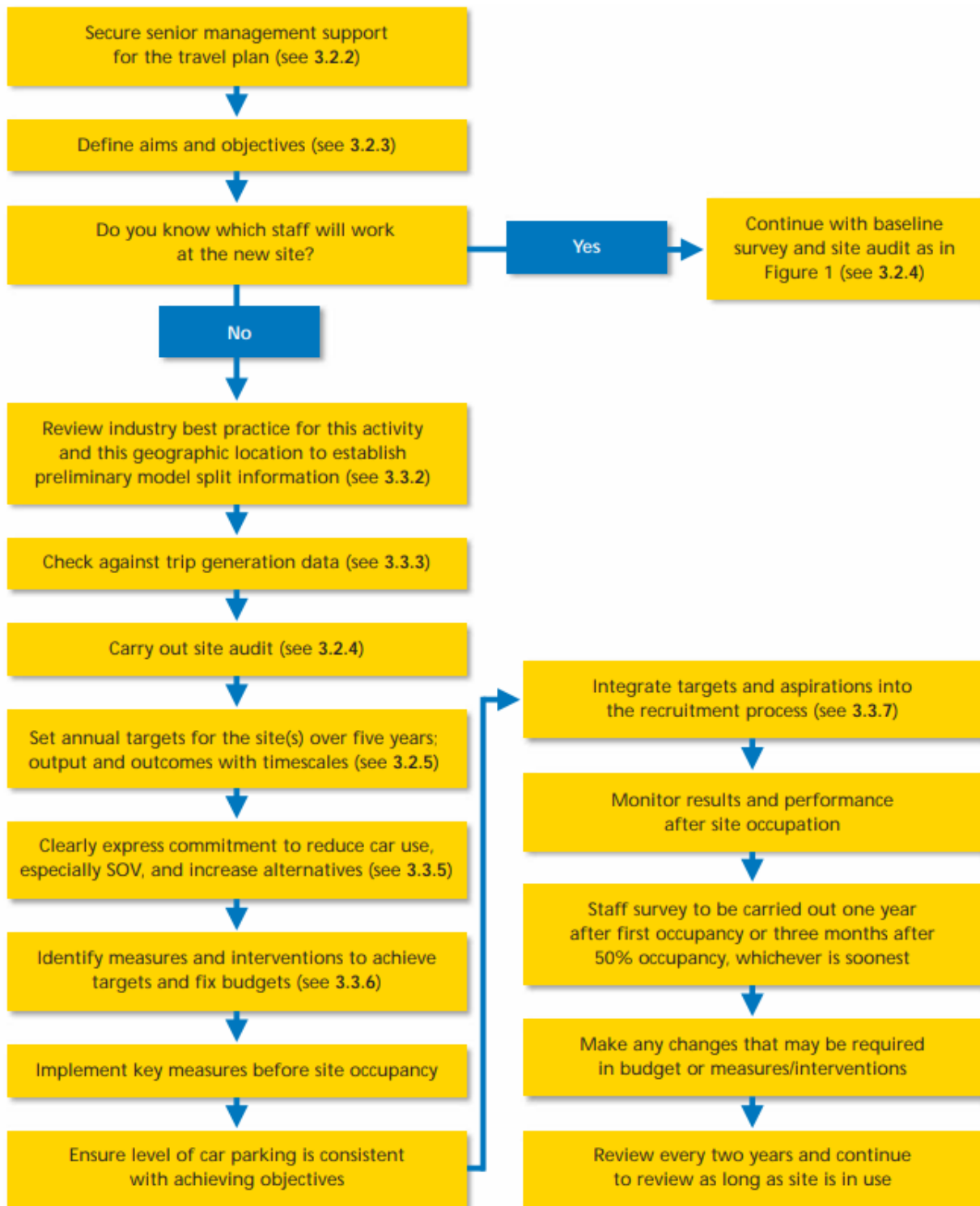
- A.3.1 The Government guidance Travel Plans, Transport Assessments and Statements (Ministry of Housing, Communities and Local Government, 2014) provides advice on when travel plans are required, and what they should contain. Travel Plans are defined as ways of assessing and mitigating the negative transport impacts of development and are required for all developments which generate significant amounts of movement. Travel plans should, where possible, be considered in parallel with development proposals and readily integrated into the design rather than retrofitted.
- A.3.2 The primary purpose of a travel plan is to identify opportunities for the effective promotion and delivery of sustainable transport initiatives such as walking, cycling, public transport and tele-commuting, in order to reduce the demand for travel by less sustainable modes. It is noted, however, that while sustainable travel is the focus for travel plans, they should not be used to cut provision for cars in a way that is unsustainable and could have negative impacts on the surrounding areas.
- A.3.3 These initiatives should be based on evidence of the anticipated transport impacts of development, and specific targets should be set against the baseline conditions before measures can be put in place to promote and encourage sustainable travel. Explicit outcomes should be set, rather than just the identification processes to be followed, and should address all journeys resulting from a proposed development by anyone who may need to visit or stay.
- A.3.4 This is facilitated through the production of long-term management strategies for integrating proposals for sustainable travel into the planning process. Clear future monitoring and management arrangements need to be set out, with the consideration of any additional measures that may be required to offset unacceptable impacts if the targets should not be met.
- A.3.5 The length of time over which monitoring will occur, and the frequency of monitoring should be proportional to the nature and scale of the development and should be agreed as part of the travel plan. Monitoring requirements should continue to be provided until there is sufficient evidence that the travel patterns of the development are in line with the objectives of the travel plan. This includes meeting the original targets set out, over a consistent period of time. Following this, the travel plan would become a voluntary initiative.

- A.3.6 In summary, the guidance states that travel plans should evaluate and consider the following:
- a. *“Benchmark travel data including trip generation databases*
 - b. *Information concerning the nature of the proposed development and the forecast level of trips by all modes of transport likely to be associated with the development*
 - c. *Relevant information about existing travel habits in the surrounding area*
 - d. *Proposals to reduce the need for travel to and from the site via all modes of transport*
 - e. *Provision of improved public transport services”.*

Publicly Available Specification (PAS) 500:2008 - National Specification for Travel Plans

- A.3.7 The PAS 500 has been produced by the British Standards Institute (BSI), that aims to inspire confidence and deliver assurance to customers with standards-based solutions. This document sets out a national standard for this industry in order to improve the quality and effectiveness of travel plans and provide a valuable resource that travel plan professionals can rely on.
- A.3.8 The PAS 500 provides for three grades of conformance (bronze, silver and gold) with each level requirements clearly set out in the relevant clauses of the document.
- A.3.9 The document defines the necessary scope of work for developing and implementing workplace travel plans, providing valuable requirements; particularly those with more than 100 employees. While the document sets out the required scope of work for producing a travel plan, it does not specify detailed measures or interventions, establish specific targets, objectives or outcomes.
- A.3.10 The document states that this guidance can be used to help make the best possible use of transport infrastructure, through the development of a long-term management strategy, delivering objectives through positive action and regular reviews. It also brings associated benefits to commuters, business travellers and businesses of helping meet the challenges of climate change, congestion and air pollution.
- A.3.11 The document sets out a flow diagram indicating all activities that should be included within a travel plan for a new site, as shown in Plate A.1.

Plate A.1 PAS 500 - required activities that should be included within a travel plan for a new site



A.3.12 This FCTP has not been designed to be accredited to PAS 500. However, the scope of work for the SSTPs (as set out in this FCTP) include the necessary items detailed within PAS 500 to enable them to be compliant with the required specification. Certification against the specification could be sought if required.

Appendix B SSTP example template

B.1 Contact details

- B.1.1 Site information (site name and full address of the site).
- B.1.2 Travel Plan Coordinator information (name, organisation, address, telephone and email contact details).
- B.1.3 Travel Plan Manager information (name, organisation, address, telephone and email contact details).

B.2 Introduction

- B.2.1 Each SSTP should be developed in accordance with the requirements and guidance set out in the FCTP.
- B.2.2 Provide a brief introductory paragraph which explains the purpose of this SSTP and how it fits within the FCTP.
- B.2.3 For example: *‘to actively manage and control workers’ travel to and from the construction site, to limit traffic movement and reduce disruption in the vicinity of the site’.*

B.3 Site details

- B.3.1 Provide a summary of the site location and size (estimated worker population) of the site.
- B.3.2 Provide information on the relevant construction details such as the phases of development, anticipated outline programme and site access arrangements.
- B.3.3 Provide a breakdown of the anticipated number of construction workers and National Highways staff, working hours and details of shift patterns.
- B.3.4 Where appropriate, provide this information for different parts of the construction work.

B.4 Local policies

- B.4.1 Provide a brief summary of relevant local transport, development, and environment policies, to ensure compliance with local travel planning policies, guidance and schemes in relation to travel planning measures.

B.5 Contractor policy

B.5.1 Provide a brief summary of relevant Contractor company policy in relation to transport, the environment and sustainability.

B.6 Existing transport conditions

B.6.1 Describe the local transport network (walking and cycling facilities, public transport services and their location and the nature of the highway network).

B.6.2 Provide information on the baseline mode split for site workers (this will initially be based on the latest available Census Journey to Work data for the site location but will be updated after initial travel surveys are conducted at each development site).

B.7 Objectives

B.7.1 Set site-specific objectives. These need to align with the aims and objectives of the FCTP.

B.7.2 The objectives must also have regard to:

- a. Mayoral policy and strategic guidance
- b. Local authority policy and guidance
- c. Contractor company policy
- d. The challenges and opportunities specific to the site

B.8 Site-specific targets

B.8.1 Set interim site-specific targets which link directly to each objective. These will be in addition to targets included within the FCTP.

B.8.2 The site-specific targets should be based on the baseline mode share data and should be developed in line with the programme of construction at each individual site.

B.8.3 Develop indicators by which the targets will be monitored. These should align with indicators included within the FCTP but also be relevant to this site.

B.9 Site-specific measures

B.9.1 Develop site-specific measures which support the objectives and therefore enable the targets to be met. These will be in addition to the measures included within the FCTP. Relevant measures should be detailed according to each specific site.

B.10 Action plan

- B.10.1 Tabulate the measures and implementation programme in an action plan which is split according to short, medium, and long-term activities.
- B.10.2 Explain how each of the measures in the SSTP will be secured in terms of funding and implementation responsibilities.

B.11 Management and monitoring

- B.11.1 Summarise the management and monitoring requirements described in the FCTP, but in the context of the site. This should include the relationships between the TPC, the TPM, subcontractors, TPRs and all site workers.
- B.11.2 Make clear who is responsible for monitoring at this site (this is expected to be the nominated TPC for the site).
- B.11.3 Confirm the scope of the monitoring programme for the site.
- B.11.4 Provide information on the schedule of surveys and reviews (to match the requirements of the FCTP).
- B.11.5 Set out the mechanism for reviewing measures and targets regularly and revising them where necessary, particularly after the first employee travel survey for the site which will provide information on workers' travel patterns.

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