

Southampton to London Pipeline Project

Deadline 2

Transport Assessment Scoping Report
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Southampton to London
Pipeline Project



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Esso Petroleum Company, Limited

Transport Assessment Scoping Note

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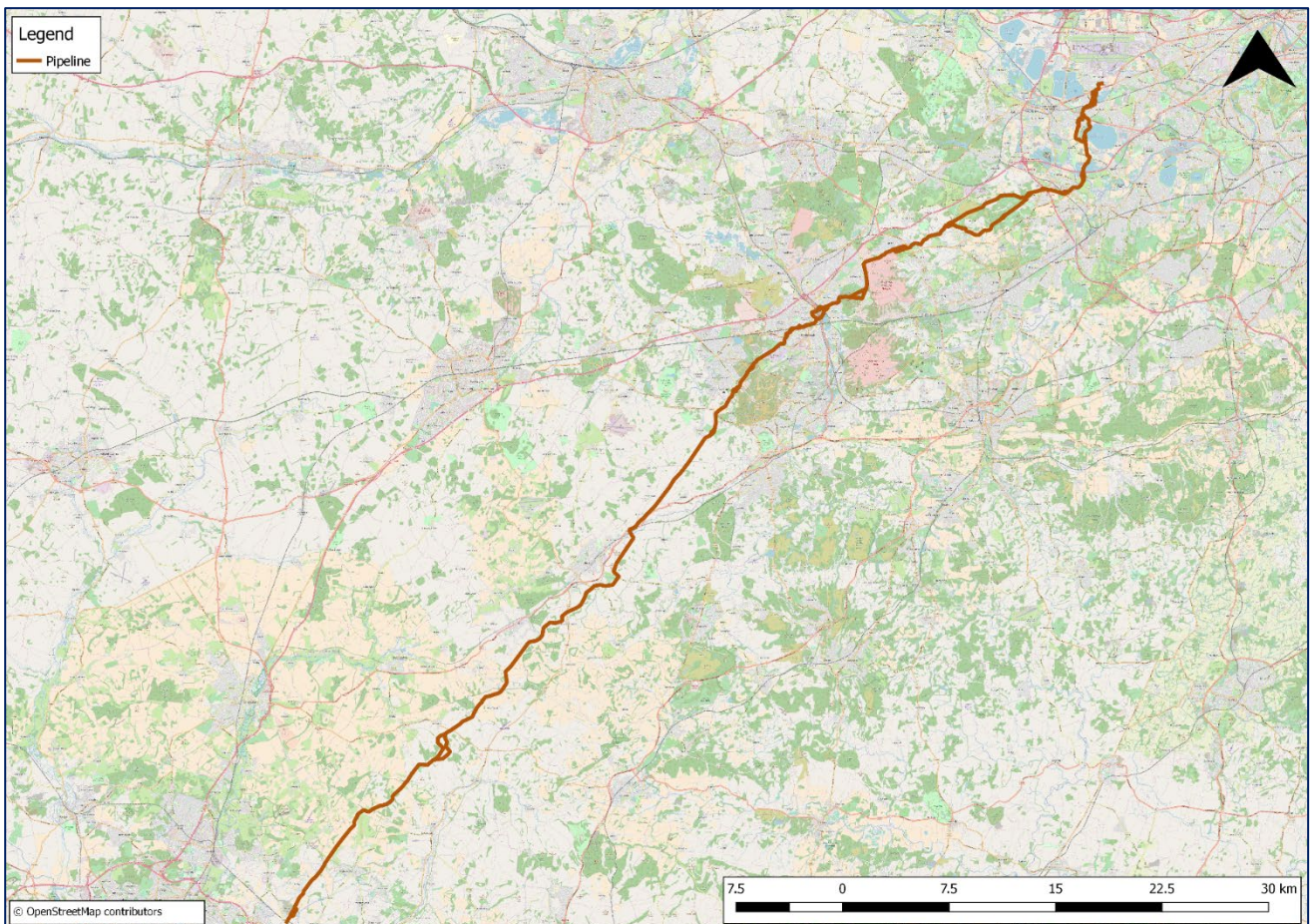
Glossary of Abbreviations

Abbreviation	Definition
AADF	Annual Average Daily Flow
AAWT	Annual Average Weekday Traffic
DfT	Department for Transport
NSIP	Nationally Significant Infrastructure Project
NPPF	National Planning Policy Framework
TEMPro	Trip End Model Presentation Program
IPC	Infrastructure Planning Commission - abolished in 2011 (powers now transferred to the relevant Secretary of State)

1 Introduction

- 1.1.1 The purpose of this Scoping Note is to provide a high level outline of the principles and methodology for the Transport Assessment that would support the Development Consent Order application and Environmental Impact Assessment for the Southampton to London Pipeline, hereafter referred to as the project.
- 1.1.2 The potential impact of the proposed pipeline is likely to relate to the vehicle trips generated by the construction of the pipeline on the highway network, these effects could impact on private vehicles, public transport (buses) as well as pedestrians and cyclists, particularly in urban areas.

Figure 1.1: Proposed Pipeline Route showing Major Roads as shared at Statutory Consultation



2 Methodology

2.1 Overview

- 2.1.1 The overarching methodology for the production of the Transport Assessment is outlined below and is based on the proposed structure of the Transport Assessment report, which is consistent with relevant guidance and broadly follows that adopted for similar proposed projects around the UK.

2.2 Proposed Transport Assessment Report Structure

Chapter 1 Executive Summary

Chapter 2 Introduction

- 2.2.1 This will outline the background to the project and the purpose of the Transport Assessment. It will describe the project, introduce the transport proposals that inform the Transport Assessment and explain that the Transport Assessment assesses the impacts relating to the construction of the replacement pipeline.
- 2.2.2 The operation and maintenance of the pipeline is expected to generate only a very small number of vehicle movements, related to infrequent maintenance visits. Additionally, as this is a replacement pipeline there would be no net change to operational vehicle movements. Therefore, vehicle movements relating to operation and maintenance will be set out, but will not be assessed, within the Transport Assessment.
- 2.2.3 Traffic associated with the decommissioning of the proposed pipeline will not be considered in the Transport Assessment as the traffic generated relating to the decommissioning phase would be less than for the construction phase.

Chapter 3 Policy Context

- 2.2.4 The project constitutes a Nationally Significant Infrastructure Project (NSIP) pursuant of the Planning Act 2008. This chapter will summarise the relevant policy, legislation and guidance documents used to produce the Transport Assessment, such as the Overarching National Policy Statement for Energy (EN-1), National Policy Statement for Gas Supply Infrastructure and Gas and Oil Pipelines (EN-4). In addition the National Planning Policies Framework (NPPF) 2012 2018, Design Manual for Roads and Bridges, the Highways Act and relevant Local Authority guidelines and policies may provide non-binding guidance. For this infrastructure EN-1 in conjunction with EN-4 will be the primary basis for IPC decision making. In particular, the following extracts from EN-1 and EN-4 are relevant to the Transport Assessment:
- 2.2.5 Policy
- EN-1, para. 4.1.5;

- EN-1, para. 4.2.7;
- EN-1, para. 5.13.2;
- EN-1, para. 5.13.3;
- EN-1, para. 15.3.4;
- EN-1, para. 15.3.6;
- EN-1, para. 15.3.9;
- EN-1 para. 5.13.10;
- EN-1 para. 5.13.11; and
- EN-4, para. 2.19.8.

Chapter 4 Pipeline Proposal

- 2.2.6 This chapter will provide details of the proposed replacement pipeline relevant to potential transport impacts, including the proposed route and proposed locations of the compounds as well as describing the locations of the proposed temporary and permanent accesses from the local highway network.

Chapter 5 Existing Situation (Baseline)

- 2.2.7 This chapter will provide details of the existing situation on the highway network and will include the following:
- Description of the highway network which would be used by construction vehicles relating to the pipeline proposal;
 - Existing traffic levels on routes potentially affected by construction traffic relating to the pipeline proposal;
 - Existing levels of accessibility for public transport (public bus and rail);
 - Overview of existing levels of walking activity and walking facilities,
 - Overview of existing levels of cycling activity and cycling facilities;
 - Overview of existing levels of equestrian activity and equestrian facilities where appropriate; and
 - Review of collision data on the highway network.
- 2.2.8 To establish the existing Baseline, traffic flow data on important links, which will be agreed with stakeholders, will be sourced from the respective Local Highway Authorities, Department for Transport, Transport for London and Highways England.
- 2.2.9 The following tables and figures (2.1 to 2.4) show the provisional key links and junctions that would be assessed. These may be subject to minor amendments as design refinement progresses.

Table 2.1: Provisional Key Links to be Assessed in Hampshire

No.	Location Description	Easting (x)	Northing (y)
L1	Naishes Lane	481763	151279
L2	Jubilee Drive	481154	151522
L3	Leipzig Road	481780	151205
L4	Church Crookham	481798	151319
L5	Wakefords Park	481765	151113
L6	Sandy Lane	481730	151641
L7	Maddoxford Lane	450880	114525
L8	A31 - Arlesford Bypass Logistics Hub	461687	131624
L9	A31 – Hen & Chicken Logistics Hub	475639	142205
L10	Cove Road – Hartland Park Logistics Hub	482080	155482

Figure 2.1: Provisional Key Links to be Assessed in Hampshire

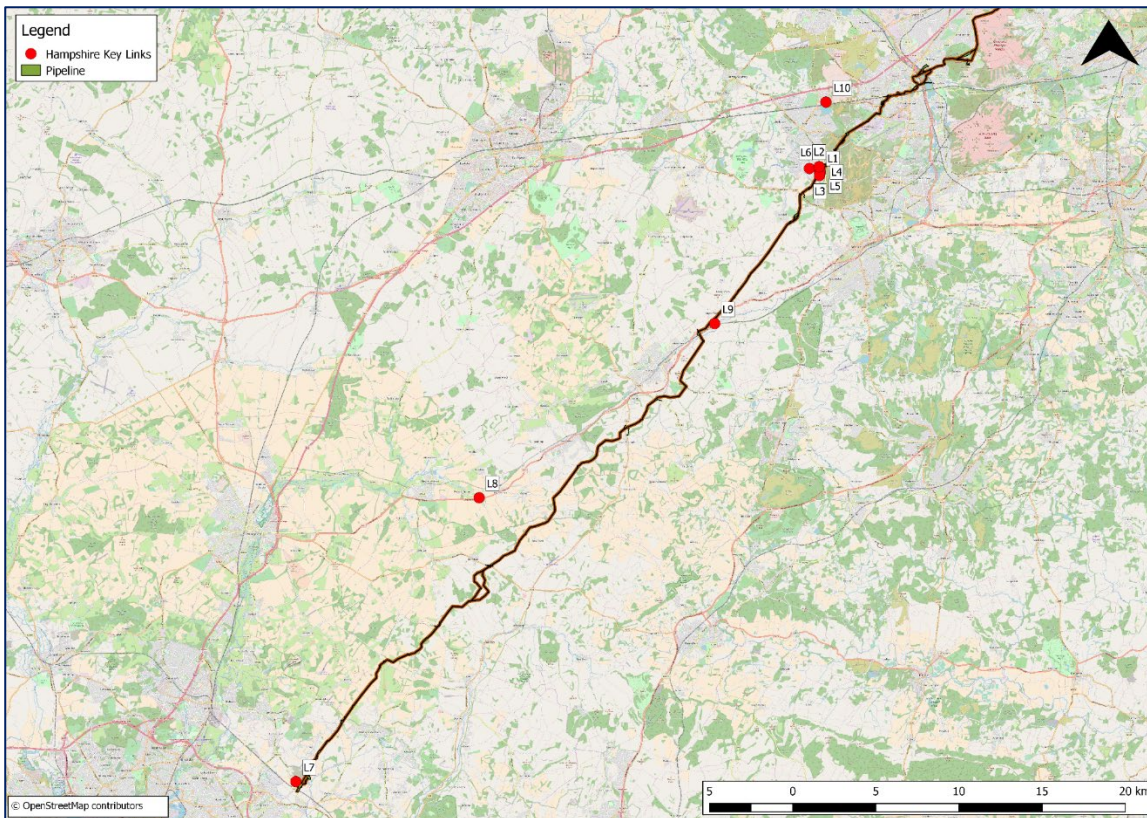


Table 2.2: Provisional Key Links to be Assessed in Surrey

No.	Location Description	Easting (x)	Northing (y)
L1	B3015 The Maultway	490952	159471
L2	B3015 Deepcut Bridge Road – Deepcut Logistics Hub	490787	158303
L3	Ambleside Road	492277	161755
L4	Briar Avenue	492643	161476

No.	Location Description	Easting (x)	Northing (y)
L5	B311 Red Road	492219	161303
L6	Fordbridge Road	506787	171209
L7	Buckingham Way	488655	158084
L8	Balmoral Drive	488701	157796
L9	B3411 Frimley Green Road	488332	157454
L10	A322 – New Road Windlesham Logistics Hub	491760	163043
L11	Littleton Lane – Brett Aggregates Logistics Hub -	505943	167696

Figure 2.2: Provisional Key Links to be Assessed in Surrey

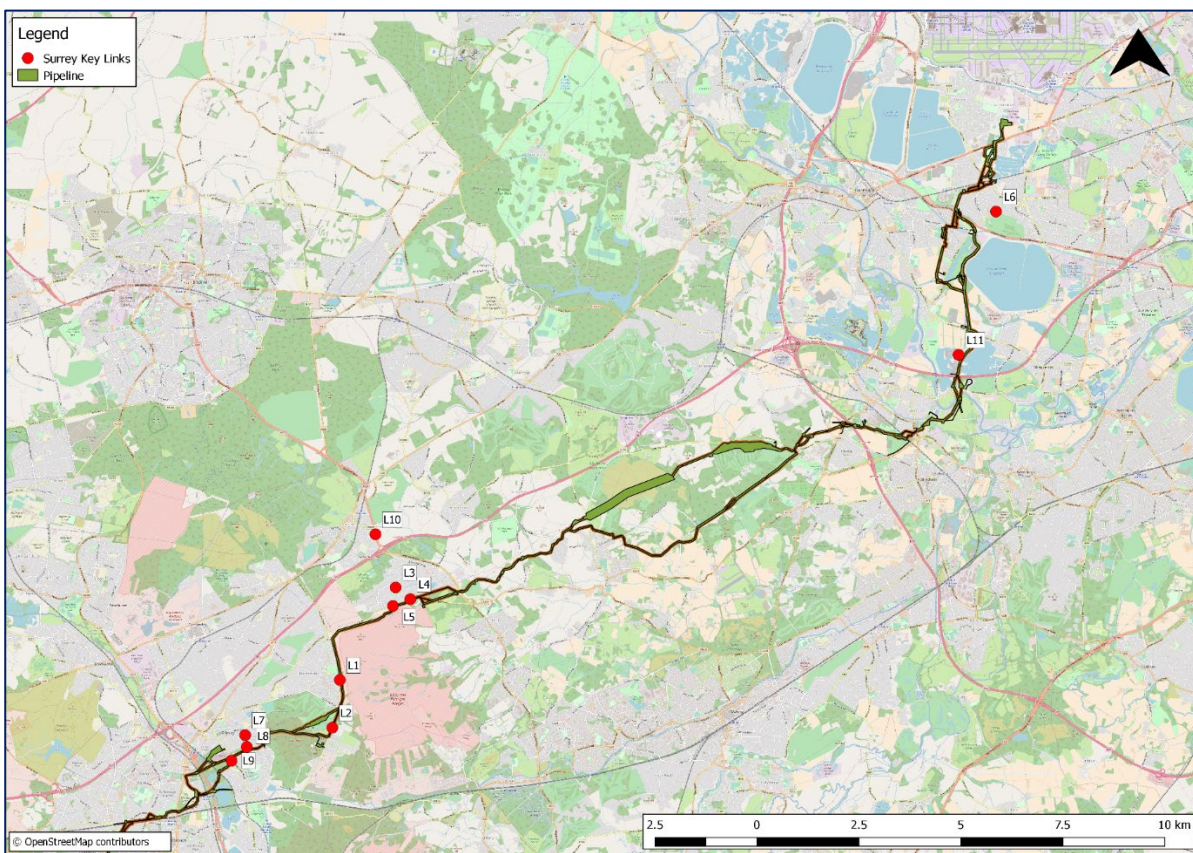


Table 2.3: Provisional Key Junctions to be Assessed Hampshire

No.	Location Description	Easting (x)	Northing (y)
J1	Naishes Lane / Wakefords Park	481732	151146
J2	Naishes Lane / Church Crookham	481769	151320
J3	Naishes Lane / Sandy Lane	481743	151629
J4	Sandy Lane / Jubilee Drive	481247	151737

Figure 2.3: Provisional Key Junctions to be Assessed in Hampshire

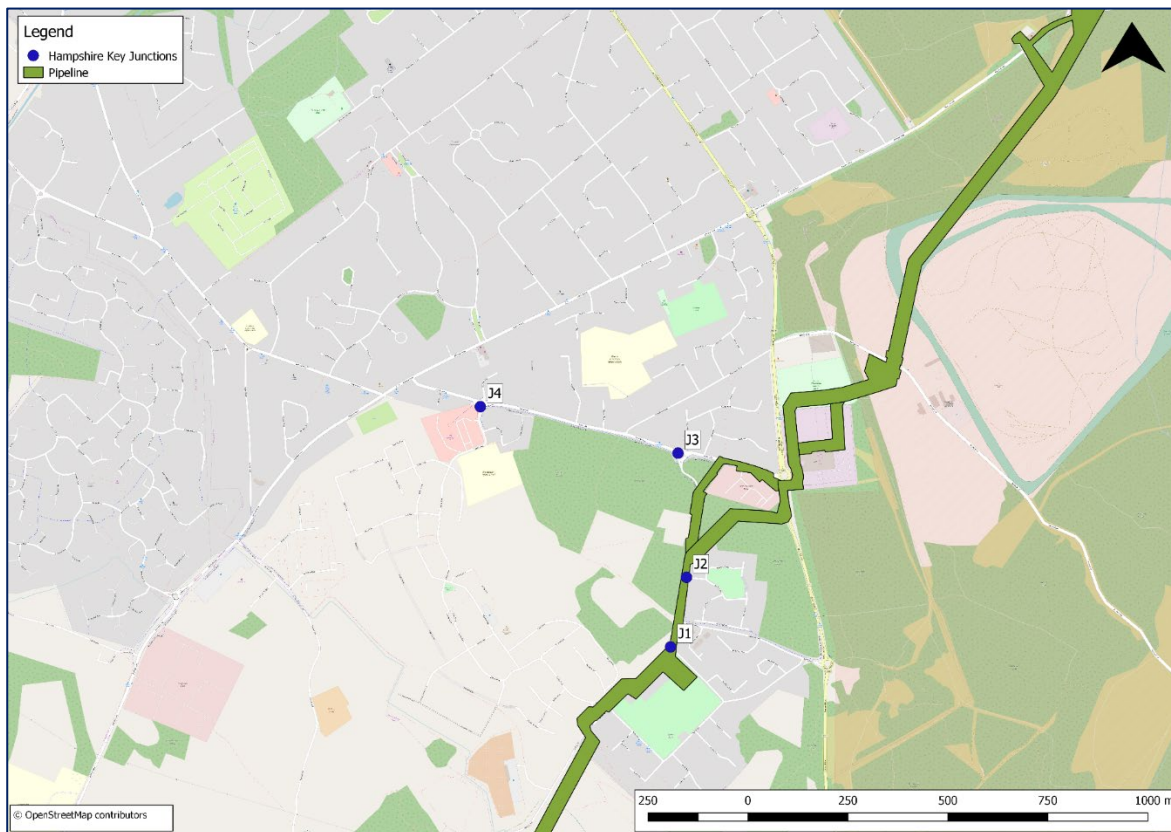
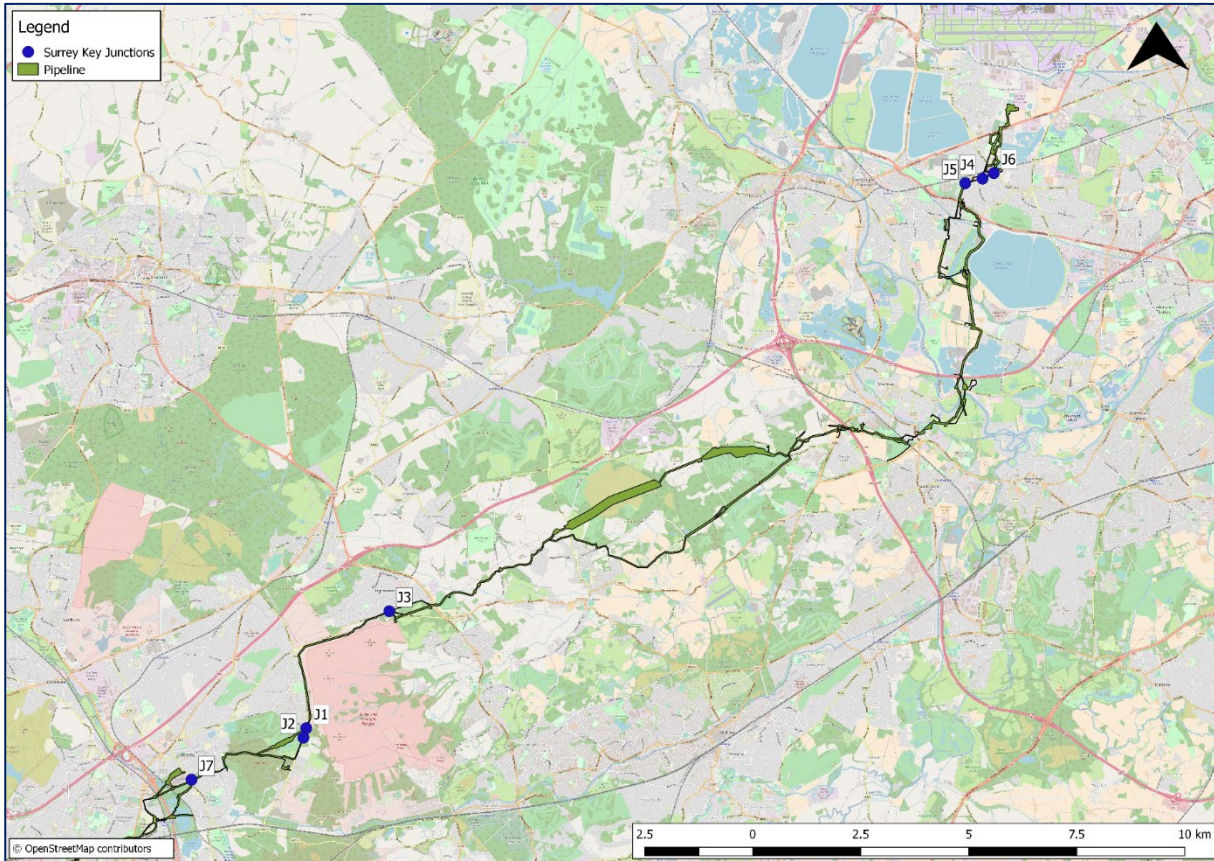


Table 2.4: Provisional Key Junctions to be Assessed Surrey

No.	Location Description	Easting (x)	Northing (y)
J1	B3015 Deepcut Bridge Road / Old Bisley Road	490953	158795
J2	B3015 Deepcut Bridge Road / Minorca Road	490889	158575
J3	B311 Red Road / Lightwater Road	492824	161524
J4	Woodthorpe Road / Stanwell Road minor	506327	171742
J5	Woodthorpe Road / Chesterfield Road	505930	171627
J6	Woodthorpe Road / Clarendon Road /Station Road	506583	171872
J7	B3411 Frimley Green Road / Balmoral Drive	488319	157561

Figure 2.3: Provisional Key Junctions to be Assessed in Surrey



Chapter 6 Assessment Methodology

- 2.2.10 This chapter will set out the methodology used to assess the impact of construction traffic trips on the local highway network.
- 2.2.11 Each phase of road closures and diversions would be assessed for the following:
- Traffic Flow Demand and Distribution;
 - Change in Traffic Flows; and
 - Change in Journey Times.

Traffic Flow Demand and Distribution

- 2.2.12 A spreadsheet approach will be adopted for the assessment of traffic link and junction information. This would provide peak hour traffic information and would also be used to provide Annual Average Daily Traffic (AADT), Annual Average Weekday Traffic (AAWT) and percentage of Heavy Goods Vehicles (HGVs).
- 2.2.13 The spreadsheet would be based on traffic flow information obtained from public sources and data that may be purchased or commissioned. It would primarily be a link based assessment but it is assumed that turning movements would be incorporated at key junctions (key junctions to be confirmed, with stakeholders). If

required, outline designs could be produced with junction modelling and further swept path analysis potentially required as proof of concept.

- 2.2.14 Background traffic growth will use information available for committed developments and incorporate standard factors using industry standard TEMPro software, which would be adjusted to avoid double counting of traffic.
- 2.2.15 HGV trip generation would be derived from pipeline installation proposals. These trips will be assigned to the road network using anticipated routes for construction vehicles.
- 2.2.16 Construction worker trip generation will also be derived and would include origins and destinations where practicable. Mode of travel would be developed drawing on our experience from other construction projects, to agree practicable targets for sustainable mode share. Walking and cycling could also be considered but would not be included within the spreadsheet assessment.
- 2.2.17 Calculation of journey times will also be included within the spreadsheet assessment. While this would not be calibrated to observed data it would be based on standard assessment techniques.

Change in Traffic Flows

- 2.2.18 Changes in traffic flows will be assessed based on thresholds of 30%, 60% and 90% (Institute of Environmental Assessment, 1993, pp.15-16) for a period of more than four weeks in any 12-month period (Institute of Environmental Assessment, 1993). These will be used for change in total traffic and change in Heavy Duty Vehicles (HGVs and buses).
- 2.2.19 Criteria to assess the Magnitude of Change in traffic flows are detailed in Table 2.5

Table 2.5: Criteria for Magnitude of Change in Traffic Flows

Change in Traffic Flows	Magnitude
A change in average daily traffic in excess of 90% for a period exceeding 4 weeks in any 12-month period	Large
A change in average daily traffic of between 60% and 90% for a period exceeding 4 weeks in any 12-month period	Medium
A change in average daily traffic of between 30% and 60% for a period exceeding 4 weeks in any 12-month period	Small
A change in average daily traffic of up to 30% for a period exceeding 4 weeks in any 12-month period	Negligible

Change in Journey Times

- 2.2.20 For journey times there is limited guidance, it is not proposed that junction analysis will be undertaken as part of this assessment. Changes to journey times are most likely to result from traffic diversions and roads subject to two and three-way traffic lights required for the project. The assessment of journey times will therefore focus on this matter. Analysis of diversion routes using speed flow curves will be

undertaken based on Future Baseline and 'with' project traffic forecasts with diversion routes in place.

- 2.2.21 Both AM and PM weekday (Monday to Friday) peak hour will be assessed for each diversion. Both directions will be assessed where the diversion is bi-directional. Peak hours will be determined based on available traffic data.
- 2.2.22 Journey times for pedestrians, cyclists and equestrians would also be considered (unless access could be maintained at all times). Pedestrians, cyclists and equestrians are more sensitive to changes in route than private vehicles users because of the effects associated with slower travel speeds and potential unsuitability of diversion routes.
- 2.2.23 The method for public transport (buses) will replicate the method used for the assessment of journey times for general traffic but with the value/ sensitivity assumed to be High. This is on the basis that passengers on buses are very sensitive to change, and that bus routes have little capacity to accommodate a change while maintaining a consistent level of service.
- 2.2.24 For the bus routes that will be affected the following criteria is proposed:
- Temporary changes in journey distances by bus for more than four weeks in any 12-month period, of more than 400m.
- 2.2.25 Criteria to assess the Magnitude of Change in journey times are detailed in Table 2.4.

Table 2.4: Criteria for Magnitude of Change in Journey Times

Change in Journey Times	Magnitude
A change in peak hour journey times in excess of 90% for a period exceeding 4 weeks in any 12-month period	Large
A change in peak hour journey times of between 60% and 90% for a period exceeding 4 weeks in any 12-month period	Medium
A change in peak hour journey times of between 30% and 60% for a period exceeding 4 weeks in any 12-month period	Small
A change in peak hour journey times of up to 30% for a period exceeding 4 weeks in any 12-month period	Negligible

Chapter 7 Assessment Scenarios

- 2.2.26 This chapter will state the assessment scenarios considered within the Transport Assessment. For each assessed year, a comparison would be provided between the 'without' and 'with' project scenario.
- 2.2.27 The proposed pipeline route has been categorised as either 'Rural' or 'Urban' and the following key current working assumptions that will inform the assessment are summarised in Table 2.5 below.

Table 2.5: Key Current Working Assumptions

Assumption	Rural	Urban
Maximum concurrent work fronts per section	8	6
Length laid/ week	450 m	90 m
Excavated spoil off-site	Limited	Yes
Standard construction working	Monday – Saturday 07:00 to 19:00	
Typical Pipe lengths	12m	3-6m
Road closures for open cut pipeline crossings of carriageways	Up to 5 working days, Class B roads and lower. For the temporary road closures to be implemented, traffic diversions will be in operation. Diversions outside of Order Limits will be agreed with relevant traffic authority in accordance with the terms of the DCO.	
Traffic management	Traffic signals to be provided where pipe is laid along or adjacent to carriageways. Mostly two-way working.	
Staff per work front	10 staff	10 staff
Staff car sharing (people/ car)	2	2
Workforce place of residence	Unknown	

Chapter 8 Future Situation (Future Reference Case)

- 2.2.28 This chapter will provide details of the future situation on the highway network.
- 2.2.29 To establish the future Baseline, background traffic growth will be applied to the existing Baseline flows which would also incorporate additional traffic flows relating to any relevant committed developments and would be adjusted to avoid double counting of traffic.

Chapter 9 Transport Impact Assessment Results

- 2.2.30 This chapter will summarise the results of the Impact Assessments undertaken. Traffic flows and changes to other transport modes would be summarised in a series of tables, with full details of the traffic flows contained within appendices.

Chapter 10 Mitigation

- 2.2.31 This chapter will consider the potential mitigation measures that would be required in order to address any effects assessed as having a medium or large Magnitude.

Chapter 11 Conclusions

- 2.2.32 This Section would provide a summary to all the above and draw out key conclusions.