

Hampshire Water Transfer and Water Recycling Project

Environmental Statement – Chapter 18 Traffic and transport

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The Southern Water logo consists of three stylized, wavy blue lines of varying lengths, positioned to the right of the text 'Southern Water'.

Contents

18	Traffic and transport	1
18.1	Introduction	1
18.2	Legislation, policy and guidance	2
18.3	Consultation, scoping and engagement	16
18.4	Primary and tertiary mitigation.....	22
18.5	Assessment methodology	24
18.6	Assumptions and limitations.....	42
18.7	Baseline conditions	43
18.8	Assessment of likely significant effects	66
18.9	Mitigation, monitoring and enhancement	107
18.10	Summary of residual effects.....	108
	References	124

Tables

Table 18-1	List of relevant legislation.....	2
Table 18-2	List of relevant national policy.....	3
Table 18-3	List of relevant local policy	8
Table 18-4	List of relevant guidance and standards	15
Table 18-5	Environmental Impact Assessment Scoping Opinion - Planning Inspectorate comments	17
Table 18-6	Summary of the scope for traffic and transport assessment	25
Table 18-7	Summary of links included in the traffic and transport assessment for the Environmental Statement.....	26
Table 18-8	Data sources used to inform the traffic and transport assessment	33
Table 18-9	Sensitive receptors	39
Table 18-10	Magnitude of impact definitions	41
Table 18-11	Significance of effects	42
Table 18-12	Section E: Portsdown Hill to Boarhunt Public Rights of Way links	54
Table 18-13	Section F: Boarhunt to Crockerhill and Section G: Crockerhill to Wickham Public Rights of Way links.....	55
Table 18-14	Section H: Wickham to Shedfield Public Rights of Way links	56
Table 18-15	Section J: Shedfield to the River Hamble Public Rights of Way links.....	57
Table 18-16	Section K: The River Hamble to Lower Upham Public Rights of Way links	57
Table 18-17	Section L: Lower Upham to Brambridge Public Rights of Way links	58
Table 18-18	Section M: Brambridge to Otterbourne Public Rights of Way links	59
Table 18-19	Public transport services between the Water Recycling Plant site and the Otterbourne Water Supply Works	62
Table 18-20	Section D: The Water Recycling Plant to Portsdown Hill link sensitivity (accidents and safety)	101
Table 18-21	Section E: Portsdown Hill to Boarhunt link sensitivity (accidents and safety)	101
Table 18-22	Section F: Boarhunt to Crockerhill link sensitivity (accidents and safety)	102
Table 18-23	Section G: Crockerhill to Wickham link sensitivity (accidents and safety).....	102
Table 18-24	Section H: Wickham to Shedfield link sensitivity (accidents and safety).....	102
Table 18-25	Section J: Shedfield to the River Hamble link sensitivity (accidents and safety).....	103
Table 18-26	Section K: The River Hamble to Lower Upham link sensitivity (accidents and safety)	103
Table 18-27	Section L: Lower Upham to Brambridge link sensitivity (accidents and safety)	104

Table 18-28	Section M: Brambridge to Otterbourne WSW link sensitivity (accidents and safety) ...	104
Table 18-29	Summary of residual effects	109

18 Traffic and transport

18.1 Introduction

- 18.1.1 This chapter provides the assessment of the likely significant effects on traffic and transport from the construction, operation and decommissioning of the Hampshire Water Transfer and Water Recycling Project (hereafter referred to as the 'Proposed Development'), which is being progressed by Southern Water Services Limited ('the Applicant').
- 18.1.2 This chapter details the legislation, policy and guidance that is relevant to traffic and transport, summarises the engagement and consultation undertaken to date, sets out the scope and methodology of assessment, and describes the baseline environment. Following this, the likely significant effects of the Proposed Development on traffic and transport are assessed taking account of embedded primary and tertiary mitigation within the design. The need for any secondary mitigation is then considered along with any proposals for monitoring and/or enhancement. The chapter concludes with a summary of residual effects.
- 18.1.3 Whilst this Environmental Statement (ES) presents an assessment of the effects that may occur from decommissioning activities of the Proposed Development, the Applicant is not seeking consent for decommissioning.
- 18.1.4 Traffic and transport topics considered within this chapter for the Proposed Development are:
1. Delay: including delay caused to drivers, bus passengers, cyclists, pedestrians and horse riders.
 2. Severance: the extent to which the Proposed Development impacts the perceived ability (or inability) of members of communities to move around their community and access services/facilities.
 3. Amenity, fear and intimidation: the impact of the anticipated volume of traffic.
 4. Accident and safety: including road safety and accident data.
 5. Hazardous and abnormal indivisible loads and the potential for a collision to result in an environmental impact.
- 18.1.5 This chapter should be read in conjunction with ES Chapter 3 Description of the Proposed Development, Volume I (Document reference 6.1, DCO Volume 6) which describes the development parameters against which the effects considered in this chapter have been assessed.
- 18.1.6 In addition, this chapter should be read alongside relevant parts of other chapters in Volume I, namely:
1. ES Chapter 6 Air quality and odour (Document reference 6.1, DCO Volume 6) – provides an assessment of the effects associated with exhaust emissions from construction vehicles on the road network, informed by the construction traffic demand forecasts detailed in this chapter.
 2. ES Chapter 12 Land use and agriculture (Document reference 6.1, DCO Volume 6) – assesses the severance of land and the barriers to access to water for livestock. The findings of the traffic and transport assessment inform the

assessment of in-combination effects on amenity for relevant land use receptors.

3. ES Chapter 15 Noise and vibration (Document reference 6.1, DCO Volume 6) – provides an assessment of the effects associated with airborne noise generated by construction vehicles on the road network, informed by the construction traffic demand forecasts detailed in this chapter.
4. ES Chapter 16 Resources and waste management (Document reference 6.1, DCO Volume 6) – provides an assessment of the effects on landfill capacity associated with hazardous loads, which has informed the hazardous loads assessment in this chapter.
5. ES Chapter 17 Socio-economics, tourism and health (Document reference 6.1, DCO Volume 6) – the recreation assessment considers impacts on the Public Rights of Way (PRoW) network during the construction period, drawing on the findings of this chapter.
6. ES Chapter 20, Cumulative and in-combination effects, (Document reference 6.1, DCO Volume 6) – an assessment of the cumulative effects i.e. effects from the interrelationship between the Proposed Development and other developments, and an assessment of the in-combination effects, i.e. effects from the interaction between the individual effects of the Proposed Development.

18.1.7 This chapter is supported by the following appendices, contained in ES Volume II (Document reference 6.2, DCO Volume 6):

1. ES Appendix 18.1 Transport Assessment

18.1.8 The ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6) provides a detailed evaluation of how the Proposed Development would affect the local transport network and identifies any measures required to manage any impacts.

18.2 Legislation, policy and guidance

18.2.1 This section identifies the legislation, policy, guidance and other documentation that has informed the assessment of likely significant effects on traffic and transport.

Legislation

18.2.2 Table 18-1 lists the legislation relevant to the assessment of the likely significant effects on traffic and transport.

Table 18-1 List of relevant legislation

Legislation	Relevance to assessment
Highways Act 1980 [1]	Sets out the provisions in relation to the management and operation of the road network in England.
New Roads and Street Works Act 1991 [2]	Provides a legislative framework for street works. This includes the temporary use of streets to facilitate works in the public highway.
Road Traffic Regulation Act 1984 [3]	Provides a legislative framework for managing the regulation of traffic on roads.

National policy

- 18.2.3 The primary policy for determining the application for the Development Consent Order (DCO) for the Proposed Development is the National Policy Statement for water resources infrastructure (NPSWRI). This sets out policies to guide how DCO applications for water resources infrastructure should be decided and how the effects of such infrastructure are considered.
- 18.2.4 Table 18-2 lists the paragraphs from the NPSWRI and other national policy that are relevant to the traffic and transport assessment. It also sets out where these policy requirements are addressed within the chapter.

Table 18-2 List of relevant national policy

Relevant paragraph reference	Summary of policy requirement	Where addressed in chapter
National Policy Statement for water resources infrastructure, 2025 [4]		
4.14.2-4.14.3	Environmental impacts may result particularly from trips generated on roads which may increase noise and air pollution as well as greenhouse gas emissions. The disturbance caused by traffic and abnormal loads generated during the construction phase will depend on the scale and type of the proposal.	The assessment of likely significant effects arising from construction traffic with regards to driver and bus passenger delay and abnormal loads is set out in section 18.8.
4.14.6	Applicants should consult National Highways (NH), Network Rail (NR) and Local Highway Authorities (LHA) as appropriate on the assessment and mitigation.	The approach to engagement is detailed in section 18.3 and includes engagement with NR, NH and the relevant LHA.
4.14.7	A construction management plan and travel plan should be prepared for the construction and operational phase of the Proposed Development. Both plans should include demand management and monitoring measures to mitigate transport impacts. Details of proposed measures to improve access by other means of sustainable transport should also be provided for example walking, cycling and public and shared transport. The aim of doing this is to reduce the need for parking associated with the proposal, contribute to decarbonisation, reduce the need to travel and secure behavioural change and modal shift to mitigate transport impacts.	Supporting documents, including a Framework Construction Traffic Management Plan (CTMP) and the appended Framework Construction Worker Travel Plan (CWTP) (Document reference 7.2, DCO Volume 7) have been discussed with NH and the relevant LHAs, as detailed in section 18.4.

Relevant paragraph reference	Summary of policy requirement	Where addressed in chapter
4.14.8	The assessment should also consider any possible disruption to services and infrastructure (such as road, rail and airports).	The assessment of likely significant effects arising from possible disruption to services and infrastructure is set out in section 18.8.
4.14.11	If a Proposed Development is likely to have significant transport implications, the Applicant's ES should also include a Transport Assessment.	A Transport Assessment has been prepared and appended to the ES, see ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).
4.14.12	Where mitigation is needed, possible demand management measures must be considered.	Details of primary and tertiary mitigation, including some demand management measures, are set out in section 18.4.
4.14.16	Where there is likely to be substantial Heavy Goods Vehicle (HGV) traffic, the Applicant should consider how to control HGV movements to and from the site during construction and operation, maximise the possibility for modal interchange to more sustainable alternatives, how to provide appropriate infrastructure to support vehicles that use alternative fuels, how to make sufficient provision for HGV parking and associated facilities, and how to ensure satisfactory arrangements for reasonably foreseeable abnormal disruption or for transporting abnormal loads in consultation with relevant network providers and the responsible police force.	Arrangements for HGV traffic, including appropriate routing and mitigation is considered within the Transport Assessment appended to the ES at ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6). Management measures for construction traffic, including abnormal loads, have been set out and secured through the Framework CTMP (Document reference 7.2, DCO Volume 7).
4.14.22	Development should only be refused on highway grounds if there would be an unacceptable impact on highway safety, if residual cumulative impacts on the road network would be severe, or if it does not show how consideration has been given to securing modal shift to more environmentally sustainable transport options, how freight and construction impacts have been reduced and mitigated and the provision of adequate active, public or shared transport access.	The assessment of effects in relation to accidents and safety and driver delay is provided in section 18.8, with no likely significant effects reported. A detailed overview of road safety, traffic impacts and access is provided within ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6). Detail relating to HGV routing and measures to reduce construction impacts have been set out within and secured through the Framework CTMP (Document reference 7.2, DCO Volume 7).

Relevant paragraph reference	Summary of policy requirement	Where addressed in chapter
National Networks National Policy Statement, 2024 [5]		
4.58	The impact of the Proposed Development on safety including the impact of any mitigation measures should be assessed. This includes undertaking a road safety audit process and ensuring their implementation.	An assessment of the effects with regards to road safety is set out in section 18.8.
4.59	The Applicant should be able to demonstrate that their scheme is consistent with government road safety policy and with the NH Safety Framework for the Strategic Road Network. Applicants must show that they have taken all steps that are reasonably required to reduce the risk of death and injury arising from their development, which includes contributing to an overall reduction in road casualties, contributing to an overall reduction in the number of unplanned incidents and contributing to improvements in road safety for pedestrians and cyclists.	The assessment of effects in relation to accidents and safety is provided in section 18.8, with a detailed road traffic collision analysis provided within the Transport Assessment, appended at ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).
4.60	The Applicant must also demonstrate that they have considered the safety implications of their project from the outset and that they are putting in place rigorous processes for monitoring and evaluating safety.	Safety measures relating to traffic and transport have been set out within the Framework CTMP (Document reference 7.2, DCO Volume 7) submitted as part of the DCO application.
5.271	Applicants should consult the relevant highway and transport authorities, local planning authority, and NR, as appropriate, on the assessment of transport impacts.	Hampshire County Council (HCC), Portsmouth City Council (PCC) and NH as the relevant local and strategic highway authorities have been engaged, as detailed in section 18.3. All relevant local planning authorities have also been consulted, as detailed in section 18.3.
5.271	Appropriate regard should be given to policies outlined in existing or emerging local plans, Local Transport Plans, Local Cycling and Walking Infrastructure Plans (LCWIP) and Rights of Way Improvement Plans.	All relevant transport policies have been reviewed in detail and included in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

Relevant paragraph reference	Summary of policy requirement	Where addressed in chapter
5.272 and 5.273	Different transport networks may need to share space within an area, even whilst serving different travel needs (e.g. bus lanes, shared cycle lanes, green lanes, or bus and rail routes on the same corridor). Applicants should seek to offer an integrated transport outcome which considers all modes as well as improving local connectivity and accessibility in developing infrastructure. The needs of pedestrians and other vulnerable road users should be considered, where appropriate, in line with the principles of the road user hierarchy.	All modes, including pedestrians and vulnerable road users have been considered in line with the principles of the road user hierarchy within the assessment of effects in section 18.8. Sustainable mode provision has been a key principle of the Traffic Management Strategy (TMS) (Document reference 7.3, DCO Volume 7) and Framework Rights of Way Management Plan (RoWMP) appended to the Framework CTMP (Document reference 7.2, DCO Volume 7) which have been submitted as part of this DCO application.
5.274	Evidence should be provided as part of the Proposed Development regarding new or existing severance issues and/or safety concerns that act as a barrier to non-motorised users, unless it is unsafe or unviable to do so.	An assessment of the effects with regards to the severance of communities by existing and proposed road infrastructure is set out in section 18.8.
National Planning Policy Framework, 2025 [6]		
105	Planning policies and decisions should protect and enhance PRoW and access, including taking opportunities to provide better facilities for users, for example by adding links to existing rights of way networks including National Trails.	The Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7) has detailed proposed PRoW mitigation. This has been submitted alongside the ES as part of the DCO application.
109 (c)	Transport issues should be considered from the earliest stages of development proposals so that the potential impacts of development on transport networks can be addressed.	ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6), has been prepared and appended to the ES. This document sets out the traffic and transport impact of the Proposed Development, and provides detail of any required mitigation measures intended to manage the impact of the Proposed Development on transport networks.
109 (e)	Transport issues should be considered from the earliest stages of development proposals so that opportunities to promote walking, cycling and public	ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6), has been prepared and appended to the ES. This details how the

Relevant paragraph reference	Summary of policy requirement	Where addressed in chapter
	transport use are identified and pursued.	forecast impacts on sustainable modes of travel would be managed.
109 (f)	Transport issues should be considered from the earliest stages of development proposals so that the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains.	Transport issues have been considered from the earliest stage, as set out in section 18.3, with embedded measures detailed in section 18.4. The assessment of likely significant effects arising from the Proposed Development is set out in section 18.8. This has been informed by ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).
116	Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe taking into account all reasonable future scenarios.	This assessment is supported by ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6). This report details the impacts of the Proposed Development with regards to highway safety and delay. The assessment of likely significant effects (section 18.8) also details how the Proposed Development would impact driver delay and highway safety, with no significant highway safety or driver delay effects.
118	All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or Transport Assessment so that the likely impacts of the proposal can be assessed	Supporting documents have been discussed with the relevant highway authorities as detailed in section 18.4. A Framework CWTP has been appended to the Framework CTMP (Document reference 7.2, DCO Volume 7) and has been prepared and submitted as part of the DCO application. The ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6) has also been prepared.

Local policy

18.2.5 The local policies listed in Table 18-3 are considered relevant to the traffic and transport assessment of the Proposed Development. While the Secretary of State (SoS) is required to determine an application for development consent in accordance with the NPSWRI, it may be that the SoS considers aspects of local

policy to be matters that are important and relevant to the determination. In the event that there is any conflict between the local policy and the NPSWRI, the NPSWRI would prevail for the purposes of decision making given the national significance of the infrastructure.

18.2.6 Policy has been considered from the relevant local planning authorities, which are the host authorities, as described in section 2.3 of ES Chapter 2 Planning legislation and policy, Volume I (Document reference 6.1, DCO Volume 6), that the Order Limits of the Proposed Development passes through, as well as local planning authorities that are anticipated to accommodate traffic movements associated with the Proposed Development within their highway network. Additional detail on specific highway network links that are expected to accommodate traffic associated with the Proposed Development is provided at Table 18-7.

18.2.7 Adopted and emerging development plan policies have been considered. Adopted and emerging planning policy that are relevant is included in Table 18-3.

Table 18-3 List of relevant local policy

Local planning authority	Relevant local policy	Relevance to assessment
East Hampshire District Council (EHDC)	East Hampshire District Local Plan: Joint Core Strategy (Adopted May 2014) [7]: <ul style="list-style-type: none"> • Policy CP31 • Policy CP32 Local Plan Second Review saved policies (2006) (Adopted March 2006) [8]: <ul style="list-style-type: none"> • Policy T4 	<p>Policy CP31 of the Local Plan indicates the need for development to enhance provision for walking, cycling and public transport.</p> <p>Policy CP31(b) states that development proposals need to protect and provide safe and convenient cycle and pedestrian links that integrate with existing cycle and pedestrian networks.</p> <p>Policy CP31(g) also states development proposals are required to ensure that the type and volume of traffic generated would not harm the countryside or the rural character of local roads.</p> <p>The traffic and transport assessment considers road safety, which includes safety from a pedestrian and cycle perspective. It also provides an assessment of the impact of a temporary increase in traffic associated with construction activities.</p> <p>Additionally, Policy CP31(c) notes highway design, including signage, should meet the needs of motor vehicles and safety.</p> <p>Policy 31(h) requires development proposals to protect sunken and rural lanes so that their convenience and safety are enhanced for users, with measures that apply to construction vehicles that reduce their impact on these routes</p>

Local planning authority	Relevant local policy	Relevance to assessment
		<p>contained within the Framework CTMP (Document reference 7.2, DCO Volume 7).</p> <p>Policy 31(j) includes a requirement for proposals that are likely to have significant transport implications to produce and implement transport assessments and travel plans. A Transport Assessment has been prepared and is provided at ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6). A Framework CWTP has also been prepared as an appendix to the Framework CTMP (Document reference 7.2, DCO Volume 7).</p> <p>The assessment of effects contained within this chapter is underpinned by a series of management plans, including the Framework CTMP (Document reference 7.2, DCO Volume 7) and the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7), which provide an overview of the signage strategy associated with the Proposed Development.</p> <p>Extant policy T4 from the Local Plan second review, states that “<i>development will not be permitted where it would adversely affect the amenity of users of footpaths, bridleways or cycleways</i>”. This chapter (see section 18.8) includes an assessment of amenity, fear and intimidation.</p>
<p>Eastleigh Borough Council (EBC)</p>	<p>Eastleigh Borough Local Plan (2016-2036) (Adopted April 2022) [9]:</p> <ul style="list-style-type: none"> • Strategic policy S12 • Policy DM13 	<p>Strategic policy S12 notes that new development should integrate with existing routes and PRoW and wherever possible maintain, protect and enhance their function. Development that would sever, obstruct or otherwise have a detrimental impact on the existing or proposed network of green routes as shown on the policies map [10] will not be permitted by East Hampshire District Council under the Town and Country Planning Act route. This chapter (see section 18.8) provides an assessment of the severance impacts of the Proposed Development.</p> <p>Policy DM13 of the Local Plan states that new development must have safe and convenient access to the highway and be provided without unacceptable environmental impact. The policy also sets out development proposals that will generate vehicle movements likely to have an adverse impact on traffic conditions beyond the</p>

Local planning authority	Relevant local policy	Relevance to assessment
		<p>immediate vicinity of the development site will be required to incorporate and implement mitigation measures such as contributions towards relevant off-site sustainable transport infrastructure, PRow and service improvements where appropriate. This chapter (see section 18.8) provides an assessment of the impact of traffic generation associated with the Proposed Development.</p>
<p>Fareham Borough Council (FBC)</p>	<p>Fareham Local Plan 2037 (2023) (Adopted April 2023) [11]:</p> <ul style="list-style-type: none"> • Strategic Policy TIN1 • Policy TIN2 <p>Local Plan Part 3: The Welbourne Plan (2015) (Adopted June 2015) [12]</p> <ul style="list-style-type: none"> • Policy WEL2 	<p>The Local Plan states the need for a convenient, efficient, resilient and safe transport network. Policy TIN1 sets out that development will be permitted where it contributes to the delivery of identified cycle, pedestrian and other non-road user routes. This chapter (see section 18.8) is underpinned by a suite of management plans, including the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7), which identifies locations where permanent PRow improvements will be sought.</p> <p>Policy TIN2 states that development will be permitted where there is no unacceptable impact on highway safety. This chapter (see section 18.8) provides an assessment of the Proposed Development's impact on highway safety.</p> <p>The Local Plan Part 3: Welbourne Plan sets out the Welbourne site plan boundary, which is located in the vicinity of the Proposed Development study area (as defined in section 18.5), as well as matters pertaining to transport, access and movement in relation to the Welbourne site. Policy WEL2 notes development should incorporate a balanced package of measures to encourage smarter transport choices including the provision of a network of footpaths, cycleways and bridleways to enhance permeability within the site and to access the adjoining area. The impact of the Welborne committed development is considered in perpetuity with the Proposed Development within the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6)</p>
<p>HCC</p>	<p>Hampshire Local Transport Plan (LTP4) (2024) (Adopted February 2024) [13]</p>	<p>LTP4 sets out transport polices covering all aspects of transport planning, delivery, and operation.</p> <p>The core policies set out in the Hampshire LTP4 shape how transport is planned and delivered</p>

Local planning authority	Relevant local policy	Relevance to assessment
	<ul style="list-style-type: none"> • Policy C1 • Policy C2 • Policy C3 • Policy C4 • Policy HP1 • Policy RT2 • Policy BT2 	<p>within Hampshire and are relevant to this Proposed Development. Of specific relevance, Policy C2 focuses on the efficient and sustainable movement of goods which is considered within the tertiary measures of this document in section 18.4.</p> <p>Policy C3 emphasises the need to consider all road users which is considered within the traffic and transport assessment.</p> <p>Policy C1 and C4 place people, places and climate change at the heart of decision making. People and places are considered within this chapter (see section 18.8), whilst climate change is a consideration within the primary and tertiary mitigation set out in section 18.4.</p> <p>Policy HP1 sets out the need to deliver infrastructure required to support a large-scale shift towards walking and cycling for everyday trips. This policy will be supported by developing (LCWIPs), seeking funding to implement infrastructure improvements prioritised in these LCWIPs and by applying the ‘Hampshire Walking and Cycling Principles [14]’. This chapter (see section 18.8) is underpinned by a suite of management plans, one of which is the Framework CWTP (appended to the Framework CTMP (Document reference 7.2, DCO Volume 7)) and contains a package of measures intended to support a large-scale shift towards walking and cycling in line with this policy.</p> <p>Policy RT2 aims to improve sustainable access to the countryside and notes Hampshire will seek to improve the accessibility and connectivity of the Rights of Way network. Section 18.8 within this chapter assesses the Proposed Development’s impact in the context of the PRow network, whilst the Framework RoWMP (appended to the Framework CTMP (Document reference 7.2, DCO Volume 7)) provides supporting detail on aspects of the Proposed Development such as PRow reinstatement.</p> <p>Policy BT2 relates to streetworks and other highway activities that could disrupt transport users. The policy notes HCC will:</p> <ol style="list-style-type: none"> a) Publish a Network Management Plan

Local planning authority	Relevant local policy	Relevance to assessment
		<p>b) Manage and co-ordinate highway activities to reduce traffic disruption</p> <p>c) Consider introducing a lane rental scheme to protect key strategic routes</p> <p>d) Continue to use traffic control and information tools to actively manage the network</p> <p>This chapter (see section 18.8) provides an assessment of the Proposed Development's impact on driver and passenger delay. This is supported by the Framework CTMP (Document reference 7.2, DCO Volume 7) which sets out how construction activities will be managed to reduce the impact on delay and the TMS (Document reference 7.3, DCO Volume 7) which sets out the proposed traffic management measures.</p>
<p>Havant Borough Council (HBC)</p>	<p>Havant Borough Core Strategy (2011) (Adopted March 2011) [15]:</p> <ul style="list-style-type: none"> • Policy CS20 <p>Havant Borough Local Plan (Allocations) (2014) (Adopted July 2014) [16]</p> <ul style="list-style-type: none"> • Policy DM9 	<p>Policy CS20 of the Local Plan notes development will be permitted where it does not increase congestion and ensure highway design responds positively to the characteristics of the area. This chapter (see section 18.8) provides an assessment of driver and passenger delay associated with the construction phase of the Proposed Development.</p> <p>Policy DM9 states Planning Permission will only be granted for development in the coastal zone that upgrades existing footpaths and ensures that public access is retained and provided to connect existing paths along the waterfront where appropriate. The coastal zone covers the area within the vicinity of the Water Recycling Plant (WRP) and Budds Farm Water Treatment Works (WTW). The Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7), which supports this traffic and transport chapter, provides and secures detail of PRow reinstatement in the vicinity of the coastal zone.</p> <p>With regards to Havant Thicket Reservoir, the Local Plan notes construction traffic should be reduced in Leigh Park, Rowlands Castle and other residential areas. The Leigh Park area is located to the north-east of the Order Limits, to the north of Havant. This chapter (see section 18.8) provides an assessment of driver and passenger delay in this area, with detail of construction traffic routing provided within the</p>

Local planning authority	Relevant local policy	Relevance to assessment
		Framework CTMP (Document reference 7.2, DCO Volume 7).
PCC	<p>Portsmouth Plan (The Portsmouth Core Strategy) (2012) (Adopted January 2012) [17]</p> <ul style="list-style-type: none"> • Policy PCS16 • Policy PCS17 <p>Portsmouth Local Plan (2038) (Draft) 'Regulation 19' [18] Pre-Submission Portsmouth Local Plan (Emerging Local Plan, July 2024)</p> <ul style="list-style-type: none"> • Strategic Policy PLP47 	<p>PCS16 of the Portsmouth Plan states that the city council will work with its partners to bring forward infrastructure to support community benefit.</p> <p>Policy PCS17 of the Portsmouth Plan notes the Council will work with its partners to deliver a strategy that will reduce the need to travel and provide a sustainable and integrated transport network.</p> <p>The Framework CWTP (appended to the Framework CTMP (Document reference 7.2, DCO Volume 7)) which supports this traffic and transport chapter secures a series of measures to encourage sustainable travel among construction workers employed to work on this Proposed Development.</p> <p>Draft Strategic Policy PLP47 of the Portsmouth Local Plan (2038) (Draft) concerns movement and transport in Portsmouth, and states that development proposals should contribute to the protection and/or delivery of a network of high quality walking and cycling routes throughout the City, including those identified in the LCWIP. The Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7) and TMS (Document reference 7.3, DCO Volume 7) which support this traffic and transport chapter provide an approach to reinstatement and enhancement of walking and cycling routes affected by the Proposed Development, including those within the PCC boundary in accordance with Policy PCS16 and Strategic Policy PLP47.</p>
Winchester City Council (WCC)	<p>Winchester District Local Plan Review (2006) (Adopted July 2006) [19]</p> <ul style="list-style-type: none"> • Policy T2 <p>Winchester District Local Plan Part 2 Development Management and Site Allocations (Adopted March 2017) [20] Your Place Your Plan Winchester District</p>	<p>Policy T2 of the Winchester District Local Plan Review sets out that development that accords with other relevant policies, requiring new or improved access, will be permitted provided it does not interfere with highway safety or function, or have adverse environmental implications. This chapter provides an assessment of the Proposed Development's impact on accidents and safety.</p> <p>Policy T1 of the Your Place Your Plan Winchester District Local Plan 2020-2040 notes the aim to reduce demands on the traffic network and the use of non car modes, particularly walking and cycling, which should be encouraged through the</p>

Local planning authority	Relevant local policy	Relevance to assessment
	Local Plan 2020-2040 March 2026 [21] <ul style="list-style-type: none"> Policy T4 	<p>use of Travel Plans, improvements and traffic management. The Framework CWTP, which can be found appended to the Framework CTMP (Document reference 7.2, DCO Volume 7), secures a series of proposed measures that aims to increase the uptake of sustainable modes among construction workers.</p> <p>Policy T4 of the Your Place Your Plan Winchester District Local Plan 2020-2040 notes that new development will be permitted where it accords with the development plan and where it makes provision for access to the site in accordance with any highway requirements on the grounds of safety, including the provision of gateways, visibility splays, access to adopted highways and accompanying signage that may be required. The Framework CTMP (Document reference 7.2, DCO Volume 7) details the highway access proposals associated with the Proposed Development.</p>
South Downs National Park Authority (SDNPA)	South Downs Local Plan (2014-2033) (Adopted July 2019) [22] <ul style="list-style-type: none"> Policy SD19 Policy SD20 South Downs Local Plan Review (Regulation 18) (2025) <ul style="list-style-type: none"> Policy SD19 Policy SD22 	<p>Policy SD19 of the Local Plan notes</p> <ul style="list-style-type: none"> Development proposals will be permitted provided that they are located and designed to reduce the need to travel and promote the use of sustainable modes of transport. Development proposals that are likely to generate a significant number of journeys must be located near existing town and village centres, public transport routes, main roads and, where relevant, the cycle network. Development proposals must demonstrate the continued safe and efficient operation of the strategic and local road networks. <p>This chapter (see section 18.8) provides an assessment of highway safety, whilst the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6) provides an assessment of trip generation associated with the development proposals. The supporting Framework CWTP (appended to the Framework CTMP (Document reference 7.2, DCO Volume 7)) secures a package of measures designed to promote the use of sustainable transport.</p> <p>Policy SD20 notes development proposals will be permitted provided they contribute to a network of attractive and functional non-motorised travel routes, with appropriate signage, throughout the</p>

Local planning authority	Relevant local policy	Relevance to assessment
		<p>National Park. It also notes development proposals will be permitted provided they incorporate attractive, accessible public links through the site, which are suitable for pedestrians, cyclists, mobility scooters and equestrians as appropriate, which connect to the nearest convenient point on the PRoW network and/or local footway network. The Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7), which supports this chapter, sets out details of PRoW management and also contains details on signage strategy, which is reinforced within the TMS (Document reference 7.3, DCO Volume 7).</p> <p>The Regulation 18 South Downs Local Plan Review allocates additional sites for development and provides additional narrative alongside several policies, including more emphasis on reducing car dependency and increasing active travel use (Policy SD19) as well as a clearer expectation that parking layouts must avoid visual and landscape harm (Policy SD22). The Framework CWTP (appended to the Framework CTMP (Document reference 7.2, DCO Volume 7)) provides a series of measures aimed at reducing car dependency among construction workers, whilst the Framework CTMP (Document reference 7.2, DCO Volume 7) itself provides details of how construction vehicle parking will be managed to prevent adversely impacting the local area.</p>

Guidance, standards and advice

18.2.8 In addition, the traffic and transport assessment has been undertaken in accordance with relevant guidance and has been compiled in accordance with professional standards. The guidance and standards which relate to this assessment are detailed in Table 18-4.

Table 18-4 List of relevant guidance and standards

Guidance	Description	Relevance to assessment
Institute of Sustainability and Environmental Professionals (ISEP) (formerly the Institute of Environmental Management and Assessment) (2023) Guidelines for the Environmental Assessment of Traffic and Movement [23]	Provide the basis for a systematic, consistent and comprehensive coverage for the appraisal of traffic impacts for a wide range of development projects.	Details the methodology for assessing the environmental impacts of the Proposed Development, as detailed in section 18.5.

Guidance	Description	Relevance to assessment
National Highways (2020) The Design Manual for Roads and Bridges (DMRB), LA 104 Environmental Assessment and Monitoring [24]	Sets out the requirements and procedures associated with the assessing, reporting and monitoring the environmental effects of NH projects and provides helpful guidance in a broader sense for other major infrastructure projects.	Section 3 of the guidance describes the environmental sensitivity, magnitude of impact, significance category and significance matrix. This approach has been adopted in this assessment, as detailed in section 18.5.
National Highways (2020) DMRB LA 112 Population and Human Health [25]	The guidance provides a framework for assessing, mitigating and reporting the effects of NH projects and provides helpful guidance in a broader sense for other major infrastructure projects	The guidance introduces significance criteria that aid consistent and proportionate assessment to support the reporting of likely significant effects. This includes significance criteria and magnitude of impact descriptions associated with impacts on walking, cycling and horse riding routes, which has been adopted for this assessment, as detailed in section 18.5.
Transport Decarbonisation Plan (2021) Decarbonising transport: a better, greener Britain [26]	Presents the path to net zero for the UK transport system and the supporting actions and commitments needed to achieve this.	Whilst emissions for transport construction are outside the scope of this guidance, it provides overarching goals for the movement of goods. This guidance is considered within primary and tertiary measures relating to construction vehicles in section 18.4.

18.3 Consultation, scoping and engagement

Consultation

18.3.1 Feedback received from stakeholders for each consultation relevant to traffic and transport is summarised within the Consultation Report (Document Reference 5.1, DCO Volume 5), including how the Proposed Development has had regard to the feedback. These cover the consultation responses received for the following consultations:

1. Summer 2022 Consultation
2. Summer 2024 Consultation
3. Spring 2025 Consultation
4. Autumn 2025 Consultation
5. Spring 2026 Consultation

Environmental Impact Assessment scoping

- 18.3.2 An Environmental Impact Assessment (EIA) Scoping Opinion was adopted by the Planning Inspectorate on behalf of the SoS on 31 August 2023. A full list of the EIA Scoping Opinion comments made by the Planning Inspectorate and their respective responses are provided in ES Appendix 5.3 Response to the EIA Scoping Opinion, Volume II (Document reference 6.2, DCO Volume 6).
- 18.3.3 Comments received from the Planning Inspectorate in relation to traffic and transport are set out in Table 18-5, describing how and where these are addressed in the ES.

Table 18-5 Environmental Impact Assessment Scoping Opinion - Planning Inspectorate comments

Scoping Opinion ID	Summary of Scoping Opinion comment	How the ES addresses the Scoping Opinion comment	Where addressed in the ES
ID 3.12.1	It was agreed in the EIA Scoping Opinion that, during operation, traffic impacts pertaining to driver delay, bus passenger delay, accidents and safety and severance can be scoped out of the ES.	These are scoped out of the assessment given change in traffic flows on nearby roads in the operational phase of the Proposed Development would fall far short of the 30% change in flow threshold set out in the ISEP Guidelines [23] to give rise to a transport impact. Detail regarding the operational impact of the Proposed Development is provided in ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).	No additional information provided in the ES.
ID 3.12.2	The EIA Scoping Opinion indicated that hazardous loads during operation should be scoped into the ES. The EIA Scoping Opinion stated that the ES should include an estimate of the number and composition of any hazardous loads and include an assessment of any likely significant effects or demonstrate why these are not likely with agreement from relevant consultation bodies.	The scope of the assessment has been amended to reflect these comments in the EIA Scoping Opinion.	Section 18.5
ID 3.12.3	The EIA Scoping Opinion made reference to the comments from HBC and noted an explanation would be required to justify why	Comments regarding the potential limitations of Strava Heat Maps (i.e. it excludes more casual PRoW users) were noted and therefore Strava Heat Maps have not informed this	Section 18.5

Scoping Opinion ID	Summary of Scoping Opinion comment	How the ES addresses the Scoping Opinion comment	Where addressed in the ES
	Strava heat maps would offer a robust data source.	assessment. The methodology detailed in DMRB LA 112 Population and Human Health [25] has been adopted to assess the impacts on pedestrian, cycle and horse rider delay.	
ID 3.12.4	The EIA Scoping Opinion also noted the baseline description should provide an accurate representation of the baseline conditions.	The description of baseline conditions has been updated to provide an accurate representation of the baseline conditions, also reflecting similar comments provided by HCC to update the accuracy of this section.	Section 18.7
ID 3.12.5	The EIA Scoping Opinion noted that the ISEP Guidelines for the Environmental Assessment of Road Traffic (1993) [27] has been replaced by the ISEP Guidelines [23] for the Environmental Assessment of Traffic and Movement (2023).	The assessment methodology has been amended to reflect the revised guidelines.	Section 18.5
ID 3.12.6	The EIA Scoping Opinion noted that if deliveries by sea are proposed, the ES should provide details including frequency, anticipated routes and assess any related impacts where significant effects are likely to occur.	These are scoped out of the assessment. No deliveries are anticipated by sea and therefore this has not been assessed.	No additional information is provided within the ES
ID 3.12.7	The EIA Scoping Opinion noted that the ES should contain a clear and full description of the methodology for any modelling used.	A clear description of the assessment methodology is set out in the Transport Assessment.	ES Appendix 18.1, Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6)
ID 3.12.8	The EIA Scoping Opinion noted the ES should include a description of the expected number of Abnormal Indivisible Loads (AILs), the proposed routing and any mitigation measures required to facilitate the delivery.	Potential AILs are identified and assessed based on the management measures detailed in the Framework CTMP (Document reference 7.2, DCO Volume 7), which is submitted as part of the DCO application.	Section 18.8

Engagement

18.3.4 This section provides details of the ongoing technical engagement that has been undertaken with stakeholders in relation to traffic and transport.

EIA Working Groups

18.3.5 Five EIA Working Groups have been established as forums for ongoing engagement with statutory bodies regarding the Proposed Development. These Working Groups when combined cover all of the assessment topics considered by the EIA. A full description of each of the EIA Working Groups, the key stakeholders, and an overview of the topics presented can be found in ES Chapter 5 EIA approach and methodology, Volume I, (Document reference 6.1, DCO Volume 6). This section presents a summary of the topics covered in the EIA Working Groups which are of relevance for the traffic and transport assessment.

18.3.6 The Emissions and Transport EIA Working Group, which includes traffic and transport, air quality and odour, noise and vibration, and waste and materials, has been the main forum for engagement on traffic and transport matters. There have been 12 Emissions and Transport EIA Working Group meetings between summer 2022 and DCO application. Technical officers from EBC, EHDC, FBC, HCC, HBC, PCC, SDNPA, WCC, NH and Natural England (NE) attended the EIA Working Group meetings.

18.3.7 The following overarching themes were covered across the EIA Working Group meetings:

1. Introduction and background to the Proposed Development.
2. Overview of the baseline environment.
3. Environmental Impact Assessment scoping which included setting out the proposed approach to EIA scoping, providing an overview of the EIA Scoping Report and seeking feedback on the EIA Scoping Opinion.
4. An overview of the Preliminary Environmental Information (PEI) Report, including setting out the baseline and approach to mitigation, as well as providing an overview of the PEI Report findings.
5. Updates on the approach to development of the design of the Proposed Development.
6. Briefings on the materials to be consulted on, including design and environmental assessment related matters, ahead of the summer 2022, summer 2024 and Spring 2025 Consultations.
7. Approach to mitigation, Commitments Register (ES Appendix 5.5 Commitments Register, Volume II (Document reference 6.2, DCO Volume 6)) and associated management plans to be provided with the DCO applications.
8. Consultation feedback and updates on scheme development, and design principles following the Summer 2024 Consultation and PEI Report.
9. Updates on EIA progress and development of mitigation, including management plans and the Commitments Register.
10. An overview of the ES, including setting out the baseline and any updates from the PEI Report, as well as providing an overview of the findings of the EIA.

18.3.8 Comments received as part of the EIA Working Groups and other stakeholder engagement, alongside the matters resolved in relation to traffic and transport, are detailed in the sections below.

National Highways

18.3.9 NH have been consulted via the Emissions and Transport EIA Working Group as well as bespoke meetings to discuss the Transport Assessment and transport management plans. A detailed summary of these meetings and workshops, including meeting minutes, can be found in ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

18.3.10 A draft version of the Framework CTMP (and appended Framework CWTP) (Document reference 7.2, DCO Volume 7) was provided to NH for comment.

18.3.11 Meetings have taken place between the Applicant and NH to discuss the access strategy for temporary construction compound B1-1, which is located to the west of Mill Lane in Havant (see ES Figure 1.1 Location of the Proposed Development and Order Limits, Volume III (Document reference 6.3, DCO Volume 6)). These meetings have centred around the potential use of the A27 eastbound slip road to provide out of hours HGV access to the compound.

Hampshire County Council

18.3.12 Hampshire County Council (HCC) is the LHA for the majority of local roads within the study area (as defined at Table 18-7) with the exception of PCC roads located to the south of Section D: The Water Recycling Plant site to Portsdown Hill and Section E: Portsdown Hill to Boarhunt of the Pipeline between the Water Recycling Plant (WRP) site and Otterbourne Water Supply Works (WSW).

18.3.13 Engagement with HCC has been via several methods and groups including the Emissions and Transport EIA Working Group, bilateral meetings, Joint Officers Group meetings and other bespoke meetings to discuss the Transport Assessment and transport management plans. A detailed summary of these meetings and workshops, including meeting minutes, can be found in ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

18.3.14 Supporting documentation to the ES has been discussed with HCC and includes a Transport Assessment (found in ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6)), Framework CTMP (Document reference 7.2, DCO Volume 7), (and the appended Framework CWTP), TMS (Document reference 7.3, DCO Volume 7) and Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7).

18.3.15 During initial engagement with HCC it was outlined that temporary road closures would be objected to on the A3, A32, A334, B2177 and B3354. As detailed in the TMS (Document reference 7.3, DCO Volume 7), road closures have been avoided on all roads identified by HCC and listed above.

18.3.16 There have been several workshops to discuss the Transport Assessment, including:

1. A Transport Assessment Scoping meeting was held on 26 January 2024 to discuss the scope of the Transport Assessment (found in ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6)).

This engagement was informed by a Transport Assessment Scoping Report. Written comments were provided in February 2024, and these have been reflected in section 18.7.

2. A technical note setting out the proposed background traffic growth factors and cumulative developments was issued in October 2024 for comment. The background growth factors were agreed in writing and have informed this assessment. The cumulative developments (longlist and shortlist) were subsequently discussed in spring 2025. Following engagement with HCC and to be consistent with the air quality assessment, these cumulative developments have informed the future baseline (section 18.7).
3. A technical note detailing the forecast construction traffic impacts was issued to HCC in December 2024. This was discussed at a meeting on 12 March 2025 where it was agreed management measures would be implemented to reduce construction traffic impacts at Fisher's Pond, as detailed in the Framework CTMP (Document reference 7.2, DCO Volume 7).

18.3.17 To inform the Framework CTMP (Document reference 7.2, DCO Volume 7) there have been several workshops with HCC to discuss the following key topics:

1. A draft Framework CTMP (Document reference 7.2, DCO Volume 7) was submitted as part of the Summer 2024 Consultation documents and written comments were provided, as set out in the Consultation Report (Document reference 5.1, DCO Volume 5).
2. At workshops on 11 July 2024 and 3 September 2024, the access strategies for the temporary construction compounds were discussed, including the access locations, management measures and the proposed routing of HGV. Comments received at these workshops informed the Framework CTMP (Document reference 7.2, DCO Volume 7).
3. An updated Framework CTMP was shared in April 2025 and written comments were received from HCC on 4 August 2025 and discussed at workshops on 14, 21 and 28 August 2025.

18.3.18 A draft Framework CWTP (which can be found appended to the Framework CTMP (Document reference 7.2, DCO Volume 7)) was issued to HCC in December 2024 and written comments were received in January 2025. Following a workshop on 6 May 2025, the Framework CWTP was updated to address the comments received.

18.3.19 A draft TMS (Document reference 7.3, DCO Volume 7) was issued to HCC in December 2024. Written comments subsequently provided by HCC were discussed at a workshop on 28 April 2025. The TMS (Document reference 7.3, DCO Volume 7) was subsequently updated to reflect these written comments and the matters discussed at the workshop.

18.3.20 There have been several workshops with HCC to discuss the Framework RoWMP on 17 October 2024, 22 October 2024 and then 1 May 2025. Written comments on the draft Framework RoWMP were also provided in January 2025 and these have been addressed in the Framework RoWMP submitted with the DCO application appended to the Framework CTMP (Document reference 7.2, DCO Volume 7).

Portsmouth City Council

- 18.3.21 Portsmouth City Council (PCC) (as the LHA for the roads to the south of Sections D and E of the Pipeline between the WRP site and Otterbourne WSW) has also been engaged via the Emissions and Transport EIA Working Group. PCC has noted a keen interest in temporary construction compounds and their access arrangements. There has also been engagement with PCC as part of the bi-lateral meetings, Joint Officers Group meetings and the Transport Assessment scoping discussions. Draft transport management plans were also shared with PCC for comment and whilst no written comments were received, the content of the management plans have been discussed with PCC in meetings.

South Downs National Park Authority

- 18.3.22 The SDNPA, who are responsible for the conservation and enhancement of the natural beauty, wildlife and cultural heritage of the South Downs, has also been engaged via the Emissions and Transport EIA Working Group. The SDNPA queried the quantum of hazardous loads and how these were being assessed within the ES. The quantum of hazardous load movements and the associated assessment of likely significant effects is set out in section 18.8. The SDNPA also attended workshops to discuss the Framework RoWMP (appended to the Framework CTMP (Document reference 7.2, DCO Volume 7)) dated 17 October 2024 and 22 October 2024.

Network Rail

- 18.3.23 NR is the owner/operator of much of the UK railway network and have been consulted regarding the potential impacts of the Proposed Development, primarily associated with the proposed tunnelling works below the railway. Whilst engagement is ongoing, it is not expected that the Proposed Development would have any impact on the passenger rail services. Any impacts upon NR tracks or assets are intended to be within NR acceptance criteria.

18.4 Primary and tertiary mitigation

Primary measures

- 18.4.1 As described in ES Chapter 3 Description of the Proposed Development, Volume I, (Document reference 6.1, DCO Volume 6) a range of measures have been embedded into the Proposed Development design to avoid or reduce environmental effects. These primary mitigation measures specific to traffic and transport which form part of the design that has been assessed are:
1. All motorways, A roads and railways would be crossed using trenchless construction at a minimum depth of 2.5m below surface level.
 2. Avoiding temporary road closures on roads used for journeys at a regional or national level (as defined in section 18.5). Full detail relating to this is provided within the TMS submitted as part of the DCO (Document reference 7.3, DCO Volume 7).
 3. Where practicable, avoiding temporary closures on national trails, the National Cycle Network (NCN) or other Rights of Way where there are not deemed to

be suitable alternatives. Full detail relating to this is provided within the Framework RoWMP submitted as part of the DCO appended to the Framework CTMP (Document reference 7.2, DCO Volume 7).

4. Temporary and permanent transport infrastructure, such as new accesses, would be designed in accordance with the relevant standards. Full detail on this is provided within the Framework CTMP submitted as part of the DCO (Document reference 7.2, DCO Volume 7).
5. Public Rights of Way (PRoW) impacted by the Proposed Development would be reinstated to its previous condition, as detailed in the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7).

Tertiary measures

- 18.4.2 Good construction practices are secured in the Outline Construction Environmental Management Plan (CEMP) (Document reference 7.1, DCO Volume 7) which is secured by a requirement in the DCO and will manage the effects of construction. The measures of particular relevance to traffic and transport relate to the Stakeholder and Customer Communications Plan for the CEMP and the supporting transport management plans that have been submitted as separate documents as part of the DCO application, comprising the Framework CTMP (with the Framework CWTP and Framework RoWMP appended) (Document reference 7.2, DCO Volume 7) and TMS (Document reference 7.3, DCO Volume 7) as described at paragraphs 18.4.4 to 18.4.8.
- 18.4.3 A Framework CTMP (Document reference 7.2, DCO Volume 7) has been prepared and submitted as part of the DCO application. The Framework CTMP provides detail on the routes that will be designated for use by construction vehicles when travelling to and from the various components of the Proposed Development, as shown at ES Figure 18.2 Construction Traffic Access Routes, Volume III (Document reference 6.3, DCO Volume 6). The document also provides detail on construction traffic management measures that will be implemented during the construction process. Additionally, the Framework CTMP details the routing of Abnormal Indivisible Loads and the anticipated temporary works that may be required to facilitate access.
- 18.4.4 A Framework CWTP, which can be found appended to the Framework Construction CTMP (Document reference 7.2, DCO Volume 7), has also been prepared and issued as part of the DCO application. The Framework CWTP secures a package of measures that aim to encourage more sustainable travel behaviours among construction workers. Though the Framework CWTP secures a commitment to these measures to reduce single occupancy vehicle trips, the modal split used within the assessment in section 18.8 replicates the existing baseline modal split and does not account for the impacts of the Framework CWTP as per the request of HCC.
- 18.4.5 A TMS has been submitted as part of the DCO application documents (Document reference 7.3, DCO Volume 7). This document provides detail regarding any road closures and associated traffic management that may be required during the construction phase of the Proposed Development. Where road closures are proposed in proximity to each other, the TMS (Document reference 7.3, DCO Volume 7) includes measures that will result in a sequential approach to road closures (nearby roads would not be subject to closures at the same time) being

adopted to reduce impacts on journey times. In addition, the TMS (Document reference 7.3, DCO Volume 7) also identifies where works in the public highway will be undertaken overnight to reduce impacts on journey times.

- 18.4.6 Additionally, a Framework RoWMP has been prepared and submitted alongside the ES as part of the DCO application appended to the Framework CTMP (Document reference 7.2, DCO Volume 7). The Framework RoWMP secures PRow mitigation measures, such as diversions, that are required during the construction phase of the Proposed Development. The document also provides detail of measures to notify the public when local PRowS may be impacted.
- 18.4.7 The Framework CTMP (and appended Framework CWTP and Framework RoWMP) (Document reference 7.2, DCO Volume 7) and TMS (Document reference 7.3, DCO Volume 7) have been developed in consultation with HCC and PCC as the relevant LHAs. The Framework CTMP (and appended Framework CWTP) (Document reference 7.2, DCO Volume 7) and TMS (Document reference 7.3, DCO Volume 7) have also been developed in consultation with NH as the strategic highway authority. Engagement with the SDNPA has also informed the Framework CTMP and Framework RoWMP (Document reference 7.2, DCO Volume 7).
- 18.4.8 The Framework CTMP is secured by a requirement in Schedule 2 to the draft DCO. Post-consent, the Contractor will develop the document into detailed CTMP(s), adhering to the framework set out.
- 18.4.9 Decommissioning will be subject to the appropriate permits, consents and regulatory environment at the relevant time. Decommissioning activities are expected to follow good industry practice in place at the time, anticipated to be similar in nature to measures in the Outline CEMP (Document reference 7.1, DCO Volume 7).

18.5 Assessment methodology

Scope of assessment

- 18.5.1 Likely significant effects requiring assessment may be temporary or permanent, direct, indirect, secondary, cumulative, in-combination, beneficial or adverse and may occur during construction, operation or decommissioning. Potential likely significant effects on traffic and transport receptors within the scope of the assessment are summarised in Table 18-8. The scope of the assessment has responded to feedback received as detailed in section 18.3.
- 18.5.2 Effects from decommissioning of the Proposed Development are considered to be no greater than those identified during the construction phase. The construction period is considered to have the greatest change on the surrounding transport network and the construction phase has therefore been used to identify the likely worst-case effects of the decommissioning phase, including whether any mitigation would be required. Refer to ES Chapter 3 Description of the Proposed Development, Volume I (Document reference 6.1, DCO Volume 6), section 3.7 for full information on decommissioning.
- 18.5.3 Cumulative effects are those from the resulting interrelationships between the Proposed Development and other developments (inter-project). These are

reported within ES Chapter 20 Cumulative and in-combination effects, Volume I (Document reference 6.1, DCO Volume 6).

- 18.5.4 In-combination effects are those that result from the interaction of individual effects combined together on a single receptor or resource at a single point in time. Where a receptor is affected by multiple topics and there is the potential for significant in-combination effects to occur, these aggregated effects are reported within ES Chapter 20 Cumulative and in-combination effects, Volume I (Document reference 6.1, DCO Volume 6).
- 18.5.5 Table 18-8 sets out the summary of the scope for the assessment in this chapter. All scoped out elements as agreed in the EIA Scoping Opinion are confirmed in ES Appendix 5.3 Response to EIA Scoping Opinion, Volume II (Document reference 6.2, DCO Volume 6).

Table 18-6 Summary of the scope for traffic and transport assessment

Impact (receptor)	Construction	Operation	Decommissioning
Delay (driver and bus passenger)	Scoped in	Scoped out	Scoped in
Delay (pedestrian, cyclist and horse rider)	Scoped in	Scoped in	Scoped in
Severance (non motorised road users)	Scoped in	Scoped out	Scoped in
Amenity, fear and intimidation (non motorised road users)	Scoped in	Scoped in	Scoped in
Accidents and safety (all road users)	Scoped in	Scoped out	Scoped in
Hazardous and large loads (all road users)	Scoped in	Scoped in	Scoped in

Study area

- 18.5.6 This section describes the spatial scope (the area which is impacted) for the assessment as it applies to traffic and transport.
- 18.5.7 The study area for the assessment has been defined with reference to the ISEP Guidelines [23] (see paragraph 18.5.32) and comprises the Order Limits for the Proposed Development and the spatial extent defined for each topic of the traffic and transport assessment.
- 18.5.8 The traffic and transport study area has been established through stakeholder engagement with the LHAs and NH following the determination of routes for construction traffic for both the movement of materials and employees, and operational traffic. The study area has been defined by the components of the Proposed Development (see ES Chapter 3 Description of the Proposed Development, Volume I (Document reference 6.1, DCO Volume 6) for full details on the Proposed Development components):
1. Water Recycling Plant site
 2. Pipelines between Budds Farm Wastewater Treatment Works (WTW) and the WRP site

3. Pipelines between the WRP site and Bedhampton Springs
 4. Pipeline between the WRP site and Otterbourne WSW
 5. Above Ground Plant (AGP), including:
 6. Intermediate Pumping Stations (IPS)
 7. Break Pressure Tanks (BPT)
- 18.5.9 The study area is bound by Winchester and Petersfield in the north, B2149 and Havant in the east, M27 and Langstone in the south and the M3 in the west, as shown in ES Figure 18.1 Traffic and transport study area: Proposed Development and key links, Volume III (Document reference 6.3, DCO Volume 6). This figure also displays the key links in the Development study area.
- 18.5.10 The following links, as described in Table 18-7, are located in the vicinity of the Proposed Development components and are therefore included in the study area for this ES. These links are also illustrated in ES Figure 18.3 Construction study links, Volume III (Document reference 6.3, DCO Volume 6).
- 18.5.11 These links do not comprise the full extent of the study area, with other roads that are not anticipated to accommodate notable volumes of construction trips but that may be affected directly or indirectly by the Proposed Development reviewed across section 18.7.
- 18.5.12 Some of these other links were initially assessed in additional detail, though as the design of the Proposed Development progressed it became apparent that construction traffic impacts on these routes would be minimal. As such, these links have not been included within Table 18-7 and are categorised as ‘low impact’ at ES Figure 18.3 Construction study links, Volume III (Document reference 6.3, DCO Volume 6).
- 18.5.13 Where there are multiple links with the same road name, suffixes have been added to each road name to distinguish between each discrete link. These suffixes involve the location of the respective link section in relation to other links of the same name (i.e. east (E), west (W), central (C)) or for longer links that are present throughout the study area, numbering has been used (i.e. B2177 (1)). This enables each link to have a unique reference.

Table 18-7 Summary of links included in the traffic and transport assessment for the Environmental Statement

Ref	Link name	Component/Section	Start junction	End junction
6	B2149 (S)	Pipelines between the WRP site and Bedhampton Springs	New Road roundabout (B2149 Park Road North/New Road/B2149 Petersfield Road/Elmleigh Road)	Langstone Interchange (B2149 Park Road North/A27/A3023 Langstone Road)
8	B2177 (1)	Pipelines between the WRP site and Bedhampton Springs	Belmont Junction (B2177 Portsdown Hill Road/B2177 Bedhampton Road/Brookside Road/B2177 Bedhampton Hill)	Rusty Cutter (B2177 Bedhampton Hill/A2030/A2030 Havant Road/A3 Slips)

Ref	Link name	Component/Section	Start junction	End junction
12	Brookside Road	Pipelines between the WRP site and Bedhampton Springs	Belmont Junction (B2177 Portsdown Hill Road/B2177 Bedhampton Road/Brookside Road/B2177 Bedhampton Hill)	Brookside Road/Bidbury Lane/Lower Road
13	Bidbury Lane	Pipelines between the WRP site and Bedhampton Springs	Brookside Road/Bidbury Lane/Lower Road	Bidbury Lane/Mill Lane
14	Mill Lane	Pipelines between the WRP site and Bedhampton Springs	Bidbury Lane/Mill Lane	Mill Lane
15	West Street	Pipelines between the WRP site and Bedhampton Springs	B2149 New Road/B2150 Bedhampton Road/West Street	Park Road North/Park Road South/West Street
16	Meyrick Road	Pipelines between the WRP site and Bedhampton Springs	West Street/Meyrick Road	Meyrick Road
17	Harts Farm Way (1)	WRP site	Tear Drop Junction (A2030/A27/Harts Farm Way)	Harts Farm Way
18	Gillman Road	Section D of the Pipeline between the WRP site and Otterbourne WSW	Crookhorn Lane/B2177 Portsdown Hill Road/Gillman Road	Gillman Road
19	B2177 (2)	Section D of the Pipeline between the WRP site and Otterbourne WSW	New Down Lane/B2177 Portsdown Hill Road	Crookhorn Lane/B2177 Portsdown Hill Road/Gillman Road
20	A3 (S)	Section E of the Pipeline between the WRP site and Otterbourne WSW	A3 London Road/B2177 Portsdown Hill Road	A27 Southampton Road/A3 London Road/A27 Western Road/M275
21	A27	Section E of the Pipeline between the WRP site and Otterbourne WSW	A27 Southampton Road/A3 London Road/A27 Western Road/M275	M27 Junction 12
22	Crookhorn Lane	Section D of the Pipeline between the WRP site and Otterbourne WSW	Crookhorn Lane/College Road	Crookhorn Lane/B2177 Portsdown Hill Road/Gillman Road
23	College Road	Section D of the Pipeline between the WRP site and Otterbourne WSW	Purbrook Way/College Road	Crookhorn Lane/College Road

Ref	Link name	Component/Section	Start junction	End junction
24	Purbrook Way (2)	Section D of the Pipeline between the WRP site and Otterbourne WSW	Purbrook Way/College Road	Purbrook Way/A3 (M) Slip
26	B2177 (3)	Section D of the Pipeline between the WRP site and Otterbourne WSW	Crookhorn Lane/B2177 Portsdown Hill Road/Gillman Road	B2177 Portsdown Hill Road/Rectory Grove
29	New Down Lane	Section E of the Pipeline between the WRP site and Otterbourne WSW	New Down Lane	New Down Lane/B2177 Portsdown Hill Road
31	B2177 (4)	Section E of the Pipeline between the WRP site and Otterbourne WSW	New Down Lane/B2177 Portsdown Hill Road	B2177 Southwick Road
32	Boarhunt Road	Section E of the Pipeline between the WRP site and Otterbourne WSW	Boarhunt Road	M27 Junction 11
33	A32 (S)	Section F of the Pipeline between the WRP site and Otterbourne WSW	A32 Hoad's Hill/Knowle Road	M27 Junction 10
34	A32 (C)	Section F of the Pipeline between the WRP site and Otterbourne WSW	A32 Hoad's Hill/A334 Winchester Road	A32 Hoad's Hill/Knowle Road
35	A334 (E)	Section G of the Pipeline between the WRP site and Otterbourne WSW	A334 Winchester Road/B2177 Winchester Road	A32 Hoad's Hill/A334 Winchester Road
36	A334 (C)	Section H of the Pipeline between the WRP site and Otterbourne WSW	A334 Station Hill/B3035 Botley Road/A334 Wickham Road	A334 Winchester Road/B2177 Winchester Road
37	Titchfield Lane	Section G of the Pipeline between the WRP site and Otterbourne WSW	Titchfield Lane	Titchfield Lane/A334 Winchester Road/Blind Lane
38	Blind Lane	Section H of the Pipeline between the WRP site and Otterbourne WSW	Titchfield Lane/A334 Winchester Road/Blind Lane	Blind Lane
39	B2177 (5)	Section H of the Pipeline between the	B2177 Winchester Road/St Annes Lane	A334 Winchester Road/B2177 Winchester Road

Ref	Link name	Component/Section	Start junction	End junction
		WRP site and Otterbourne WSW		
40	Shirell Heath High St	Section H of the Pipeline between the WRP site and Otterbourne WSW	B2177 Winchester Road/Shirell Heath High St	Shirell Heath High St
41	B3035	Section J of the Pipeline between the WRP site and Otterbourne WSW	B2177 Winchester Road/Coppice Hill/B3035 Botley Road	A334 Station Hill/B3035 Botley Road/A334 Wickham Road
42	Curdrige Lane	Section J of the Pipeline between the WRP site and Otterbourne WSW	B3035 Botley Road/Curdrige Lane	Curdrige Lane
43	B3037 (W)	Section K of the Pipeline between the WRP site and Otterbourne WSW	B3037 Fair Oak Road/A335 Station Hill	B3354 Winchester Road/B3354 Botley Road/B3037 Fair Oak Road
44	B3354 (S)	Section L of the Pipeline between the WRP site and Otterbourne WSW	B3354 Main Road/B2177 Portsmouth Road/B3354 Winchester Road	B3354 Winchester Road/B3354 Botley Road/B3037 Fair Oak Road
45	B3037	Section K of the Pipeline between the WRP site and Otterbourne WSW	B3354 Winchester Road/B3037 Mortimers Lane	B3037 Mortimers Lane/B2177 Winchester Road
46	B2177 (6)	Section K of the Pipeline between the WRP site and Otterbourne WSW	B2177 Winchester Road/B3037 Mortimers Lane/Upham Street	B2177 Winchester Road/Winters Hill
47	Winters Hill	Section K of the Pipeline between the WRP site and Otterbourne WSW	Winters Hill/Scivier's Lane/Durley Street/Manor Road	B2177 Winchester Road/Winters Hill
48	B3335 (N)	Section L of the Pipeline between the WRP site and Otterbourne WSW	M3 Junction 11/Hockley Link/B3335 Winchester Road	B3335 Winchester Road/B3335 Highbridge Road/B3354 Main Road
49	B3354 (N)	Section L of the Pipeline between the WRP site and Otterbourne WSW	B3335 Winchester Road/B3335 Highbridge Road/B3354 Main Road	B3354 Main Road/B2177 Portsmouth Road/B3354 Winchester Road

Ref	Link name	Component/Section	Start junction	End junction
50	B2177 (7)	Section L of the Pipeline between the WRP site and Otterbourne WSW	B3354 Main Road/B2177 Portsmouth Road/B3354 Winchester Road	B3037 Mortimers Lane/B2177 Winchester Road
51	B2177 (9)	Section K of the Pipeline between the WRP site and Otterbourne WSW	B2177 Winchester Road/Winters Hill	B2177 Winchester Road/Coppice Hill/B3035 Botley Road
52	Otterbourne Hill (N)	Section M of the Pipeline between the WRP site and Otterbourne WSW	Otterbourne Main Road/Sparrowgrove	Otterbourne Main Road/Kiln Lane/Otterbourne Hill
53	Kiln Lane	Section M of the Pipeline between the WRP site and Otterbourne WSW	Otterbourne Main Road/Kiln Lane/Otterbourne Hill	Kiln Lane
54	Church Lane	Section L of the Pipeline between the WRP site and Otterbourne WSW	B3335 Highbridge Road/Brambridge	Church Lane
56	B3335 (S)	Section L of the Pipeline between the WRP site and Otterbourne WSW	B3335 Winchester Road/B3335 Highbridge Road/B3354 Main Road	A335 Allbrook Way/Allbrook Hill/A335 Twyford Road/Woodside Avenue
57	A335	Section L of the Pipeline between the WRP site and Otterbourne WSW	M3 Junction 12	A335 Allbrook Way/Allbrook Hill/A335 Twyford Road/Woodside Avenue
58	Waterworks Road	Section M of the Pipeline between the WRP site and Otterbourne WSW	Sparrowgrove/Waterworks Road	Otterbourne WSW
59	Sparrowgrove	Section M of the Pipeline between the WRP site and Otterbourne WSW	Otterbourne Road/Sparrowgrove	Sparrowgrove/Waterworks Road
62	Brockhampton Road	Pipelines between Budds Farm WTW and the WRP site	West Street/Brockhampton Road	Harts Farm Way/Brockhampton Road/Brookside Road/Southmoor Lane
63	Harts Farm Way (2)	Pipelines between Budds Farm WTW and the WRP site	Harts Farm Way	Harts Farm Way/Brockhampton Road/Brookside

Ref	Link name	Component/Section	Start junction	End junction
				Road/Southmoor Lane
64	Otterbourne Road	Section M of the Pipeline between the WRP site and Otterbourne WSW	B3335 St Cross Road/Hockley Link/Otterbourne Road/Badger Farm Road	Otterbourne Main Road/Sparrowgrove
65	Hockley Link	Section M of the Pipeline between the WRP site and Otterbourne WSW	B3335 St Cross Road/Hockley Link/Otterbourne Road/Badger Farm Road	M3 Junction 11
66	Southmoor Lane	Pipelines between Budds Farm WTW and the WRP site	Harts Farm Way/Brockhampton Road/Brookside Road/Southmoor Lane	Southmoor Lane/Budds Farm access
67	Otterbourne Hill (S)	Section M of the Pipeline between the WRP site and Otterbourne WSW	Otterbourne Main Road/Kiln Lane/Otterbourne Hill	Otterbourne Hill/Winchester Road/Winchester Road Link
68	B2177 (8)	Section D of the Pipeline between the WRP site and Otterbourne WSW	B2177 Portsdown Hill Road/Rectory Grove	Belmont Junction (B2177 Portsdown Hill Road/B2177 Bedhampton Road/Brookside Road/B2177 Bedhampton Hill)
69	A334 (W)	Section J of the Pipeline between the WRP site and Otterbourne WSW	A334 Station Hill/A334 Mill Hill/A3051 Botley Road	A334 Station Hill/B3035 Botley Road/A334 Wickham Road
70	Winchester Road Link	Section M of the Pipeline between the WRP site and Otterbourne WSW	Otterbourne Hill/Winchester Road/Winchester Road Link	M3 Junction 12

18.5.14 A construction workers hub may be temporarily required during the construction phase to act as a main project hub (as described in section 3.5 of ES Chapter 3 Description of the Proposed Development, Volume I (Document reference 6.1, DCO Volume 6)). Due to uncertainty over timing and availability of potential temporary construction workers hub sites, the temporary construction workers hub would be identified by the Contractor, during the construction phase. Given specific detail regarding its location would not be known until post-consent, the impact of the proposed construction workers hub on the local highway network has been assessed more generally by assessing the local highway network as a single receptor rather than reviewing specific roads. This assessment is set out in section

18.8 and full details can be found in section 10.6 of ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

- 18.5.15 It is assumed the construction workers hub would be located at an existing site which will have suitable consent to undertake similar activities, have sufficient car parking and generate a similar or greater volume of traffic in the peak periods. Given the construction workers hub would therefore result in a net reduction in traffic compared with the existing consent, when assessing the construction workers hub in this chapter, the local highway network has been assessed as a single receptor which is considered appropriate.
- 18.5.16 The construction workers hub is not included in the Order Limits and it may be situated outside of the spatial study area defined above. A framework has been developed which details the purpose of the construction workers hub and the parameters that would guide the location, as detailed in section 3.5 of ES Chapter 3 Description of the Proposed Development, Volume I (Document reference 6.1, DCO Volume 6).
- 18.5.17 In addition to the road links identified above, the spatial study area also includes all PRow that are located within the Order Limits. PRows outside of the Order Limits would not be impacted by the Proposed Development and are therefore not included in the spatial study area.

Assessment scenarios

- 18.5.18 ES Chapter 5 EIA approach and methodology, Volume I, (Document reference 6.1, DCO Volume 6) provides an overview of the Proposed Development's approach to the temporal scope (the time scales over which impacts may occur) of the EIA. This section describes the temporal scope for the assessment as it applies to the traffic and transport assessment.
- 18.5.19 The assessment of traffic and transport effects looks across the whole of the construction timeline for the Proposed Development and once in operation, in accordance with the ISEP Guidelines [23]. The assessments that consider construction traffic, for example, identify the 12-month period when construction traffic peaks for each specific location, to provide a robust assessment. Assessment of temporary effects such as construction phase disruption to the PRow and highway network provides the estimated duration of these effects and takes this into account when determining the magnitude of the impact and significance of the effect.
- 18.5.20 The operation assessment considers the permanent effects arising from operation and ongoing maintenance activities, in the opening year of operation. Given this assessment is not informed by future traffic demand on the local highway network (as the relevant effects are scoped out), assessing the impacts in the opening year is considered to be appropriate and robust.
- 18.5.21 As detailed in the EIA Scoping Report, the travel patterns and conditions considered include without ('Do Minimum') and with ('Do Something') the Proposed Development scenarios to determine anticipated changes that could occur as a result of construction and/or operation of the Proposed Development. Those changes between the 'Do Minimum' and 'Do Something' scenarios, such as a forecast change in traffic flow as a result of the construction or operation of the Proposed Development, are then assessed in terms of their probable effect on

transport receptors (vehicular drivers, pedestrians, cyclists, horse riders and public transport passengers).

18.5.22 In summary, the following assessment scenarios are considered:

1. Current baseline (2024)
2. ‘Do Minimum’ (construction) – future baseline (approximately five-year construction period, assumed to commence in 2028)
3. ‘Do Something’ (construction – future baseline with construction traffic (approximately five-year construction period, assumed to commence in 2028)
4. ‘Do Minimum’ (operation) – future baseline (opening year, assumed to be 2034)
5. ‘Do Something’ (operation – future baseline with operational traffic (opening year, assumed to be 2034)

Baseline methodology

Desk study

18.5.23 Baseline data collection has been undertaken to obtain information across the study area. This section provides the approach to collecting baseline data.

18.5.24 The following data sources have been accessed to inform the baseline with respect to traffic and transport (see Table 18-8).

Table 18-8 Data sources used to inform the traffic and transport assessment

Source of data	Baseline data
PRoW and accessibility	HCC Map of PRoW [28] (accessed in December 2025) PCC Map of PRoW [29] (accessed in January 2026) Sustrans NCN and Long Distance National Cycle Routes [30] (accessed in November 2025)
Location of work and place of residence	Nomis (ONS 2021 Census) – location of usual residence and place of work by method of travel to work [31]
Traffic flows	Webtris – NH [32] (accessed in January 2025)

Site surveys

18.5.25 Automatic Traffic Count (ATC) surveys were undertaken at 54 links during June/July 2023. The survey findings include traffic counts and recorded road speeds for a seven day period. Adjustments have been made to these flows to reflect the current baseline year of 2024, as detailed in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

18.5.26 Additional ATC surveys were then undertaken at 29 links in October 2024, with a number of sites surveyed in 2023 re-surveyed during this set of surveys for validation purposes. Six Junction Turning Count (JTC) surveys were also undertaken in October 2024.

18.5.27 Following this, an additional three ATC surveys were carried out in May 2025, as well as an additional six JTC surveys.

18.5.28 The traffic survey data outlined above includes all HGV construction access routes to the Proposed Development, as agreed with HCC and PCC as the LHAs.

18.5.29 The methodology and data outputs are detailed in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

Assessment methodology

18.5.30 The approach to assessment is set out in ES Chapter 5 EIA approach and methodology, Volume I (Document reference 6.1, DCO Volume 6). This has informed the approach used in this traffic and transport assessment.

18.5.31 Following the preparation of the EIA Scoping Report, the ISEP Guidelines (1993) were superseded by the ISEP Guidelines (2023) [23]. In accordance with the EIA Scoping Opinion, the assessment methodology has been updated to reflect the latest guidance where relevant. This approach has been agreed with key stakeholders including HCC, PCC and NH as the relevant highway authorities. As such, from hereon in reference to the ISEP Guidelines refers to the 2023 document.

18.5.32 The ISEP Guidelines [23] set out two rules that are used to establish whether an environmental assessment of traffic effects should be carried out on receptors. This has informed the study area for the traffic and transport assessment. The ISEP Guidelines [23] (see paragraph 2.16) threshold is as follows:

1. Rule 1 - Include road links where traffic flows would increase by more than 30% (or the number of HGVs would increase by more than 30%).
2. Rule 2 - Include any other specifically sensitive areas where net traffic flows increase by 10% or more. This would include areas with pedestrians or cyclists, shopping areas, schools, and accident hotspots.

18.5.33 Where the predicted increase in traffic flows is lower than the above thresholds, the ISEP Guidelines [23] suggests that the significance of the effects can be stated as negligible and additional detailed assessments on the effects on receptors is not warranted on those links.

18.5.34 The assessment methodology for each of the scoped-in environmental effects with regards to traffic and transport are set out in the following sections. The definitions and overarching methodology have been defined with reference to the ISEP Guidelines [23]. DMRB LA 112 Population and Human Health [25] has also been used to define the sensitivity and magnitude of impact for pedestrian, cycle and horse rider delay.

Driver and bus passenger delay

18.5.35 As detailed in paragraph 3.19 of the ISEP Guidelines [23], driver and bus passenger delay may change in the following locations:

1. At the site entrance where there would be additional turning movements
2. On the highways passing the development site where there would likely be additional traffic and the flow might be affected by additional parked cars
3. At other key intersections along the highway which might be affected by increased traffic
4. At side roads where the ability to find gaps in the traffic may be reduced, thereby lengthening delays

18.5.36 Delay to bus passengers may also change where bus routes or bus stops are proposed to be changed or where demand for a bus service exceeds capacity. Bus routes within the vicinity of the Order Limits are shown at ES Figure 18.4 Bus routes within the vicinity of the Order Limits, Volume III (Document reference 6.3, DCO Volume 6).

18.5.37 Driver and bus passenger delay is assessed qualitatively based on a review of the quantitative data available in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6). This is assessed using assessor judgment in the context of the principles set out in ISEP Guidelines [23] including:

“...delays are only likely to be significant when the traffic on the network surrounding the development is already at, or close to, the capacity of the system”.

Pedestrian, cycle and horse riding delay

18.5.38 Drawing upon the ISEP Guidelines [23] and professional experience, pedestrian and cycle delay may change where:

1. Pedestrians, cyclists and horse riders cross existing roads where traffic flows are projected to change
2. Pedestrians, cyclists and horse riders cross new roads
3. Existing roads which pedestrians, cyclists and horse riders would have crossed are removed
4. Road speeds change
5. Pedestrians, cyclists and horse riders volumes change
6. New crossing facilities are provided
7. Existing pedestrians, cyclists or horse riders' crossing facilities change

18.5.39 Pedestrian and cyclist delay is assessed qualitatively based on the nature of the Proposed Development and construction proposals as set out in section 3.5 of ES Chapter 3 Description of the Proposed Development, Volume I (Document reference 6.1, DCO Volume 6) using assessor judgment and guidance set out in DMRB LA 112 Population and Human Health. It also includes consideration of potential temporary/permanent closures and/or diversions of PRow.

Severance

18.5.40 Severance is defined by the ISEP Guidelines [23] in paragraph 3.13:

“In the context of a traffic and movement assessment, severance is the perceived division that can occur within a community when it becomes separated by major transport infrastructure. The term is used to describe a complex series of factors that separate people from places and other people. Severance may result from the difficulty of crossing a heavily trafficked road or a physical barrier created by infrastructure...”

18.5.41 Severance is assessed qualitatively based on a review of the quantitative data available in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6). This is assessed using assessor judgement in the

context of the principles set out at paragraph 3.14 of the ISEP Guidelines [23] which states:

“The measurement and prediction of severance is extremely difficult. The correlation between the extent of severance and the physical barrier of a road is not clear and there are no predicative formulae that give simple relationships between traffic factors and levels of severance. Factors that need to be considered in determining whether severance is likely to be an important issue include road width, traffic flow and composition, traffic speeds, the availability of crossing facilities and the number of movements that are likely to cross the affected route... An assessment of severance should aim to estimate the current severance caused by traffic and related factors, and the extent to which additional traffic will exacerbate this problem”.

Amenity, fear and intimidation

18.5.42 Amenity is defined by the ISEP Guidelines [23] in paragraph 3.29:

“Pedestrian amenity is broadly defined as the relative pleasantness of a journey, and is considered to be affected by traffic flow, traffic composition and pavement width/separation from traffic. This definition also includes pedestrian fear and intimidation, and can be considered to be a much broader category including consideration of the exposure to noise and air pollution, and the overall relationship between pedestrians and traffic”.

18.5.43 Whilst the ISEP Guidelines [23] discuss amenity in the context of pedestrians, it is also relevant for cyclists, horse riders and bus passengers.

18.5.44 Fear and intimidation is defined by the ISEP Guidelines [23] in paragraph 3.32:

“...environmental impact that affects people is the fear and intimidation created by all moving objects...”.

18.5.45 Paragraph 3.33 of the ISEP Guidelines [23] notes that the extent of fear and intimidation is dependent on:

1. The total volume of traffic
2. The heavy vehicle composition
3. The speed these vehicles are passing
4. The proximity of traffic to people – and/or the feeling of the inherent lack of protection created by factors such as a narrow pavement median, a narrow path or a constraint (such as a wall or fence) preventing people stepping further away from moving vehicles

18.5.46 Amenity, fear and intimidation is considered for pedestrians, cyclists, horse riders and bus passengers.

18.5.47 Amenity, fear and intimidation is assessed qualitatively based on a review of the quantitative data available in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6) and in the context of the facilities for pedestrians, cyclists, horse riders and bus passengers. This is assessed using assessor judgment in the context of the principles set out in ISEP Guidelines [23] at paragraphs 3.34 and 3.36, which state:

“there are no commonly agreed thresholds for estimating these levels of danger – hence of fear and intimidation – from known traffic and physical conditions... there will be a need for judgement to be exercised in determining the degree of fear and intimidation. Special consideration should be given to areas where there are likely to be particular problems, such as high speed sections of road, locations of turning points and accesses, and the inherent lack of protection created by factors such as a narrow pavement median, a narrow path or a constraint (such as a wall or fence) preventing people stepping further away from moving vehicles....”.

18.5.48 The ISEP Guidelines [23] (paragraphs 3.37 – 3.40) do however include a weighting system to help assessors provide a first approximation of the likelihood of pedestrian fear and intimidation. This quantitative assessment has been adopted to inform the overall qualitative assessment.

Accident and safety

18.5.49 The key issue in assessing accidents and safety is in understanding the potential for change. There can be some small changes in prevailing road safety conditions arising as a result of having a greater number of journeys being made on a network, i.e. the more people that are travelling, the more people that are liable to become involved in an accident. By far the more important issue to consider is how travel and the design of the transport networks interrelate to affect prevailing road safety. In that context, prevailing road safety may change where:

1. Fundamental changes are proposed to the form or nature of a transport network such as changes to the geometry of a junction or changing the form of a junction.
2. Fundamental changes are proposed to prevailing travel patterns on transport networks not designed to cater for them. Examples could include introducing a pedestrian demand on a rural road without footways or introducing a pedestrian demand across a heavily trafficked and high speed road without a suitable crossing provision.
3. Fundamental changes are proposed to the vehicle composition of the existing highway network. Examples could include construction traffic utilising a route that results in a significant increase in the proportion of HGV movements. This could have a subsequent impact on the safe operation of the particular road or street.

18.5.50 Whilst the Proposed Development is not expected to result in changes which could significantly affect accidents and safety, potential temporary diversions during construction may increase traffic movements through existing accident clusters. As such, accidents and safety has been scoped in for the assessment of construction effects.

18.5.51 A qualitative assessment has been undertaken based on quantitative assessment of road traffic collisions and the forecast change in traffic demand, both of which can be found in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

Hazardous and large loads

- 18.5.52 Hazardous loads are discussed by the ISEP Guidelines [23] in paragraph 3.49:
“Some developments may involve the transportation of dangerous or hazardous loads by road and this should be recognised within any traffic and movement assessment. Such movements should include specialist loads that might be involved in the construction or decommissioning phases of the development, in addition to movements associated with the operation of the establishment.”
- 18.5.53 Hazardous loads could include, for example:
1. Explosives
 2. Gases
 3. Flammable liquid
 4. Flammable solids
 5. Oxidising substances
 6. Toxic substances
 7. Radioactive material
 8. Corrosive substances
- 18.5.54 In paragraph 3.50, the ISEP Guidelines [23] indicate that:
“Where the number of movements is considered to be significant, the assessment should include a risk or catastrophe analysis to illustrate the potential for an accident to happen and the likely effect of such an event.”
- 18.5.55 Large (abnormal) loads are defined by NH [33] as a vehicle having any of the following:
1. A weight of more than 44,000kg
 2. An axle load of more than 10,000kg for a single non driving axle and 11,500kg for a single driving axle
 3. A width of more than 2.9m
 4. A rigid length of more than 18.65m
- 18.5.56 The assessment of hazardous and large loads has been undertaken qualitatively with reference to the quantitative assessment of road traffic collisions included in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6). Full detail on the suitability of routes and potential mitigation that may be required to facilitate AIL movements is provided within the Framework CTMP (Document reference 7.2, DCO Volume 7).

Sensitive receptors

- 18.5.57 Within the study area, it is necessary to identify particular user groups, which may be sensitive to changes in the traffic and transport network conditions in relation to the above described effects. These user groups are deemed to be receptors for the purpose of the assessment. Potential receptors that are vulnerable to increased traffic on links include:
1. Walkers
 2. Cyclists

3. Horse riders
4. Drivers and passengers in vehicles including public transport (through driver delay and safety impacts)

18.5.58 The nature, extent, and sensitivity of key receptors and any identified threats or vulnerabilities caused from increased vehicles include:

1. People at home or work, walking, or cycling
2. People travelling by public transport
3. Sensitive and/or vulnerable groups such as children, elderly, disabled, income and socially disadvantaged
4. Sensitive locations such as hospitals, places of worship, schools, and historical buildings
5. Recreational areas and shopping areas
6. Sites of ecological/nature conservation value
7. Sites of tourist/visitor attractions

Sensitivity of receptors

18.5.59 The road link sensitivity is determined by the concentration of sensitive receptors served by that link, applying the principles from the ISEP Guidelines [23], DMRB LA 104 Environmental Assessment and Monitoring [24] and DMRB LA 112 Population and Human Health [25]. Table 18-9 below provides broad definitions of the different receptor sensitivity levels that are adopted for the assessment.

Table 18-9 Sensitive receptors

Sensitivity	Definition (Design Manual for Roads and Bridges LA 104 [24])	Traffic and transport approach
Very high	Very high importance and rarity, international scale and very limited potential for substitution.	Receptors travelling on internationally important routes/journeys (such as routes to ports) at significant volumes. Receptors travelling on routes/journeys where there is no alternative (such as a single route across a railway line for a particular mode/group/town) at significant volumes. Vulnerable road user receptors travelling on networks at significant volumes ¹ (such as immediately outside schools or doctors' surgeries). Road links with over 16 collisions recorded per kilometre in the most recent five year period data was available.

¹ Based on the assessor's judgement.

Sensitivity	Definition (Design Manual for Roads and Bridges LA 104 [24])	Traffic and transport approach
High	High importance and rarity, national scale, and limited potential for substitution.	<p>Receptors travelling on nationally important routes/journeys (such as the NCN or motorways) at significant volumes.</p> <p>Receptors travelling on routes/journeys where there is little alternative (such as multiple but infrequent routes across a railway line for a particular mode/group/town) at significant volumes.</p> <p>Vulnerable road user receptors travelling on networks at significant volumes (such as on main approaches to schools or doctors' surgeries).</p> <p>Road links with 11 to 15 collisions recorded per kilometre in the most recent five year period data was available.</p>
Medium	High or medium importance and rarity, regional scale, limited potential for substitution.	<p>Receptors travelling on routes/journeys important at a district level (such as a road or cycle route connecting two towns) at significant volumes.</p> <p>Receptors travelling on routes/journeys where there is some alternative (such as a PRow or footway forming part of a coarse wider network of routes) at significant volumes.</p> <p>Vulnerable road user receptors travelling on networks at a non-elevated rate (such as in a residential area away from schools and doctors' surgeries).</p> <p>Road links with six to ten collisions recorded per kilometre in the most recent five year period data was available.</p>
Low	Low or medium importance and rarity, local scale.	<p>Receptors travelling on routes/journeys important at a town scale (such as local 'through' routes) at significant volumes.</p> <p>Receptors travelling on routes/journeys where there are similar/equivalent alternatives (such as a local street in a network of connected streets).</p> <p>Vulnerable road user receptors travelling on networks at a very low rate (such as a rural road away from schools and doctors' surgeries).</p> <p>Road links with one to five collisions recorded per kilometre in the most recent five year period data was available.</p>
Negligible	Very low importance and rarity, local scale.	<p>Receptors travelling on local estate level routes/journeys (such as residential streets not serving a significant 'through' function).</p> <p>Receptors travelling on routes/journeys where there is little demand for that route.</p> <p>Road links with no collisions recorded in the most recent five year period data was available.</p>

18.5.60 The sensitivity of each receptor is detailed in Annex T of the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

Definition of impact magnitude

18.5.61 Criteria for assessing the magnitude of impact are defined in Table 18-10. These topic specific classifications are summarised in DMRB LA 104 Environmental

Assessment and Monitoring [24] and DMRB LA 112 Population and Human Health [25], and have been interpreted with specific reference to traffic and transport. Broadly, the magnitude of impact is defined as follows:

Table 18-10 Magnitude of impact definitions

Magnitude	Definition (from Design Manual for Roads and Bridges LA 104 Environmental Assessment and Monitoring [24])
Major	Changes which are likely to be perceptible and which would substantially change conditions which would otherwise prevail to the extent that it would substantially affect travel behaviour (such as the night time closure of a road or the introduction of a new controlled pedestrian crossing on a busy road).
Moderate	Changes which are likely to be perceptible and which would materially change conditions which would otherwise prevail to the extent that it may affect travel behaviour to some degree (such as a change in road network capacity which may lead to some rerouting or retiming of journeys, or creation of a secondary supplementary route servicing a similar function as an existing route).
Minor	Changes which are likely to be perceptible but not the extent that it would materially change conditions which would otherwise prevail (such as the introduction of a new site access junction or resurfacing of a footway).
Negligible	Changes which are unlikely to be perceptible (such as a low change in traffic or pedestrian volumes).

Significance of effects

18.5.62 As described in ES Chapter 5 EIA approach and methodology, Volume I Assessment (Document reference 6.1, DCO Volume 6), subsequent to establishing the receptor sensitivity and magnitude of impact, the significance of effect is determined using the matrix shown in Table 18-11. Where a combination of sensitivity and magnitude impact results in a significance of effect that could be either one of two classifications (e.g. moderate or major significance of effect), professional judgement as well as consideration of factors from Table 18-9 and Table 18-10 has been used to determine the correct significance of effect.

18.5.63 In addition to this, the following factors set out at paragraph 3.9 of LA 104 Environmental Assessment and Monitoring [24] also provide additional guidance in determining significance of effects:

“The assessment of the significance of environmental effects shall cover the following factors:

- 1) *the receptors/resources (natural and human) which would be affected and the pathways for such effects;*
- 2) *the geographic importance, sensitivity or value of receptors/resources;*
- 3) *the duration (long or short term); permanence (permanent or temporary) and changes in significance (increase or decrease);*
- 4) *reversibility – e.g. is the change reversible or irreversible, permanent or temporary;*

- 5) *environmental and health standards (e.g. local air quality standards) being threatened;*
- 6) *feasibility and mechanisms for delivering mitigating measures, e.g. Is there evidence of the ability to legally deliver the environmental assumptions which are the basis for the assessment?"*

18.5.64 Moderate and major beneficial/adverse effects are deemed significant, whilst negligible and minor beneficial/adverse effects are deemed not likely significant in EIA terms.

Table 18-11 Significance of effects

		Magnitude of impact			
		Negligible	Minor	Moderate	Major
Sensitivity of receptor	Very high	Minor	Moderate or Major	Major	Major
	High	Minor	Minor or Moderate	Moderate or Major	Major
	Medium	Negligible or Minor	Minor	Moderate	Moderate or Major
	Low	Negligible or Minor	Negligible or Minor	Minor	Minor or Moderate
	Negligible	Negligible	Negligible or Minor	Negligible or Minor	Minor

18.6 Assumptions and limitations

- 18.6.1 This section provides a description of the assumptions and limitations to the traffic and transport assessment.
- 18.6.2 The location for a construction workers hub would be identified by the Contractor, during the construction phase, and can therefore not be confirmed prior to the DCO application. The site would be an existing office development with sufficient car parking, as detailed in section 3.5 ES Chapter 3 Description of the Proposed Development, Volume I (Document reference 6.1, DCO Volume 6). Given the construction workers hub would predominately be used for offices and staff welfare, the impacts on the wider traffic calculations, particularly with regards to HGV movements, are anticipated to be minimal. Trips to and from the construction workers hub associated with construction workers would also be in keeping with the existing permitted use of the site as an office. This is detailed in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).
- 18.6.3 Road and/or lane closures would be required to facilitate the construction of the Proposed Development. This includes road and/or lane closures associated with the construction of the Pipeline between the WRP site and Otterbourne WSW and to enable the construction of the temporary and permanent accesses. The anticipated duration of time required for the traffic management is set out in the TMS submitted as part of the DCO application (Document reference 7.3, DCO Volume 7).

- 18.6.4 It is assumed that, unless stated otherwise, all PRow impacts would affect pedestrians only.
- 18.6.5 Where short-term closures of PRow are referenced, it is assumed that these closures would last for a maximum of four weeks. Full detail regarding this is secured within the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7).
- 18.6.6 At the request of HCC, for the purposes of this assessment it has been assumed that all construction workers would arrive to work by car (single occupancy). As detailed in the Framework CWTP (included in Appendix A of the Framework CTMP (Document reference 7.2, DCO Volume 7)), measures are proposed to encourage more positive travel behaviours.
- 18.6.7 It is assumed that testing of the washout valves in the operation phase would take place once every six months as a worst case scenario. This infrequent traffic demand in the operation phase is not considered relevant to an ES assessment and has therefore only been considered in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

18.7 Baseline conditions

- 18.7.1 To provide an assessment of the likely significance effects from the Proposed Development (in terms of traffic and transport), it is necessary to identify and understand the baseline conditions in the study area. This provides a reference point against which potential changes in traffic and transport can be assessed.

Current baseline

- 18.7.2 An overview of the baseline information for each of the principal components set out in ES Chapter 3 Description of the Proposed Development, Volume I (Document reference 6.1, DCO Volume 6) is set out below. A detailed audit of the baseline information can be found in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

Water Recycling Plant site

Local highway network

- 18.7.3 Currently, there are no access roads into the WRP site, however the site is bounded by Harts Farm Way to the south and west and the A27 (trunk) dual carriageway to the north.
- 18.7.4 The A27 Havant Bypass forms part of the Strategic Road Network (SRN) and provides an east-west connection in the vicinity of Havant. The Havant Bypass accommodates two way vehicular traffic in a dual carriageway arrangement, with a central reserve segregating directional traffic. To the west, the Havant Bypass forms a dumbbell junction arrangement with the A3 (M) which involves a link road which is also known as the A2030. To the east, the A27 forms a gyratory junction with Park Road South and Langstone Road.
- 18.7.5 Harts Farm Way is a local distributor road that runs in an east-west alignment to the south of Havant, connecting the Langstone Technology Park, alongside other employment uses, with the Havant Bypass dumbbell junction to the west. To the

south, Harts Farm Way provides connections to two car parks adjacent to Chalkdock Lake.

Walking

- 18.7.6 A shared footway/cycleway (Route 22 of the NCN) is provided along the southern side of the carriageway at Harts Farm Way in the immediate vicinity of the WRP site. Dropped kerb and tactile paving crossings provide a continuous connection to the Langstone Technology Park to the east. There are however limited crossing opportunities along the Harts Farm Way corridor and existing crossing provision at the tear-drop junction is poor in terms of its level of service.
- 18.7.7 To the west, a continuous off-road shared footway/cycleway provides a connection to Farlington Marshes approximately 2.8km west of the WRP site.
- 18.7.8 A pedestrian footway bounds the WRP site to the west, measuring approximately 125m. To the north, a signalised pedestrian crossing provides access to the off-road footway to the west of the A2030. The footway then terminates to the north, at which point it does not tie into any other existing infrastructure.
- 18.7.9 A PRoW from the A27 footbridge north-east of the site of the WRP site connects to the Broadmarsh Coastal Path (footpath) adjacent to the eastern boundary of the site of the WRP site.

Cycling

- 18.7.10 The NCN Route 22 traverses the southern boundary of the A27 and passes through Harts Farm Way. The NCN Route 22 is a predominantly off-road link which, locally, provides a connection between the NCN 222 to the west and Liphook to the north. At Harts Farm Way, the link comprises a shared use footway/cycleway segregated from the carriageway by a narrow grass verge. It links to Farlington Marshes to the west and to the Langstone Technology Park to the east.

Horse riding

- 18.7.11 There are no bridleways or other equestrian facilities in the vicinity of the WRP site.

Public transport

- 18.7.12 The closest public transport nodes to the WRP site are the bus stops on the A2030 which are served by the Stagecoach 21 and 23 routes.
- 18.7.13 The West Coastway Line runs in an east-west alignment approximately 200m north of the WRP site.
- 18.7.14 The closest railway station is the Bedhampton railway station, which is located approximately 1.2km from the WRP site by foot. The Bedhampton railway station offers South Western and Southern railway regular services to destinations including Portsmouth Harbour, Littlehampton and London Waterloo.

Pipelines between Budds Farm Wastewater Treatment Works and the Water Recycling Plant site

Local highway network

- 18.7.15 The local highway network in the vicinity of the Pipelines between Budds Farm WTW and the WRP site is similar to that described at paragraphs 18.7.3 - 18.7.5.
- 18.7.16 Notable links in addition to the above include Southmoor Lane, the Langstone Technology Park Link Road and the A3023 Langstone Road.
- 18.7.17 Southmoor Lane provides a north-south connection through Langstone to the east of the Budds Farm WTW, terminating at Budds Wall to the south. To the east, Southmoor Lane provides access to several industrial units and the Langstone Technology Park.
- 18.7.18 The Langstone Technology Park Link Road is the sole link connecting Langstone Road to Southmoor Lane. It comprises an east-west link which passes to the south of the Langstone Technology Park car park. The Link Road accommodates two way vehicular traffic and contains intermittent footway provision on either side of the carriageway with formal pedestrian crossings frequently provided.
- 18.7.19 The A3023 Langstone Road is a north-south link which is the only connection to Hayling Island from the mainland. This connection is facilitated by Langstone Bridge to the south-east of the Budds Farm WTW. The A3023 Langstone Road accommodates bi-directional vehicular traffic, segregated by a ghost island. To the north, it forms a gyratory junction with the A27 (M) and the B2149. To the west, it provides access to the Langstone Technology Park Link Road, whilst along the extent of the road access is provided to a number of residential dwellings.

Walking

- 18.7.20 As with the local highway network, the walking infrastructure within the vicinity of the Pipelines between Budds Farm WTW and the WRP site is similar to that described in paragraphs 18.7.6 – 18.7.9.
- 18.7.21 In addition, a footway is provided along the eastern side of the carriageway on Southmoor Lane, although generally there is no crossing provision at each industrial access along the eastern side of the road.
- 18.7.22 Along Langstone Road, a footway is provided along both sides of the carriageway providing a pedestrian connection to the residential roads adjacent. Uncontrolled pedestrian crossings are present on Langstone Road.
- 18.7.23 Continuous footway provision connects Southmoor Lane to the A3023 Langstone Road to the east, with frequent crossing points provided along this route.
- 18.7.24 The aforementioned coastal path (a designated PRoW) traverses the coastline, with a footbridge providing access over Brockhampton Stream from which point the path loops around Budds Farm WTW and connects to Southmoor Lane. There is also a continuous PRoW network which connects Brookside Road to Solent Road and Havant Town centre, including the Rail Station and Bus Station.

Cycling

- 18.7.25 Route 22 of the NCN follows the alignment of Harts Farm Way to the north of the Pipelines between Budds Farm WTW and the WRP site, and Budds Farm WTW. This link connects to the east via an off-road cycle link to the north-east of Budds Farm WTW, with an underpass providing access to the north of the A27 Havant Bypass where the NCN link joins the B2149 Park Road South.

Horse riding

- 18.7.26 There are no bridleways or other equestrian facilities in the immediate vicinity of the WRP site and Budds Farm WTW.

Public transport

- 18.7.27 The closest public transport nodes to the Pipelines between Budds Farm WTW and the WRP site are identical to those described at paragraphs 18.7.12 – 18.7.14. The Langstone Road bus stops are located approximately 1km from the Budds Farm WTW.
- 18.7.28 The Woodbury Avenue bus stops located to the north of the A3023 Langstone Road are served by the 30 and 31 services which offer a half hourly service between Eastoke and Havant.

Pipelines between the Water Recycling Plant site and Bedhampton Springs

Local highway network

- 18.7.29 The B2149 (Bedhampton Road and New Road) provides an east/west connection within Havant. To the east, the road provides access to the Bedhampton Railway Station and Petersfield Road beyond. The B2149 is a two-way road with a single carriageway in either direction, though it widens to two lanes westbound on the approach to the signalised junction with the B2150 Hubert Road.
- 18.7.30 Purbrook Way is an east/west link which provides access to Junction 4 of the A3 (M). Purbrook Way bisects the north of Havant, accommodating two-way vehicular traffic with a single lane in either direction. On-road parking is also provided along Purbrook Way.
- 18.7.31 Park Road (North and South) provides a north/south connection between the A27 Havant Bypass and the four arm Elmleigh Road, Park Road North and New Road roundabout junction. Park Road is predominantly a dual carriageway, though it widens to three lanes northbound in the vicinity of the roundabout to the north and three lanes southbound towards the mid section in the vicinity of Bulbeck Road.
- 18.7.32 The B2177 Bedhampton Hill provides a north-east to south-west connection between Portsdown Hill Road and Bedhampton Road to the north-east, and Bedhampton Roundabout to the south-west, the latter of which provides onward connection to the A27 and A3. The B2177 Bedhampton Hill accommodates two-way vehicular traffic with a lane in each direction. The route is wide and residential in nature, with a significant portion of the route characterised by property frontages; these sections of the route provide footways on both sides that continue up to the B2177 Roundabout. Where the route provides access into residential streets, the traffic lanes are separated by sections of central hatching.

- 18.7.33 Brockhampton Road is a two-way north-south route providing connectivity between West Street to the north and Harts Farm Way to the south, Brockhampton Road is characterised by multiple uses and frontages along its extent, including residential frontages along sections of the western side and the entrance into the Portsmouth Water Headquarters on the eastern side. On the southern section of the route, Brockhampton Road passes under the Havant Bypass (A27), and provides access to a number of industrial utilities via Solent Road and Marples Way.
- 18.7.34 Brookside Road provides a north-south connection between Bedhampton Road to the north and Bidbury Lane and Lower Road to the south. Brookside Road is a residential street, with many residential frontages on both sides, that accommodates two-way vehicular movements, although a centre line is only present at both ends of the route. The presence of large trees provides a sense of enclosure to the already narrow route with a typical width of 5.6m. Intermittent footways are present toward the northern end of the route. The presence of on-street parking may limit two-way movements at some points on the route.
- 18.7.35 Bidbury Lane provides connectivity between Brookside Road and Lower Road to the west with King's Croft Lane to the east, Bidbury Lane is a narrow route typically measuring approximately 4.9m in width that enables two-way vehicular traffic along its extent. The western section of the route features a few residential frontages and access into Bidbury Mead Rec Carpark. East of the Carpark entrance, the route narrows further down to the width of one lane, constraining two-way vehicular movements.
- 18.7.36 Mill Lane provides a two-way north-south connection between Bidbury Lane and an elevated footbridge over Havant Bypass (A27) and on toward Harts Farm Way. Mill Lane is a narrow route, measuring approximately 1.9m at its narrowest point, that also functions as an active travel route. Due to its narrow width, there is limited space to facilitate two-way vehicular movements along its entire extent. A small number of properties can be accessed from the route. There is no southbound onward connection for vehicles.
- 18.7.37 West Street provides a connection between the B2149 to the west and Park Road South to the east, West Street is a route that accommodates two-way vehicular traffic along its entire extent. The route features a number of residential and business frontages. The Staunton Road/Brockhampton Road routes intersects West Street toward the western end of the route. The eastern end of the route features a narrow section, with a width of approximately 4.9m, with no central line that may limit two-way vehicular movements.
- 18.7.38 Meyrick Road is a north-east to south-west oriented route that is characterised by a number of residential frontages at its northern end, grass verges and vegetation along the middle section, and paddocks at the southernmost end. Access onto Meyrick Road and a gated entrance into Bedhampton Water Treatment Works can be found at the northern and southern points of the route respectively. The route becomes increasingly narrow (approximately 3.8m in width) as it continues south-west, making two-way vehicular movements increasingly constrained.

Walking

- 18.7.39 Formal pedestrian crossing points are provided plentifully throughout Havant, with crossing types varying between simple uncontrolled pedestrian crossings with dropped kerbs and tactile paving, to pedestrian refuge island crossing points and signalised crossings complete with a pedestrian phase.
- 18.7.40 Footways are provided along the extent of Bedhampton Hill that become wider once running parallel to the residential frontages toward the north-eastern end of the route. A continuation of these footways can be found on Bedhampton Road, including a footway along the northern edge of the route at the western end that is separated further from the road by vegetation. Signalised crossings are provided at traffic signals. As Bedhampton Road merges with West Street at the eastern end of the route, the footways continue over a level crossing. The footways provided on West Street are narrower than those on Bedhampton Road (approximately 1.4m in width) with less separation from traffic.
- 18.7.41 Footways are provided more intermittently on some residential routes within Havant. Routes such as Brookside Road, Bidbury Lane and Meyrick Road feature inconsistent footway provision that require pedestrians to switch between using them and walking along the edge of the road where they are not provided. Other routes such as Mill Lane feature no dedicated pedestrian infrastructure and require pedestrians to travel along the edge of the route and stop at passing spots to allow oncoming vehicles to pass.
- 18.7.42 A series of PRoW are also located in the vicinity of the Pipelines. This includes Havant 30 which is route which connects Harts Farm Way to across the A27(t) and along the West Coast Railway Line. Havant 45 also provides a link between Harts Farm Way and the bank of Broad Lake.
- 18.7.43 The Denmead to Emsworth section of the Wayfarer’s Walk utilises a section of Bedhampton Road prior to passing through Brockhampton Road to the south.

Cycling

- 18.7.44 Route 22 of the NCN bisects Havant in a north/south alignment, passing Havant railway station to the north-east. NCN 22 also provides a connection to NCN 2 to the east, which goes on to link to Hayling Island to the south and Chichester to the east.
- 18.7.45 Local roads within the south of Havant are generally considered suitable for cycling.

Pipeline between the Water Recycling Plant site and Otterbourne Water Supply Works

- 18.7.46 The Pipeline between the WRP site and Otterbourne WSW would either directly or indirectly affect the routes identified in this section. An illustration of these routes is provided at ES Figure 18.1 Traffic and transport study area: Proposed Development and key links, Volume III (Document reference 6.3, DCO Volume 6). The locations of Section D to Section M: Brambridge to Otterbourne WSW of the Pipeline between the WRP site and Otterbourne WSW is shown on ES Figure 1.1 Location of the Proposed Development and Order Limits, Volume III (Document reference 6.3, DCO Volume 6).

Local Highway Network

Section D: The Water Recycling Plant to Portsdown Hill

- 18.7.47 The A3 London Road runs in a north-south alignment through Widley, Purbrook and Waterlooville. To the south, the A3 forms an on-slip/off-slip junction with the B2177 Portsdown Hill Road, whilst to the north it connects to the A3 (M) at Junction 2 via the B2149. Through Widley, Purbrook and Waterlooville, the A3 accommodates two way vehicular traffic, with a dedicated bus lane running south-bound and sporadic provision of advisory cycle lanes along the northbound carriageway.
- 18.7.48 The B2177 and A3 London Road are managed by PCC, Similarly, the southern parts of Crookhorn Road are also within their control.

Section E: Portsdown Hill to Boarhunt

- 18.7.49 Boarhunt Road provides a north-east and south-west connection between Junction 11 of the M27 and Boarhunt. It accommodates two way vehicular traffic flows, measuring between 5.0m and 5.5m in width. Boarhunt Road is subject to the national speed limit.
- 18.7.50 Portsdown Hill Road/James Callaghan Drive is an east-west link located to the north of Portsmouth. It accommodates two way vehicular traffic and provides a connection between Portchester and Havant via the B2177.
- 18.7.51 Monument Lane provides a north-south connection between Portsdown Hill Road to the south and Ashley Down Lane to the north measuring approximately 1.2km. Monument Lane is subject to the national speed limit and accommodates two way vehicular traffic. Monument Lane measures approximately 4.2m in width in the vicinity of Nelson's Monument, narrowing to approximately 2.9m wide to the north of this.
- 18.7.52 Portchester Lane is also a north-south route that connects Portsdown Hill Road to the south and the B2177 to the north. Portchester Lane measures approximately 5.0m in width and accommodates two way vehicular traffic. Portchester Lane also has a height restriction of 2m in place, making it unsuitable for HGV movements.
- 18.7.53 Crooked Walk Lane provides a north-east and south-west link between the B2177 and Portchester Lane. Crooked Walk Lane typically measures between 3.8m and 4.8m in width and accommodates two way vehicular traffic.
- 18.7.54 The B2177 provides an arterial north-west and south-east link between Wickham and Cosham. The B2177 accommodates two way vehicular traffic and is subject to the national speed limit.
- 18.7.55 Pigeon House Lane measures approximately 3.8m in width and provides a north-south connection between Belney Farm to the north and the B2177 to the south.

Section F: Boarhunt to Crockerhill and Section G: Crockerhill to Wickham

- 18.7.56 Section F: Boarhunt to Crockerhill of the Pipeline between the WRP site and Otterbourne WSW comprises the section from the boundary between WCC and FBC located west of Boarhunt to the boundary between FBC and WCC north of Crockerhill. Section G: Crockerhill to Wickham of the Pipeline between the WRP

site and Otterbourne WSW comprises the section from the boundary between FBC and WCC north of Crockerhill to Winchester Road (A334) north-west of Wickham.

- 18.7.57 This section of the route interacts with the consented Welborne development, with engagement ongoing as to how this section of the proposed pipeline would be secured and delivered to protect the needs of the consented development and facilitate the delivery of the DCO should it be permitted. This separately consented development has been included in the future baseline and considered cumulatively in ES Chapter 20, Cumulative and in-combination effects, Volume I (Document reference 6.1, DCO Volume 6).
- 18.7.58 The A32 provides an arterial connection between Junction 10 of the M27 to the south and Wickham to the north, forming a roundabout junction with the A334 to the south-east of Wickham. To the south, the A32 Wickham Road is a dual carriageway, with directional traffic segregated by central hatching. To the north, the road narrows to a single lane in either direction, though central hatching continues to separate directional traffic. The A32 has a speed limit of 50mph.
- 18.7.59 The A334 Winchester Road provides a north-west and south-east link between Wickham and Botley. The A334 Winchester Road ranges between 6.0m and 6.8m in width and accommodates two way traffic segregated by advisory on-road central markings. To the south-east of Wickham, the A334 forms a roundabout junction with the A32.
- 18.7.60 Titchfield Lane is a north-east and south-west minor road which connects Wickham to Titchfield to the south-west of Knowle. Titchfield Lane typically measures approximately 5.5m in width, and accommodates two way vehicular traffic. Titchfield Lane has a speed limit of 40mph.
- 18.7.61 Mayles Lane is one of two routes to/from Knowle, Mayles Lane extends for approximately 2.8km, connecting Wickham in the north-east to Knowle and on to Funtley to the south. Mayles Lane is narrow, typically measuring between 4.0m and 5.3m in width. It has a speed limit of 30mph for the majority of its extent, reducing to 20mph in places. Much of Mayles Lane is private, with access restricted to authorised vehicles only, though there is a short section to Mayles Close which forms part of the adopted highway network. To the south of Mayles Lane there is also a 3-tonne weight restriction.
- 18.7.62 As well as Mayles Lane, Knowle Road provides a connection in and out of Knowle. Knowle Road runs in an east-west alignment, connecting the A3 Wickham Road to the east, to the village of Knowle. Knowle Road measures approximately 6.4m in width and accommodates two way vehicular traffic. It is complemented by on-street lighting, and has segregated, off-road pedestrian footway provision as well as formal crossing points at its intersections.

Section H: Wickham to Shedfield

- 18.7.63 The A334 Winchester Road is described at paragraph 18.7.59.
- 18.7.64 Pricketts Hill is a narrow north-west and south-east road connecting Shedfield High Street to Blind Lane to the north of Wickham. Pricketts Lane measures approximately 4.2m in width and accommodates two way vehicular traffic, although traffic may have to mount the verge to pass at places where the road narrows.

- 18.7.65 Blind Lane measures approximately 3.8m to 4.3m in width and provides an east-west link between the A334 Winchester Road and Pricketts Hill/Mill Lane to the east.
- 18.7.66 The Shirell Heath High Street provides a north-east and south-west link between Shedfield and Hillpound. The High Street serves the frontages of residential properties and facilities and amenities alike. It accommodates two way vehicle traffic and has a speed limit of 40mph in the vicinity of the Proposed Development, though the speed limit of the route reduces to 30mph further north.
- 18.7.67 The B2177 is a north-west and south-east route which provides a link between the B3354 and Lower Upham. The B2177 is subject to the national speed limit, and accommodates a single lane of two way vehicular traffic, with passing places provided sporadically along its extent. It generally measures approximately 6.0m in width and contains limited provision for pedestrians.

Section J: Shedfield to the River Hamble

- 18.7.68 B3035 Botley Road predominantly features two way traffic flows, with intermittent passing opportunities present along its extent. The B3035 Botley Road extends from Bishop's Waltham in the north-east to Botley to the south-west. It typically measures approximately 6m in width and is subject to a 40mph speed limit.
- 18.7.69 Sandy Lane is a narrow rural lane which measures approximately 3.5m in width and provides a connection between Shedfield and Waltham Chase. Given the narrow width of the road, there are passing places provided frequently along its extent.
- 18.7.70 Curdridge Lane is an east-west route which connects Waltham Chase in the east to Curdridge in the west. Specifically, the road provides a link between the B3035 Botley Road in the west and the B2177 Winchester Road in the east. Curdridge Lane accommodates two way vehicular traffic flows and has a speed limit of 40mph, reducing to 30mph to the east. Curdridge Lane is narrow, typically measuring approximately 4.2m in width.
- 18.7.71 The B2177 is described at paragraph 18.7.67.

Section K: The River Hamble to Lower Upham

- 18.7.72 The B3037 Mortimers Lane is an east-west link connecting Fair Oak to the west to Lower Upham to the east. The B3037 Mortimers Lane measures approximately 6m in width and accommodates two way vehicular traffic, with a speed limit which ranges between the national speed limit and 40mph. The 40mph limit is in place on the approach to Lower Upham, which is demarked by signage and gatekeeping features adjacent to the carriageway. Pedestrian infrastructure along the B3037 is limited, with the intermittent provision of footpaths and formal crossings near major intersections.
- 18.7.73 Scivier's Lane is a single carriageway rural road characterised by its narrow profile, ranging from 4.8m to 5.5m in width, which provides a link between the B2177 and Winters Hill. Scivier's Lane provides access to a series of residential properties, and links to the residential area of Durley to the east of Section K: The River Hamble to Lower Upham of the Pipeline between the WRP site and Otterbourne WSW.

- 18.7.74 Winters Hill is an east-west link which measures approximately 4.5m in width, providing a connection between Scivier's Lane and the B2177.
- 18.7.75 Alma Lane is a narrow, single carriageway north-east and south-west link that connects Lower Upham to Greenwood Lane to the south-west.

Section L: Lower Upham to Brambridge

- 18.7.76 The B2177 is described at paragraph 18.7.67.
- 18.7.77 Stroudwood Lane is approximately 3.5m wide, narrow lane which provides a short link between the B2177 Winchester Road and the B3037 Mortimers Lane.
- 18.7.78 The B3354 is a north-south route connecting from B3335 to the north, towards Botley to the south. As with the B3335, the B3354 accommodates two way vehicular traffic which is segregated by central hatching at places (through Colden Common). There are multiple formal crossing points on the B3354 through Colden Common, including signalised pedestrian crossing points. The road's speed limit ranges between 30mph (through Colden Common) to 50mph outside of residential areas.
- 18.7.79 Bishopstoke Lane is a narrow, approximately 3.8m wide lane, providing a two way link between Eastleigh and Colden Common. Given its narrow width, regular passing places are provided for two vehicles to pass.
- 18.7.80 The B3335 is a north-south route connecting J11 of M3 to the north to Colden Common and Otterbourne to the south. The B3335 accommodates two way traffic, which is segregated by a clearly demarked central parting. The B335 measures between 5.2m to 7.0m in width, and has a speed limit which varies between 30mph through Twyford to 50mph outside of residential areas. To the south-west, the B3335 Highbridge Road passes under a railway line, and this link may not be suitable for some HGV movements given that the height clearance of the bridge is just 3.7m.

Section M: Brambridge to Otterbourne Water Supply Works

- 18.7.81 The B3335 is described at paragraph 18.7.80.
- 18.7.82 Kiln Lane is an east-west route connecting the B3335 to the east to Main Road to the west. Kiln Lane is a two way vehicular traffic route providing a key link to Otterbourne. Kiln Lane ranges in width between 4.5m and 5.8m. Kiln Lane is subject to the national speed limit, although towards Otterbourne a speed limit of 30mph is in place. As with the B3335, Kiln Lane may be unsuitable for some HGV movements due to a low clearance height (4.8m) underneath the railway bridge.
- 18.7.83 Otterbourne Main Road provides a north-south connection through Otterbourne, linking to Kiln Lane to the south. Main Road provides access to a number of facilities and amenities in central Otterbourne and as such pedestrian facilities including formal crossing points permeate the extent of the road. Main Road has a speed limit of 30mph, and ranges between 7.5m to 9.0m in width, with frequent crossing spaces provided for pedestrians. Main Road accommodates two way vehicular traffic, which is separated by advisory road markings.

Strategic Road Network

- 18.7.84 The following Strategic Road Network (SRN) links are located within the vicinity of the Pipeline between the WRP site and Otterbourne WSW:
1. A34 (T) – The A34 (T) runs in a north-south alignment and provides a connection between Winchester to the north-west of the Otterbourne WSW Works north to Newbury and on to Oxford. The A34(T) connects to the M3 at Junction 9.
 2. M3 – The M3 provides a strategic connection between Eastleigh and West London. In the vicinity of the Pipeline between the WRP site and Otterbourne WSW, it connects the M27 Junction 4 south of Eastleigh to Winchester to the north-west of Otterbourne.
 3. M27 – The M27 offers an east-west connection between the New Forest and Portsmouth, circumventing Southampton to the north where it forms a junction with the M3. The M27 is aligned to the south of the Pipeline between the WRP site and Otterbourne WSW as it passes through areas such as Wickham and Boarhunt.
 4. A3 (M) – The A3 (M) runs in a north-south alignment from Junction 5 of the A27 at Broadmarsh to West London via Petersfield, Guildford and a number of other settlements. The A3 (M) bounds Havant to the west, segregating it from Waterlooville to the west. The Pipeline between the WRP site and Otterbourne WSW is to pass underneath the A3 (M) in the vicinity of Junction 5.
 5. A27 (T) – The A27 (T) provides an east-west connection between the M27 north of Portsmouth and Polegate to the south-east of England. It passes to the south of the Pipeline between the WRP site and Otterbourne WSW in the vicinity of Cosham/Farlington, and passes immediately north of the WRP site. The Pipeline between the WRP site and Otterbourne WSW would pass underneath the A27 adjacent to Junction 5 at Broadmarsh.
- 18.7.85 Refer to ES Figure 18.1 Traffic and transport study area: Proposed Development and key links, Volume III (Document reference 6.3, DCO Volume 6) for an illustration of the relevant local highway network links in the vicinity of the Pipeline between the WRP site and Otterbourne WSW.

Walking

Section D: The Water Recycling Plant site to Portsdown Hill

- 18.7.86 Walking infrastructure within Section D largely comprises of footways provided along principal road links including B2177 Portsdown Hill Road, A3 London Road and Crookhorn Lane. There are no PRoW in the vicinity of this section.
- 18.7.87 On the B2177 Portsdown Hill Road, pedestrian provision comprises of a footway along the northern side of the carriageway. To the east, this footway is segregated from the carriageway via a grass verge. A dropped kerb, uncontrolled crossing complete with a pedestrian refuge island is provided at the junction with Crookhorn Lane, from which point a pedestrian footway is provided on both sides of the carriageway to the north.

18.7.88 A continuous pedestrian footway also connects the B2177 to the A3 London Road, although crossing provision at the junction between these two links is limited to intermittent provision of uncontrolled, dropped kerb crossing points.

Section E: Portsdown Hill to Boarhunt

18.7.89 Section E captures a number of minor roads which do not have dedicated pedestrian provision such as Crooked Walk Lane, Portchester Lane and Monument Lane. Despite this, these roads accommodate a small number of pedestrian movements associated with access to dwellings, farms, PRow and other uses present.

18.7.90 There is slightly more intensive pedestrian use of lanes in the vicinity of Fort Nelson and Nelson’s Monument, which are located to the south of the study area. These two facilities are tourist attractions and are relatively significant trip generators. Though, the majority of trips to these attractions are taken by vehicle, as reflected by car parking provision and a lack of pedestrian provision, some trips may be taken by foot. However, there is limited pedestrian infrastructure on roads to the north of these attractions including Monument Lane and Swivelton Lane which fall within Section E.

18.7.91 There are also a number of PRow located within the vicinity of Section E, including those outlined below at Table 18-12.

Table 18-12 Section E: Portsdown Hill to Boarhunt Public Rights of Way links

Public Right of Way name	Overview
Boarhunt 14/1	Short link route connecting Boarhunt Road to Fareham 107/1
Boarhunt 15/1	Short link route connecting Boarhunt Road to other PRow
Boarhunt 12/1	Short link route connecting Blackhouse Lane to Monument Lane
Boarhunt 13/5	Short link route connecting various PRow
Boarhunt 13/1	Short link route connecting Monument Lane to B2177 Southwick Road
Boarhunt 16/1	Short link route connecting Ham Road to Monument Lane
Boarhunt 19/1	Short link route connecting Boarhunt Road to Ashley Down
Boarhunt 17/2	Short link route connecting Ham Road to other PRow
Southwick and Widley 3/1	Short link route connecting B2177 Southwick Road to Portsdown Technology Park
Southwick and Widley 28/1	Short link route connecting Widley Walk to New Down Lane via Widley Farm
Southwick and Widley 36/1	Medium length link connecting Purbrook Heath Road to Dellcrest Path

Section F: Boarhunt to Crockerhill and Section G: Crockerhill to Wickham

18.7.92 Section F of the Pipeline between the WRP site and Otterbourne WSW comprises the section from the boundary between WCC and FBC located west of Boarhunt

to the boundary between FBC and WCC north of Crockerhill. Section G of the Pipeline between the WRP site and Otterbourne WSW comprises the section from the boundary between FBC and WCC north of Crockerhill to Winchester Road (A334) north-west of Wickham.

- 18.7.93 Section F and G encompasses pedestrian footway at the A32 Hoad's Hill/Wickham Road. Provision this route is generally adequate, with footway present on the western side of the carriageway. Crossing provision at local junctions along the A32 comprises a series of dropped kerb crossings with tactile paving and pedestrian refuge islands.
- 18.7.94 Knowle Road is a key pedestrian route to and from Knowle and is the only road to/from the village that contains dedicated pedestrian infrastructure given the lack of provision on the other route to the village, Mayles Lane. The pedestrian provision on Knowle Road comprises of a segregated shared footway/cycleway separated from the south of the carriageway by a grass verge.
- 18.7.95 There are no dedicated pedestrian facilities on either Titchfield Lane, Mayles Lane or Forest Lane despite these links providing access to rural settlements (Knowle) and dwellings. It is understood following engagement with HCC that Mayles Lane in particular is still used by pedestrians to access Knowle.
- 18.7.96 In addition to the above on-road links, there are several PRoW links within the Section F and G area, including those outlined below at Table 18-13.

Table 18-13 Section F: Boarhunt to Crockerhill and Section G: Crockerhill to Wickham Public Rights of Way links

Public Right of Way name	Overview
Wickham 5/1	Short link route connecting Titchfield Lane to Tanfield Lane
Wickham 501/1	Long bridleway route linking Wickham Lodge Knowle to Wickham
Wickham 10/1	Short link route connecting A32 Hoad's Hill to Forest Lane
Fareham 86/3	Short link route connecting Knowle Road to other PRoW
Wickham 9/1	Short link route connecting Forest Lane to other PRoW
Fareham 101/1	Short link route connecting Nine Elms Lane to other PRoW
Fareham 102/1	Short link route connecting A32 Wickham Road to other PRoW
Fareham 103/1	Short link route connecting various PRoW
Fareham 104/1	Short link route connecting various PRoW
Fareham 104/2	Short link route connecting various PRoW
Fareham 105/1	Short link route connecting various PRoW
Fareham 104/2	Short link route connecting various PRoW
Fareham 106/1	Short link route connecting Nine Elms Lane to other PRoW
Fareham 107/1	Short link route connecting other PRoW to Whitedell Farm
Boarhunt 22/1	Short link route connecting other PRoW to Bere Farm
Boarhunt 11/3	Short link route connecting B2177 Southwick Road to Bere Farm

Section H: Wickham to Shedfield

- 18.7.97 Section H: Wickham to Shedfield covers the A334 Winchester Road and the Shirrell Heath High Street – both of which include pedestrian footway and crossing provision.
- 18.7.98 Other minor roads including Pricketts Hill and Blind Lane do not have any pedestrian provision, with pedestrian movements expected to mix with traffic. These routes primarily function to serve the frontages of residential dwellings, and do not accommodate significant pedestrian trip volumes.
- 18.7.99 Table 18-14 details the various PRoW links that fall within Section H of the Pipeline between the WRP site and Otterbourne WSW.

Table 18-14 Section H: Wickham to Shedfield Public Rights of Way links

Public Right of Way name	Overview
Shedfield 4/2	Short link route connecting PRoW
Shedfield 2/1	Short link route connecting PRoW to Winchester Road
Shedfield 3/2	Medium length route connecting Sandy Lane to Winchester Road via the Marriot Meon Valley Hotel and Country Club
Shedfield 13/1	Short link route connecting Winchester Road to High Street
Shedfield 12/1	Short link route connecting High Street to other PRoW
Shedfield 12/2	Short link route connecting Pricketts Hill with High Street
Wickham 12/1	Short link route connecting A334 Winchester Road with other PRoW
Wickham 14/2	Short link route connecting Blind Lane with other PRoW
Wickham 1/1	Short link route connecting A334 Winchester Road to Blind Lane

Section J: Shedfield to the River Hamble

- 18.7.100 Section J: Shedfield to the River Hamble encompasses rural lanes that primarily serve a residential function, including Sandy Lane and Curdridge Lane, as well as more prominent arterial routes including the B3035 Botley Road and the B2177 Winchester Road. Despite the intermittent provision of footway along these roads, there is very limited provision of pedestrian crossing facilities even at notable junctions such as the A334/B2177 junction north of the study area.
- 18.7.101 Sandy Lane and Curdridge Lane, like Pricketts Hill and Blind Lane (described at paragraph 18.7.98) are quiet country lanes which do not accommodate significant volumes of vehicular or pedestrian traffic and therefore these movements are expected to mix.
- 18.7.102 PRoW links within the Section J area are shown below at Table 18-15.

Table 18-15 Section J: Shedfield to the River Hamble Public Rights of Way links

Public Right of Way name	Overview
Bishop's Waltham 502/1	Short link route connecting Bishop's Waltham 44/1 to Brooklands Farm
Bishop's Waltham 44/1//44/2	Short link route connecting Bishop's Waltham 502/1 to B3035 Botley Road
Curdridge 4/1	Short link route connecting Bishop's Waltham 13/1 to Curdridge Lane
Shedfield 6/1	Short link route connecting Sandy Lane to other PRow
Shedfield 4/1	Short link route connecting Little Bull Lane to other PRow

Section K: The River Hamble to Lower Upham

18.7.103 There are four road links in the immediate vicinity of Section K; Winters Hill, Scivier's Lane, Alma Lane and the B3037 Mortimers Lane.

18.7.104 There is a relative lack of pedestrian infrastructure within Section K, with pedestrians generally expected to mix with traffic on quieter roads including Winters Hill, Alma Lane and Scivier's Lane given that traffic volumes are low.

18.7.105 The B3037 Mortimers Lane is a primary vehicular route to/from Lower Upham. There is no dedicated pedestrian infrastructure on this link, and given this coupled with the high volume and speeds of vehicles on this link, pedestrians are unlikely to frequently utilise this link.

18.7.106 Section K contains several PRow in its immediate vicinity, including those outlined below at Table 18-16.

Table 18-16 Section K: The River Hamble to Lower Upham Public Rights of Way links

Public Right of Way name	Overview
Upham 20/1	Short link route connecting B2177 Winchester Road to Durley 20/1
Durley 20/1	Short link route connecting Winters Hill to Upham 20/1
Bishop's Waltham 42a/1	Short link route connecting Winchester Road to Winters Hill
Bishop's Waltham 42a/2	Short link route connecting Winters Hill to Tangier View Farm
Bishop's Waltham 43/2	Short link route connecting Tangier View Farm to other PRow

Section L: Lower Upham to Brambridge

18.7.107 In the immediate vicinity of Section L: Lower Upham to Brambridge of the Pipeline between the WRP site and Otterbourne WSW is the formal signalised pedestrian crossing at the B3354 Winchester Road/B2177 Portsmouth Road junction at Fisher's Pond. The crossing links footways on either side of the B3354 Winchester Road, though there is no pedestrian provision at the B2177 Portsmouth Road arm despite the presence of footway at this location.

- 18.7.108 As mentioned at paragraph 18.7.72, there is no dedicated pedestrian provision at the B3037 Mortimers Lane. The B2177 Portsmouth Road also has little by way of pedestrian facilities, with sparse intermittent provision throughout.
- 18.7.109 Bishopstoke Lane, which is located to the north of Section L in the vicinity of Brambridge, is a rural country lane with no pedestrian provision.
- 18.7.110 The B3335 Highbridge Road provides a connection between Brambridge/Colden Common and North Eastleigh. It has an approximately 1.8m wide pedestrian footway on the southern side of the carriageway to accommodate pedestrian movements.
- 18.7.111 Section L also contains a number of PRow links, including those outlined below at Table 18-17.

Table 18-17 Section L: Lower Upham to Brambridge Public Rights of Way links

Public Right of Way name	Overview
Colden Common 2a/1	Short link route connecting B3335 Highbridge Road to other PRow
Colden Common 6/1	Short link route connecting B3335 Highbridge Road to other PRow
Colden Common 7/1	Short link route connecting Church Lane to Bishopstoke Lane
Colden Common 8/1	Short link route connecting Church Lane to Upper Moors Road
Colden Common 9/1	Short link route connecting B3335 Highbridge Road to Upper Moors Road
Colden Common 5/2	Short link route connecting Lordswood to Church Lane
Colden Common 21/1	Medium length route connecting Bishopstoke Lane with other PRow
Colden Common 22/1	Short link route connecting Church Lane to Fisher's Pond
Colden Common 23/2	Short link route connecting PRow
Colden Common 22/3	Short link route connecting PRow
Fair Oak and Horton Heath 27/1	Short link route connecting B3354 Winchester Road to other PRow
Fair Oak and Horton Heath 27/1	Short link route connecting B3354 Winchester Road to Colden Common 30/1
Colden Common 30/1	Short link route connecting Fair Oak and Horton Heath 27/1 to B2177 Portsmouth Road
Fair Oak and Horton Heath 23/1	Short bridleway link connecting Stroudwood Lane to a series of other PRow

Section M: Brambridge to Otterbourne Water Supply Works

- 18.7.112 The main walking links within the vicinity of Section M include the B3335 Highbridge Road (described at paragraph 18.7.80), Kiln Lane and the Otterbourne Main Road.

- 18.7.113 Kiln Lane is a key route to and from Otterbourne, providing a link between the village and Colden Common to the east. Despite this, there are no dedicated pedestrian facilities on Kiln Lane.
- 18.7.114 The Otterbourne Main Road bisects Otterbourne in a north-south alignment. The Main Road has pedestrian footway on either side of the carriageway, and features uncontrolled pedestrian crossing points at junctions with local roads (including Kiln Lane).
- 18.7.115 Section M also contains a number of PRoW links including those outlined below at Table 18-18.

Table 18-18 Section M: Brambridge to Otterbourne Public Rights of Way links

Public Right of Way name	Overview
Otterbourne 6/1	Short link route connecting Main Road to Kiln Lane
Otterbourne 7/1	Short link route connecting Boyatt Lane to Kiln Lane
Otterbourne 5/4	Short link route connecting Kiln Lane over the South Western Main Line towards Twyford
Otterbourne 2/1	Medium length route connecting Kiln Lane to B3335 Highbridge Road
Otterbourne 3/1	Short link route connecting Otterbourne 3/1 to other PRoW
Colden Common 1/1	Short link route connecting Kiln Lane to B3335 Highbridge Road
Colden Common 2a/1	Short link route connecting B3335 Highbridge Road to other PRoW

Cycling

Section D: The Water Recycling Plant site to Portsdown Hill

- 18.7.116 There are no dedicated cycling facilities within Section D. Except for the B2177 Portsdown Hill Road and the A3 London Road, local roads within Section D are generally lightly trafficked and suitable for cyclists to mix with vehicle traffic in line with LTN 1/20 guidance.

Section E: Portsdown Hill to Boarhunt

- 18.7.117 Within the vicinity of Section E of the Pipeline between the WRP site and Otterbourne WSW, Route 22 of the NCN includes facilities on the A2030 and provides a link to Gillman Lane and Crookhorn Lane junction beyond. This route is identified for improvement through the committed Campdown development.
- 18.7.118 Aside from the B2177 Southwick Road, local roads within the area are generally lightly trafficked and are considered suitable for cyclists to mix with traffic in line with LTN 1/20 guidance.

Section F: Boarhunt to Crockerhill and Section G: Crockerhill to Wickham

- 18.7.119 The end point of the Meon Valley Trail is located to the north-east of Section F and G, providing a link north-east along a disused railway from Wickham towards West

Meon. Though the Meon Valley Trail does not fall within Section F or G, the bridleway referred to as 'Wickham 501/1', which provides a direct link from Wickham Lodge Knowle to the Trail, is crossed by the Pipeline between the WRP site and Otterbourne WSW. This bridleway link is a popular off-road cycle route which provides access to the Meon Valley Trail.

18.7.120 Similarly, the NCN link 224 is also crossed by Section F and G of the Pipeline between the WRP site and Otterbourne WSW. Locally, this is an on-road link between the finish point of the Meon Valley Trail to the north-east of Wickham and North Fareham to the south. Despite there being no dedicated cycle infrastructure, the link utilises Mayles Lane, passing through Knowle to the west.

Section H: Wickham to Shedfield

18.7.121 There is a lack of dedicated cycle infrastructure within the vicinity of Section H. Links such as Blind Lane, Pricketts Hill and Shirell Heath High Street are generally low speed, lightly trafficked routes that are suitable for cyclists to mix with traffic.

18.7.122 Other links are of an arterial nature, including the A334 Winchester Road and the B2177 Winchester Road. These routes do not have any dedicated cycle infrastructure and are not suitable for cyclists of all abilities. Instead, according to LTN 1/20 guidance, only more experienced cyclists should utilise these routes within which they would have to mix with vehicular traffic.

Section J: Shedfield to the River Hamble

18.7.123 There is no dedicated cycling infrastructure within the vicinity of Section J. In the absence of any dedicated infrastructure, it is considered that local roads within Section J including Sandy Lane and Curdridge Lane are suitable for cyclists of all abilities.

18.7.124 In contrast, arterial links within Section J such as the B3035 Botley Road and the B2177 Winchester Road are subject to high traffic volumes and speeds. Instead, it is assumed that these routes are only suitable for more experienced cyclists in line with LTN 1/20 guidance.

Section K: The River Hamble to Lower Upham

18.7.125 As above, no existing cycle infrastructure exists within Section K. Local lanes including Winters Hill, Scivier's Lane and Alma Lane are rural roads which generally accommodate low volumes of traffic. As such it is considered appropriate for most cyclists to mix with traffic in line with LTN 1/20 guidance.

18.7.126 There are several links that are subject to high traffic volumes including the B3037 Mortimers Road, B2177 Winchester Road and B3035 Botley Road. Vehicles on these links are also likely to travel at higher speeds. As such, these links are not suitable for most cyclists as per LTN 1/20 guidance.

Section L: Lower Upham to Brambridge

18.7.127 Though there are no NCN links in the vicinity of Section L, advisory on-road cycle lanes are provided intermittently on the B2177 Portsmouth Road as well as the B3354 Winchester Road to the north of the junction with B2177 Portsmouth Road. Given that provision of these advisory cycle lanes is sporadic, in line with LTN 1/20

guidance, cycling on the B2177 and B3354 is only advised for experienced cyclists as they would have to routinely mix with other traffic on what can be described as busy roads.

Section M: Brambridge to Otterbourne Water Supply Works

- 18.7.128 Notably within Section M, NCN Route 23 bisects Otterbourne in a north-south alignment along Otterbourne's Main Road. In the vicinity of Otterbourne, the route is predominantly on-road, though some sections, including Otterbourne Hill, are off-road, traffic free links characterised by the provision of a segregated shared use footway/cycleway.
- 18.7.129 Locally, NCN 23 provides a link between Eastleigh and Winchester which passes through Otterbourne and other local settlements. Regionally, it provides a connection between Southampton and Reading.
- 18.7.130 Aside from the NCN Route 23, local roads within Otterbourne are generally lightly trafficked and suitable for experienced cyclists to mix with traffic based on LTN 1/20 guidance.

Horse riding

Section D: The Water Recycling Plant site to Portsdown Hill

- 18.7.131 There are no bridleways or other equestrian facilities in the vicinity of Section D.

Section E: Portsdown Hill to Boarhunt

- 18.7.132 The Fort Widley equestrian centre is located in the vicinity of Section E, immediately north of the B2177 Portsdown Hill Road. However, there are no bridleways linking to this site or in the vicinity of Section E.

Section F: Boarhunt to Crockerhill and Section G: Crockerhill to Wickham

- 18.7.133 The bridleway route Wickham 501-1 is located within the vicinity of Section F and G. Wickham 501-1 is a long-distance bridleway route which connects Wickham Lodge Knowle to Wickham.

Section H: Wickham to Shedfield

- 18.7.134 There are no bridleways or other equestrian facilities in the vicinity of Section H.

Section J: Shedfield to the River Hamble

- 18.7.135 The Shedfield Riding School is located to the west of Section J, however there are no bridleways linking to this site or in the vicinity of Section J.

Section K: The River Hamble to Lower Upham

- 18.7.136 The Broad Oak stables are located to the west of Section K near Lower Upham, however there are no bridleways linking to this facility or within the vicinity of Section K.

Section L: Lower Upham to Brambridge

18.7.137 The bridleway route Fair Oak and Horton Heath 23-1 intersects Section L of the Proposed Development to the south of Fisher’s Pond. This bridleway provides a connection between Stroudwood Lane and a series of other PRow.

18.7.138 There are two equestrian facilities in the vicinity of Section L also, including the Bow Lake Equestrian facility and the Oakpark Equestrian facility.

Section M: Brambridge to Otterbourne Water Supply Works

18.7.139 There are no bridleways or other equestrian facilities in the vicinity of Section M.

Public transport

18.7.140 Given the nature of the study area contained within the immediate vicinity of the Pipeline between the WRP site and Otterbourne WSW, an overview of public transport provisions within the area as a whole has been outlined. This is because there are only a handful of key public transport routes within the area, and many of the Pipeline sections do not contain any nodes or services at all given their rurality.

18.7.141 For those in rural areas or for individuals who find it difficult to use or access public bus services, or those who have no access to a car, HCC provide a ‘Connect Transport’ service. This is a bookable, door-to-door accessible transport service. A standard fare is charged to use this service which is similar to fares charged on public bus services.

18.7.142 A summary of bus services that operate in the area of the Pipeline between the WRP site and Otterbourne WSW is provided at Table 18-19.

Table 18-19 Public transport services between the Water Recycling Plant site and the Otterbourne Water Supply Works

Service	Operator	Route	Weekday frequency	Weekday evening frequency	Sunday frequency
1	Bluestar	Southampton – Chandlers Ford – Otterbourne – Compton – Winchester	20 mins	Hourly	30 mins
61	Stagecoach in Hampshire	Eastleigh – Twyford and Colden Common	Hourly	-	-
69	Stagecoach in Hampshire	Winchester – Colden Common – Fair Oak – Bishop’s Waltham – Swanmore – Wickham – Fareham	Hourly	Friday/Saturday – two journeys	Irregular
ZOO	Bluestar	Eastleigh – Fair Oak – Marwell Zoo (operates April to September only)	Hourly	-	Hourly

Service	Operator	Route	Weekday frequency	Weekday evening frequency	Sunday frequency
49	Stagecoach in Hampshire	Bishop's Waltham – Swanmore – Botley – Hedge End	Irregular	-	-
96	HCC	Swanmore, Shirrell Heath, Shedfield and Wickham to Broadcut and Fareham	Monday – Friday, 1-2 return journeys	-	-
20	Stagecoach in Portsmouth	Havant – Leigh Park – Crookhorn – QA Hospital – Portsmouth City Centre – Gunwharf	30 mins	-	-
MV1	Meon Valley Community Bus	West Meon – Soberton – Fareham	Mondays and second and fifth Friday of the month	-	-
700	Stagecoach in Portsmouth	The Hard – Commercial Road – North End – Hillsea – A27 – Havant – Emsworth – Southbourne – Chichester	30 mins	Hourly	30 mins
23	Stagecoach in Portsmouth	Leigh Park – Havant – Cosham – North End – Commercial Road – Gunwharf – Southsea	10 mins	30 mins	15 mins
27	First Solent	Rowlands Castle – Leigh Park – Havant – Emsworth	Irregular	-	-
37/37X	Stagecoach in Portsmouth	Havant – Leigh Park – Crookhorn – Stakes Hill – Waterlooville – Cowplain – Horndean – Petersfield	Hourly	-	-
39	Stagecoach in Portsmouth	Wecock Farm – Waterlooville – Crookhorn – Leigh Park – Havant	Hourly	-	-
20	First Solent	Fareham – Funtley – Knowle – Wickham	Irregular	-	-

18.7.143 These routes utilise a variety of links within the area between the WRP site and the Otterbourne WSW. The following provides an overview of these links in the context of local bus services:

1. A description of bus service provision within the vicinity of the WRP site in Havant is provided at paragraph 18.7.12.
2. The A3 London Road serves the '8 the Star' service which runs between Clanfield and Portsmouth. The A3 London Road accommodates this service

with dedicated bus lanes which are provided intermittently in both directions. In addition to this, bus stop facilities are high quality, with dedicated lay-bys, shelters, benches, bins, flagpoles and raised platforms.

3. The A32 Hoad's Hill/Wickham Road are served by the 20 and 69 services. The bus stop facilities on these routes vary between simple flagpole stops to stops that have a dedicated lay-by, shelter and waiting facilities.
4. The A334 Winchester Road is also frequented by the 69 bus service, with stops to the south of Wickham also served by the 20 service. There are no dedicated bus lanes, and stops along the A334 Winchester Road vary from simple flagpole stops to stops that have a dedicated bus lay-by. Call only stops, which are stops that don't have any waiting facilities whereby buses do not stop unless they are flagged down, are also present along the A334 Winchester Road.
5. The B2177 Winchester Road is utilised by the 69 bus service. Again, there are no dedicated bus lanes, and buses are expected to mix with traffic. However, bus stops are equipped with waiting facilities to varying degrees. These facilities range from simple flagpole provision to stops that are complete with flagpoles, shelters, benches and dedicated bus lay-bys.
6. The 49 bus service utilises Curdridge Lane through Waltham Chase. Stops along this link also vary in terms of facilities provided, with some comprising solely of flagpoles whilst other stops are supported by pedestrian crossings, shelters and waiting facilities.
7. The B3035 Botley Road is served by the 49 bus route. Stops on this road are 'call only' stops.
8. The 49 service travels along Winters Hill as it connects towards Botley and Hedge End. Winters Hill is a narrow route, measuring approximately 4.8m in width. As such, there is no specific provision for buses, with stops demarked solely by flagpoles and equipped with raised boarding platforms.
9. B3037 Mortimers Lane accommodates the 69 bus service, providing a link between Fair Oak and Lower Upham. Bus stop facilities along the route vary, with some stops containing dedicated on-carriageway bus cages and others comprising of dedicated bus lay-bys. All stops have flagpoles and raised off-road platforms for passengers to wait on.
10. The 69 and ZOO services frequent the Fisher's Pond Garage stops on the B2177 Portsmouth Road, though the latter runs during summer months only. There is minimal provision for buses along this route, and buses are expected to mix with traffic both in transit and when they stop. The stops at Fisher's Pond Garage comprise solely of flagpoles.
11. The B3354 Winchester Road accommodates the 69 and ZOO bus services. There are no dedicated bus lanes on this route, though bus stops in the vicinity of the Portsmouth Road junction contain dedicated infrastructure including lay-bys and flagpoles. To the south however, bus stops comprise solely of flagpoles, with no other dedicated infrastructure.
12. Buses mix with traffic on the B3335 Highbridge Road, and there are no dedicated lay-by facilities at bus stops along the road. Bus stop facilities are minimal, mostly comprising solely of a flagpole though in some cases a raised

platform is provided to assist passengers. The B3335 Highbridge Road accommodates the 61 bus route.

13. Bus stops are located at multiple, regular points along Otterbourne Road, Main Road and Otterbourne Hill, and are served by the 1 and 61 services. Bus stop provision varies, from minimal provision comprising of a flagpole to stops with dedicated bus lay-bys and stops that have shelter facilities.

18.7.144 In terms of rail links, the South Western Main Line bisects the north-western portion of the Pipeline between the WRP site and Otterbourne WSW, running in a north-south alignment immediately east of Otterbourne.

18.7.145 The nearest station to this section of the railway line is the Shawford railway station which is located approximately 1.7km north of Otterbourne. This station offers regular hourly services between Winchester and Southampton Central.

18.7.146 The central section of the Pipeline between the WRP site and Otterbourne WSW does not impact any rail routes and is not in proximity to any rail stations. To the south-west, the Pipeline between the WRP site and Otterbourne WSW nears the Eastleigh to Fareham Line to the west of Knowle, though this railway line is ultimately located approximately 750m west of the Pipeline between the WRP site and Otterbourne WSW.

18.7.147 Regionally, railway stations that hold a strategic function and are located within the vicinity of the Proposed Development include Eastleigh, Fareham and Winchester railway stations.

18.7.148 The existing baseline conditions in the vicinity of the WRP site and Havant are described at paragraphs 18.7.13 to 18.7.14.

Above Ground Plant

18.7.149 The AGP is considered in the above baseline sub-sections as they would be located within the relevant pipeline sections. This includes:

1. BPT-K located within Section K (River Hamble to Lower Upham)
2. Invasive Non-Native Species (INNS) Treatment at Otterbourne WSW located within Section M (Brambridge to Otterbourne WSW)
3. IPS-F located within Section F (Boarhunt to Crockerhill)
4. BPT/IPS-E located within Section E (Portsdown Hill to Boarhunt)
5. IPS-G located within Section G (Crockerhill to Wickham)

Future baseline

18.7.150 The methodology for establishing the future baseline transport conditions was set out in the EIA Scoping Report and this methodology has been agreed with the relevant stakeholders and refined, as detailed in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6). This includes a combination of the DfT Trip End Model Presentation Programme (TEMPro) and the National Road Traffic Projections 2022, which is based on the Department for Transport's National Transport Model.

18.7.151 As per the ISEP Guidelines [23], derived forecast traffic growth (e.g. TEMPro) has been utilised to derive future year baseline traffic conditions. The TEMPro growth

factors for the period 2023-2031² are presented within the Transport Assessment (ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6)).

- 18.7.152 The EIA Scoping Report indicated the future baseline would include any changes which are committed or otherwise reasonably expected (as agreed with the highway authorities) to take place to existing conditions by the future design year(s). Whilst the PEI Report noted an alternative approach where cumulative development traffic would not be considered in the future baseline, to remain consistent with the air quality assessment, traffic demand associated with cumulative development has been included in the future baseline.
- 18.7.153 The future baseline is described in full in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

18.8 Assessment of likely significant effects

- 18.8.1 This section presents the assessment of likely significant effects on traffic and transport resulting from the construction, operation and decommissioning of the Proposed Development. The likely significant effects of the Proposed Development are identified taking into account primary and tertiary mitigation, as detailed in section 18.4. Following assessment, the need for secondary mitigation is considered in section 18.9 and residual effects are explained in section 18.10.
- 18.8.2 The structure of this chapter involves the categorisation of effects based on ISEP Guidelines [23]. These categories are set out as follows:
1. Driver and bus passenger delay
 2. Pedestrian, cyclist and horse rider delay
 3. Severance
 4. Amenity, fear and intimidation
 5. Accidents and safety
 6. Hazardous loads
 7. Abnormal indivisible loads
- 18.8.3 As detailed in the section 18.5, this assessment is based on the quantitative analysis included within the Transport Assessment (ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6)). The sensitivity of each receptor, as set out in this section, is detailed in Annex S of the Transport Assessment (ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6)).

Construction effects

Driver and bus passenger delay

- 18.8.4 During construction, the Proposed Development would result in impacts to the existing highway network within the study area as a result of the following activities:

² Whilst construction and commissioning activities are planned between 2028 and 2033, 2031 represents the last year significant construction traffic demand is forecast on the local highway network. As such, 2031 has been identified as the future year for the purposes of the assessment of effects during construction.

1. Construction of the Pipeline between the WRP site and Otterbourne WSW
 2. Construction of the WRP site, and AGP
 3. Construction of the temporary accesses to the temporary construction compounds
 4. Construction of the permanent vehicle accesses to the WRP site, and AGP
 5. Traffic management to facilitate temporary works in the public highway to enable HGV access to the temporary construction compounds
 6. Changes to traffic flows associated with temporary traffic management (lane/road closures and associated diversions)
 7. Increased traffic and HGV movements from the Proposed Development on the surrounding road network
- 18.8.5 The Proposed Development would also result in impacts associated with construction worker movements to and from the construction workers hub. This could impact the existing highway network outside of the study area.
- 18.8.6 These changes to and on the highway network within the study area have the potential to affect perceptions of driver and bus delay.
- 18.8.7 Bus routes that are on roads intersecting with the Pipeline between the WRP site and Otterbourne WSW are shown alongside points at which the Pipeline between the WRP site and Otterbourne WSW would intersect the local highway network at ES Figure 18.4 Bus routes within the vicinity of the Order Limits, Volume III (Document reference 6.3, DCO Volume 6).
- 18.8.8 Quantitative assessments have been undertaken to inform this qualitative assessment with regards to driver and bus passenger delay. The quantitative assessments can be found in the Transport Assessment included in ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).
- 18.8.9 This assessment of driver and bus passenger delay is structured as follows for each component of the Proposed Development (where associated effects have been identified):
1. Temporary road and lane closures associated with the construction of the Pipeline between the WRP site and Otterbourne WSW and the construction of temporary and permanent accesses
 2. Traffic management associated with off-site temporary works
 3. Construction traffic impacts on the local highway network
- 18.8.10 If there are no works/impacts associated with the with the specific component (e.g. there are no temporary road or lane closures) a specific sub-section is not included.
- 18.8.11 Temporary short-term traffic management measures including road and/or lane closures and diversions would be required to facilitate construction of the Pipeline between the WRP site and Otterbourne WSW. These would be located where the Pipeline between the WRP site and Otterbourne WSW would cross the local highway network and where trenchless construction works are not provided. It is expected that these works would typically be delivered in a short period of time, as detailed in the TMS (Document reference 7.3, DCO Volume 7).
- 18.8.12 Works to facilitate the construction of the temporary and permanent accesses for the temporary construction compounds and AGP would also likely require

temporary traffic management including temporary, short-term road or lane closures, as detailed in the TMS (Document reference 7.3, DCO Volume 7).

- 18.8.13 An increase in traffic associated with the movement of materials and workforce would impact traffic demand on roads within the study area. These roads are identified within the Framework CTMP (Document reference 7.2, DCO Volume 7), with details of construction trip generation provided in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

Water Recycling Plant site

Temporary road and lane closures

- 18.8.14 As detailed in the TMS (Document reference 7.3, DCO Volume 7), temporary lane closures would be required on Harts Farm Way to construct the permanent access into the WRP site and a signal-controlled pedestrian and cycle crossing on Harts Farm Way. These temporary lane closures would only be permitted overnight.
- 18.8.15 Harts Farm Way is used by vehicular drivers on routes/journeys important at a local level and the receptor sensitivity is therefore low. The anticipated temporary, short-term works, including overnight lane closures would likely be perceptible but not to the extent that it would materially change conditions which would otherwise prevail, resulting in a minor magnitude of impact at this location. Based on the application of LA 104 Environmental Assessment and Monitoring [24], this would result in temporary, short-term effects of minor adverse significance (not significant) to drivers and bus passengers whilst the works are undertaken.

Construction traffic impacts on the local highway network

- 18.8.16 A temporary increase in traffic demand is forecast on Harts Farm Way as set out in ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).
- 18.8.17 Harts Farm Way is used by vehicular drivers on routes/journeys important at a local level and the receptor sensitivity is therefore low. This temporary increase in traffic demand would likely be perceptible but not to the extent that it would materially change conditions which would otherwise prevail, resulting in a minor magnitude of impact at this location. Based on the application of LA 104 Environmental Assessment and Monitoring [24], this would result in temporary, short-term effects of minor adverse significance (not significant) to drivers and bus passengers.

Pipelines between Budds Farm Wastewater Treatment Works and the Water Recycling Plant site

Construction traffic impacts on the local highway network

- 18.8.18 As detailed in ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6), traffic flows on Southmoor Lane, Brockhampton Road and Harts Farm Way are forecast to increase as a result of the Proposed Development.
- 18.8.19 Southmoor Lane, Brockhampton Road and Harts Farm Way are used by vehicular drivers on routes/journeys important at a local level and the receptor sensitivity is

therefore low. This temporary increase in traffic demand would not be perceptible, resulting in a negligible magnitude of impact at this location. This would result in temporary, short-term effects of negligible adverse significance (not significant) to drivers and bus passengers.

Pipelines between the Water Recycling Plant site and Bedhampton Springs

Temporary road and lane closures

- 18.8.20 A road closure would be required on Mill Lane to construct the temporary access into temporary construction compound B1-1.
- 18.8.21 Mill Lane is a local estate level route and the residential therefore the receptor sensitivity is negligible. The anticipated temporary, short-term works would not be perceptible given Mill Lane is a no-through road, resulting in a negligible magnitude of impact at this location. This would result in temporary effects of negligible adverse significance (not significant) to drivers whilst the works are undertaken.

Traffic management associated with off-site temporary works

- 18.8.22 As detailed in the Framework CTMP (Document reference 7.2, DCO Volume 7), off-site temporary works are proposed at the Bedhampton Road/Brookside Road junction. These temporary works would likely require a lane closure on both Brookside Road and Bedhampton Road. Temporary lane closures on Bedhampton Road would only be permitted overnight.
- 18.8.23 Brookside Road and Bedhampton Road are used by vehicular drivers on routes/journeys important at a local or town scale and the receptor sensitivity is therefore low. The anticipated temporary, short-term works would likely be perceptible, and which would materially change conditions which would otherwise prevail, resulting in a moderate magnitude of impact at this location. This would result in short-term effects of minor adverse significance (not significant) to drivers and bus passengers.

Construction traffic impacts on the local highway network

- 18.8.24 As detailed in the Framework CTMP (Document reference 7.2, DCO Volume 7), construction workers would not be permitted to park at temporary construction compounds B1-1, B1-2 and B1-3 and instead be transported by minibus. Changes in traffic demand on Mill Lane, Bidbury Lane, Bedhampton Hill, Bedhampton Road, Meyrick Road and West Street would be limited to a small number of delivery vehicles and mini-bus movements. Mill Lane, Bidbury Lane, Bedhampton Hill, Bedhampton Road, Meyrick Road and West Street are used by vehicular drivers on routes/journeys important at an estate or local scale and the receptor sensitivity is therefore either Negligible (Mill Lane, Bidbury Lane and Meyrick Road) or low (Bedhampton Hill, Bedhampton Road and West Street). This temporary increase in traffic demand would not be perceptible, resulting in a negligible magnitude of impact at this location. This would result in temporary, short-term effects of negligible adverse significance (not significant) to drivers and bus passengers on all links.

Pipeline between the Water Recycling Plant site and Otterbourne Water Supply Works

Section D: The Water Recycling Plant site to Portsdown Hill

Temporary road and lane closures

- 18.8.25 A temporary road closure would be required on Gilman Road to construct the temporary access into temporary construction compound D-1. Gilman Road is a traffic free route and therefore the receptor sensitivity is negligible. The anticipated temporary, short-term works would not be perceptible, resulting in a negligible magnitude of impact at this particular location. Whilst works are undertaken here, the result would be of negligible adverse significance (not significant) to drivers.

Construction traffic impacts on the local highway network

- 18.8.26 A temporary increase in traffic demand is forecast on Gilman Road as set out in ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6). Gilman Road is a traffic free route and therefore the receptor sensitivity is negligible. The increase in traffic would not be perceptible due to the absence of existing traffic that could be delayed, and would not materially change conditions which would otherwise prevail in respect of driver delay, resulting in a negligible magnitude of impact at this location. Based on the application of LA 104 Environmental Assessment and Monitoring [24], this would result in temporary, short-term effects of negligible adverse significance (not significant) to drivers and bus passengers.
- 18.8.27 A temporary increase in traffic demand is also forecast on Portsdown Hill Road, Crookhorn Lane, College Road and Purbrook Way. These roads are important at a regional scale and therefore the receptor sensitivity is medium. The increase in traffic would be perceptible but not to the extent that it would materially change conditions, resulting in a minor magnitude of impact at this location. This would therefore result in temporary, short-term effects of minor adverse significance (not significant) to drivers and bus passengers.

Section E: Portsdown Hill to Boarhunt

Temporary road and lane closures

- 18.8.28 To construct the temporary and permanent accesses on New Down Lane, and the temporary accesses on Widley Walk, Mill Lane, Pigeon House Lane, Crooked Walk Lane, Portchester Lane, Monument Lane, lane or road closures would be required. Road and/or lane closures would also be required on these roads to construct the Pipeline between the WRP site and Otterbourne WSW. These routes are used by drivers making journeys that are important at a local level and do not serve as a significant 'through' function, and therefore the receptor sensitivity is negligible. The associated anticipated short-term temporary works would likely to be perceptible to the extent they would substantially change conditions, resulting in a major magnitude of impact. The short-term temporary effects would be of minor adverse significance (not significant) with regards to driver delay.

- 18.8.29 To construct the temporary accesses on Boarhunt Road, lane closures for up to 12 weeks would be required. A road closure for up to three weeks would also be required to construct the Pipeline between the WRP site and Otterbourne WSW. This route is used by drivers making journeys that are important at a local level, and therefore the receptor sensitivity is low. The associated anticipated short-term temporary works would likely to be perceptible to the extent they would substantially change conditions, resulting in a major magnitude of impact. The TMS (Document reference 7.3, DCO Volume 7) includes measures to keep alternative routes open whilst a closure is planned on Boarhunt Road to manage the impacts on journey times. With these measures, the short-term temporary effects (up to 15 weeks) would be of minor adverse significance (not significant) with regards to driver delay.
- 18.8.30 Lane closures would also be required on the B2177 Southwick Road to construct the temporary access and the Pipeline between the WRP site and Otterbourne WSW. This route is used by drivers making journeys that are important on a regional level, and therefore the receptor sensitivity is medium. The temporary lane closures on this route would change conditions which are likely to be perceptible but not the extent that it would materially change conditions which would otherwise prevail and therefore the impact would be of minor magnitude. These short-term, temporary effects would be of minor adverse significance (not significant) with regards to driver delay.

Traffic management associated with off-site temporary works

- 18.8.31 As detailed in the Framework CTMP (Document reference 7.2, DCO Volume 7), potential off-site permanent works are proposed at the New Down Lane/Portsdown Hill Road junction to enable two vehicles to pass on New Down Lane at the junction. Portsdown Hill Road is used by journeys that are important on a regional level, and therefore the receptor sensitivity is medium. The anticipated temporary, overnight, short-term works would likely be perceptible but not the extent that it would materially change conditions which would otherwise prevail, resulting in a minor magnitude of impact at this location. The short-term temporary effects would be of minor adverse significance (not significant) with regards to driver and bus passenger delay.

Construction traffic impacts on the local highway network

- 18.8.32 A temporary increase in traffic demand is forecast on New Down Lane, Boarhunt Road, B2177 Portsdown Hill Road, the B2177 Southwick Road, the A3 London Road and the A27. New Down Lane is used by drivers making journeys that are important at a local level, and does not serve a 'through' function, and therefore the receptor sensitivity is negligible. Boarhunt Road is used by drivers making journeys that are important at a local level, and therefore the receptor sensitivity is low. B2177 Portsdown Hill Road, the B2177 Southwick Road, the A3 London Road and the A27 are used by drivers making journeys that are important on a regional level, and therefore the receptor sensitivity is medium.
- 18.8.33 The increase in traffic would not be perceptible or materially change conditions that would otherwise prevail, resulting in a negligible magnitude of impact at these locations. This would result in effects of negligible adverse significance (not significant) to drivers and bus passengers.

Section F: Boarhunt to Crockerhill

Temporary road and lane closures

- 18.8.34 To construct the temporary accesses as well as the Pipeline between the WRP site and Otterbourne WSW, road closures would be required on Whitedell Lane, Forest Lane and Chalk Lane. Given these routes are used by drivers making journeys that are important at a local level and do not serve as a significant ‘through’ function, the receptor sensitivity at these locations is negligible. The associated anticipated short-term temporary works would likely to be perceptible to the extent they would substantially change conditions, resulting in a major magnitude of impact. The short-term temporary effects would be of minor adverse significance (not significant) with regards to driver delay.
- 18.8.35 Overnight lane closures would be required on the A32 Hoad’s Hill to construct the temporary accesses. This route is used by drivers and bus passengers making journeys that are important on a regional level, and therefore the receptor sensitivity is medium. The temporary overnight lane closures would not be perceptible or materially change conditions that would otherwise prevail, resulting in a negligible magnitude of impact. The short-term temporary effects would be of negligible adverse significance (not significant) with regards to driver and bus passenger delay.

Construction traffic impacts on the local highway network

- 18.8.36 A temporary increase in traffic demand is forecast on the A32. This road is used by drivers making journeys that are important on a regional level, and therefore the receptor sensitivity is medium. The increase in traffic on the A32 Hoad’s Hill would not be perceptible or materially change conditions that would otherwise prevail, resulting in a negligible magnitude of impact at these locations. This would result in short-term, temporary effects of negligible adverse significance (not significant) to drivers and bus passengers.

Section G: Crockerhill to Wickham

Temporary road and lane closures

- 18.8.37 To construct the temporary accesses as well as the Pipeline between the WRP site and Otterbourne WSW, road closures would be required on Castle Farm Lane and Tanfield Lane. The receptor sensitivity at both locations is negligible as both routes are used by drivers making trips important at a local level and do not provide a significant ‘through’ function. The associated anticipated short-term temporary works would likely to be perceptible to the extent they would substantially change conditions, resulting in a major magnitude of impact. The short-term temporary effects would be of minor adverse significance (not significant) with regards to driver delay.
- 18.8.38 A lane closure would be required to construct the temporary and permanent access from Titchfield Lane. Titchfield Lane is used by drivers making trips at a local level and as such the receptor sensitivity is low. The anticipated temporary, short-term works would likely be perceptible but not the extent that it would materially change conditions which would otherwise prevail, resulting in a minor magnitude of impact

at this location. Whilst the temporary, short-term works are being undertaken, it is anticipated that the effects would be of minor adverse significance (not significant) to drivers using this route.

Construction traffic impacts on the local highway network

- 18.8.39 A temporary increase in traffic demand is forecast on the A334 Winchester Road. The A334 Winchester Road is used by drivers making journeys that are important on a regional level, and therefore the receptor sensitivity is medium. The increase in traffic on the A334 Winchester Road would not be perceptible or materially change conditions that would otherwise prevail, resulting in a negligible magnitude of impact at these locations. This would result in effects of negligible adverse significance (not significant) to drivers and bus passengers.
- 18.8.40 A temporary increase in traffic demand is forecast on Titchfield Lane. Titchfield Lane is used by drivers making journeys that are important on a local level, and therefore the receptor sensitivity is low. The increase in traffic on Titchfield Lane would not be perceptible or materially change conditions that would otherwise prevail, resulting in a negligible magnitude of impact at these locations. This would result in temporary, short-term effects of negligible adverse (not significant) significance to drivers and bus passengers.

Section H: Wickham to Shedfield

Temporary road and lane closures

- 18.8.41 To construct the temporary accesses as well as the Pipeline between the WRP site and Otterbourne WSW, road closures would be required on Blind Lane and Pricketts Hill. The receptor sensitivity at both locations is low as both routes are used by drivers making trips important at a local level. The associated anticipated short-term temporary works would likely to be perceptible to the extent they would substantially change conditions, resulting in a major magnitude of impact. The TMS (Document reference 7.3, DCO Volume 7) includes measures to keep alternative routes open whilst closures are planned on Blind Lane and Pricketts Hill to manage the impacts on journey times. With these measures the short-term temporary effects would be of minor adverse significance (not significant) with regards to driver delay.
- 18.8.42 To construct the temporary access on Shirrell Heath High Street, a lane closure would be required. The receptor sensitivity at this location is low as this route is used by drivers making trips important at a local level. The anticipated temporary, short-term works would likely be perceptible but not the extent that it would materially change conditions which would otherwise prevail, resulting in a minor magnitude of impact. The anticipated works, which would be temporary and short-term in nature, would result in effects of minor adverse significance (not significant) to drivers whilst works are being undertaken.

Traffic management associated with off-site temporary works

- 18.8.43 As detailed in the Framework CTMP (Document reference 7.2, DCO Volume 7), potential off-site temporary works are proposed at the A334/Titchfield Lane/Blind Lane junction to enable HGV access to Blind Lane. This junction is used by

journeys that are important on a regional level, and therefore the receptor sensitivity is medium. The anticipated temporary, overnight, short-term works would likely be perceptible but not the extent that it would materially change conditions which would otherwise prevail, resulting in a minor magnitude of impact at this location. The short-term temporary effects would be of minor adverse significance (not significant) with regards to driver and bus passenger delay.

Construction traffic impacts on the local highway network

- 18.8.44 A temporary increase in traffic demand is forecast on Blind Lane and Shirrell Heath High Street. Blind Lane and Shirrell Heath High Street are used by drivers making journeys that are important on a local level, and therefore the receptor sensitivity is low. The increase in traffic would be perceptible and materially change conditions that would otherwise prevail, resulting in a minor magnitude of impact at these locations. This would result in effects of negligible adverse significance (not significant) to drivers and bus passengers.
- 18.8.45 A temporary increase in traffic demand is forecast on the B2177 Winchester Road and the A334 Kitnocks Hill. These roads are used by drivers making journeys that are important on a regional level, and therefore the receptor sensitivity is medium. The increase in traffic would not be perceptible or materially change conditions that would otherwise prevail, resulting in a negligible magnitude of impact at these locations. This would result in temporary, short-term effects of negligible adverse significance to drivers and bus passengers (not significant).

Section J: Shedfield to the River Hamble

Temporary road and lane closures

- 18.8.46 To construct the temporary accesses and the Pipeline between the WRP site and Otterbourne WSW (Sandy Lane only), road closures would be required on St Annes Lane and Sandy Lane. The receptor sensitivity at both locations is low as both routes are used by drivers making trips important at a local level. The associated anticipated short-term temporary works would likely be perceptible to the extent they would substantially change conditions, resulting in a major magnitude of impact. The TMS (Document reference 7.3, DCO Volume 7) includes measures to keep alternative routes open whilst closures are planned on St Annes Lane and Sandy Lane to manage the impacts on journey times. With these measures the short-term temporary effects would be of minor adverse significance (not significant) with regards to driver delay.
- 18.8.47 To construct the temporary accesses as well as the Pipeline between the WRP site and Otterbourne WSW, lane closures would be required on Curdrige Lane. The receptor sensitivity at this location is low as this route is used by drivers making trips important at a local level. The anticipated temporary, short-term works would likely be perceptible but not to the extent that it would materially change conditions which would otherwise prevail, resulting in a minor magnitude of impact. The anticipated works, which would be temporary and short-term in nature, would result in effects of minor adverse significance (not significant) to drivers and bus passengers whilst works are being undertaken.
- 18.8.48 To construct the temporary access on the B3035 Botley Road a night-time lane closure would be required. This route is used by drivers making journeys that are

important on a regional level and therefore the receptor sensitivity is medium. The temporary night-time lane closures on this route would likely be perceptible but not to the extent that it would materially change conditions which would otherwise prevail, resulting in a minor magnitude of impact. This would result in effects of minor adverse significance to drivers and bus passengers whilst works are being undertaken (not significant).

Construction traffic impacts on the local highway network

- 18.8.49 A temporary increase in traffic demand is forecast on the A334 Station Hill, B3035 Botley Road and Curdridge Lane.
- 18.8.50 The A334 Station Hill is used by drivers making journeys that are important on a regional level, and therefore the receptor sensitivity is medium. The increase in traffic on the A334 Station Hill would not be perceptible resulting in a negligible magnitude of impact at this location. This would result in temporary, short-term effects of negligible adverse significance to drivers and bus passengers (not significant).
- 18.8.51 The B3035 Botley Road and Curdridge Lane are used by drivers making journeys that are important on a regional level, and therefore the receptor sensitivity is medium. The increase in traffic on the B3035 Botley Road and Curdridge Lane would be perceptible and materially change conditions that would otherwise prevail, resulting in a minor magnitude of impact at these locations. This would result in temporary, short-term effects of minor adverse significance to drivers and bus passengers (not significant).

Section K: The River Hamble to Lower Upham

Temporary road or lane closures

- 18.8.52 To construct the temporary accesses as well as the Pipeline between the WRP site and Otterbourne WSW, lane or road closures would be required on Scivier's Lane, Alma Lane, Winters Hill, Winchester Road and the B3037 Mortimers Lane.
- 18.8.53 The receptor sensitivity on Scivier's Lane and Alma Lane is negligible as both routes are used by drivers making trips important at a local level and do not provide a significant 'through' function. The associated anticipated short-term temporary works would likely be perceptible to the extent they would substantially change conditions, resulting in a major magnitude of impact. This would result in temporary, short-term effects of minor adverse significance to drivers (not significant).
- 18.8.54 The receptor sensitivity on Winters Hill is low as this route is used by drivers making journeys that are important at a local level. The sensitivity on the B2177 Winchester Road and the B3037 Mortimers Lane is medium as these routes are used by drivers and bus passengers making trips important at a regional level. The associated anticipated short-term temporary works, would be perceptible on this route, leading to a minor magnitude of impact. The temporary, short-term effects would be of minor adverse significance to drivers and bus passengers (not significant).

Construction traffic impacts on the local highway network

- 18.8.55 A temporary increase in traffic demand is forecast on the B2177 Winchester Road, the B3037 Mortimers Lane and the B3037 Fair Oak Road and these are used by drivers making journeys that are important on a regional level, and therefore the receptor sensitivity is medium. The increase in traffic would not be perceptible or materially change conditions that would otherwise prevail, resulting in a negligible magnitude of impact at these locations. This would result in temporary, short-term effects of negligible adverse significance to drivers and bus passengers (not significant).
- 18.8.56 A temporary increase in traffic demand is also forecast on Winters Hill. Winters Hill is used by drivers making journeys that are important on a local level, and therefore the receptor sensitivity is low. The increase in traffic on Winters Hill would not be perceptible or materially change conditions that would otherwise prevail, resulting in a negligible magnitude of impact at this location. This would result in temporary short-term effects of negligible adverse significance to drivers and bus passengers (not significant).

Section L: Lower Upham to Brambridge

Temporary road and lane closures

- 18.8.57 To construct the temporary access as well as the Pipeline between the WRP site and Otterbourne WSW, road and/or lane closures would be required on Stroudwood Lane, Church Lane and Bishopstoke Lane.
- 18.8.58 The receptor sensitivity on Stroudwood Lane and Bishopstoke Lane is low as these routes are used by drivers making trips important at a local level. On Stroudwood Lane and Bishopstoke Lane the associated anticipated short-term temporary road closures would likely be perceptible to the extent they would substantially change conditions, resulting in a major magnitude of impact. The TMS (Document reference 7.3, DCO Volume 7) includes measures to keep alternative routes open whilst closures are planned on Stroudwood Lane and Bishopstoke Lane to manage the impacts on journey times. With these measures the short-term temporary effects would be of minor adverse significance with regards to driver and bus passenger delay and therefore not significant.
- 18.8.59 The receptor sensitivity on Church Lane is low as this route is used by drivers making trips important at a local level. On Church Lane, the temporary lane closures would be perceptible on this route, leading to a minor magnitude of impact. The temporary, short-term effects would be of minor adverse significance to driver and bus passenger delay (not significant).
- 18.8.60 To construct the temporary accesses on the B2177 Portsmouth Road, B3354 Winchester Road and the B3335 Highbridge Road lane closures would be required. These routes are used by drivers making trips important at a regional level and therefore receptor sensitivity at these locations is medium. The associated anticipated short-term temporary works, which includes night-time closures, would not be perceptible on these routes, leading to a negligible magnitude of impact. The anticipated works, which would be temporary and short-term in nature, would result in effects of negligible adverse significance (not significant) with regards to driver and bus passenger delay whilst works are being undertaken.

Construction traffic impacts on the local highway network

- 18.8.61 A temporary increase in traffic demand is forecast on the B3354 Main Road, A335 Allbrook Way, B3335 (Highbridge Road and Searles Hill) and Church Lane. The receptor sensitivity on the B3354 Main Road, A335 Allbrook Way, B3335 (Highbridge Road and Searles Hill) is medium as these roads are used for journeys important at a regional level whilst the receptor sensitivity on Church Lane is low. The increase in traffic on these links would result in a negligible or minor magnitude of impact. This would result in temporary short-term effects of minor adverse significance to drivers and bus passengers (not significant).

Section M: Brambridge to Otterbourne Water Supply Works

Temporary road and lane closures

- 18.8.62 To construct the temporary access to the temporary construction haul road as well as the Pipeline between the WRP site and Otterbourne WSW, road closures would be required on Kiln Lane. The receptor sensitivity at this location is low as this route is used by drivers making trips important at a local level. The associated anticipated short-term temporary works would likely to be perceptible to the extent they would substantially change conditions, resulting in a major magnitude of impact. The TMS (Document reference 7.3, DCO Volume 7) includes measures to keep alternative routes open whilst closures are planned on Kiln Lane to manage the impacts on journey times. With these measures the short-term temporary effects would be of minor adverse significance with regards to driver delay (not significant).
- 18.8.63 To enable access to the temporary construction compounds M-1 and M-2, temporary short-term road closures may potentially be required on Kiln Lane. These road closures would be required for a few minutes twice a day whilst HGVs are arriving and departing the compounds on Kiln Lane. As noted above, receptor sensitivity at this location is low. The associated anticipated short-term temporary closures would likely to be perceptible but not the extent that it would materially change conditions which would otherwise prevail, resulting in a minor magnitude of impact. The short-term temporary effects would therefore be of negligible adverse significance with regards to driver delay (not significant).

Traffic management associated with off-site temporary works

- 18.8.64 As detailed in the Framework CTMP (Document reference 7.2, DCO Volume 7), off-site temporary works are proposed at the Otterbourne Hill/Kiln Lane/Otterbourne Main Road junction. These temporary works would likely require a road closure on Kiln Lane and a lane closure on Otterbourne Hill. Otterbourne Hill is used by drivers making journeys that are important at a regional level and the receptor sensitivity is therefore medium. Kiln Lane is used by vehicular drivers on routes/journeys important at a local or town scale and the receptor sensitivity is therefore low. The anticipated temporary, short-term works would likely be perceptible, and which would materially change conditions which would otherwise prevail, resulting in a moderate magnitude of impact at this location. This would result in effects of minor adverse significance (not significant) to drivers and bus passengers.

Construction traffic impacts on the local highway network

- 18.8.65 A temporary increase in traffic demand is forecast on Kiln Lane, Sparrowgrove and Waterworks Road associated with the construction of Section M of the Pipeline between the WRP site and Otterbourne WSW and the INNS Treatment at Otterbourne WSW. These routes are used by drivers making journeys that are important on a local level, and therefore the receptor sensitivity is low. The increase in traffic would not be perceptible or materially change conditions that would otherwise prevail, resulting in a negligible magnitude of impact at these locations. Based on the application of LA 104 Environmental Assessment and Monitoring [24], this would result in effects of negligible adverse significance (not significant) to drivers and bus passengers.
- 18.8.66 A temporary increase in traffic demand is forecast on the Winchester Road Link, Hockley Link, Otterbourne Hill and Otterbourne Road. The roads used by drivers making journeys that are important on a regional level, and therefore the receptor sensitivity is medium. The increase in traffic would not be perceptible or materially change conditions that would otherwise prevail, resulting in a negligible magnitude of impact at these locations. This would result in temporary, short-term effects of negligible adverse significance (not significant) to drivers and bus passengers.

Construction workers hub

Construction traffic impacts on the local highway network

- 18.8.67 As set out in ES Chapter 3 Description of the Proposed Development, Volume I (Document reference 6.1, DCO Volume 6), the construction workers hub would not be used to store materials, plant or other equipment. The site would therefore only generate HGV movements that would be comparable with an office development (e.g. refuse). The site would also benefit from an existing planning permission that includes traffic demand that is estimated to be higher than the forecast construction worker traffic demand, as set out in section 10.6 of ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6). Therefore, the impact on the wider road network has already been assessed such that it does, in effect, form part of the TEMPro adjusted baseline.
- 18.8.68 As explained at paragraph 18.5.14, the location of the construction workers hub would be identified by the Contractor during the construction phase, and therefore the local highway network has been assessed as a single receptor in relation to the construction workers hub rather than reviewing specific roads. This would likely include roads used for journeys important at a regional level and therefore the receptor sensitivity is medium.
- 18.8.69 Given the construction workers hub would be located at an existing consented site and the associated traffic demand would be included in the baseline, this change would not be perceptible to the extent that it would change conditions which would otherwise prevail, resulting in a negligible magnitude of impact. Given the potential for a reduction in traffic demand compared with the existing consent, this would result in effects of negligible adverse significance (not significant) to drivers and bus passengers.

Testing of the pipelines, washouts and overflows

Traffic impacts on the local highway network

- 18.8.70 As detailed in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6), traffic would be generated in the testing phase associated with the tankering away of water used during the testing process. The local highway network has been assessed as a single receptor in relation to the construction workers hub rather than reviewing specific roads. This would likely include roads used for journeys important at a regional level and therefore the receptor sensitivity is medium.
- 18.8.71 As set out in the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6), the traffic demand associated with the tankering away of water used during the testing process would be infrequent. This change would not be perceptible to the extent that it would change conditions which would otherwise prevail, resulting in a negligible magnitude of impact. Given the potential for a reduction in traffic demand compared with the existing consent, this would result in effects of negligible adverse significance (not significant) to drivers and bus passengers.

Pedestrian, cyclist and horse rider delay

- 18.8.72 During construction, the Proposed Development would result in temporary, short-term closures or temporary/permanent diversion of footpaths, cycleways, bridleways footways along roads or roads themselves within the study area associated with:
1. Construction of the Pipeline between the WRP site and Otterbourne WSW and the Pipelines between the WRP site and Bedhampton Springs
 2. Construction of the WRP site, and AGP
 3. Construction of the temporary accesses to the temporary construction compounds
 4. Construction of the permanent accesses to the AGP and WRP site
- 18.8.73 Quantitative assessments have been undertaken to inform this qualitative assessment with regards to pedestrian, cyclist and horse rider delay. The quantitative assessments can be found in the Transport Assessment included in ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).
- 18.8.74 This assessment is structured as follows for each component of the Proposed Development (where associated effects have been identified):
1. Pedestrians travelling on PRoW
 2. Pedestrians, cyclist and horse riders travelling on the local highway network
 3. Cyclists travelling on cycleways
 4. Horse riders travelling on bridleways
- 18.8.75 Construction works associated with the Pipeline between the WRP site and Otterbourne WSW, WRP site, and AGP would result in temporary, short-term closures or diversions of the PRoW. The proposed management of the PRoW

impacted by the Proposed Development is detailed and secured in the Framework RoWMP (appended to the Framework CTMP (Document reference 7.2, DCO Volume 7)) alongside the anticipated length of closure required.

- 18.8.76 Construction works associated with the Pipeline between the WRP site and Otterbourne WSW, WRP site, and AGP would also result in temporary, short-term road closures impacting pedestrians, cyclists and horse riders travelling on the local highway network. The proposed management measures and extent of closures are detailed in the Framework CTMP (Document reference 7.2, DCO Volume 7) and the TMS (Document reference 7.3, DCO Volume 7).
- 18.8.77 In addition, the construction works outlined above would also affect advisory on-road cycleways and shared cycleway/footways resulting in delays or temporary diversions.
- 18.8.78 The construction works associated with the Pipeline between the WRP site and Otterbourne WSW would affect bridleways resulting in temporary, short-term closures or diversions for horse riders.

Water Recycling Plant site

Pedestrians travelling on Public Rights of Way

- 18.8.79 To enable the works associated with the construction of the WRP site, the Havant-30 PRoW would be subject to a temporary closure. Given the use of this PRoW by pedestrians for recreational purposes, the receptor sensitivity at this location is medium. It is anticipated that the temporary closure at this location would be under two weeks. The temporary diversion would increase journeys by over 500m, however this diversion would be for a very short period, and therefore the magnitude of impact would be minor. Based on the application of DMRB LA 104 Environmental Assessment and Monitoring [24], this temporary closure would result in short-term effects of minor adverse significance (not significant).

Pipelines between Budds Farm Wastewater Treatment Works and the Water Recycling Plant site

- 18.8.80 The construction of the Pipelines between Budds Farm WTW and the WRP site are not predicted to have any environmental effects with regards to pedestrian, cyclist and horse rider delay.

Pipelines between the Water Recycling Plant site and Bedhampton Springs

Pedestrians travelling on Public Rights of Way

- 18.8.81 To enable the works associated with the construction of the WRP site, the Havant-30 and Havant-34 PRoWs would both be subject to temporary closures. Given the use of both PRoWs by pedestrians for recreational purposes, the receptor sensitivity at both locations is medium. These short-term temporary diversions would increase journeys by over 500m and would be communicated to local residents so they can plan their journeys in advance, as detailed within the Stakeholder and Customer Communications Plan, contained within the Outline CEMP (Document reference 7.1, DCO Volume 7). With the Stakeholder and Customer Communications Plan and given the short-term nature of the closure,

the impact would be of a minor magnitude. These temporary closures would result in effects of minor adverse significance which would be temporary and short-term in nature (not significant).

Pipeline between the Water Recycling Plant site and Otterbourne Water Supply Works

Section D: The Water Recycling Plant site to Portsdown Hill

- 18.8.82 There are no predicted environmental effects with regards to pedestrian, cyclist and horse rider delay associated with the construction of Section D of the Pipeline between the WRP site and Otterbourne WSW given there are no footways, cycleways or PRoW that need to be temporarily closed and/or diverted during construction.

Section E: Portsdown Hill to Boarhunt

Pedestrians travelling on Public Rights of Way

- 18.8.83 To enable the construction of Section E a temporary closure of Boarhunt 19, Southwick and Widley 28 and Southwick and Widley 3 PRoW would be required.
- 18.8.84 Given the use of the Southwick and Widley 3 PRoW is by pedestrians for recreational purposes and there are other available routes (as detailed in the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7)), the receptor sensitivity at this location is medium. The Southwick and Widley 3 PRoW does not appear to be a through route. As such, the temporary closure is not likely to be perceptible, with the magnitude of impact being negligible. Based on the application of DMRB LA 104 Environmental Assessment and Monitoring [24], this temporary closure would result in short-term effects of minor adverse significance (not significant).
- 18.8.85 Given the use of the Southwick and Widley 28 PRoW is by pedestrians for recreational purposes and there are other available routes (as detailed in the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7)), the receptor sensitivity at this location is medium. Southwick and Widley 28 PRoW would be closed for up to 24 months. The alternative routes associated with the closure of this PRoW would increase journeys by between 50m and 250m and, as such, would be of a minor impact. Based on the application of DMRB LA 104 Environmental Assessment and Monitoring [24], this temporary closure would result in medium-term effects of minor adverse significance (not significant).
- 18.8.86 Given the use of the Boarhunt 19 PRoW is by pedestrians for recreational purposes and there are other available routes (as detailed in the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7)), the receptor sensitivity at this location is medium. Boarhunt 19 PRoW would be closed for up to 18 months. The alternative routes associated with the closure of this PRoW would increase journeys by between 50m and 250m and, as such, would be of a minor impact. Based on the application of DMRB LA 104 Environmental Assessment and Monitoring [24], this temporary closure would result in short-term effects of minor adverse significance (not significant).

Pedestrians, cyclists and horse riders travelling on the local highway network

- 18.8.87 To enable the construction of the Pipeline between the WRP site and Otterbourne WSW, temporary lane closures would be required on the B2177 Southwick Road. Given that this route is likely to accommodate a non-elevated rate of vulnerable road user receptors, the receptor sensitivity at this location is medium. The diversion route would be under 50m, resulting in an impact of minor magnitude. Any temporary, short-term effects with regards to pedestrian and cycle delay here would be of minor adverse significance (not significant).
- 18.8.88 Temporary road closures would be required on Widley Walk, Mill Lane, Pigeon House Lane, Crooked Walk Lane, Portchester Lane, and Monument Lane to facilitate the construction of the Pipeline. Vulnerable receptors travelling on these roads would be at a very low rate as there are limited facilities nearby and therefore the link sensitivity is low. It is anticipated that the temporary, short-term works associated with the closures on these routes would increase journeys by more than 500m, resulting in an impact of major magnitude on all routes. The Outline CEMP (Document reference 7.1, DCO Volume 7) includes a Stakeholder and Customer Communications Plan that will inform local residents of the short-term closures so they can plan accordingly. With this measure, these temporary, short-term closures would result in effects of minor adverse significance (not significant).
- 18.8.89 A temporary road closure would also be required on New Down Lane. This closure has been assessed with regards to pedestrian, cycle and horse riding delay as part of the closure to PRow Southwick and Widley 28 (see paragraph 18.8.85).

Cyclists travelling on cycleways

- 18.8.90 To enable the construction of the Pipeline between the WRP site and Otterbourne WSW, temporary closures of the cycleway would be required on the B2177 Southwick Road. This route is used for recreational purposes and provides a link to a wider network of routes for which an alternative route could be taken and the receptor sensitivity at this location is therefore considered to be medium. The diversion route would be under 50m, resulting in an impact of a minor magnitude. Any temporary, short-term effects with regards to cycle delay here would be of minor adverse significance (not significant).

Section F: Boarhunt to Crockerhill

Pedestrians travelling on Public Rights of Way

- 18.8.91 Temporary closures and diversions are required on Fareham 103 and Fareham 107 PRow to facilitate the construction of the Proposed Development.
- 18.8.92 Given that Fareham 103 is used by pedestrians for recreational purposes and there are other available routes, the receptor sensitivity at this location is medium. The Fareham 103 PRow diversion would increase journeys by between 50-250m. As detailed in DMRB LA 112 Population and Human Health [25], this would result in effects of minor magnitude. As such, this temporary diversion would result in short-term effects of minor adverse significance (not significant).
- 18.8.93 Given that Fareham 107 is used by pedestrians for recreational purposes and there are other available routes, the receptor sensitivity at this location is medium. The

Fareham 107 PRoW diversion would increase journeys between 50m and 250m, thus resulting in a minor impact. This would result in temporary, short-term effects of minor adverse significance (not significant).

Pedestrians, cyclist and horse riders travelling on the local highway network

- 18.8.94 Road closures would be required on Forest Lane and Whitedell Lane to enable the construction of the Proposed Development. Vulnerable road user receptors travelling on these roads would be at a very low rate and therefore the link sensitivity is low. The anticipated temporary, short-term works would increase journeys by more than 500m, resulting in an impact on both routes of a major magnitude. The Outline CEMP (Document reference 7.1 DCO Volume 7) includes a Stakeholder and Customer Communications Plan that will inform local residents of the short-term closures so they can plan accordingly. With this measure, the resulting in effects of minor adverse significance (not significant).

Section G: Crockerhill to Wickham

Pedestrians travelling on Public Rights of Way

- 18.8.95 To facilitate the construction works of the Proposed Development, temporary closures of the Wickham 1, Wickham 5, Wickham 501 and Wickham 10 PRoW would be required.
- 18.8.96 Wickham 1 and Wickham 5 PRoW are used by pedestrians for recreational purposes and there are other available routes, as such the receptor sensitivity at these locations is medium. The diversion of Wickham 1 and Wickham 5 would require a diversion of 50m-250m and therefore the impact would be of a minor magnitude. For pedestrians traveling on Wickham 1 and Wickham 5, this would result in temporary short-term effects of minor adverse significance (not significant).
- 18.8.97 Wickham 10 PRoW is used by pedestrians for recreational purposes and there are other available routes, as such the receptor sensitivity at these locations is medium. The closure of Wickham 10 would likely be for under two weeks and there are alternative routes available and therefore the impact would be of a minor magnitude. For pedestrians traveling on Wickham 10, this would result in temporary short-term effects of minor adverse significance (not significant).
- 18.8.98 Wickham 501 (Meon Valley Trail) is a named trail and therefore the receptor sensitivity is high. The diversion of Wickham 501 would require a diversion of 50m-250m and therefore the impact would be of a minor magnitude. For pedestrians traveling on Wickham 501, given the diversion route would change the overall route length by less than 150m, this would result in temporary short-term effects of minor adverse significance (not significant).

Pedestrians, cyclist and horse riders travelling on the local highway network

- 18.8.99 A road closure is required on Tanfield Lane to enable the construction of the Proposed Development. This route is likely to accommodate a very low rate of vulnerable road user receptors and, as such, the receptor sensitivity is low. The temporary, short-term works associated with this temporary closure is anticipated to increase journeys by 50m to 250m, thus having an impact of minor magnitude.

The effects that would arise as a result of this closure would be of minor adverse significance (not significant).

- 18.8.100 A temporary lane closure is required on the A32 Hoad's Hill to enable the construction of a temporary access into the temporary construction compounds G-1 and G-2. Due to the availability of alternative routes and proportion of vulnerable road user receptors at a non-elevated level (i.e. they are away from schools and doctor's surgeries), the receptor sensitivity at this location is medium. The temporary, short-term diversions are anticipated to be below 50m with a negligible impact magnitude. The resulting temporary, short-term effects would be of negligible adverse significance (not significant).

Horse riders and cyclists travelling on bridleways

- 18.8.101 The construction works associated with the Proposed Development would also affect horse riders on the Wickham 501 bridleway, resulting in a temporary, short-term closure or diversion for horse riders. Wickham 501 (Meon Valley Trail) is a named trail and therefore the receptor sensitivity is high. It is anticipated that the temporary, short-term construction works at this bridleway would require a diversion of 50m-250m and therefore the impact would be of a minor magnitude. Given this short-term diversion would be under 150m, this would result in temporary short-term effects of minor adverse significance (significant) for horse riders and cyclists.

Section H: Wickham to Shedfield

Pedestrians travelling on Public Rights of Way

- 18.8.102 The works associated with the construction of the Proposed Development would require temporary diversions of the Shedfield 12 and Shedfield 13 PRoW. These routes are used by pedestrians for recreational purposes and there are other available routes, therefore the receptor sensitivity at these locations is medium. The diversions associated with the closures of these PRoWs are anticipated to increase journeys by 50m-250m, thus the impact on these routes would be of a minor magnitude. This would result in temporary, short-term effects of minor adverse significance (not significant).

Pedestrians, cyclist and horse riders travelling on the local highway network

- 18.8.103 Pricketts Hill and Blind Lane are both anticipated to require road closures to facilitate the construction of the Proposed Development. Both routes are likely to accommodate a very low rate of vulnerable road user receptors, and therefore the receptor sensitivity is low. It is anticipated that the temporary, short-term works that are requiring these closures to take place would increase journeys by more than 500m for both routes, thus having an impact of major magnitude. This would result in effects of minor adverse significance (not significant).

Section J: Shedfield to the River Hamble

Pedestrians travelling on Public Rights of Way

18.8.104 Temporary closures and diversions of Shedfield 2, Shedfield 3 and Shedfield 4 PRow would be required to enable the construction of the Proposed Development. These routes are used by pedestrians for recreational purposes and there are other available routes, the receptor sensitivity at these locations is medium. The diversion routes would increase journeys by between 50m and 250m, thus having a minor impact on these routes. Given the temporary diversions would increase journeys by less than 150m, this would result in temporary, short-term effects of minor adverse significance (not significant).

Pedestrian, cyclist and horse riders travelling on the local highway network

18.8.105 To enable the works associated with the construction of the Proposed Development, Sandy Lane would be subject to a road closure. This route is likely to accommodate a very low rate of vulnerable road users and, as such, the receptor sensitivity is low. The temporary, short-term works associated with the closure of this route is anticipated to increase journeys by more than 500m, thus resulting in an impact of major magnitude. The Outline CEMP (Document reference 7.1 DCO Volume 7) includes a Stakeholder and Customer Communications Plan that will inform local residents of the short-term closures so they can plan accordingly. With this measure, the resultant effects of these temporary, short-term closures would be of minor adverse significance (not significant).

Section K: The River Hamble to Lower Upham

Pedestrians travelling on Public Rights of Way

18.8.106 Temporary closures and diversions of Bishop's Waltham 43 and Bishop's Waltham 502 would be required to enable the construction of the Proposed Development. These routes are used by pedestrians for recreational purposes and there are other available routes, the receptor sensitivity at these locations is medium. The diversion routes would increase journeys by between 50m and 250m, thus having a minor impact on these routes. This would result in temporary, short-term effects of minor adverse significance (not significant).

Pedestrians, cyclist and horse riders travelling on the local highway network

18.8.107 To enable the construction works associated with the Proposed Development, lane closures would be required on the B3037 Mortimer's Lane. Since the route is likely to accommodate a very low rate of vulnerable road user receptors, the receptor sensitivity at this location is low. The diversion would be less than 50m, resulting in an impact of negligible magnitude. The closure here would therefore result in temporary, short-term effects of negligible adverse significance (not significant).

18.8.108 Road closures would be required on Scivier's Lane and Alma Lane to enable construction works of the Proposed Development. Both routes are likely to accommodate a very low rate of vulnerable road user receptors, and therefore has a low receptor sensitivity. It is anticipated that the temporary, short-term works

associated with these closures would increase journeys by over 500m, resulting in an impact of major magnitude. The Outline CEMP (Document reference 7.1 DCO Volume 7) includes a Stakeholder and Customer Communications Plan that will inform local residents of the short-term closures so they can plan accordingly. With this measure, the closures on both routes would result in effects of minor adverse significance (not significant) with regards to walking, cycling and horse riding delay.

Section L: Lower Upham to Brambridge

Pedestrians travelling on Public Rights of Way

- 18.8.109 Temporary closures and diversions of Fair Oak and Horton Heath 23, Fair Oak and Horton Heath 27, Colden Common 2a, Colden Common 21 and Colden Common 22 PRow would be required to enable the construction of the Proposed Development. These routes are used by pedestrians for recreational purposes and there are other available routes, the receptor sensitivity at these locations is medium. The diversion routes would increase journeys by between 50m and 250m, thus having a minor impact on these routes. This would result in temporary, short-term effects of minor adverse significance (not significant).

Pedestrians, cyclist and horse riders travelling on the local highway network

- 18.8.110 Road closures are also required on Bishopstoke Lane and Stroudwood Lane to enable the construction of the Proposed Development. Both routes are likely to accommodate a very low rate of vulnerable road user receptors, and therefore have a low receptor sensitivity. It is anticipated that the temporary, short-term works associated with these closures would increase journeys by over 500m, resulting in an impact of major magnitude. The Outline CEMP (Document reference 7.1 DCO Volume 7) includes a Stakeholder and Customer Communications Plan that will inform local residents of the short-term closures so they can plan accordingly. With this measure, the closures on both routes would result in effects of minor adverse significance (not significant) with regards to walking, cycling and horse riding delay.
- 18.8.111 Lane and footway closures would be required on the B3335 Highbridge Road and B3354 Winchester Road to facilitate the construction of temporary access to compounds. Due to the availability of alternative routes and the proportion of vulnerable road user receptors at a non-elevated rate, the receptor sensitivity at both locations is medium. The temporary, short-term diversions provided for both routes are anticipated to be below 50m, resulting in a negligible impact magnitude. This would result in temporary, short-term effects of minor adverse significance (not significant).

Horse riders travelling on bridleways

- 18.8.112 The temporary diversion of Fair Oak and Horton Heath 23 bridleway would be required to enable the construction of the Proposed Development, resulting in a temporary, short-term diversion for horse riders. This route is used for recreational purposes and, given that some alternative routes are available for users, the receptor sensitivity at this location is at the medium level. It is anticipated that the temporary, short-term construction works at this bridleway would increase the journey length by between 50m and 250m, therefore having an impact of minor

magnitude. The resultant effects are expected to be of minor adverse significance (not significant) with regards to horse rider delay.

Section M: Brambridge to Otterbourne Water Supply Works

Pedestrians travelling on Public Rights of Way

18.8.113 The works associated with the construction of the Proposed Development necessitate the temporary closure and diversion of the Otterbourne 6 and Otterbourne 7 PRowS. These routes are used by pedestrians for recreational purposes, there are other available routes and therefore the receptor sensitivity at these locations is medium. As such, the diversions for both PRowS are anticipated to increase journeys by between 50m and 250m, therefore having an impact on these routes of minor magnitude. The resultant effects, which would be temporary and short-term in nature, would be of minor adverse significance (not significant).

Pedestrians, cyclist and horse riders travelling on the local highway network

18.8.114 A road closure is required on Kiln Lane to enable works associated with the construction of the Proposed Development. There is likely to be limited demand for this route given there are very few dwellings/facilities nearby and therefore receptor sensitivity at this location is negligible. It is anticipated that the temporary, short-term works associated with the closure of Kiln Lane would increase journeys by more than 500m. As such, the impact on this route would be of a major magnitude. This closure would result in effects of minor adverse significance (not significant).

Severance

18.8.115 During the construction phase, the Proposed Development would result in increased traffic flows and temporary changes to highway infrastructure as a result of:

1. Increased traffic demand and HGV demand associated with the construction of the Proposed Development on the surrounding road network
2. Increase in traffic demand associated with temporary road closures and associated diversions
3. The creation of new temporary pedestrian and cycle crossings at accesses associated with the temporary construction compounds and the permanent AGP
4. The temporary closure of PRow associated with the construction of the Proposed Development

18.8.116 Quantitative assessments have been undertaken to inform this qualitative assessment with regards to severance. The quantitative assessments can be found in the Transport Assessment included in ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

18.8.117 This assessment is structured as follows for each component of the Proposed Development (where associated effects have been identified):

1. Increased traffic demand and HGV demand associated with the construction of the Proposed Development and any temporary road closures and associated diversions
2. The creation of pedestrian and cycle crossings at temporary and permanent accesses
3. The temporary closure of PRow associated with the construction of the Proposed Development

18.8.118 There would be an increase in traffic flow on roads within the study area as a result of construction traffic demand. In addition, there would be an increase in traffic flow on roads that would be designated as diversion routes as a result of temporary, short-term road closures associated with the construction of the Proposed Development.

18.8.119 The proposed temporary accesses to the temporary construction compounds would affect perceptions of severance through the creation of new crossings. The temporary closure of PRow associated with the construction of the Proposed Development could also impact perceptions of severance.

Water Recycling Plant site

Increase in traffic demand

18.8.120 The forecast increase in traffic flow and HGV composition associated with the construction of the Proposed Development on Harts Farm Way is predicted to be below 30%. Vulnerable road users would be travelling on these routes at a non-elevated rate and therefore the receptor sensitivity would be medium.

18.8.121 The environmental effects with regards to severance caused by an increase in construction traffic are unlikely to be perceptible on any roads within the study area, resulting in a negligible impact (with reference to ISEP Guidelines [23]). Therefore, the Proposed Development would result in a negligible adverse effect (not significant) with regards to severance from traffic flow changes associated with construction traffic.

Temporary closure of Public Rights of Way

18.8.122 A short-term, temporary closure of PRow Havant 30 is proposed. This route is used for recreational purposes, with some alternative routes available for users. As such, the receptor sensitivity is medium. This temporary closure would increase the walking distance for some receptors to Broadmarsh Coastal Path but would not impact any journeys between dwellings and local facilities such as schools or shops. This temporary closure would result in changes that would likely be perceptible but not to the extent that it would materially change conditions which would otherwise prevail, and therefore the impact would be of a minor magnitude. Therefore, this would result in temporary, short-term effects of minor adverse significance (not significant).

Pipelines between Budds Farm Wastewater Treatment Works and the Water Recycling Plant site

Increase in traffic demand

- 18.8.123 The forecast increase in traffic flow and HGV composition associated with the construction of the Proposed Development on Harts Farm Way, Southmoor Lane and Brockhampton Road is predicted to be below 30%. Vulnerable road users would be travelling on these routes at a non-elevated rate and therefore the receptor sensitivity would be medium.
- 18.8.124 The environmental effects with regards to severance caused by an increase in construction traffic are unlikely to be perceptible on any roads within the study area, resulting in a negligible impact (with reference to ISEP Guidelines [23]). Therefore, the Proposed Development would result in a negligible adverse effect (not significant) with regards to severance from traffic flow changes associated with construction traffic.

Pipelines between the Water Recycling Plant site and Bedhampton Springs

Increase in traffic demand

- 18.8.125 The forecast increase in traffic flow and HGV composition associated with the construction of the Proposed Development on Mill Lane, Bidbury Lane, Bedhampton Road, Meyrick Road and West Street is predicted to be below 30%. Vulnerable road users would be travelling on these routes at a non-elevated rate and therefore the receptor sensitivity would be medium.
- 18.8.126 The environmental effects with regards to severance caused by an increase in construction traffic are unlikely to be perceptible on any roads within the study area, resulting in a negligible impact (with reference to ISEP Guidelines [23]). Therefore, the Proposed Development would result in a negligible adverse effect (not significant) with regards to severance from traffic flow changes associated with construction traffic.

Temporary closure of Public Rights of Way

- 18.8.127 Short-term temporary closures of PRow Havant 30 and Havant 34 are proposed. These routes are used for recreational purposes, with some alternative routes available for users. As such, the receptor sensitivity is medium. Alternative suitable routes are proposed, as detailed in the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7) and therefore these temporary closures would result in changes that would likely be perceptible but not the extent that it would materially change conditions which would otherwise prevail, and therefore the impact would be of a minor magnitude. Therefore, this would result in temporary, short-term effects of minor adverse significance (not significant).

Pipeline between the Water Recycling Plant site and Otterbourne Water Supply Works

Section D: The Water Recycling Plant site to Portsdown Hill

Increase in traffic demand

- 18.8.128 The forecast increase in traffic flow and HGV composition associated with the construction of the Proposed Development on Gilman Road, Crookhorn Lane, College Road and Purbrook Way is predicted to be below 30%. Vulnerable road users would be travelling on these routes at an elevated rate and therefore the receptor sensitivity in all locations would be high.
- 18.8.129 The environmental effects with regards to severance caused by an increase in construction traffic are unlikely to be perceptible on any roads within the study area, resulting in a negligible impact (with reference to ISEP Guidelines [23]). Therefore, the Proposed Development would result in a minor adverse effect (not significant) with regards to severance from traffic flow changes associated with construction traffic.

Section E: Portsdown Hill to Boarhunt

Increase in traffic demand

- 18.8.130 The forecast increase in traffic flow and HGV composition associated with the construction of the Proposed Development and the temporary closure of roads on the study area for Section E is predicted to be below 30%. Vulnerable road users would be travelling on these routes at a very low rate and therefore the receptor sensitivity would be low.
- 18.8.131 The environmental effects with regards to severance caused by an increase in construction traffic are unlikely to be perceptible on any roads within the study area, resulting in a minor impact (with reference to ISEP Guidelines [23]). Therefore, the Proposed Development would result in a negligible adverse effect (not significant) with regards to severance from traffic flow changes associated with construction traffic.

Temporary closure of Public Rights of Way

- 18.8.132 Temporary footpath closures are required on PRow Southwick and Widley 28, Southwick and Widley 3 and Boarhunt 19, with suitable alternative routes identified. These PRow are used for recreational purposes by pedestrians and therefore the receptor sensitivity in all locations is medium.
- 18.8.133 Alternative suitable routes are proposed, as detailed in the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7) and therefore, with regards to severance, these temporary closures would result in changes that would likely be perceptible but not the extent that it would materially change conditions which would otherwise prevail, and therefore the impact would be of a minor magnitude. Therefore, this would result in temporary, short-term effects of minor adverse significance (not significant).

Section F: Boarhunt to Crockerhill

Increase in traffic demand

- 18.8.134 The forecast increase in traffic flow and HGV composition associated with the construction of the Proposed Development and the temporary closure of roads on the study area for Section F is predicted to be below 30%. Vulnerable road users would be travelling on these routes at a non-elevated or very low rate and therefore the receptor sensitivity would be medium (A32) or low (Whitedell Lane and Forest Lane).
- 18.8.135 The environmental effects with regards to severance caused by an increase in construction traffic are unlikely to be perceptible on any roads within the study area, resulting in a negligible impact (with reference to ISEP Guidelines [23]). Therefore, the Proposed Development would result in a minor adverse effect (not significant) with regards to severance from traffic flow changes associated with construction traffic.

Creation of pedestrian and cycle crossings at temporary and permanent accesses

- 18.8.136 The proposed temporary accesses to the temporary construction compounds from the A32 Hoad's Hill would result in the creation of a new crossing for pedestrians and cyclists. The A32 Hoad's Hill is located close to communities which are predicted to have non elevated rate of vulnerable road users, and for which alternative routes can be taken, meaning that the link sensitivity is medium.
- 18.8.137 The introduction of the pedestrian/cycle crossings at the temporary compound accesses would result in an impact of minor magnitude. Therefore, a temporary, short-term minor adverse (not significant) significance of effect with regards to severance is predicted.

Temporary closure of Public Rights of Way

- 18.8.138 Temporary footpath closures and/or diversions would be required on PRoW Fareham 103 and 107, with suitable alternative routes identified. These PRoW are used for recreational purposes by pedestrians, and alternative routes would be available and therefore the receptor sensitivity in all locations is medium.
- 18.8.139 Alternative suitable routes are proposed, as detailed in the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7) and therefore, with regards to severance, these temporary closures would result in changes that would likely be perceptible but not the extent that it would materially change conditions which would otherwise prevail, and therefore the impact would be of a minor magnitude. Therefore, this would result in temporary, short-term effects of minor adverse significance (not significant).

Section G: Crockerhill to Wickham

Increase in traffic demand

- 18.8.140 The forecast increase in traffic flow and HGV composition associated with the construction of the Proposed Development and the temporary closure of roads on the study area for Section G is predicted to be below 30%. Vulnerable road users

would be travelling on these routes at a very low rate and therefore the receptor sensitivity would be low.

- 18.8.141 The environmental effects with regards to severance caused by an increase in construction traffic are unlikely to be perceptible on any roads within the study area, resulting in a negligible impact (with reference to ISEP Guidelines [23]). Therefore, the Proposed Development would result in a negligible adverse effect (not significant) with regards to severance from traffic flow changes associated with construction traffic.

Temporary closure of Public Rights of Way

- 18.8.142 Temporary footpath closures and/or diversions would be required on PRow Wickham 1, Wickham 5, Wickham 10 and Wickham 501, with suitable alternative routes identified. These PRow are used for recreational purposes by pedestrians, and alternative routes would be available and therefore in the context of severance, the receptor sensitivity in all locations is medium.
- 18.8.143 Alternative suitable routes are proposed, as detailed in the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7) and therefore, with regards to severance, these temporary closures would result in changes that would likely be perceptible but not the extent that it would materially change conditions which would otherwise prevail, and therefore the impact would be of a minor magnitude. Therefore, this would result in temporary, short-term effects of minor adverse significance (not significant).

Section H: Wickham to Shedfield

Increase in traffic demand

- 18.8.144 The forecast increase in traffic flow and HGV composition associated with the construction of the Proposed Development and the temporary closure of roads on the study area for Section H is predicted to be below 30%. Vulnerable road users would be travelling on these routes at a non-elevated or very low rate and therefore the receptor sensitivity would be medium (Shirrell Heath High Street) or low (A334, Blind Lane, B2177 and Pricketts Hill).
- 18.8.145 The environmental effects with regards to severance caused by an increase in construction traffic are unlikely to be perceptible on any roads within the study area, resulting in a negligible impact (with reference to ISEP Guidelines [23]). Therefore, the Proposed Development would result in a minor adverse effect (not significant) with regards to severance from traffic flow changes associated with construction traffic.

Creation of pedestrian and cycle crossings at temporary and permanent accesses

- 18.8.146 The proposed temporary access to the temporary construction compound from Shirrell Heath High Street would result in the creation of a new crossing for pedestrians. Shirrell Heath High Street is located close to communities which are predicted to have non elevated rate of vulnerable road users, and for which alternative routes can be taken, meaning that the link sensitivity is medium.

18.8.147 The introduction of the pedestrian/cycle crossings at the temporary construction compound accesses would result in an impact of minor magnitude. Therefore, a temporary, short-term minor adverse (not significant) significance of effect with regards to severance is predicted.

Temporary closure of Public Rights of Way

18.8.148 Temporary footpath closures and/or diversions would be required on PRow Shedfield 12 and Shedfield 13, with suitable alternative routes identified. These PRow are used for recreational purposes by pedestrians, and alternative routes would be available and therefore the receptor sensitivity in all locations is medium.

18.8.149 Alternative suitable routes are proposed, as detailed in the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7) and therefore, with regards to severance, these temporary closures would result in changes that would likely be perceptible but not the extent that it would materially change conditions which would otherwise prevail, and therefore the impact would be of a minor magnitude. Therefore, this would result in temporary, short-term effects of minor adverse significance (not significant).

Section J: Shedfield to the River Hamble

Increase in traffic demand

18.8.150 The forecast increase in traffic flow and HGV composition associated with the construction of the Proposed Development and the temporary closure of roads on the study area for Section J is predicted to be below 30%. Vulnerable road users would be travelling on these routes at a very low rate and therefore the receptor sensitivity would be low.

18.8.151 The environmental effects with regards to severance caused by an increase in construction traffic are unlikely to be perceptible on any roads within the study area, resulting in a negligible impact (with reference to ISEP Guidelines [23]). Therefore, the Proposed Development would result in a negligible adverse effect (not significant) with regards to severance from traffic flow changes associated with construction traffic.

Temporary closure of Public Rights of Way

18.8.152 Temporary footpath closures and/or diversions would be required on PRow Shedfield 2, Shedfield 3 and Shedfield 4, with suitable alternative routes identified. These PRow are used for recreational purposes by pedestrians, and alternative routes would be available and therefore the receptor sensitivity in all locations is medium.

18.8.153 Alternative suitable routes are proposed, as detailed in the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7) and therefore, with regards to severance, these temporary closures would result in changes that would likely be perceptible but not the extent that it would materially change conditions which would otherwise prevail, and therefore the impact would be of a minor magnitude. Therefore, this would result in temporary, short-term effects of minor adverse significance (not significant).

Section K: The River Hamble to Lower Upham

Increase in traffic demand

- 18.8.154 The forecast increase in traffic flow and HGV composition associated with the construction of the Proposed Development and the temporary closure of roads on the study area for Section K is predicted to be below 30%. Vulnerable road users would be travelling on these routes at a very low rate and therefore the receptor sensitivity would be low.
- 18.8.155 The environmental effects with regards to severance caused by an increase in construction traffic are unlikely to be perceptible on any roads within the study area, resulting in a negligible impact (with reference to ISEP Guidelines [23]). Therefore, the Proposed Development would result in a negligible adverse effect (not significant) with regards to severance from traffic flow changes associated with construction traffic.

Temporary closure of Public Rights of Way

- 18.8.156 Temporary footpath closures and/or diversions would be required on PRoW Bishop's Waltham 43 and Bishop's Waltham 502, with suitable alternative routes identified. These PRoW are used for recreational purposes by pedestrians, and alternative routes would be available and therefore the receptor sensitivity in all locations is medium.
- 18.8.157 Alternative suitable routes are proposed, as detailed in the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7) and therefore, with regards to severance, these temporary closures would result in changes that would likely be perceptible but not the extent that it would materially change conditions which would otherwise prevail, and therefore the impact would be of a minor magnitude. Therefore, this would result in temporary, short-term effects of minor adverse significance (not significant).

Section L: Lower Upham to Brambridge

Increase in traffic demand

- 18.8.158 The forecast increase in traffic flow and HGV composition associated with the construction of the Proposed Development and the temporary closure of roads on the study area for Section L is predicted to be below 30%. Vulnerable road users would be travelling on these routes at a non-elevated rate and therefore the receptor sensitivity would be medium.
- 18.8.159 The environmental effects with regards to severance caused by an increase in construction traffic are unlikely to be perceptible on any roads within the study area, resulting in a negligible impact (with reference to ISEP Guidelines [23]). Therefore, the Proposed Development would result in a minor adverse effect (not significant) with regards to severance from traffic flow changes associated with construction traffic.

Creation of pedestrian and cycle crossings at temporary and permanent accesses

- 18.8.160 The proposed temporary accesses to the temporary construction compounds from the B3354 Winchester Road, Church Lane and Highbridge Road would result in the creation of a new crossings for pedestrians. These roads are located close to communities which are predicted to have non elevated rate of vulnerable road users, and for which alternative routes can be taken, meaning that the link sensitivity is medium.
- 18.8.161 The introduction of the pedestrian/cycle crossings at the temporary compound accesses would result in an impact of minor magnitude. Therefore, a temporary, short-term minor adverse (not significant) significance of effect with regards to severance is predicted at all locations.

Temporary closure of Public Rights of Way

- 18.8.162 Temporary footpath closures and/or diversions would be required on PRow Fair Oak and Horton Heath 23, Fair Oak and Horton Heath 27, Colden Common 2a, Colden Common 21 and Colden Common 22, with suitable alternative routes identified. These PRow are used for recreational purposes by pedestrians, and alternative routes would be available and therefore the receptor sensitivity in all locations is medium.
- 18.8.163 Alternative suitable routes are proposed, as detailed in the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7) and therefore, with regards to severance, these temporary closures would result in changes that would likely be perceptible but not the extent that it would materially change conditions which would otherwise prevail, and therefore the impact would be of a minor magnitude. Therefore, this would result in temporary, short-term effects of minor adverse significance (not significant).

Section M: Brambridge to Otterbourne Water Supply Works

Increase in traffic demand

- 18.8.164 The forecast increase in traffic flow and HGV composition associated with the construction of the Proposed Development and the temporary closure of roads on the study area for Section M is predicted to be below 30%. Vulnerable road users would be travelling on these routes at a non-elevated rate and therefore the receptor sensitivity would be medium.
- 18.8.165 The environmental effects with regards to severance caused by an increase in construction traffic are unlikely to be perceptible on any roads within the study area, resulting in a negligible impact (with reference to ISEP Guidelines [23]). Therefore, the Proposed Development would result in a minor adverse effect (not significant) with regards to severance from traffic flow changes associated with construction traffic.

Temporary closure of Public Rights of Way

- 18.8.166 Temporary footpath closures and/or diversions would be required on PRow Otterbourne 6 and 7, with suitable alternative routes identified. These PRow are used for recreational purposes by pedestrians, and alternative routes would be available and therefore the receptor sensitivity in all locations is medium.

18.8.167 Alternative suitable routes are proposed, as detailed in the Framework RoWMP appended to the Framework CTMP (Document reference 7.2, DCO Volume 7) therefore, with regards to severance, these temporary closures would result in changes that would likely be perceptible but not the extent that it would materially change conditions which would otherwise prevail, and therefore the impact would be of a minor magnitude. Therefore, this would result in temporary, short-term effects of minor adverse significance (not significant).

Amenity, fear and intimidation

18.8.168 During the construction phase, the Proposed Development would result in temporary increased traffic demand and HGV demand on the surrounding road network. These impacts could affect pedestrian, cycle and horse riding amenity, and lead to a change in the perception of fear and intimidation within the study area.

18.8.169 Quantitative assessments have been undertaken to inform this qualitative assessment with regards to amenity and fear and intimidation. The quantitative assessments have been undertaken in accordance with the ISEP Guidelines [23] and can be found in Annex O of the Transport Assessment included in ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

Water Recycling Plant site

18.8.170 During the construction phase, the Proposed Development would result in temporary increase in traffic and HGV demand on Harts Farm Way. The footway on Harts Farm Way is predominately used for used for recreational purposes and therefore the receptor sensitivity is medium.

18.8.171 The findings of the quantitative assessment indicate the magnitude of impact would be negligible. Therefore, this would result in temporary, medium-term effects of negligible adverse significance (not significant).

Pipelines between Budds Farm Wastewater Treatment Works and the Water Recycling Plant site

18.8.172 During the construction phase, the Proposed Development would result in temporary increase in traffic and HGV demand on Southmoor Lane and Harts Farm Way. Vulnerable road users would be travelling on these routes at a non-elevated rate and therefore the receptor sensitivity would be medium.

18.8.173 The findings of the quantitative assessment indicate the magnitude of impact would be negligible. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant).

Pipelines between the Water Recycling Plant site and Bedhampton Springs

18.8.174 During the construction phase, the Proposed Development would result in temporary increase in traffic and HGV demand on Mill Lane, Bidbury Lane, Bedhampton Road, Meyrick Road, West Street and Brockhampton Road. Vulnerable road users would be travelling on these routes at a non-elevated rate and therefore the receptor sensitivity would be medium.

18.8.175 The minor increase in HGV demand on these local roads would result in changes which are likely to be perceptible but not the extent that it would materially change conditions which would otherwise prevail, and therefore the impact would be of a minor magnitude. Therefore, this would result in temporary, short-term effects of minor adverse significance (not significant).

Pipeline between the Water Recycling Plant site and Otterbourne Water Supply Works

Section D: The Water Recycling Plant site to Portsdown Hill

18.8.176 Traffic flow and HGV composition associated with the construction of the Proposed Development on Gilman Road, Crookhorn Lane, College Road and Purbrook Way is predicted to increase in the construction stage. Vulnerable road users would be travelling on these routes at an elevated rate and therefore the receptor sensitivity in all locations would be high.

18.8.177 The findings of the quantitative assessment indicate the magnitude of impact would be negligible. Therefore, this would result in temporary, short-term effects of minor adverse significance (not significant) with regards to amenity, fear and intimidation.

Section E: Portsdown Hill to Boarhunt

18.8.178 Traffic flows and the HGV composition associated with the construction of the Proposed Development are forecast to increase on Boarhunt Road, Portsdown Hill Road, the A3 and the A27. Vulnerable road users would be travelling on these routes at a non-elevated rate and therefore the receptor sensitivity would be medium at all locations.

18.8.179 The findings of the quantitative assessment indicate the magnitude of impact would be negligible. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant) with regards to amenity, fear and intimidation.

18.8.180 Traffic flows and HGV composition would also increase on New Down Lane. Vulnerable road users would be travelling on this route at a non-elevated rate and therefore the receptor sensitivity would be medium at this location. As detailed in the Framework CTMP and appended Framework RoWMP (Document reference 7.2 DCO Volume 7), the PRoW would be closed for this duration of these works so there would be no impact on pedestrians with regards to amenity, fear and intimidation.

Section F: Boarhunt to Crockerhill

18.8.181 Traffic flow and HGV composition associated with the construction of the Proposed Development on the A32 is predicted to increase in the construction stage. Vulnerable road users would be travelling on these routes at a non-elevated rate and therefore the receptor sensitivity would be medium.

18.8.182 The findings of the quantitative assessment indicate the magnitude of impact would be negligible. Therefore, this would result in temporary, short-term effects of

negligible adverse significance (not significant) with regards to amenity, fear and intimidation.

Section G: Crockerhill to Wickham

18.8.183 Traffic flow and HGV composition associated with the construction of the Proposed Development on the A334 and Titchfield Lane is predicted to increase in the construction stage. Vulnerable road users would be travelling on these routes at a very low rate and therefore the receptor sensitivity would be low.

18.8.184 The findings of the quantitative assessment indicate the magnitude of impact would be negligible. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant) with regards to amenity, fear and intimidation.

Section H: Wickham to Shedfield

18.8.185 During the construction phase, the Proposed Development would result in temporary increase in traffic and HGV demand on the A334, B2177, Blind Lane and Shirrell Heath High Street. Vulnerable road users would be travelling on these routes at a non-elevated rate and therefore the receptor sensitivity would be medium.

18.8.186 The findings of the quantitative assessment indicate the magnitude of impact would be negligible. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant).

Section J: Shedfield to the River Hamble

18.8.187 Traffic flow and HGV composition associated with the construction of the Proposed Development on the A334, B3035 and Curdrige Lane is predicted to increase in the construction stage. Vulnerable road users would be travelling on these routes at a very low rate and therefore the receptor sensitivity would be low.

18.8.188 The findings of the quantitative assessment indicate the magnitude of impact would be negligible. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant) with regards to amenity, fear and intimidation.

Section K: The River Hamble to Lower Upham

18.8.189 During the construction phase, the Proposed Development would result in temporary increase in traffic and HGV demand on the B3037, B2177 and Winters Hill. Vulnerable road users would be travelling on these routes at a very low rate and therefore the receptor sensitivity would be low.

18.8.190 The findings of the quantitative assessment indicate the magnitude of impact would be negligible. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant).

Section L: Lower Upham to Brambridge

18.8.191 Traffic flow and HGV composition associated with the construction of the Proposed Development on the A335, B3335, B3354 and Church Lane is predicted to

increase in the construction stage. Vulnerable road users would be travelling on these routes at a non-elevated rate and therefore the receptor sensitivity would be medium.

18.8.192 The findings of the quantitative assessment indicate the magnitude of impact would be negligible. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant) with regards to amenity, fear and intimidation.

Section M: Brambridge to Otterbourne Water Supply Works

18.8.193 During the construction phase, the Proposed Development would result in a temporary increase in traffic and HGV demand on Otterbourne Hill, Otterbourne Road, Kiln Lane and the Hockley Link associated with the construction of Section M of the Pipeline between the WRP site and Otterbourne WSW and the INNS Treatment at Otterbourne WSW. Vulnerable road users would be travelling on these routes at a low or non-elevated rate and therefore the receptor sensitivity would be medium.

18.8.194 The findings of the quantitative assessment indicate the magnitude of impact would be negligible. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant).

Accidents and safety

18.8.195 During the construction phase, the Proposed Development would result in the following changes relevant to accidents and safety:

4. Temporary increased traffic demand and HGV demand on the surrounding road network
5. Operations associated with temporary construction compounds
6. Temporary closures and/or diversions of roads, PRow, footways and cycleways

18.8.196 A detailed review of road traffic collision data has been undertaken for the study area and included in the Transport Assessment in ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6). This has been supplemented with a quantitative assessment to inform this qualitative assessment with regards to accidents and safety. The quantitative assessment can be found in Annex N of the ES Appendix 18.1 Transport Assessment, Volume II (Document reference 6.2, DCO Volume 6).

Water Recycling Plant site

18.8.197 During the construction phase, the Proposed Development would result in temporary increase in traffic and HGV demand on Harts Farm Way. Based on the findings of the road traffic collision analysis, the sensitivity of this link is low.

18.8.198 The forecast increase in traffic demand, including HGVs, would give rise to an impact of minor magnitude. Therefore, this would result in temporary, medium-term effects of negligible adverse significance (not significant).

Pipelines between Budds Farm Wastewater Treatment Works and the Water Recycling Plant site

- 18.8.199 During the construction phase, the Proposed Development would result in a temporary increase in traffic and HGV demand on Southmoor Lane, Brockhampton Road and Harts Farm Way. Based on the findings of the road traffic collision analysis, the sensitivity of these links is medium.
- 18.8.200 The forecast increase in traffic demand, including HGV, would give rise to an impact of negligible magnitude. Therefore, this would result in temporary, medium-term effects of negligible adverse significance (not significant).

Pipelines between the Water Recycling Plant site and Bedhampton Springs

- 18.8.201 The Proposed Development would result in a temporary increase in traffic and HGV demand on Mill Lane, Bidbury Lane, Bedhampton Road, Meyrick Road and West Street during the construction phase.
- 18.8.202 No collisions were recorded on Mill Lane and Meyrick Road and therefore the sensitivity of these links is negligible. The minor increase in HGV demand on these local roads would result in changes which are likely to be perceptible but not the extent that it would materially change conditions which would otherwise prevail, and therefore the impact would be of a minor magnitude. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant) on Mill Lane and Meyrick Road.
- 18.8.203 Given the low number of collisions recorded on West Street and Brookside Road, the sensitivity of these links is low. The minor increase in HGV demand on these local roads would result in changes which are likely to be perceptible but not the extent that it would materially change conditions which would otherwise prevail, and therefore the impact would be of a minor magnitude. On West Street, and Brookside Road, a temporary, short-term effect of minor adverse significance (not significant) is predicted.
- 18.8.204 The link sensitivity of Bedhampton Road and Bidbury Lane is medium. The minor increase in HGV demand on these roads would result in changes which are likely to be perceptible but not the extent that it would materially change conditions which would otherwise prevail, and therefore the impact would be of a minor magnitude. On Bedhampton Road and Bidbury Lane, a temporary, short-term effect of minor adverse significance (not significant) is predicted.

Pipeline between the Water Recycling Plant site and Otterbourne Water Supply Works

Section D: The Water Recycling Plant site to Portsdown Hill

- 18.8.205 The Proposed Development would result in a temporary increase in traffic and HGV demand on links within the Section D study area. The link sensitivity for each of these links, based on the recorded number of collisions, is set out in Table 18-20. These links are shown in the context of Section D at ES Figure 18.3 Construction study links, Volume III (Document reference 6.3 DCO Volume 6).

Table 18-20 Section D: The Water Recycling Plant to Portsdown Hill link sensitivity (accidents and safety)

Link reference	Road link	Sensitivity
18	Gillman Road	Negligible
19	B2177 (2)	High
22	Crookhorn Lane	Low
23	College Road	Medium
24	Purbrook Way (2)	High
26	B2177 (3)	Medium
68	B2177 (8)	Low

18.8.206 The forecast increase in traffic demand, including HGVs, would give rise to an impact of negligible magnitude. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant) on Gillman Road, Crookhorn Lane and College Road. On Purbrook Way and the B2177, this would result in temporary, short-term effects of minor adverse significance (not significant).

Section E: Portsdown Hill to Boarhunt

18.8.207 The Proposed Development would result in temporary increase in traffic and HGV demand on links within the Section E study area. The link sensitivity for each of these links, based on the recorded number of collisions, is set out in Table 18-21. These links are shown in the context of Section E at ES Figure 18.3 Construction study links, Volume III (Document reference 6.3 DCO Volume 6).

Table 18-21 Section E: Portsdown Hill to Boarhunt link sensitivity (accidents and safety)

Link reference	Road link	Sensitivity
20	A3 (S)	Very high
21	A27	High
29	New Down Lane	Negligible
31	B2177 (4)	Medium
32	Boarhunt Road	Low

18.8.208 The forecast increase in traffic demand, including HGVs, would give rise to an impact of negligible magnitude. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant) on New Down Lane, B2177 and Boarhunt Road. On the A3 and A27, this would result in temporary, short-term effects of minor adverse significance (not significant).

Section F: Boarhunt to Crockerhill

18.8.209 The Proposed Development would result in a temporary increase in traffic and HGV demand on links within the Section F study area. The link sensitivity for each of these links, based on the recorded number of collisions, is set out in Table 18-22

below. These links are shown in the context of Section F at ES Figure 18.3 Construction study links, Volume III (Document reference 6.3, DCO Volume 6).

Table 18-22 Section F: Boarhunt to Crockerhill link sensitivity (accidents and safety)

Link reference	Road link	Sensitivity
33	A32 (S)	Medium
34	A32 (C)	Low

18.8.210 The forecast increase in traffic demand, including HGV, would give rise to an impact of negligible magnitude. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant) on all links.

Section G: Crockerhill to Wickham

18.8.211 The Proposed Development would result in a temporary increase in traffic and HGV demand on links within the Section G study area. The link sensitivity for each of these links, based on the recorded number of collisions, is set out in Table 18-23 below. These links are shown in the context of Section G at ES Figure 18.3 Construction study links, Volume III (Document reference 6.3, DCO Volume 6).

Table 18-23 Section G: Crockerhill to Wickham link sensitivity (accidents and safety)

Link reference	Road link	Sensitivity
35	A334 (E)	Medium
37	Titchfield Lane	Low

18.8.212 The forecast increase in traffic demand, including HGV, would give rise to an impact of negligible magnitude. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant) on all links.

Section H: Wickham to Shedfield

18.8.213 The Proposed Development would result in a temporary increase in traffic and HGV demand on links within the Section H study area. The link sensitivity for each of these links, based on the recorded number of collisions, is set out in Table 18-24 below. These links are shown in the context of Section H at ES Figure 18.3 Construction study links, Volume III (Document reference 6.3, DCO Volume 6).

Table 18-24 Section H: Wickham to Shedfield link sensitivity (accidents and safety)

Link reference	Road link	Sensitivity
36	A334 (C)	Medium
38	Blind Lane	Negligible
39	B2177 (5)	Medium
40	Shirell Heath High St	Low

18.8.214 The forecast increase in traffic demand, including HGV, would give rise to an impact of negligible magnitude. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant) on all links.

Section J: Shedfield to the River Hamble

18.8.215 The Proposed Development would result in a temporary increase in traffic and HGV demand on links within the Section J study area. The link sensitivity for each of these links, based on the recorded number of collisions, is set out in Table 18-21 below. These links are shown in the context of Section J at ES Figure 18.3 Construction study links, Volume III (Document reference 6.3, DCO Volume 6).

Table 18-25 Section J: Shedfield to the River Hamble link sensitivity (accidents and safety)

Link reference	Road link	Sensitivity
41	B3035	Low
42	Curdrige Lane	Low
69	A334 (W)	High

18.8.216 The forecast increase in traffic demand, including HGV, would give rise to an impact of negligible magnitude. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant) on B3035 and Curdrige Lane. On the A334, this would result in temporary, short-term effects of minor adverse significance (not significant).

Section K: The River Hamble to Lower Upham

18.8.217 The Proposed Development would result in a temporary increase in traffic and HGV demand on links within the Section K study area. The link sensitivity for each of these links, based on the recorded number of collisions, is set out in Table 18-26 below. These links are shown in the context of Section K at ES Figure 18.3 Construction study links, Volume III (Document reference 6.3, DCO Volume 6).

Table 18-26 Section K: The River Hamble to Lower Upham link sensitivity (accidents and safety)

Link reference	Road link	Sensitivity
43	B3037 (W)	Medium
45	B3037	Low
46	B2177 (6)	Low
47	Winters Hill	Low
51	B2177 (9)	Low

18.8.218 The forecast increase in traffic demand, including HGV, would give rise to an impact of negligible magnitude. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant) on all links.

Section L: Lower Upham to Brambridge

18.8.219 The Proposed Development would result in temporary increase in traffic and HGV demand on links within the Section L study area. The link sensitivity for each of these links, based on the recorded number of collisions, is set out in Table 18-27 below. These links are shown in the context of Section L at ES Figure 18.3 Construction study links, Volume III (Document reference 6.3, DCO Volume 6).

Table 18-27 Section L: Lower Upham to Brambridge link sensitivity (accidents and safety)

Link reference	Road link	Sensitivity
44	B3354 (S)	Medium
48	B3335 (N)	Low
49	B3354 (N)	Low
50	B2177 (7)	Low
54	Church Lane	Low
55	Bishopstoke Lane	Low
56	B3335 (S)	Low
57	A335	Low

18.8.220 The forecast increase in traffic demand, including HGV, would give rise to an impact of negligible magnitude. Therefore, this would result in a temporary, short-term effects of negligible adverse significance (not significant) on all links.

Section M: Brambridge to Otterbourne Water Supply Works

18.8.221 The Proposed Development would result in a temporary increase in traffic and HGV demand on links within the Section M study area associated with the construction of Section M of the Pipeline between the WRP site and Otterbourne WSW and the INNS Treatment at Otterbourne WSW. The link sensitivity for each of these links, based on the recorded number of collisions, is set out in Table 18-28 below. These links are shown in the context of Section M at ES Figure 18.3 Construction study links, Volume III (Document reference 6.3, DCO Volume 6).

Table 18-28 Section M: Brambridge to Otterbourne WSW link sensitivity (accidents and safety)

Link reference	Road link	Sensitivity
52	Otterbourne Hill (N)	Low
53	Kiln Lane	Low
58	Waterworks Road	Low
59	Sparrowgrove	Low
64	Otterbourne Road	Low
65	Hockley Link	Low
67	Otterbourne Hill (S)	Low
70	Winchester Road Link	Negligible

18.8.222 The forecast increase in traffic demand, including HGV, would give rise to an impact of negligible magnitude. Therefore, this would result in temporary, short-term effects of negligible adverse significance (not significant) on all links.

Hazardous and large loads

Hazardous loads

- 18.8.223 The assessment of hazardous loads is informed by analysis undertaken as part of the ES Chapter 16 Resources and waste management, Volume I (Document reference 6.1, DCO Volume 6).
- 18.8.224 The WRP site is situated on a historic landfill, with vehicle movements to remove potentially hazardous waste excavated from this historic landfill required to dispose of this hazardous waste elsewhere. In addition, it is anticipated that approximately 24,448 tonnes of total construction waste would be generated, which may include an element of hazardous material which would require off-site disposal, as set out in ES Chapter 16 Resources and waste management Volume I (Document reference 6.1, DCO Volume 6).
- 18.8.225 As such, during the construction phase, the Proposed Development would generate a maximum of 3,895 HGV (one-way) movements transporting hazardous materials, primarily from the WRP site but also from other temporary construction compounds, that are required to be disposed of off-site. This equates to less than four vehicle movements per day over the course of the construction period. The transportation of hazardous loads can result in an environmental impact should the vehicle be involved in a road traffic collision or experience damage that results in spilt material to impact the local environment.
- 18.8.226 Hazardous loads would be transported from the WRP site and other temporary construction compounds to a combination of landfill and hazardous landfill sites via the SRN, utilising the most suitable routes within the local highway network. Full detail on these routes is provided within the Framework CTMP (Document reference 7.2, DCO Volume 7). Routes within the study area provide connectivity at both a local and a regional level, and therefore the receptor sensitivity is medium.
- 18.8.227 As there is expected to be less than four hazardous loads a day during the construction period, the potential for a collision is deemed to be minimal, based on the recorded traffic flows and collision data, as detailed in the ES Appendix 18.1 Transport Assessment (Document reference 6.2, DCO Volume 6). Therefore, the magnitude of impact would be negligible. Therefore, the significance of effect with regards to hazardous loads would be negligible adverse (not significant) given that these impacts are of a temporary nature.

Abnormal indivisible loads

- 18.8.228 The construction stage of the Proposed Development would generate two AIL movements, one to/from the WRP site and one to/from the drilling receptor shaft on New Down Lane. Both of these movements are associated with the transportation of the tunnel boring machine. As detailed in the Framework CTMP (Document reference 7.2, DCO Volume 7), these deliveries would be completed using specialist vehicles. Large mobile cranes would also be required to lift the tunnel boring machine in and out of the tunnel shafts. Subject to requirements, it is possible these cranes would also be classified as AILs.
- 18.8.229 Given the proximity of the WRP to Junction 5 of the A3 (M)/A2030, the specialist vehicles would only be required to travel on Harts Farm Way after leaving the SRN.

- 18.8.230 The receptor shaft compound on New Down Lane would be located in proximity to Junction 12 of the M275, and therefore the specialist vehicles would be required to travel on New Down Lane, Portsdown Hill Road, Crookhorn Lane, College Road and Purbrook Way.
- 18.8.231 Measures to manage the AIL movements would be agreed with the police service and LHA post-consent. It is expected specialist vehicles would be escorted by police and a pilot car to assist with traffic control for the entire delivery route. Where required, street furniture and signage would be temporarily removed.
- 18.8.232 Harts Farm Way and New Down Lane are important at a local scale and the sensitivity of these receptors is Low. There would be one specialist vehicle movement to and from the WRP over the course of the construction period as well as one specialist vehicle movement to and from the New Down Lane receptor shaft compound. These movements would be escorted and are expected to be undertaken overnight and therefore changes are not likely to be perceptible so the magnitude of impact would be negligible. As such, this would have a negligible significance of effect (not significant) at all locations whilst the works are undertaken.
- 18.8.233 Portsdown Hill Road, Crookhorn Lane, College Road and Purbrook Way are important at a regional scale and the sensitivity of these receptors is medium. There would be one specialist vehicle movement to and from the New Down Lane receptor shaft compound which would route on Portsdown Hill Road, Crookhorn Lane, College Road and Purbrook Way. These movements would be escorted and are expected to be undertaken overnight and therefore changes are not likely to be perceptible so the magnitude of impact would be negligible. As such, this would have a negligible significance of effect (not significant) in all locations whilst the works are undertaken.

Operational effects

Pedestrian, cyclist and horse rider delay

- 18.8.234 Pedestrian, cyclist and horse rider delay was scoped into the assessment of operational effects at the scoping stage to account for any permanent diversions to PRow that may be required as a result of the Proposed Development.
- 18.8.235 One permanent diversion is proposed as part of the Proposed Development, Fareham 103, associated with the AGP IPS F. PRow Fareham 103 is used for recreational purposes by pedestrians, and alternative routes are available. The receptor sensitivity is therefore medium.
- 18.8.236 It is anticipated that the permanent diversion would increase journey length by less than 50m. In accordance with DMRB LA 112 Population and Human Health [25], the impact on this route would be of a negligible magnitude. This would result in permanent, long-term effects of negligible adverse significance which is not significant.

Amenity, fear and intimidation

- 18.8.237 Amenity, fear and intimidation was scoped into the assessment of operational effects at the scoping stage to account for any long-term amenity benefits (such as PRow or footway enhancements) that may arise as a result of the Proposed

Development. Given specific enhancements to the PRoW network will not be secured as mitigation to offset likely significant effects, the associated beneficial effects have not been assessed in this ES. Potential enhancements to the PRoW network are however being explored and will be presented in the Case for the Project (Document Reference 5.6, DCO Volume 5).

Hazardous and large loads

Hazardous loads

- 18.8.238 During the operational phase the WRP site would generate a maximum of 80 tanker movements transporting chemicals in a 30 day period (or a maximum of three loads per day). This peak in deliveries would be limited to drought conditions. The transportation of hazardous loads can result in an environmental impact should the vehicle be involved in a road traffic collision or experience damage that causes a leakage.
- 18.8.239 Hazardous loads would be transported to the WRP site via the SRN and Harts Farm Way. Based on the findings of the road traffic collision analysis, the sensitivity of this link is low.
- 18.8.240 Given there would be a maximum of three hazardous loads a day, limited to drought conditions, impact on this route would be of a minor magnitude. This would result in permanent, long-term effects of negligible adverse significance which is not significant.

Decommissioning

- 18.8.241 Effects from decommissioning of the Proposed Development are considered to be no greater than those identified during the construction phase and are therefore assessed to be of the same significance as those assessed for construction. The significance of effects resulting from decommissioning is therefore the same as reported as for the construction effects.

18.9 Mitigation, monitoring and enhancement

- 18.9.1 Mitigation measures are defined in ES Chapter 5 EIA approach and methodology, Volume I (Document reference 6.1, DCO Volume 6), with primary mitigation and tertiary mitigation for traffic and transport being presented in section 18.4 of this chapter.

Secondary mitigation

- 18.9.2 No secondary mitigation has been identified in addition to the primary mitigation and tertiary mitigation for traffic and transport presented in section 18.4 of this chapter.

Monitoring

- 18.9.3 There are no likely significant adverse effects related to this assessment identified either during construction or operational stages of the Proposed Development that would require monitoring, beyond those measures (such as construction traffic

management and Rights of Way management) that are set out in the relevant transport management plans described in paragraphs 18.4.3 to 18.4.7.

18.10 Summary of residual effects

- 18.10.1 Table 18-27 provides a summary of the residual effects relating to the construction, operation and decommissioning of the Proposed Development with regard to traffic and transport receptors.

Table 18-29 Summary of residual effects

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
WRP site	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling on Harts Farm Way	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Pedestrian, cyclist and horse rider delay	Pedestrians travelling on Havant 30	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Severance	Pedestrians, cyclists, horse riders travelling on Harts Farm Way	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Severance	Pedestrians travelling on Havant 30	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Amenity, fear and intimidation	Pedestrians, cyclists and horse riders travelling on Harts Farm Way	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Harts Farm Way	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Hazardous loads	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Harts Farm Way	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Abnormal indivisible loads	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Harts Farm Way	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)

Hampshire Water Transfer and Water Recycling Project
Environmental Statement – Chapter 18 Traffic and transport

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
Pipelines between Budds Farm WTW and the WRP site	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling on Harts Farm Way, Brockhampton Road and Southmoor Lane	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Severance	Pedestrians, cyclists, horse riders travelling on Harts Farm Way, Brockhampton Road and Southmoor Lane	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Amenity, fear and intimidation	Pedestrians, cyclists and horse riders travelling on Harts Farm Way, Brockhampton Road and Southmoor Lane	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Southmoor Lane, Brockhampton Road and Harts Farm Way	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
Pipelines between the WRP site and Bedhampton Springs	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling on Brookside Road and Bedhampton Road	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Driver delay	Vehicular drivers travelling on Mill Lane	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Pedestrian, cyclist and horse rider delay	Pedestrians travelling on Havant 30 and Havant 34	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Severance	Pedestrians, cyclists and horse riders travelling on Mill Lane, Bidbury Lane, Bedhampton	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
		Road, Meyrick Road, West Street and Brockhampton Road			
	Severance	Pedestrians travelling on Havant 30 and Havant 34	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Amenity, fear and intimidation	Pedestrians, cyclists and horse riders travelling on Mill Lane, Bidbury Lane, Bedhampton Road, Meyrick Road, West Street and Brockhampton Road	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Mill Lane and Meyrick Road	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on West Street, Brookside Road, Bedhampton Road and Bidbury Lane	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
Section D of the Pipeline between the WRP site and Otterbourne WSW	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling on Portsmouth Road, Crookhorn Lane, College Road and Purbrook Way	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Driver delay	Vehicular drivers travelling on Gillman Road	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Severance	Pedestrians, cyclists and horse riders travelling on Gilman Road, Crookhorn Lane, College Road and Purbrook Way	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
	Amenity, fear and intimidation	Pedestrians, cyclists and horse riders travelling on Gilman Road, Crookhorn Lane, College Road and Purbrook Way	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Gillman Road, Crookhorn Lane, College Road and the B2177	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Purbrook Way	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
Section E of the Pipeline between the WRP site and Otterbourne WSW	Driver delay	Vehicular drivers travelling on New Down Lane, Widley Walk, Mill Lane, Pigeon House Lane, Crooked Walk Lane, Portchester Lane, Monument Lane and Boarhunt Road	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling on the B2177 Portsdown Hill Road, the B2177 Southwick Road, the A3 London Road and the A27	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Pedestrian delay	Pedestrians travelling on Southwick and Widley 3	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Pedestrian delay	Pedestrians travelling on Boarhunt 19 and Southwick and Widley 28	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
	Pedestrian and cyclist delay	Pedestrians and cyclists travelling on B2177 Southwick Road	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Pedestrian, cyclist and horse rider delay	Pedestrians, cyclists and horse riders travelling on Widley Walk, Mill Lane, Pigeon House Lane, Crooked Walk Lane, Portchester Lane, and Monument Lane	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Severance	Pedestrians, cyclists and horse riders travelling on New Down Lane, Widley Walk, Mill Lane, Pigeon House Lane, Crooked Walk Lane, Portchester Lane, Monument Lane, Boarhunt Road, B2177 Portsdown Hill Road, the B2177 Southwick Road, the A3 London Road and the A27	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Severance	Pedestrians travelling on Southwick and Widley 28, Southwick and Widley 3 and Boarhunt 19	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Amenity, fear and intimidation	Pedestrians, cyclists and horse riders travelling on Boarhunt Road, Portsdown Hill Road, the A3 and the A27	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on New Down Lane, B2177 and Boarhunt Road	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on the A3 and A27	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Abnormal indivisible loads	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
Section F of the Pipeline between the WRP site and Otterbourne WSW	Driver delay	Vehicular drivers travelling on White dell Lane, Forest Lane and Chalk Lane	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling on the A32	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Pedestrian delay	Pedestrians travelling on Fareham 103 and Fareham 107	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Pedestrian, cyclist and horse rider delay	Pedestrians, cyclists and horse riders travelling on Forest Lane and White dell Lane	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Severance	Pedestrians, cyclists and horse riders travelling on White dell Lane, Forest Lane, Chalk Lane and the A32	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Severance	Pedestrians travelling on Fareham 103 and Fareham 107	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Amenity, fear and intimidation	Pedestrians, cyclists and horse riders travelling on the A32	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on the A32	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Hazardous loads	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on New Down Lane, Portsdown Hill Road, Crookhorn Lane, College Road and Purbrook Way	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Abnormal indivisible loads	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on New Down Lane, Portsdown Hill Road, Crookhorn Lane, College Road and Purbrook Way	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
Section G of the Pipeline between the WRP site and Otterbourne WSW	Driver delay	Vehicular drivers travelling on Castle Farm Lane, Tanfield Lane and Titchfield Lane	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling on the A32	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Pedestrian delay	Pedestrians travelling on Wickham 1, Wickham 5 and Wickham 10	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Pedestrian, cyclist and horse rider delay	Pedestrians, cyclists and horse riders travelling on Wickham 501 Tanfield Lane	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Pedestrian and cyclist delay	Pedestrians and cyclists travelling on A32 Hoad's Hill	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
	Severance	Pedestrians, cyclists and horse riders travelling on Castle Farm Lane, Tanfield Lane, Titchfield Lane and the A32	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Severance	Pedestrians travelling on Wickham 1, Wickham 5, Wickham 10 and Wickham 51	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Amenity, fear and intimidation	Pedestrians, cyclists and horse riders travelling on the A334 and Titchfield Lane	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on A334 and Titchfield Lane	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Hazardous loads	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Titchfield Lane and the A32	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
Section H of the Pipeline between the WRP site and Otterbourne WSW	Driver delay	Vehicular drivers travelling on Blind Lane, Pricketts Hill and Shirrell Heath High Street	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling through the A334/Titchfield Lane/Blind Lane junction	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling on the B2177 Winchester Road and the A334 Kitnocks Hill	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
	Pedestrian delay	Pedestrians travelling on Shedfield 12 and Shedfield 13 PRow	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Pedestrian, cyclist and horse rider delay	Pedestrians, cyclists and horse riders travelling on Pricketts Hill and Blind Lane	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Severance	Pedestrians, cyclists and horse riders travelling on Blind Lane, Pricketts Hill, Shirrell Heath High Street, the B2177 Winchester Road and the A334 Kitnocks Hill	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Severance	Pedestrians travelling on Shedfield 12 and Shedfield 13	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Amenity, fear and intimidation	Pedestrians, cyclists and horse riders travelling on the A334, B2177, Blind Lane and Shirrell Heath High Street	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on the B2177 Winchester Road and the A334 Kitnocks Hill, Blind Lane and Shirrell Heath High Street	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Hazardous loads	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Blind Lane, Shirrell Heath High Street, the B2177 Winchester Road and the A334 Kitnocks Hill	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)

Hampshire Water Transfer and Water Recycling Project
Environmental Statement – Chapter 18 Traffic and transport

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
Section J of the Pipeline between the WRP site and Otterbourne WSW	Driver delay	Vehicular drivers travelling on St Annes Lane, Sandy Lane and Curdridge Lane	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling on B3035 Botley Road	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling on the A334 Station Hill	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Pedestrian delay	Pedestrians travelling on Shedfield 2, Shedfield 3 and Shedfield 4 PRow	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Pedestrian, cyclist and horse rider delay	Pedestrians, cyclists and horse riders travelling on Sandy Lane	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Severance	Pedestrians, cyclists and horse riders travelling on St Annes Lane, Sandy Lane, Curdridge Lane, B3035 Botley Road and A334 Station Hill	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Severance	Pedestrians travelling on Shedfield 2 Shedfield 3 and Shedfield 4	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Amenity, fear and intimidation	Pedestrians, cyclists and horse riders travelling on the A334, B3035 and Curdridge Lane	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
		drivers travelling on B3035 and Curdrige Lane			
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on the A334	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Hazardous loads	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on the A334, B3035 and Curdrige Lane	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
Section K of the Pipeline between the WRP site and Otterbourne WSW	Driver delay	Vehicular drivers travelling on Scivier's Lane, Alma Lane, Winters Hill, Winchester Road and the B3037 Mortimers Lane	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling on B2177 Winchester Road and B3037 Fair Oak Road	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Pedestrian delay	Pedestrians travelling on Bishop's Waltham 43 and Bishop's Waltham 502	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Pedestrian, cyclist and horse rider delay	Pedestrians, cyclists and horse riders travelling on Scivier's Lane and Alma Lane	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Severance	Pedestrians, cyclists and horse riders travelling on Scivier's Lane, Alma Lane, Winters Hill, Winchester Road, B3037 Mortimers Lane, B2177	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
		Winchester Road and B3037 Fair Oak Road			
	Severance	Pedestrians travelling on Bishop's Waltham 43 and Bishop's Waltham 502	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Amenity, fear and intimidation	Pedestrians, cyclists and horse riders travelling on the B3037, B2177 and Winters Hill	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Winters Hill, Winchester Road, B3037 Mortimers Lane, B2177 Winchester Road and B3037 Fair Oak Road	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Hazardous loads	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Winters Hill, Winchester Road, B3037 Mortimers Lane and B2177 Winchester Road	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
Section L of the Pipeline between the WRP site and Otterbourne WSW	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling on Stroudwood Lane, Church Lane, Bishopstoke Lane, B3354 Main Road, A335 Allbrook Way, B3335 (Highbridge Road and Searles Hill)	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Pedestrian delay	Pedestrians travelling on Fair Oak and Horton Heath 27,	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
		Colden Common 2a, Colden Common 21 and Colden Common 22			
	Pedestrian, cyclist and horse rider delay	Pedestrians, cyclists and horse riders travelling on Fair Oak and Horton Heath 23, Bishopstoke Lane, Stroudwood Lane, B3335 Highbridge Road and B3354 Winchester Road	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Severance	Pedestrians, cyclists and horse riders travelling on Stroudwood Lane, Church Lane, Bishopstoke Lane, B3354 Main Road, B3354 Winchester Road, A335 Allbrook Way, B3335 (Highbridge Road and Searles Hill)	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Severance	Pedestrians (and horse riders) travelling on Fair Oak and Horton Heath 23, Fair Oak and Horton Heath 27, Colden Common 2a, Colden Common 21 and Colden Common 22	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Amenity, fear and intimidation	Pedestrians, cyclists and horse riders travelling on the A335, B3335, B3354 and Church Lane	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Church Lane, Bishopstoke Lane, B3354, A335 Allbrook Way, B3335	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
		(Highbridge Road and Searles Hill)			
	Hazardous loads	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Church Lane, B3354, A335 Allbrook Way, B3335 Highbridge Road	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
Section M of the Pipeline between the WRP site and Otterbourne WSW	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling on Otterbourne Hill and Kiln Lane	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Driver delay	Vehicular drivers travelling on Kiln Lane	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Driver and bus passenger delay	Vehicular drivers and bus passengers travelling on Winchester Road, Hockley Link, Otterbourne Hill and Otterbourne Road	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Pedestrian delay	Pedestrians travelling on Otterbourne 6-1 and Otterbourne 7-1	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Pedestrian, cyclist and horse rider delay	Pedestrians, cyclists and horse riders travelling on Kiln Lane	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Severance	Pedestrians, cyclists and horse riders travelling on Kiln Lane, Winchester Road, Hockley Link, Otterbourne Hill and Otterbourne Road	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)

Hampshire Water Transfer and Water Recycling Project
 Environmental Statement – Chapter 18 Traffic and transport

Component/Pipeline Section	Impact	Receptor	Residual effects		
			Construction	Operation	Decommissioning
	Severance	Pedestrians (and horse riders) travelling on Otterbourne 6-1 and Otterbourne 7-1	Minor adverse effect (not significant)	N/A	Minor adverse effect (not significant)
	Amenity, fear and intimidation	Pedestrians, cyclists and horse riders travelling on Otterbourne Hill, Otterbourne Road, Kiln Lane, Winchester Road and the Hockley Link	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Accidents and safety	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Otterbourne Hill, Otterbourne Road, Kiln Lane, Winchester Road and the Hockley Link	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
	Hazardous loads	Pedestrians, cyclists, horse riders, bus passengers and drivers travelling on Kiln Lane, Winchester Road, Hockley Link, Otterbourne Hill and Otterbourne Road	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)
Construction workers hub	Driver and bus passenger delay	Drivers and bus passengers travelling on the local highway network near the construction workers hub	Negligible adverse effect (not significant)	N/A	Negligible adverse effect (not significant)

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from
Southern
Water. 

The Southern Water logo graphic consists of three white, stylized wavy lines that resemble water waves, positioned to the right of the word "Water".